



NATIONAL  
SCIENCE  
FOUNDATION



வார்டிக வார்தாவ 2  
ஆண்டறிககை 0  
Annual Report 0

சாதிக விஞ்ஞா படிதம  
தேசிய விஞ்ஞான மன்றம்  
National Science Foundation



*keeping with its mandate and aligning with the National Policy Framework " Vistas of prosperity" and also with the Sustainable Development Goals( SDGs), the NSF progressed continuously throughout 2020 with the energy and drive of its committed staff guided by the Chairman and the Board of Management delivering the maximum output. This year's Annual Report captures basically the completed work as set out in the Action Plan for the year. All relevant information that would enable the interested parties to form a judgment on performance, future prospects and constraints of the institute is contained in this report with 39 graphical presentations, 10 tables, 91 pictures, 01 diagram and 14 annexes. The entire annual report contains 160 pages together with the Audit Report & the NSF feedback on the Audit Report. The report is prepared following the format of the PED Guidelines for Good Governance.*





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# *FUNCTIONS*    **NSF** **Act**    *External resource pool* *About*    **RESEARCH** Organizational structure **Goal**    *SCIENCE*

## Overview

- » About
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- » The Board of Management
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## About

The National Science Foundation, which functions under the purview of the Ministry of Higher Education, Technology & Research is providing its dedicated service to the nation over 50 years. The organization was initially established as the National Science Council (NSC) in 1968 (by the Act No. 09 of 1968). NSC was restructured as the Natural Resources, Energy and Science Authority (NARESA) in 1982 (by the Act No. 78 of 1981). After 16 years of service, NARESA was reorganized as the National Science Foundation (NSF) by the Act No. 11 of 1994 in 1998.

## Functions as mandated by the Act

NSF is mandated to function in accordance with the provisions of the Science and Technology Development Act No. 11 of 1994 as follows:

- (a) to initiate, facilitate and support basic and applied scientific research by universities, science and technology institutions and scientists, with a view-
  - (i) to strengthening scientific research potential, including research in the social sciences, and science education programmes;
  - (ii) to developing the natural resources of Sri Lanka;
  - (iii) to promoting the welfare of the people of Sri Lanka; and
  - (iv) to training research personnel in science and technology
- (b) to foster the interchange of scientific information among scientists in Sri Lanka and foreign countries;
- (c) to award scholarships and fellowships for scientific study or scientific work at science and technology institutions;
- (d) to maintain a current register of scientific and technical personnel, and in other ways to provide a central clearing house for the collection, interpretation and analysis of data, on the availability of and the current and projected need for, scientific and technical resources in Sri Lanka, and to provide a source of Sri Lanka, and to provide a source of information for policy formulation on science, technology and other fields;
- (e) to popularize science amongst the people by funding programmes for that purpose.

## Goal

To contribute actively and effectively to the rapid development of the nation by implementing programmes under priorities of the National Policy Framework “Saubhagyaye Dekma”.

## Objectives

1. Conduct research, development, and innovation to create a knowledge economy by building public-private, institution-industry partnerships.
2. Facilitate required capacity building, infrastructure development, technology transfer, knowledge creation and sharing in all fields of S&T to improve the quality of life of our people.
3. Conduct policy studies & surveys, data collection and evidence-based reporting to help developing S&T indicators promoting decision making by the policy makers.
4. Outreach to public and other sectors of the society through science communication and increase the science literacy and engagement in science by the public.
5. Nurture a competent work force in a conducive work environment which is performance-driven and results-oriented.



# NSF's future direction

It affords me great pleasure to preface with this message the Annual Report – 2020 of the National Science Foundation, the premier national institution mandated to promote science, technology and innovation for the socio-economic development of the country. Founded in 1968, it has made a remarkable contribution to national development through a wide range of interventions, including promotion of S&T, capacity building of R&D institutions and academia, and enhancement of science literacy.



2020 was an extraordinary year because of the outbreak of the COVID-19 pandemic which has upended normal life and established systems across the globe with devastating and far-reaching impacts not only on health, but on the economy, society, multilateral trade, cooperation and aid. While those disruptions can be destabilizing and excruciating, they can also give rise to opportunities to discover and develop new models in many areas, including health, education, business, agriculture and trade, thereby paving the way for a new future.

We as a nation have missed many an opportunity in the past. However, this time, we will not allow the opportunity to slip and will leverage it in order to make major strides in development. Here, we should not be working in isolation, for global collaboration and cooperation is imperative for combatting the current pandemic. In a pandemic context, funds are hard to come by due to urgent and important competing demands. However, advances in digital technologies, provided a good IT infrastructure is in place, offer ample opportunities for progress and development even when financial resources are limited.

In these circumstances, the NSF has reviewed its systems and workings, revisited the goals and objectives of its key programmes and activities in the light of the “New Normal”, and has embarked on several novel initiatives so as to respond effectively to change. Of special significance in this regard are the establishment of a digital platform to leverage Sri Lankan scientific and professional expatriates for national development, taking steps for setting up a National Digital Library for the benefit of the academics and scientists in HEIs and R&D institutions, funding critically important research to mitigate the impact of COVID-19, and organizing a conference on COVID-19 under the theme “From Adversity to Serendipity”.

Since S&T is a primary driver of economic development, the NSF will redouble its effort to advance the cause of S&T for the common good. This will make the NSF a strategic partner and dynamic force in the socio-economic development of the country in keeping with the vision of the government.

**Emeritus Prof. Ranjith Senaratne**  
**Chairman**  
**National Science Foundation**



# Director General's review



The NSF fulfilling its functions according to the Act, utilized ~ Rs 257 million in average over the past six years with a total expenditure of 327million in 2019. The year 2020 was indeed challenging with the outbreak of COVID pandemic. The amount of funds disbursed to NSF for 2020 was considerably low amounting to Rs 59 million, which was approximately 23% of the average receipts over the last six years. This serious fund reduction/limitation due to ecosystem and priority change, let the NSF think differently using different methods and approaches to encountering challenges and deliver the expected outputs. The receipts of capital funds were in instalments as usual and were Rs. 5, 4, 30, 15, and 4 million in the end of May. July, October November, and December respectively. Accordingly, the NSF was compelled to scrap or withhold over 15 different types of grant schemes, award schemes, competitions, and providing access to online/onsite S&T literature that had been carried out in the past fulfilling its mandate. Amidst constraints, the year 2020 was filled with different other programmes performed under the five mandates empowered by the Science & Technology Development Act no. 11 of 1994. Being the Acting Director General of 2020 and the Additional Director of the NSF, I am delighted to present the Annual Report of the National Science foundation (NSF), Sri Lanka for the financial year 2020 which is elaborated clearly in pages 170.

With the aim of delivering increasing outputs and outcomes and supplementing the action plan and empowering all staff categories, the NSF conceptualized partnership programmes in the end of 2020 to be successfully continued in 2021 and later. These are multidisciplinary, interdivisional and interorganizational programmes where only a role of facilitation is done by the NSF in various aspects to reach the goals of “Vistas of Prosperity” keeping with the NSF mandate. Funds for these programmes are drawn by the benefitted institutes/stakeholders. Our future direction would be to increase the performance of the NSF by active staff engagement in collaborative activities. With this aim, constant review of the organizational structure and the programmes will be on continuous move for effectiveness and greater impact.

I express my sincere gratitude and appreciation to Prof. Ranjith Senaratne/Chairman, and the Members of the Board of Management of the NSF for their guidance provided throughout in carrying out the work of the NSF and the NSF Team, which is the greatest strength of the institute, for their dedication and commitment in fulfilling the duties despite resource limitations.

**Dr Thamara F. Dias**  
**Acting Director General (2020)**





# The Board of Management

NSF is governed by a Board of Management, which consists of the Chairperson; the Director General; a Member, each representing the University Grants Commission (UGC), the Sri Lanka Association for the Advancement of Science (SLAAS), the Institution of Engineers Sri Lanka (IESL), the National Institute of Education (NIE), and the Ministry of Finance, and four other members appointed by the Honorable Minister of Higher Education, Technology and Innovation.



Emeritus Prof. Ranjith Senaratne (*w.e.f. 17<sup>th</sup> January, 2020 - to date*)  
Chairman  
National Science Foundation



Mrs Nazeema Ahamed (*w.e.f. 02<sup>nd</sup> January, 2020 - 31<sup>st</sup> May, 2020*)  
Acting Director General  
National Science Foundation



Dr Thamara F. Dias (*w.e.f. 01<sup>th</sup> June, 2020 - 31<sup>st</sup> December, 2020*)  
Acting Director General  
National Science Foundation



Dr Sunil Jayantha Nawaratne (*w.e.f. 29<sup>th</sup> January, 2020 - to date*)  
Director General  
National Institute of Education



Eng. (Prof.) S B S Abayakoon (*w.e.f. 29<sup>th</sup> January, 2020 - to date*)  
Senior Professor  
Department of Civil Engineering  
Faculty of Engineering  
University of Peradeniya



Prof. Ananda Jayawardane (*w.e.f. 17<sup>th</sup> February, 2020 - to date*)  
Senior Professor  
Department of Civil Engineering  
University of Moratuwa



Dr N N J Nawarathne (*w.e.f. 13<sup>th</sup> January, 2020 - to date*)  
Senior Lecturer  
Department of Human Resources Management  
Faculty of Management & Finance  
University of Colombo



Prof. Janitha Liyanage (*w.e.f. 14<sup>th</sup> February, 2020 - to date*)  
Vice-Chancellor of Wickramarachchi Indigenous Medical University  
Gampaha  
Senior Professor  
Department of Chemistry  
Faculty of Science  
University Kelaniya



Prof. M M Pathmalal (*w.e.f. 29<sup>th</sup> January, 2020 - to date*)  
Dean  
Faculty of Graduate Studies  
University of Sri Jayewardenepura



Dr Lakshman Wedikkara (*w.e.f. 29<sup>th</sup> January, 2020 - to date*)  
Senior Lecturer  
Department of Social Science Education  
Faculty of Education  
University of Colombo



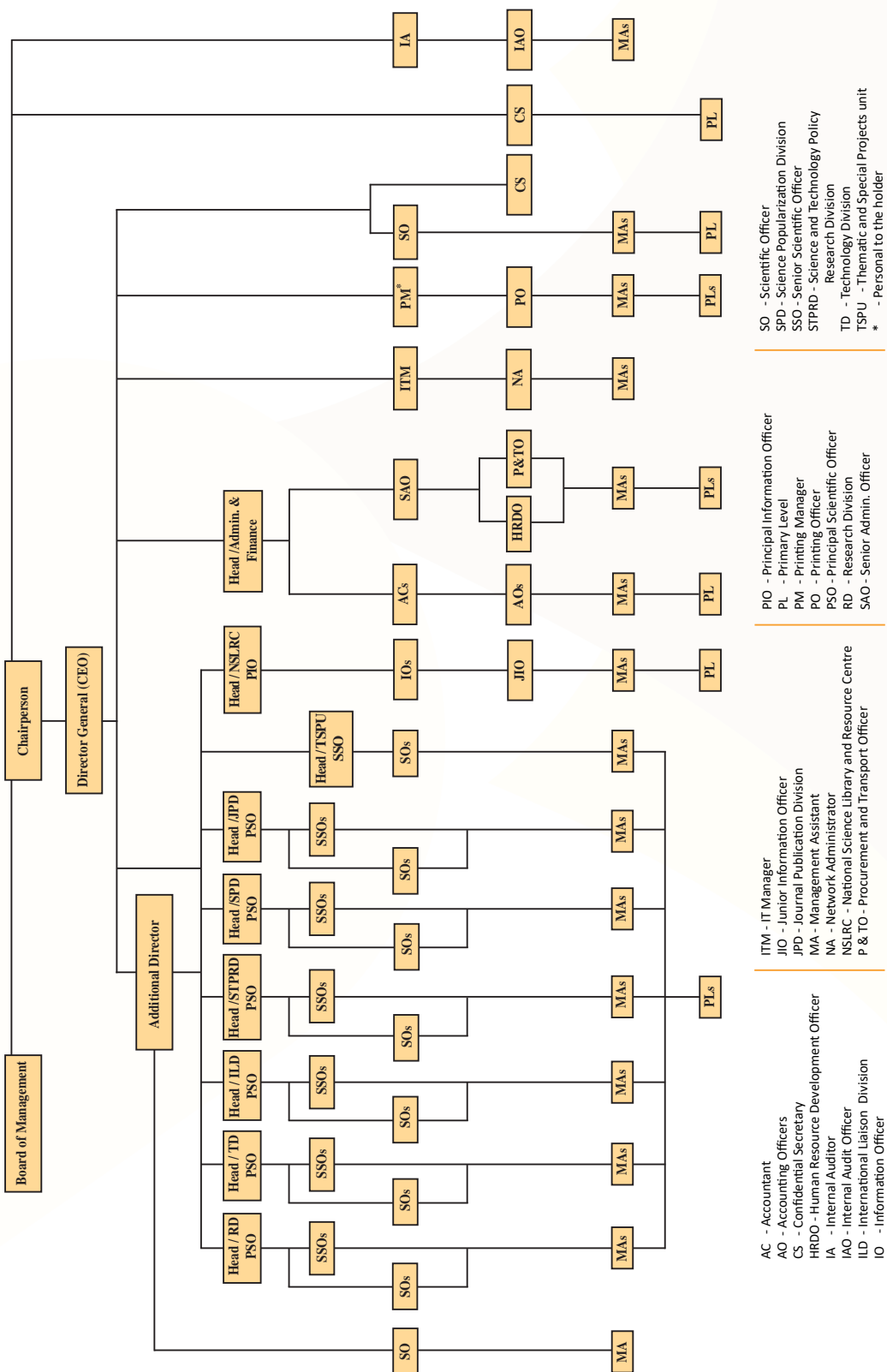
Mr R M D K G N Ranatunga (*w.e.f. 29<sup>th</sup> January, 2020 - to date*)  
Additional Director General  
Department of Treasury Operations  
Ministry of Finance



Dr Premasiri Mapalagama (*w.e.f. 29<sup>th</sup> January, 2020 - to date*)  
Consultant Pathologist  
General Hospital  
Matara



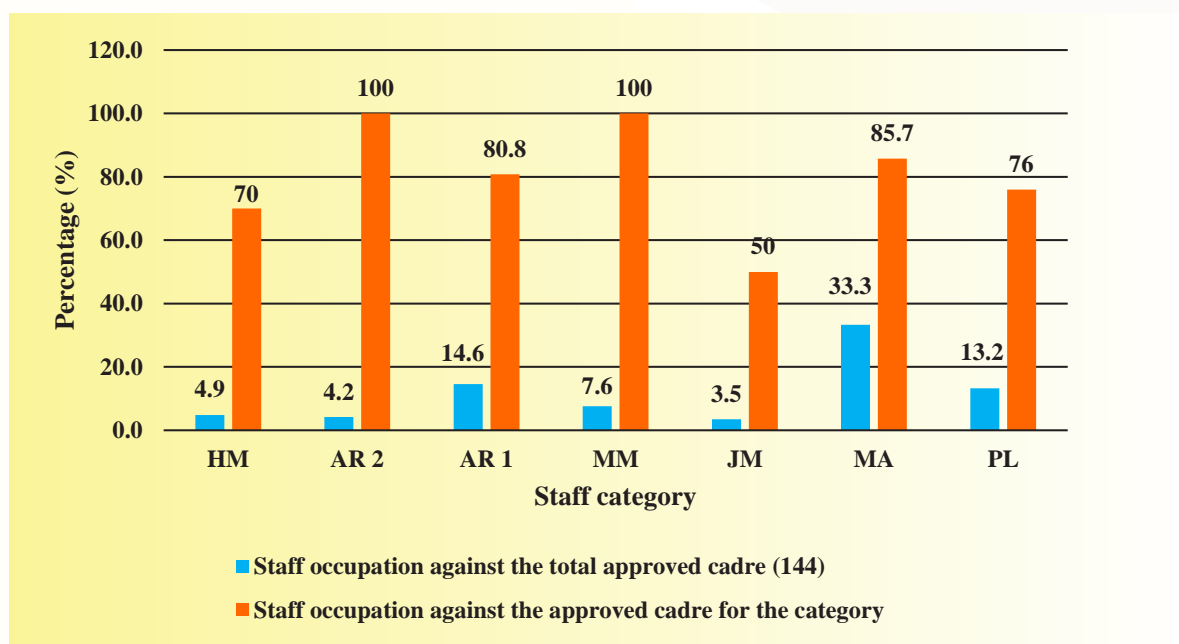
**Organizational Structure (OS) - National Science Foundation**



The NSF functions with an approved cadre of 144. A complete review of the NSF staff occupation is given in *Table 1* and is graphically presented in *Figure 01*.

**Table 1:** Staff distribution based on category

Category	Year					
	As of 2019.12.31			As of 2020.12.31		
	Approved	Existing	Vacant	Approved	Existing	Vacant
HM	10	9	1	10	7	3
AR 2	6	6	0	6	6	0
AR 1	26	22	4	26	21	5
MM	11	11	0	11	11	0
JM	10	6	4	10	5	5
MA	55	49	6	56	48	8
PL	26	21	5	25	19	6
Total	144	124	20	144	117	27



**Figure 01:** Staff occupation against the approved cadre in 2020

The details of Principal Staff of NSF as of 31<sup>st</sup> December 2020 is given in *Annex 1*.

# External resource pool

There were 25 Committees, Advisory/Editorial Boards and a National Committee helping with the NSF. These Committees, Advisory Boards etc. were composed of eminent personnel in different subject fields and provided their expertise in carrying out NSF activities throughout at the request of NSF.

## ○ Research Advisory Board

- Working Committee on Agriculture & Food Science
- Working Committee on Basic Sciences
- Working Committee on Biotechnology
- Working Committee on Environment & Biodiversity
- Working Committee on Health Sciences
- Working Committee on Engineering, Architecture and ICT
- Working Committee on Library and Information Services
- Working Committee on Technology
- Working Committee on Science & Technology Policy Research
- Working Committee on Social Sciences
- Working Committee on Indigenous Knowledge
- Working Committee on International Liaison
- Working Committee on Bioethics
- Working Committee on "Vidurava" Science Magazine
- Working Committee on Science Popularization
- Working Committee on STEM Education

- Steering Committee on Climate Change & Natural Disasters
- Steering Committee on Food Security
- Steering Committee on Gender in STEM
- Steering Committee on Water Security
- Steering Committee on Oceanography and Marine Resources

- Editorial Board of the JNSF (Journal of the National Science Foundation of Sri Lanka)
- Editorial Board of the SLJSS (Sri Lanka Journal of Social Sciences)

## ○ National Committee on Man and the Biosphere





*The NSF continued to perform its functions with diverse nature of activities under 6 major programmes.*

Programme 1

Strengthening STI Potential (Mandate -01)

Programme 1

Providing a source for STI indicators & data (Mandate -02)

Programme 1

National gateway for knowledge dissemination (Mandate -03)

Programme 1

Science communication & outreach (Mandate -04)

Programme 1

Linking with the globe (Mandate -05)

Programme 1

Good governance & productivity improvement (Mandate -06)

Mapping with  
NPF (Vistas) & SDGs



“Vistas of Prosperity and Splendour”, is the National Policy Framework (NPF) of the government which aims at achieving the fourfold outcome of a productive citizenry, a contented family, a disciplined and just society and a prosperous nation through the 10 policies constituted in it. Aligning with its mandate, the NSF focused on achieving its objectives while keeping with the policies of the NPF. Mean while, the focus on the Sustainable Development Goals (SDGs) was also construed as in previous years aiming at progressive contribution to the national development comprehensively.

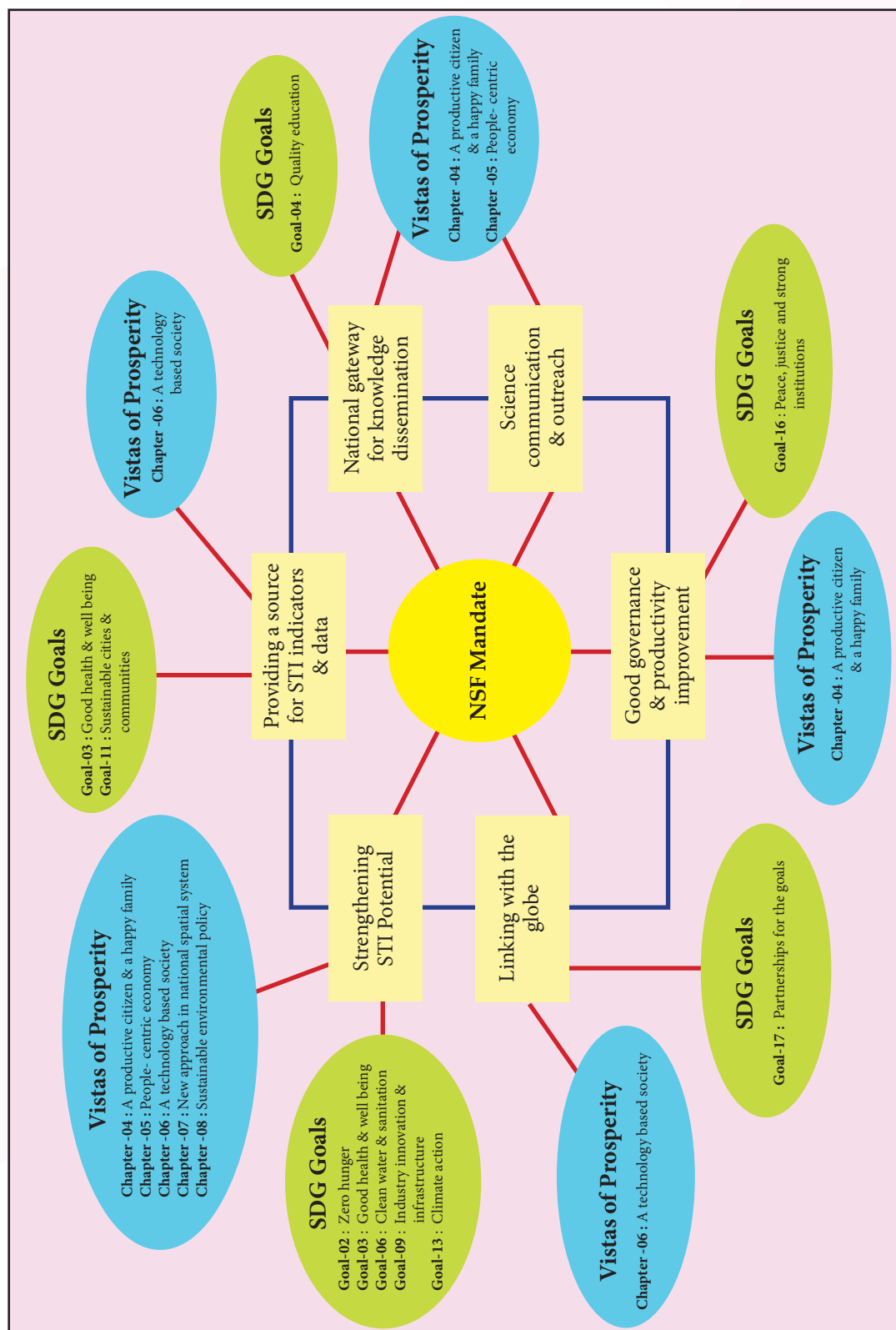


Diagram 01 : Mapping the NSF mandate with NPF & SDGs.

# Summary

The following highlights the NSF performance in 2020.

- The NSF was able to spend a sum of Rs. 82.07 million, against the allocation, Rs. 59 million to perform the functions as stipulated in the Science & Technology Development Act no. 11 of 1994. The financial progress made during the year under the six major programmes is graphically depicted in *Figure 02*.

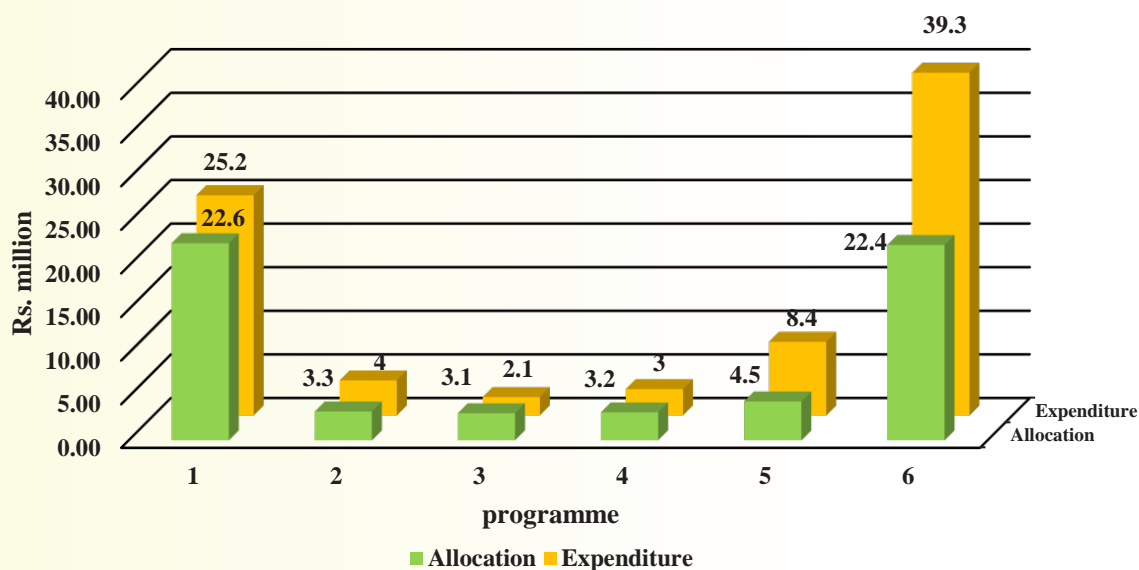


Figure 02: Financial performance 2020

- The NSF functioned with a staff of 124 at the beginning of 2020 and the figure decreased to 117 by the 31<sup>st</sup> December 2020.

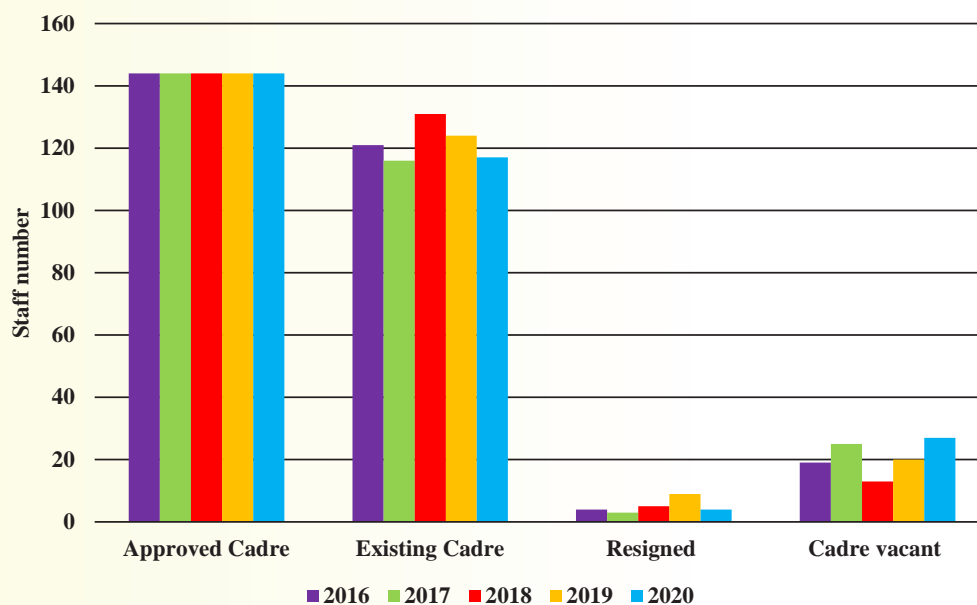


Figure 03: Staff status from 2016-2020

- Under the category “Research Institutions”, the NSF was adjudged the “1<sup>st</sup> runner up” at the Best Annual Report and Accounts Awards 2018 organized by the Association of Public Finance Accountants Sri Lanka (APFASL).



- Noting the need, the NSF developed a digital platform: Sri Lanka Intellectuals, Professionals and Scientists Forum (SLIPS Forum) to harness the expatriate global talent pool for national development in key sectors such as higher education, S&T, FDI, trade/exports, tourism, enterprises, and industry with initial emphasis to be on S&T and higher education.
- While combatting COVID-19, a wide range of lessons were learnt, many best practices were identified, and new knowledge, insights, competencies, and experiences were gained. They ought to be further studied, refined, analyzed, interpreted, and documented for the benefit of posterity. This should be done without delay lest a lot of the valuable information gathered, and the knowledge gained is lost forever.

Against this backdrop, the NSF was actively progressing to conduct a 2-day national conference titled “COVID-19: Impact, Mitigation, Opportunities and Building Resilience” under the theme “From Adversity to Serendipity” in January 2021 aiming at bringing all the key players of the relevant public and private sector institutions under one roof to deliberate and reflect on the said aspects of the pandemic to build a robust and resilient community and economy in Sri Lanka.

Ninety-four abstracts received under the six main tracks: Health, Mental health and well-being, Economy, Society, Environment, Resilience and three cross-cutting themes: Governance, Building a robust and resilient supply chain and Research, inventions and innovations. Out of these sixty-three were selected by the reviewers for oral presentations and twelve abstracts for poster presentations. These papers will be presented at three technical sessions in two parallel sessions of the conference in January 2021.

Internationally renowned scientists of Sri Lankan origin, namely Prof. Malik Peiris from Asia, Prof. Shanthi Mendis from Europe, Prof. Dilantha Fernando from North America, Prof. Raina McIntyre from Oceania, and Dr. Mahesh Nirmalan from Africa, will be sharing their expert knowledge as well as their experience from around the world of the failures and successes in other countries in combatting COVID-19. Further, ten renowned outstanding scientists and professionals in relevant fields in Sri Lanka were hand-picked and invited to contribute to the conference and the resulting volume.

The proceedings of the conference will be published in a landmark treatise which will be valuable not only to Sri Lanka, but also to the rest of the world in coping with, and mitigating the impact of, such pandemics in the future.

**National Conference on**  
**COVID 19: Impact, Mitigation, Opportunities and Building Resilience**  
Date: 27-28 January 2021  
Theme: "From Adversity to Serendipity"

**About the Event**  
The global mortality rate of COVID-19 currently lies between 5%, which is much lower than those of SARS (9.6%), MERS (35%) and Ebola (50%). However, it is more infectious and different from other pandemics in terms of the infectious period, transmissibility, clinical severity and the extent of community spread. When compared with many developed countries, Sri Lanka has made great strides in combating COVID-19 and keeping the mortality rate low. For instance, the case fatality rate (ratio of confirmed deaths to confirmed cases) thus far observed in Sri Lanka is only about 0.4% as against 1.7% in France, 14.2% in Italy, 60% in Canada, 25% in China, 3.5% in Cuba, 2.0% in India and 2.1% in the U.S. Korea is reported by WHO as 14.07.2020.

Therefore, the achievement of Sri Lanka is commendable in a global context and is among the few countries that effectively managed COVID-19. They were made possible by a combination of the relevant authorities fulfilling their mission with dedication, devotion and discretion and the resolve and effective leadership of the country at a time when the whole globe was shaken by an unprecedented pandemic.

In the course of combating COVID-19, a wide range of lessons were learnt, many best practices were identified, and new knowledge, insights, competencies and experiences were gained. They ought to be further studied, refined, analysed, interpreted and documented for the benefit of humanity. This should be done without delay but a lot of the valuable information gathered, and the knowledge gained to date.

Against this backdrop, the NSF will conduct a 2-day national conference titled "COVID-19: Impact, Mitigation, Opportunities and Building Resilience" under the theme "From Adversity to Serendipity" in January 2021. It aims at bringing all the key players of the relevant public and private sector institutions under one roof to deliberate and reflect on the above aspects of the pandemic as well as build a robust and resilient community and economy in Sri Lanka.

The proceedings of the conference will be edited and published in a landmark treatise which will be valuable not only to Sri Lanka, but also to the rest of the world in coping with, and mitigating the impact of, such pandemics in the future.

**General Objective**  
To produce a comprehensive and authoritative scholarly volume on how to manage a pandemic in relation to economic, social and psychological impact.

**Specific Objectives**

- To collect, collate, synthesize, analyze, interpret, and document information and data gathered on important aspects of the impact of COVID-19
- To document lessons learnt, best practices and strategic identified interventions, and knowledge and experience gained in combating the pandemic, mitigating its impact and building resilience
- To disseminate and address much to human capital development and capacity building to plan, prepare, manage and recover in pandemic situations and build resilience
- To ascertain and address logistical deficiencies and inadequacies in infrastructure and competencies for developing effective and robust relief operations and supply chains in crisis situations
- To learn from failures and successes of other countries in combating COVID-19
- To formulate policies to combat any future epidemics and pandemics effectively with minimal impact and improved resilience based on lessons learnt

**Key Output**  
A landmark source book on "Management of pandemics with minimal impact", including a "How to" component with special focus on Sri Lanka, but with contribution from the key players in the world, making the product globally important and relevant.

**Handbook**  
Contact: +94 212 946 622  
+94 212 922 337  
Email: nsf@nsf.gov.lk

**National Conference on**  
**COVID 19: Impact, Mitigation, Opportunities and Building Resilience**  
Theme: "From Adversity to Serendipity"  
27th-28th January 2021 | BMICH, Colombo

Presenters: <https://forms.gle/4C38K13mTn3187>  
Participants: <https://forms.gle/pa5V3D7B6fc17paL9>

**Keynote Speaker**  
PROFESSOR MALIK PEIRIS  
Professor and Chair in Virology at the School of Public Health at The University of Hong Kong

**Regional Speakers**

- NORTH AMERICA**  
Prof. Dilantha Fernando  
Dean, professor and plant pathologist at the University of Manitoba, Canada
- EUROPE**  
Prof. Shanthi Mendis  
Former Senior Advisor, World Health Organization, Geneva Switzerland, and former Professor of Medicine, University of Peradeniya, Sri Lanka
- AFRICA**  
Prof. Mahesh Nirmalan  
Professor of Medical Education and Vice Dean, Faculty of Biology Medicine and Health, University of Manchester, UK
- OCEANIA**  
Prof. Raina McIntyre  
Head, Bioscience Research Program, Kirby Institute, UNSW Medicine, and Professor of Global Biosecurity & Health, Principal Research Fellow

**Special features**

- Leading scientists from North America, Europe, Africa, Asia and Oceania join online to share their knowledge and experience
- Renowned outstanding scientists and professionals in relevant fields in Sri Lanka contribute to the conference and the resulting volume
- A policy dialogue to formulate policies to combat any future epidemics and pandemics effectively with minimal impact and improved resilience based on lessons learnt

**Strategic Partners**

Ministry of Health, Sri Lanka  
Ministry of Health, Sri Lanka  
Ministry of Health, Sri Lanka  
Ministry of Health, Sri Lanka  
Ministry of Health, Sri Lanka  
Ministry of Health, Sri Lanka  
Ministry of Health, Sri Lanka  
Ministry of Health, Sri Lanka  
Ministry of Health, Sri Lanka  
Ministry of Health, Sri Lanka

- With a view to combat with COVID-19 and mitigating its impact, particularly on health and agriculture, NSF called for research and technology development & transfer.

Proposals were invited from renowned established groups of scientists and technologists in higher education and R&D institutions with a view to bring together the best S&T personnel across institutional boundaries to address urgent, high-priority concerns and issues for fast-track delivery of results, address gaps and provide necessary solutions to be delivered in a short period of time. Collaboration with private sector was also encouraged. 07 grants were awarded.

- In view of severe financial constraints faced by the NSF due to COVID pandemic, the NSF had to scrap a number of schemes/programmes continued from several years. However, the NSF introduced Partnership Programmes in late 2020 in order to supplement the outcomes (KPIs) in the action plan of 2021. Partnership Programmes are multidisciplinary, interdivisional and interorganizational where only a role of facilitation is done by NSF in various aspects to reach the goals of the National Policy Framework "Vistas of Prosperity" keeping in line with the NSF mandate. Funds for these programmes are drawn by the benefitted institutes/stakeholders. All staff of the NSF irrespective of Divisions they were attached to, could form teams and come up with innovative ideas to implement programmes. Seven concept papers such formulated were taken forward to 2021 to work on.



## Programme 1

*Promoting R&D and Innovation and helping to create a knowledge-based economy by all categories of people in the country is the main function of the NSF.*

To support research with high impact directed towards socio-economic development of the country, the NSF called for applications and Expressions of Interests (EoIs) to conduct research and technology development in all fields of science & technology including social sciences. 212 research grant applications and 51 EoIs for technology development grants were received for consideration for funding. 21 applications were approved for award of grants. Details of grants approved for funding in 2020 are given in *Annex 02*.

The details of new grants awarded under covid call is given in *Annex 03*.

**Table 02: A status summary of R&D grants**

Field/s	No. of ongoing projects during the year			No. of completed projects during the year			Total number of projects taken forward to 2021		
	Basic	Applied	Product Development	Basic	Applied	Product Development	Basic	Applied	Product Development
Agriculture	03	04	03	01	-	-	02	04	03
Biotechnology	04	02	-	01	-	-	03	02	-
Basic Sciences	04	13	04	02	02	01	02	11	03
Engineering, Architecture & ICT	01	10	04	01	01	01	-	09	03
Environment & Biodiversity	12	04	-	07	02	-	05	02	-
Health Sciences	10	08	-	05	03	-	04 (one was withdrawn)	05	-
Indigenous Knowledge	01	-	-	01	-	-	-	-	-
Social Science	01	-	-	01	-	-	-	-	-
Cinnamon	01	-	05	-	-	-	01	-	05
Climate Change & Natural Disaster	-	05	-	-	-	-	-	05	-
RPHS	-	18	-	-	-	-	-	18	-
COVID related Research	-	04	03	-	-	-	-	04	03
<b>Total</b>	37	68	19	19	08	02	17	60	17
<b>Grand Total</b>	<b>124</b>			<b>29</b>			<b>94 (one was withdrawn)</b>		



Monitoring of 78 ongoing research grants were being progressed at sixteen (16) institutions including universities, research institutes and government departments (*Figure 04*). A total of two hundred and thirteen (213) researchers (PIs and Co-Is) were benefitted from these grants. Progress of 09 technology grants were monitored where 06 institutions & 03 individuals were benefitted. The details of ongoing grants in 2020 are given in *Annexes 04 & 05*. During the year, 17 New Research Students registered for postgraduate degrees and 16 postgraduate degrees (05 PhDs and 11 MPhils) were completed. A status summary of research grants is given in *Annex 06*. Two progress review seminars were conducted to assess progress of ongoing projects in the fields of Basic Sciences and Engineering, Architecture and Information Communication Technology.

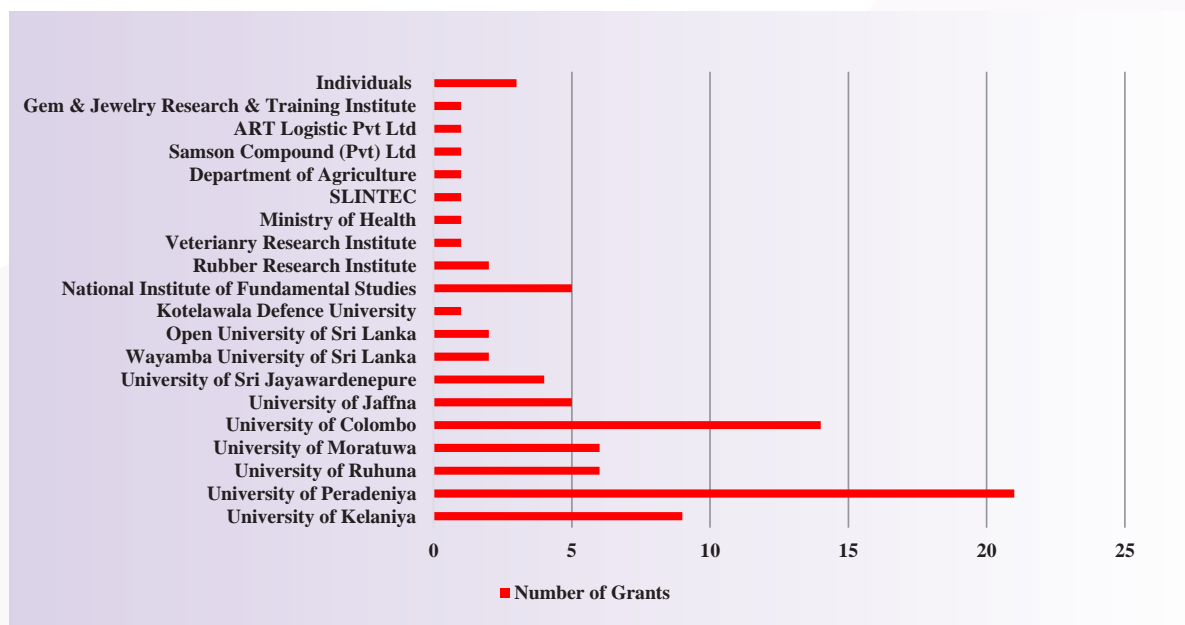


Figure 04: Ongoing grants facet in 2020

Sponsorship of Rs. 1.5 million was received from “Vishva Parami Trust” to develop prototype ventilators to combat with COVID 19. Two grants were awarded to University of Ruhuna and National Institute of Fundamental Studies (NIFS) utilizing this fund.



A total of twenty-seven (27) research grants and 02 technology grants were completed in 2020. Details are given in *Annex 07*.

A total of 92 publications have resulted from ongoing research grants in 2020, including 26 foreign publications, 08 local publications and 58 communications (*Figure 05*). In addition, 02 patents were obtained and 02 patents were filed out of the research results arising from grants awarded in the fields of Biotechnology and Health Sciences.

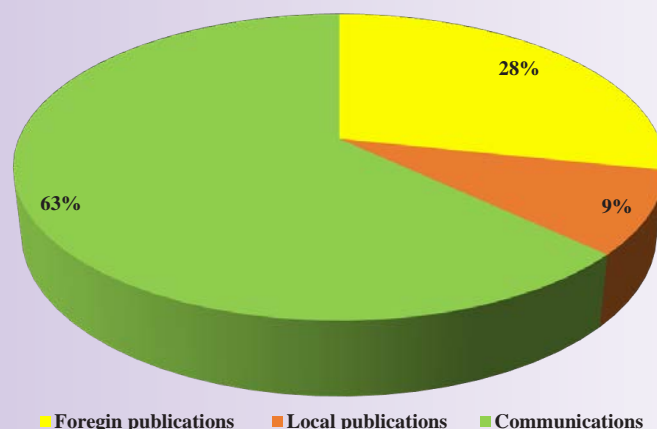


Figure 05: Publications arising from research grants in 2020

Keeping with the mandate to assist improving S&T infrastructure in the country, 04 Equipment Grant applications were processed and 02 grants were approved for funding. The details of these grants are given in *Annex 08*.

Support Scheme for Supervision of Research Degrees (SUSRED) was in operation with the objective to motivate, support and recognize scientists/engineers engaged in supervising postgraduate students conducting research in all areas of Science and Technology. Nineteen (19) supervisory teams (14 PhD and 05 MPhil degrees completed during 2018 and 2019) were selected for the SUSRED awards 2020. The details of the award winners are given in *Annex 09*.

### **Impact evaluation of completed Technology Grants**

A brief report on the survey on impact evaluation was prepared based on the responses received. Response rate was 48.4% for the 31 number of actual circulation.

### **Leveraging Cinnamon research**

The Special Project on Cinnamon (SPC) was, completed in August 2020. Five universities conducted five different research projects under the SPC.

The five projects were successfully completed with the following outputs.

- Chemical fingerprint of Ceylon Cinnamon and its wild varieties were confirmed. Genome of *C. zeylanicum* was assembled for the first time in the world. Uniqueness of Ceylon Cinnamon including *C. zeylanicum* and wild varieties were identified in comparison with other varieties in the world by assembling the complete chloroplast genomes and complete transcriptome of *C. zeylanicum*.
- Sixteen (16) superior germplasm accessions of Cinnamon were identified to be used at clonal propagation and for breeding programs. A natural antioxidant incorporated latex gloves was produced successfully using cinnamon leaf oil extracts. A nutraceutical to control hyperglycemia (type 2 diabetes) was developed using pressured water extract method.
- Scientific know-how on dependence of chemical constituents of Cinnamon along with the biochemical profile on distinct factors such as maturity, agroecology, and plant part on quality of quantity of Ceylon Cinnamon was developed.

- A comprehensive literature survey on Cinnamon value chain was done. A data base, website, market landscape, geographical distribution maps of cinnamon plantations, soil and land use maps for major cinnamon growing areas, wide cinnamon decision support system, prototypes of cinnamon based products including cinnamon tea and yoghurt and ten (10) monographs were produced.
- Monographs on "Economics on Ergonomics", "Traceability in Cinnamon Value Chain", "A Guide for the Quality and Safety Standards Application for the Cinnamon Industry" were published.



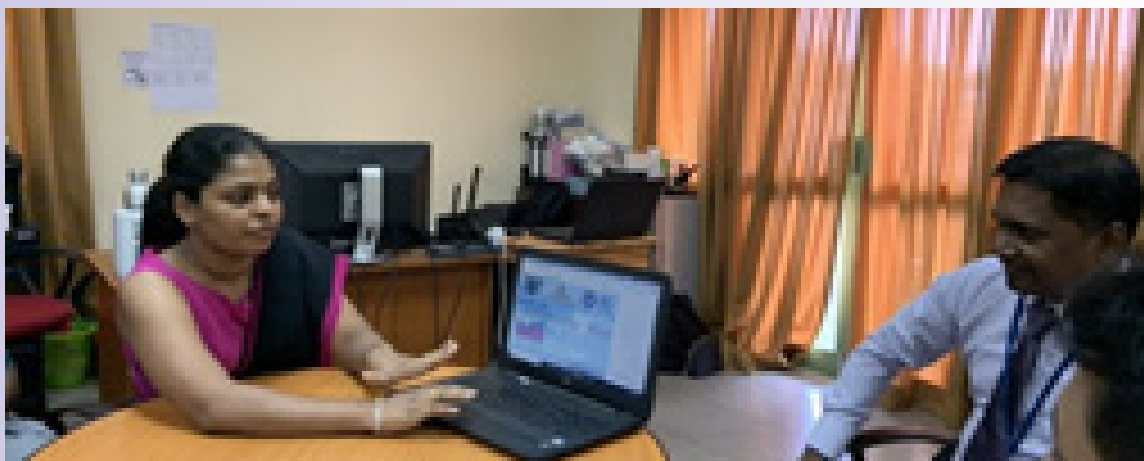
## Leveraging health research under special project - RPHS

Research Programme on Health Science (RPHS) was in progress since 2016.

A web-based live update cancer patient information system is developed in Maharagama Cancer Institute, NHSL and Kalubowila Hospital as an outcome of the research project titled "Development of live update web-based information system" conducted by Dr Pubudu De Silva of National Intensive Care Surveillance Unit (NICSU), Ministry of Health. The system can be accessed through the link <https://nicst.com/iframe-abdominal-dev/>. The NSF visited the Cancer hospital and National Intensive Care Surveillance Unit in early 2020 to monitor the progress and the functionality of this system.

The burden on the CKD and CKDu on healthcare resources including renal dialysis services in Sri Lanka is poorly understood. Although the renal registry of Sri Lanka has linked dialysis units to obtain information of CKD/CKDu patients, information is incomplete and as such, prevalence and epidemiological landscape remains unclear. Under the Project "The burden from CKD/CKDu on dialysis units in Sri Lanka", conducted by Dr Pubudu De Silva of MoH, harnessing of electronic data methods were proposed to enrich and describe surveillance information that can be accessed through dialysis units. Now the Data on the burden of CKD/CKDu in dialysis units in Sri Lanka is available online at <https://nicst.com/iframe-renal-dev/>.





*Staff of NICSU explaining the system*

Development of a comprehensive database/dash board for surveillance of Dengue in the country is one of the major objectives of the RPHS. This proactive dengue management system, a mobile application prototype, has features to display educational information, dengue statistics and basic alerts based on location. Discussions were held with the Ministry of Health to implement the system incorporating the dash boards developed through other projects in the country. This modeling platform helped predicting COVID statistics too.

### **Facilitating intellectual property (IP) protection and awareness**

NSF-TISC Center continuously operated and delivered services to the inventors which included providing IP search reports, consultancy on IP search, patent drafting, and patenting procedure. Accordingly, 09 IP consultancies were provided.

Outputs of seven technology projects funded by the NSF were submitted to WIPO for consideration under remote mentorship programme on technology transfer and commercialization and WIPO selected three projects to support under this programme, namely; (1) Synthesis and commercialization of value-added products from Sri Lankan dolomite lime (TG/2016/Tech-D/02), (2) Introduce most effective and efficient colour and clarity enhancement methods for semi-precious gem minerals found in gem gravel beds in Sri Lanka (TG/2016/Tech-D/05), and (3) Manufacturing of Compost Blocks using invasive freshwater plants and introduce to the market (TG/2016/Tech-D/08).



*NanoPCC/N-Rubber composite processing and characterization*



## Highlights of the completed projects

**Grant No. :** RG/2016/AG/02

**Principal Investigator :** Dr (Mrs) Ilmi Hewajulige  
Industrial Technology Institute  
Malabe

**Project Title :** Biodiversity and technological potential of microflor from selected Sri Lankan dairies

Dairy foods offer a significant promise in reducing malnutrition in many communities in the world. Microbial diversity of dairy environments presents an enormous, largely unexploited genetic and biological pool that could be utilized for the recovery of new strains. Preserving and controlling the microbiological quality of raw milk is a worldwide concern, however, only a few studies have examined the bacterial biodiversity of raw milk and many questions exist on their role in health and disease. In this backdrop, a study was carried out to investigate the microbial diversity of raw milk produced in Sri Lankan dairies and to correlate the findings with hygienic conditions and milking practices. From over 1825 different isolates obtained, 12 Lactic Acid Bacteria and 20 Yeasts possessed strong probiotic properties and were safe for live consumption. In addition, the pool of isolates comprised of potent candidates with antimicrobial, cholesterol lowering, exopolysaccharide producing, amylolytic and milk technological properties and therefore, could be utilized for functional food formulations.



Furthermore, the microorganisms isolated and identified from this study has laid foundation for the establishment of Sri Lanka's first depository of authentic dairy microbial cultures for research and industrial applications within the Food Technology Section of the Industrial Technology Institute.

**Grant No. :** RG/2015/EA&ICT/01

**Principal Investigator :** Prof. R Shanthini  
Department of Chemical and Process Engineering  
Faculty of Engineering  
University of Peradeniya

**Project Title :** Optimization of the processing parameters used in the traditional sesame oil production unit (sekku) and in the screw – press oil expeller used in Sri Lanka [to enhance the quality and the consistency of the quality of sesame oil produced]

Major objective of this research was to identify parameters that help in enhancing the quality of sesame oil produced in Sri Lanka and such research had never been undertaken. This research has proven that oil quality parameters of Domestic Screw Expeller (DSE)-extracted and sekku-extracted crude sesame oil comply with oil quality standards. DSE and sekku are mechanical devices producing sesame oils without the application of heat. Seeds were prepared by traditional/mechanical means of dry cleaning, washing with water (in some cases) and solar drying and oil was clarified by gravity settling. The said features render Sri Lankan sesame oils to be categorized as virgin or cold-pressed oils which has better market value. This research clearly demonstrated that Free Fatty Acids (FFA) of freshly extracted sesame oil sample depended heavily upon the freshness of seeds and the storage history of seeds concerned, irrespective of the seed type and oil extraction equipment used.



**Grant No. :** RG/2017/EA&ICT/01

**Principal Investigator :** Dr H M I Prasanna

Department of Survey and Geodesy

Faculty of Geomatics

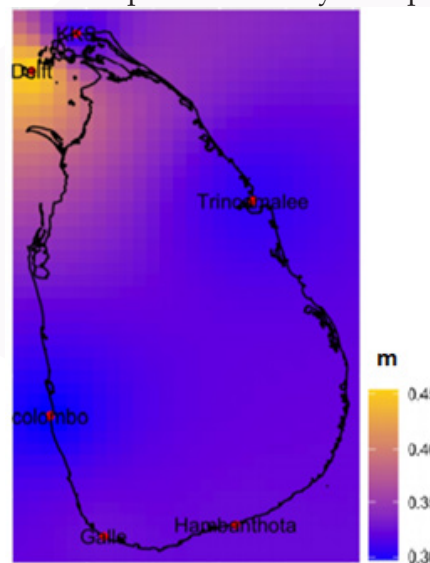
Sabaragamuwa University of Sri Lanka

**Project Title :** Development of a unified vertical reference framework for land & hydrographic surveying in Sri Lanka

The aim of this research was to develop a vertical separation model to define the relationship between the geoid, the land surveying height datum (reference surface) and hydrographic datum (chart datum) of Sri Lanka. Currently, a proper geoid model is not available for Sri Lanka. This is a major drawback for effective surveying activities (levelling) in the country. In this research, a reasonable geoid model was determined using a high resolution Global Gravitational Model (GGM) and accurate topographic data. This can be further developed in future by incorporating latest gravity based models and terrain data.



*Datum Transfer to tidal station via levelling*



*Separation between Chart Datum vs Land Survey Vertical Datum in Sri Lanka.*

**Grant No. :** RG/2016/HS/04

**Principal Investigator :** Dr Nilupa R. Amarasinghe

Department of Pharmacy

Faculty of Allied Health Sciences

University of Peradeniya

**Project Title :** Investigation of acetylcholine esterase inhibitory activity of Sri Lankan grown spices as potential therapeutic agents for Alzheimer's disease

Alzheimer's disease (AD) is the most common age related neurodegenerative disease and has become the leading cause for dementia. Dementia has long been considered an inevitable part of ageing, but recent findings have shown onset of neurodegenerative disorders like AD in the latter part of the life can be controlled by having healthy fruits and vegetables.

Spices have a long history in traditional medicine and are vital component in everyday meals in Sri Lankan society. This study investigated local spices for their potential health benefits including their ability to slow down the memory impairment in patients with AD. Out of the twelve spices subjected to testing, mace (fruit aril of nutmeg, Vasa-vasi; Sinhala, Saadikai-thol; Tamil) had a very good anticholinesterase activity indicating its potential application to treat AD. The active compound was identified as malabaricone C. Available scientific literature and these findings have shown that mace has promising activity against neurodegenerative diseases through multiple mechanisms.



**Grant No. :** RG/2016/EB/04

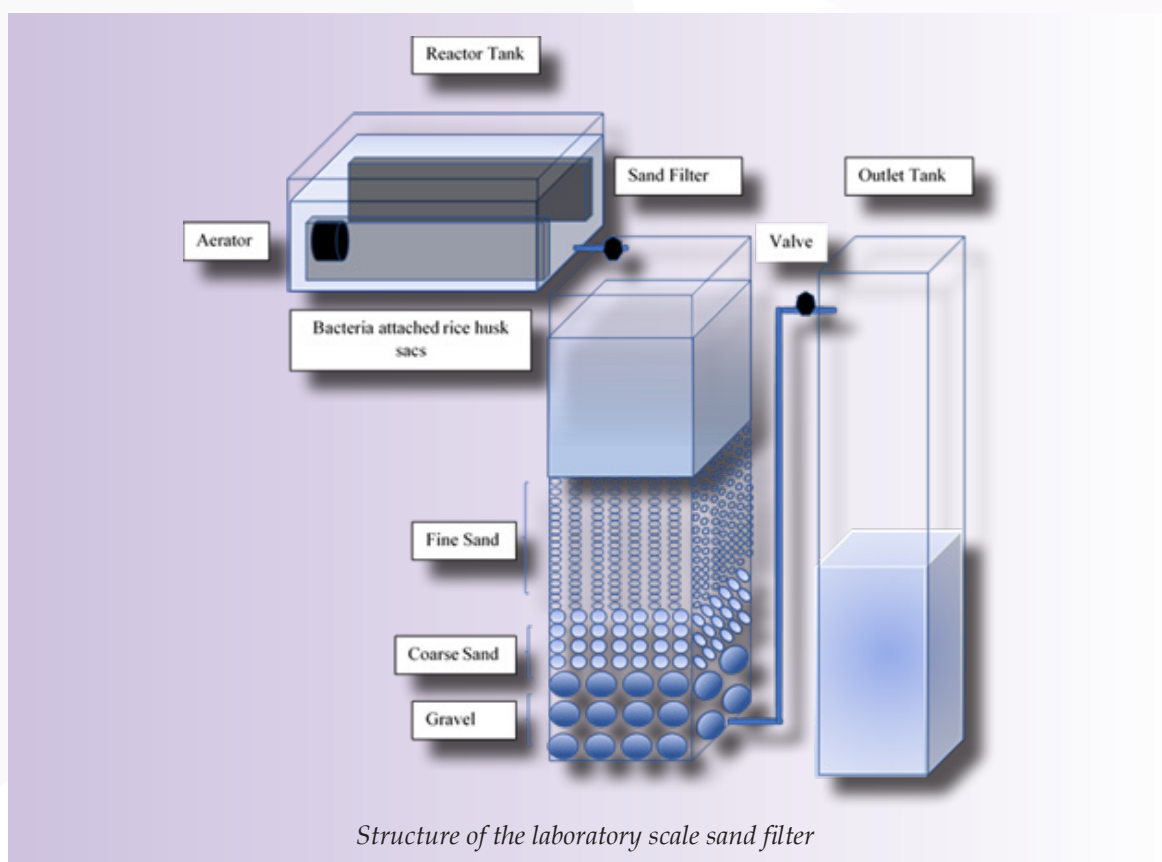
**Principal Investigator :** Prof. M M Pathmalal

Department of Zoology

University of Sri Jayawardenepura

**Project Title :** Detection and removal of geosmin and MIB (2-methylisoborneol) in drinking water by native bacteria; bioremediation approach for green solution

A major concern of water treatment utilities worldwide is the off-flavours in drinking water. Different types of compounds have been identified as causative agents of off-flavours in water. The most prominent ones are geosmin and 2-Methylisoborneol (2-MIB), which are produced by microorganisms; algae, cyanobacteria, bacteria, fungi and actinomycetes. The compounds can be detected by human nose at parts per trillion level and human threshold level is 5 ppt. The conventional water treatment methods have failed to remove the dissolved extracellular 2-MIB and geosmin and boiling at 100°C fail to remove Geosmin and 2-MIB from drinking water due to their thermal stability. Hence, the objectives of the present study were to establish a cost-effective method to detect Geosmin and 2-MIB, to identify Geosmin and 2-MIB producing cyanobacteria, isolation of Geosmin and 2-MIB degrading bacteria, study degradation kinetics of Geosmin and 2-MIB and establishing a lab scale sand filter to remove Geosmin and 2-MIB from drinking water. All the objectives given were achieved during the study period and a modified method was established to detect Geosmin and 2-MIB in water for the first time in Sri Lanka.



**Grant No. :** RG/2017/ BS/02

**Principal Investigator :** Prof. G A K S Perera

Department of Electronics

Wayamba University of Sri Lanka

**Project Title :** Synthesis and characterization of ionic liquid based gel polymer electrolytes to be used for rechargeable cells and supercapacitors

Demand for rechargeable cells and super capacitors is increasing at an alarming rate due to escalating use of various devices that require uninterrupted power. At present, rechargeable cells and super capacitors are being deeply integrated into many areas such as transport, health and industries. However, if their safety issues are not addressed properly, flora and fauna around the globe may face serious threats in the near future. In this project, the research team aimed to develop rechargeable cells and super capacitors using non-toxic materials for the electrodes and electrolyte. The special feature of these electrolytes is that apart from semi-solid nature, they were not having any plasticizers which are very toxic in nature. In place of plasticizers, ionic liquids were incorporated for electrolyte preparation. Electrodes were based on non Li metals as well as natural graphite and conducting polymers. The developed electrode materials and electrolytes exhibited appreciable electromechanical properties. Their performance was further optimized by varying the compositions. Device fabrication and characterization were also done with suitable methodologies. Many rechargeable cells and super capacitors fabricated under the project possess promising performance including durability to be used for applications upon further modifications.



*Ionic liquid based polymer electrolyte*



*Natural graphite based electrodes*

**Grant No. :** RG/2015/HS/01

**Principal Investigator :** Prof. Preethi V. Udagama

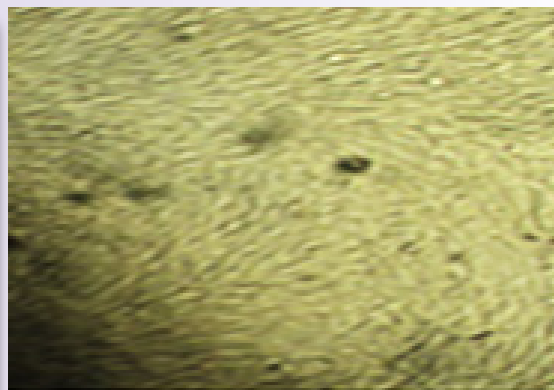
Department of Zoology

Faculty of Science

University of Colombo

**Project Title :** Proliferative, differentiation and toxicological effects of selected herbal / sponge extracts tested on in house established mesenchymal and haematopoietic stem cell lines

This study focused on screening herbal preparations of traditional medicine to seek the possibility of using plant derived natural chemicals as stem cell stimulants. Two types of stem cell lines were established in the laboratory using waste from childbirth: human mesenchymal stem cells (hMSCs) from the umbilical cord, and human blood (haemapoeitic) stem cells (hHSCs) from cord blood. The experiments identified that 2 of these herbal preparations increased cord tissue stem cell numbers, while all 3 increased cord blood stem cell numbers. In addition, one of the preparations turned cord tissue stem cells into cartilage cells, reduced fat content in fat cells and showed an anti-obesity (weight loss) effect in a rat model. If further analyzed and standardized, these preparations can be commercialized as three separate non-toxic, low cost, stem cell stimulants, a novel anti-obesity drug, and a stimulant to regenerate cartilage cells.



*Human mesenchymal stem cell (hMSC) line derived from umbilical cord*

**Grant No. :** RG/2017/IK/01

**Principal Investigator :** Prof. Raj Somadeva

Postgraduate Institute of Archaeology

**Project Title :** Human adaptations in the Middle Holocene in Sri Lanka and further techno-cultural development towards formative historical period

This research project addressed human existence and its continuity in Sri Lanka during the Holocene geological epoch. Early presence of humans in Sri Lanka during the middle and late Pleistocene has already been proven by archaeologists and physical anthropologists. However, the continuum of their existence towards Holocene has not been scientifically questioned. Under this research project six prehistoric caves were archeologically investigated by a team of archeologists to obtain material evidence to affirm the techno-cultural characteristics of the Holocene.

Most striking evidence unearthed was a collection of plant residues (charred seeds) that has been dated to the mid-Holocene (4500-3450 BCE) suggesting an emergence of a new cultural behavior by the Holocene hunter-gatherers. These specimens were excavated from Lunugalge and Alugalge rock-shelters.

Excavated samples including wild millets other plant materials, grindstones and some beads made out from animal teeth and bones dated around 3500 to 5000 BCE. Evidence reflecting an emerging new materiality of those prehistoric communities was identified. The sites and the artifacts together with Carbon-14 dates reiterate the fact that the hunter-gatherer/foragers of the mid/late Holocene had been receptive to the climatic changes of the contemporary period and the adaptive response is reflected in their material culture.



*A view of Lunugalge rock shelter excavated in Ilukkumbura. It was partly dug out by treasure hunters*



*One of the excavated seeds identified as the variety of Oryza sp. (x 40)*



*Some prehistoric beads made out from animal teeth and bones recovered from the excavation at Alugalge rock shelter (Cal. BC 3505 to 3452)*

**Grant No. :** TG/2016/Tech-D/06

**Principal Investigator :** Mr. Sunil Rodrigo  
Lilly cheese (Pvt) Ltd

**Project Title :** Formulation of whey-protein rich energy beverage

Technology development work carried out by a SME sector dairy product manufacturer, led to introduce nutritionally rich energy beverage from whey protein. Properties and composition, shelf life of the product was tested at the Industrial Technology Institute.

The product comes to the market in different natural flavours such as ginger, passion fruit, blue berry, soursop but apple as an artificial flavour.



## National Biosafety Project

The National Biosafety project, “Implementing Biosafety for safe use of Genetically Modified Organisms in Sri Lanka”, is executed by the Ministry of Environment along with Food and Agriculture Organization (FAO), Sri Lanka. The NSF was identified as a technical support provider for component 2 and part of component 4 of the project in March 2019. The project was in progress in 2020.

Under component 2, following guidelines were formulated and finalized, together with international and national experts in 2020.

1. Guidelines for the conduct of confined field trials of genetically modified plants in Sri Lanka
2. Guidelines for the environmental risk assessment of genetically modified plants in Sri Lanka
3. Guidelines for the safety assessment of food derived from genetically modified plants in Sri Lanka
4. Guidelines for testing of genetically modified mosquitoes in Sri Lanka
5. Guidelines for the Institutional Biosafety Committees
6. Risk analysis framework
7. Guidelines for the safe use of GMOs/LMOs in the laboratory



Main objective of formulating guidelines was to ensure that any research or handling products related to genetic modification are done with full caution. 07 Training programmes were conducted by international and national experts for potential local participants introducing guidelines.

Under component 4, outreach material in the form of books and videos and a glossary were developed. All these activities were done in 2020.



## Survey on high-end analytical and testing equipment

The NSF launched a survey on existing high-end analytical and testing equipment available in state universities and R&D institutions in the country. A database has been developed with collected information and is under testing. Individual profile pages have been created for each equipment with technical information and expertise available for operation & maintenance. survey is still in progress and will be continued in 2021.

## Partnership Programmes - Kithul Project

The NSF took initiatives in collaboration with the University of Ruhuna for enhancement of the Kithul industry in Sri Lanka through improved productivity and processing, value addition and product standardization. This initiative paved the way to develop quality commercial products with high market demand, standardization of sap in terms of quality to preserve its authentic and original values, introducing new standards and standardized quality procedures to easily identify the substandard Kithul products in the market. In addition, the NSF geared into gathering knowledge on Kithul cultivation and cultivation related production process by conducting livelihood basement analysis in Kithul farming community. Improvement of tools and equipment used for treacle production and establishing community health needs through assessment were also in the focused agenda to be continued in 2021.

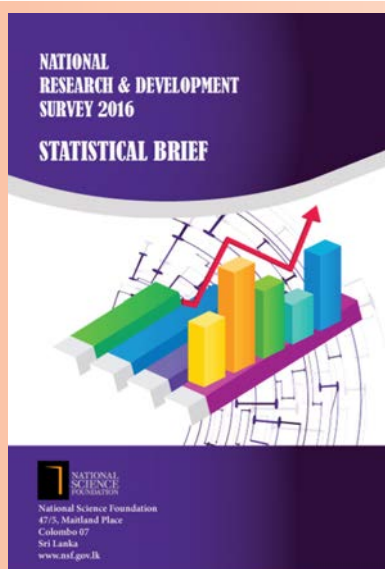
## Programme 2

*Being the apex body to provide information on the S&T sector to the stakeholders, and to be updated and resourceful, the NSF continued with the 2 major activities under this programme. Accordingly, the NSF conducted its regular R&D survey and activities relative with STMIS as explained below.*

### National Research, Development and Innovation (RDI) Survey

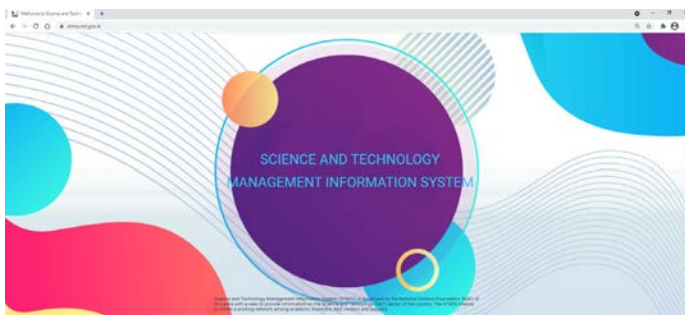
National Research, Development and Innovation (RDI) Survey which measures and reports the status of research and development activities of the country in terms of resource deployment and generating outputs, produced the Statistical Briefs of surveys for 2016 and 2017. Data collection, and analysis for the survey 2018 was completed and a Provisional Statistical Brief was published.

As a result of the partnership established with the Department of Census and Statistics, a significant response rate could be obtained for the Business Enterprise sector improving the representation and data quality of the Survey. The Survey is conducted based on international standards laid out by the Organization for Economic Cooperation and Development (OECD). The scope of the Survey encompasses the Higher Education sector, Government R&D Institutions, Business Enterprise sector, Private Nonprofit Organization sector.





## Science and Technology Management Information System (STMIS)



Science and Technology Management Information System (STMIS), <https://stmis.nsf.gov.lk>, is a computerized information system developed and maintained by the NSF since 2004. The work on the database was in progress throughout the year with updates.

<https://stmis.nsf.gov.lk> The STMIS contains information on S&T related institutions & personnel, advanced scientific equipment available, ongoing research activities, technologies developed and transferred by the institutions, services and training programs offered by the S&T institutions for the general public & research publications done by the individual scientists.

The database is enriched with additional features such as infographics to depict the number of members by expertise, qualifications, age, gender & institutions. At present there are 6718 registrants (S&T personnel) in the STMIS database of which 225 are new registrants in 2020. The database is used for information dissemination as well as generating customized reports based on the requests. Accordingly, 29 circulations were done, and 11 reports were produced and submitted to relevant authorities.

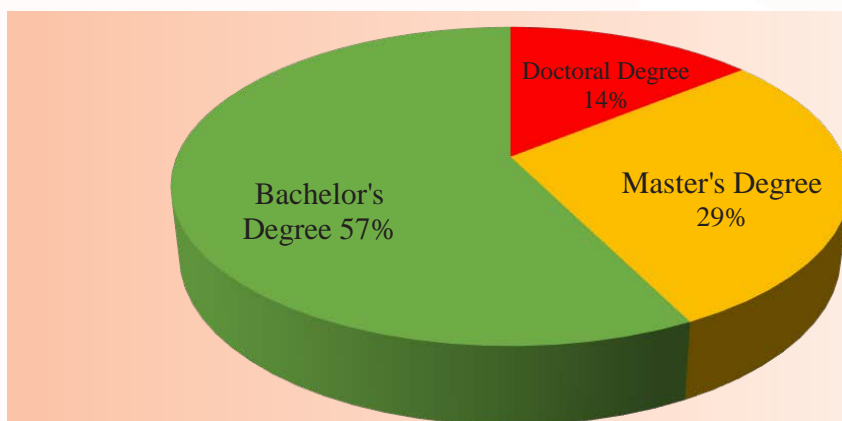


Figure 06: Members by qualification

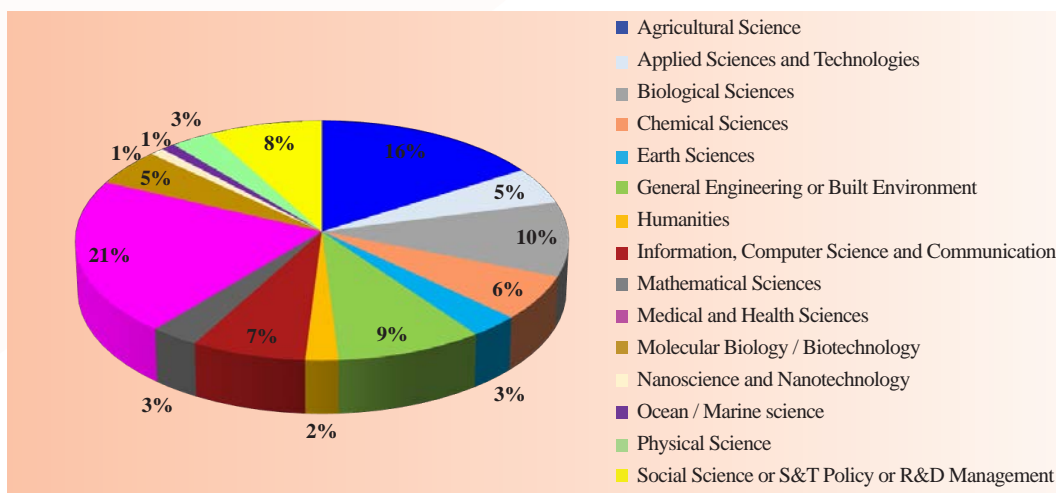
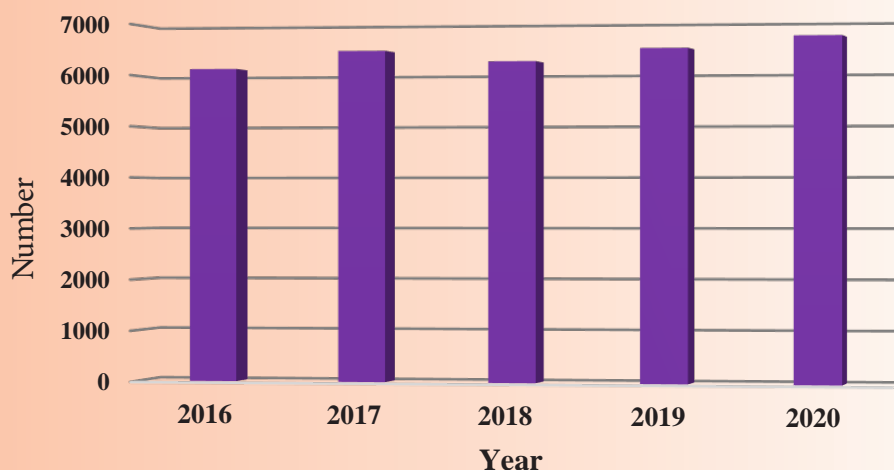


Figure 07: Members by expertise areas



**Figure 08:** Number of S&T personnel registered in the STMIS during 2016-2020

STMIS contains a portion of sharable data according to a Data Sharing Policy ensuring access of data for non-commercial legitimate purposes with NSF's proprietorship. By providing wider access to the database, it is anticipated to avoid any duplication of this public funded asset.

### **Creating a platform to discuss prevailing issues in research commercialization**

A stakeholder meeting on "Challenges in Research Commercialization in Sri Lanka" was held on 06<sup>th</sup> February 2020 in the NSF with the participation of more than 25 stakeholder institutions such as Business Linkage Cells in State Universities, government research institutions, Ministries, Chambers, and other state institutions. Extensive discussion on different facets of common issues took place while sharing own experience among the participants. Among the factors hindering successful research commercialization, less conducive regulatory/administrative frameworks, inadequate knowledge & entrepreneurship skills, issues pertaining to intellectual property protection and mismatches between supply side and demand side and poor linkages were identified as key issues for follow up and take remedial action.





### Programme 3

*Fostering interchange of scientific information is one of the key functions of the NSF. Empowered by the S&T Development Act No. 11 of 1994, the NSF provides access to scientific and technological literature and related information to all the stakeholders, in the country.*

## Information services & knowledge dissemination

10,112 new records were added to online databases in 2020. Also, 30,476 records in these databases were updated and 12,426 items in the old databases were rearranged and migrated to three new databases.

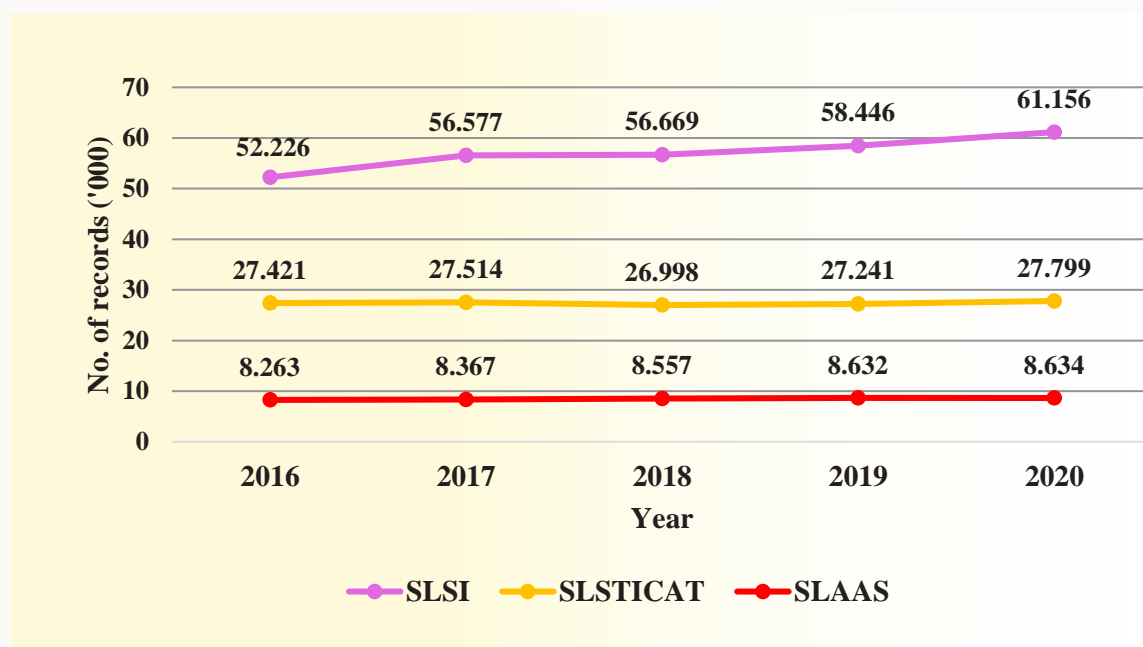


Figure 09: Growth of Databases (2016-2020)

## Sri Lanka Journals Online (SLJOL) performance

Sri Lanka Journals Online (SLJOL) (<https://www.sljol.info/>) operated by the NSF in collaboration with Ubiquity Press, UK shares the local knowledge of full range of academic disciplines worldwide. The SLJOL, a conglomeration of ninety three (93) Sri Lankan peer reviewed journals is a member of the Journals Online (JOL) project established by International Network for the Availability of Scientific Publications (INASP) of the United Kingdom (UK).

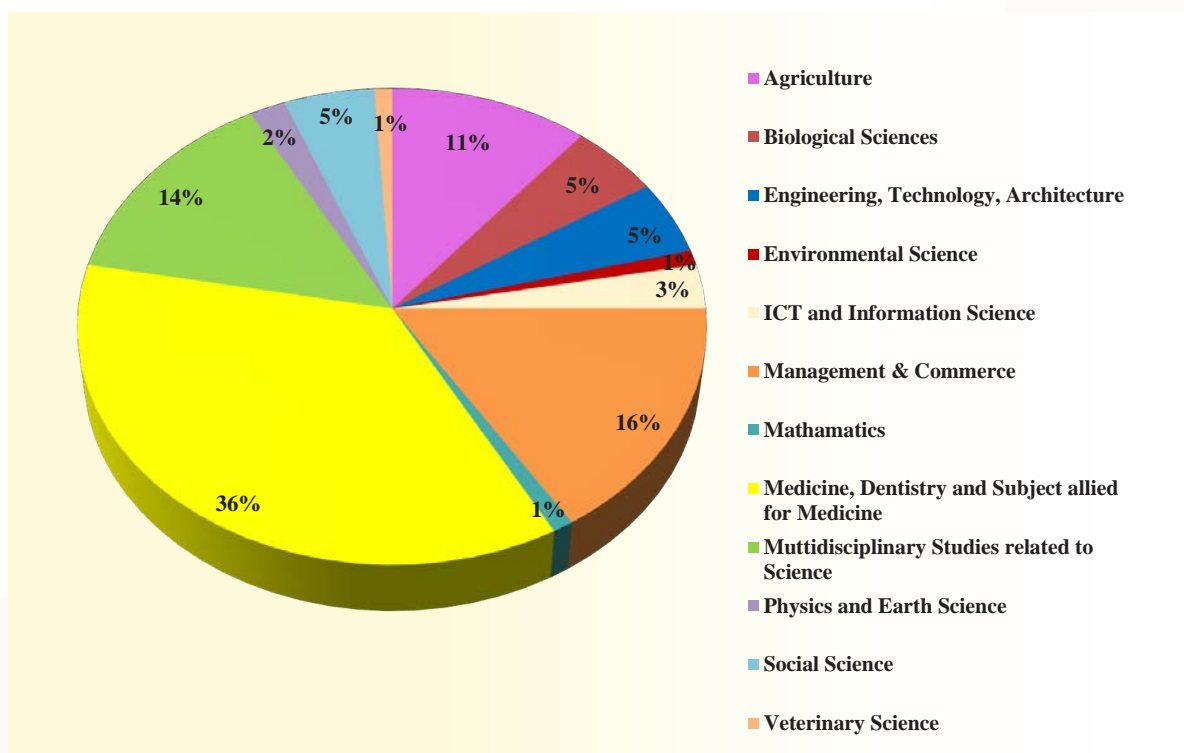


Figure 10: Subject coverage of SLJOL

In 2020, 1544 research articles of 185 journal issues were published on SLJOL.

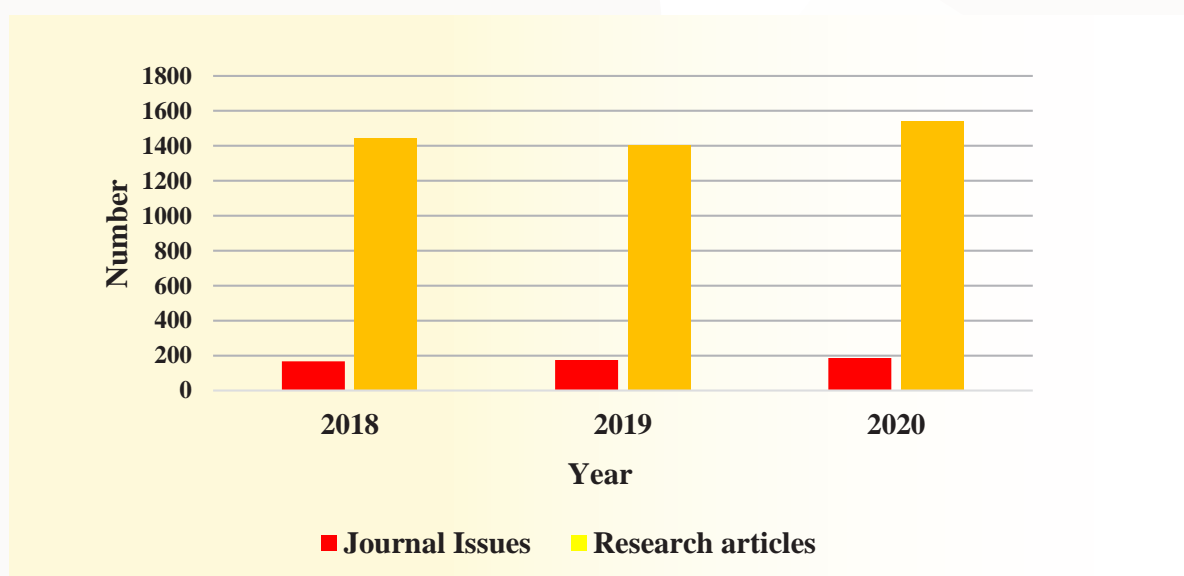


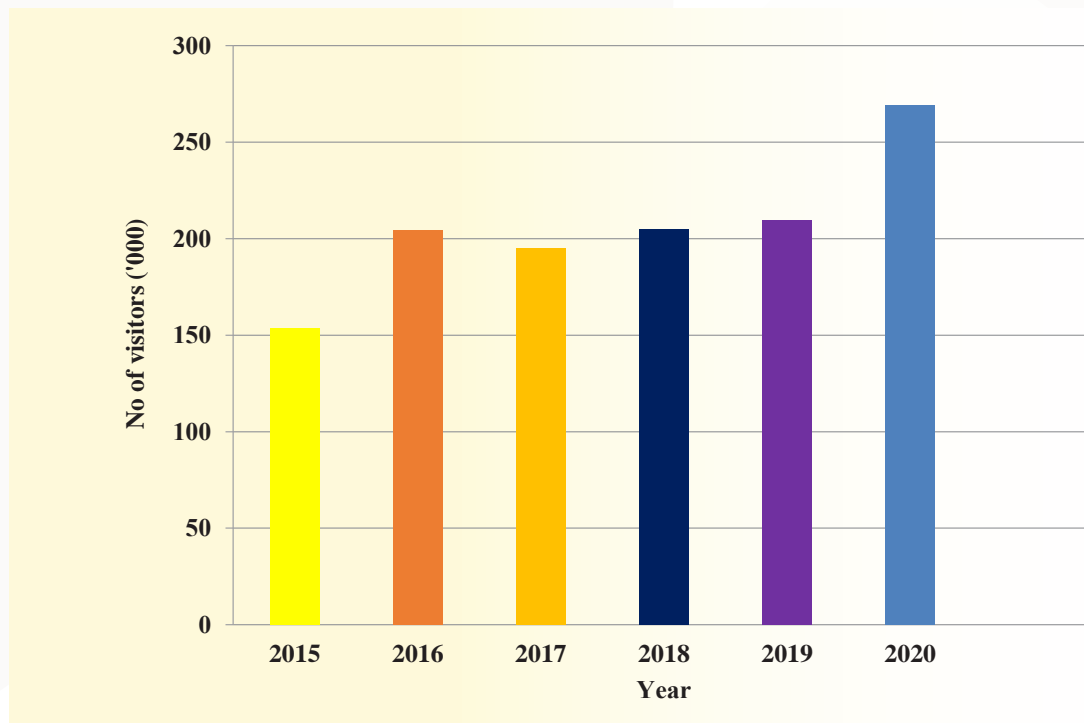
Figure11: Growth of the SLJOL (2018-2020)

According to the statistics given in Google analytics, 269,269 viewers have been recorded from 210 countries and 129,230 full text articles have been downloaded globally from SLJOL in 2020.

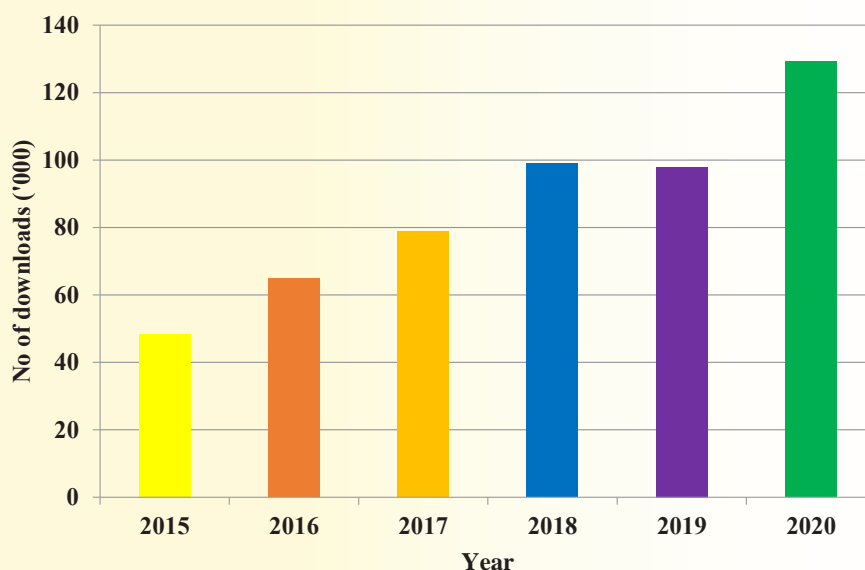
**Table 03:** Global usage of SLJOL (top thirty-six countries)

Country	Users	Country	Users	Country	Users
Sri Lanka	111,827	Japan	3605	South Korea	1182
India	30,456	Canada	3471	Ethiopia	1146
United States	21,066	Bangladesh	2035	Italy	1031
Philippines	14,619	United Arab Emirates	1947	Saudi Arabia	1029
China	9,308	Turkey	1728	Netherlands	1003
United Kingdom	6,041	Brazil	1721	South Africa	984
Australia	4,930	Germany	1718	Mexico	935
Indonesia	4,879	Ireland	1666	Spain	799
France	4,117	Thailand	1403	Hong Kong	763
Pakistan	4,000	Nepal	1361	Vietnam	759
Nigeria	3782	Singapore	1359	Kenya	752
Malaysia	3680	Egypt	1210	New Zealand	648

As shown in the following figures, usage of the SLJOL from 2015-2020 has increased considerably and full text downloads from SLJOL have been boosted during the pandemic.

**Figure 12:** Visitors of SLJOL given on google analytics (2015-2020)



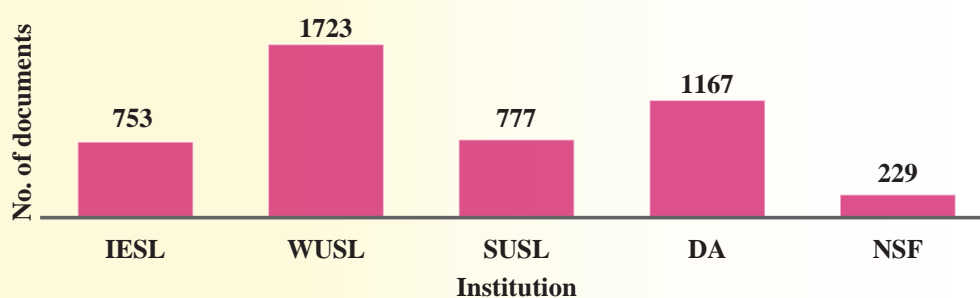


**Figure 13:** Fulltext downloads from SLJOL given on google analytics (2015-2020)

Currently 13 journals covered by the SLJOL are indexed in DOAJ which is a community - created online directory that indexes and provides access to high quality, open access, peer reviewed journals.

### Performance of the National Digitization Project

Keeping with its mandate, the NSF continued with the National Digitization Project (NDP) facilitating access to a wealth of S&T literature scattered across key S&T institutions in the country. NDP Phase III was in progress during 2020.



IESL - Institution of Engineers

DA - Department of Agriculture

WUSL - Wayamba University of Sri Lanka

NSF - National Science Foundation

SUSL - Sabaragamuwa University of Sri Lanka

**Figure 14:** Full text articles/ documents made available for online access in 2020.

The project was progressing with provision for access to local S&T literature by the S&T community via a wider network of e-repositories of sixteen institutions which is centralized at the NSF portal, <http://dl.nsf.ac.lk/ohs/>.

## Database development

Three databases were developed as follows.

1. Bibliographic database on Non-Communicable Diseases for the University of Colombo. Medical Faculty Library. <http://database-ncds.nsf.ac.lk/CA2/>



2. COVID-19 information hub and research information platform at NSF. <http://viduketha.nsf.gov.lk/COVID19/index.html>



3. Digital repository at Sri Lanka Technological Campus (SLTC) <https://digilib.sltc.ac.lk>



## Events

A media briefing was conducted on 17<sup>th</sup> January 2020 to highlight the latest research findings of four scientists who won NSF Research Awards in 2019 in the fields of energy, dengue and plant fungi.



## Journal of the National Science Foundation (JNSF)

The Journal of the National Science Foundation of Sri Lanka (JNSF), the only Sri Lankan Journal currently indexed in the Clarivate Analytics Science Citation Index Expanded, publishes the results of research in all aspects of Science and Technology since 1973. Contents of the journal are peer-reviewed under double-blind review and in addition to Science Citation Index Expanded, the JNSF is indexed in Chemical & Biological Abstracts, BIOSIS Previews, Zoological Records, SCOPUS, TEEAL, Ulrich's, AGRICOLA, and EBSCOhost. The Impact Factor of the journal was 0.378 in 2019. Four issues of the journal are published per year in March, June, September, and December. All articles in the journal are published under the Creative Commons License 'Attribution-No Derivatives-CC-BY-ND 4.0'.

The percentage of local submissions has increased to 42% compared to the previous year being the highest percentage in the last five years. The collaborations have increased from 4% to 7% in 2020. During 2020, the highest percentage of submissions were from the field of chemistry/biochemistry (15%) followed by engineering (12%) and statistics (9%). More than 50% of the submissions represented biological sciences with the physical sciences representing around 40%.

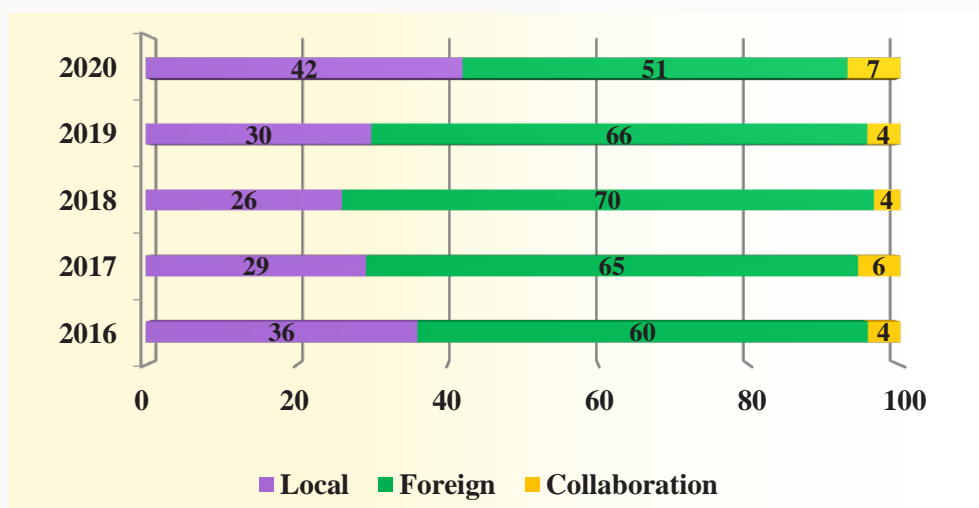


Figure 15: Percentage of submissions 2016-2020 based on origin.

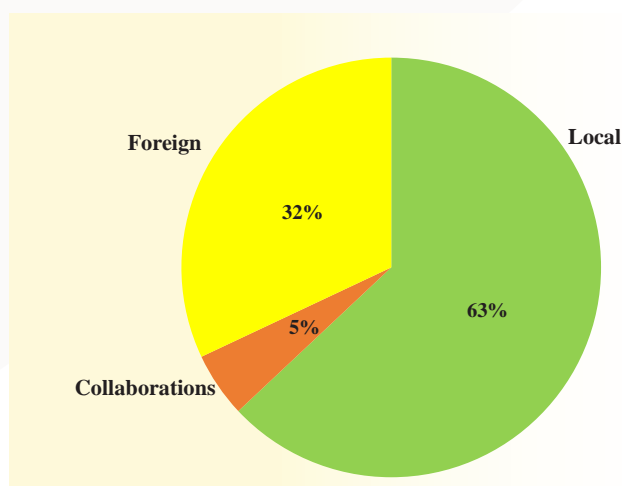


Figure 16: Origin of articles published

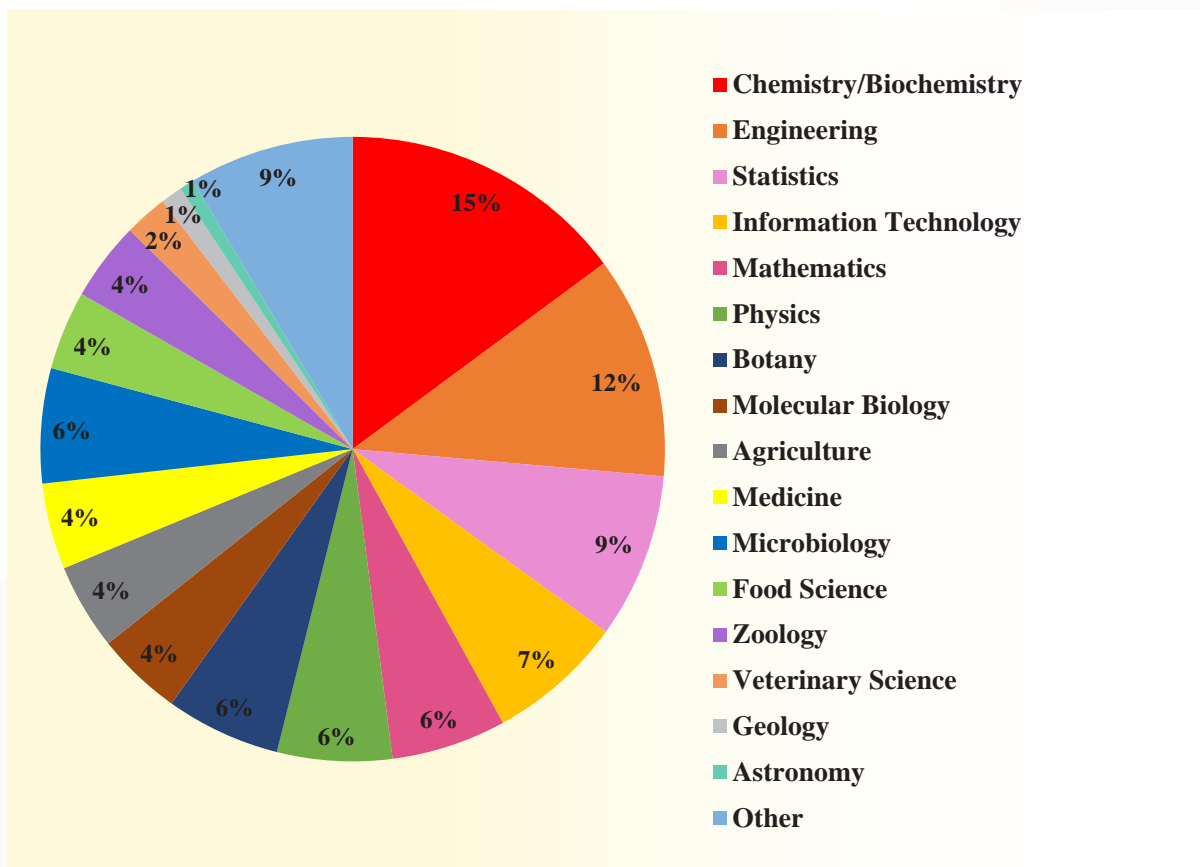


Figure 17: Submissions of articles by discipline.

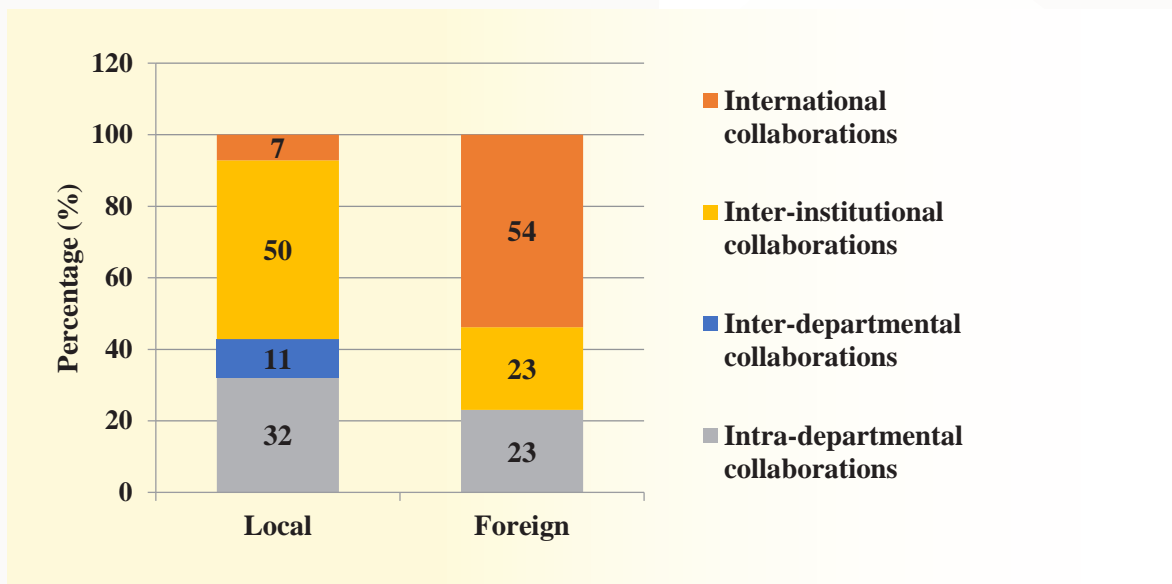


Figure 18: Collaboration status of articles published

The articles published in 2020 represented 27 local universities and institutes with the main proportion being from universities. University of Peradeniya was represented by 18% of the local authors followed by University of Colombo (14%), University of Kelaniya (10%), University of Moratuwa (8%) and University of Sri Jayewardenepura (7%).

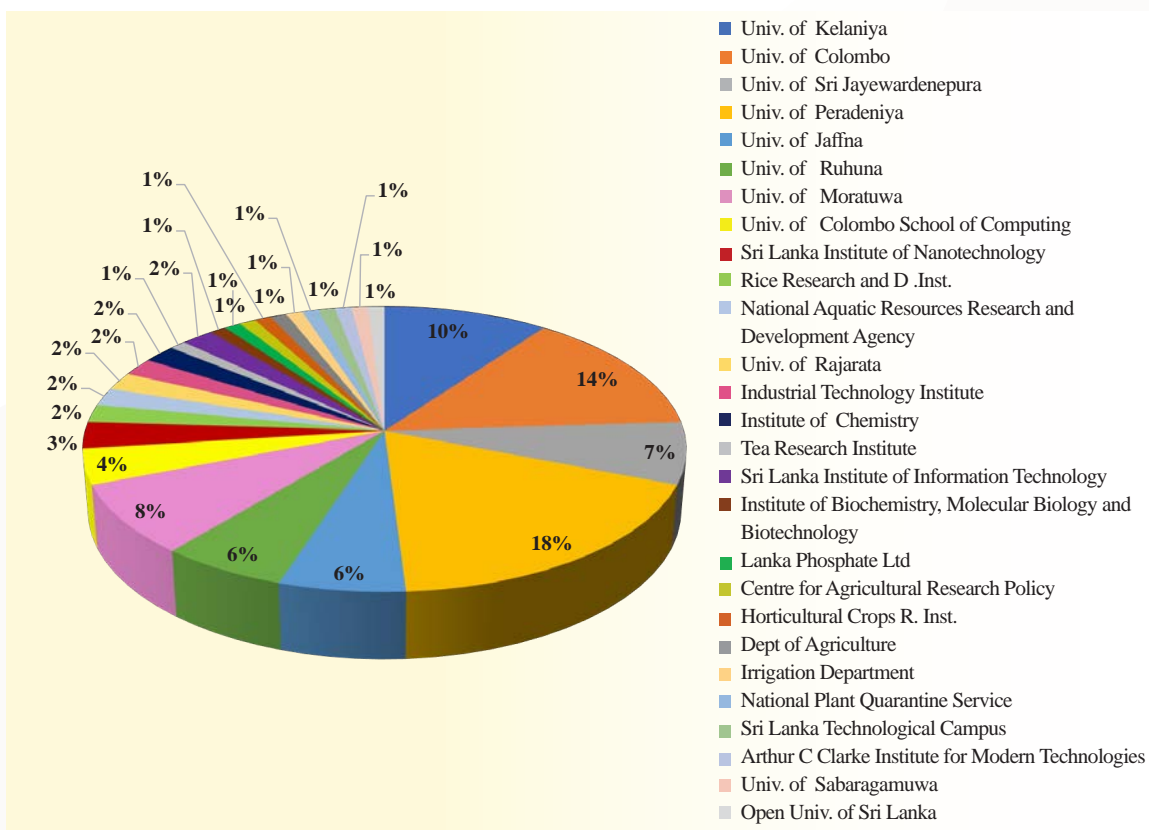


Figure 19: Reprecentage of authors by institutions.

The foreign authors represented 8 countries and the majority was from Pakistan with 42% followed by Saudi Arabia (13%), USA (11%), India (9%), Egypt (9%), China (9%), Germany (4%) and Austria (2%). These authors were affiliated to 31 different foreign universities/institutions.

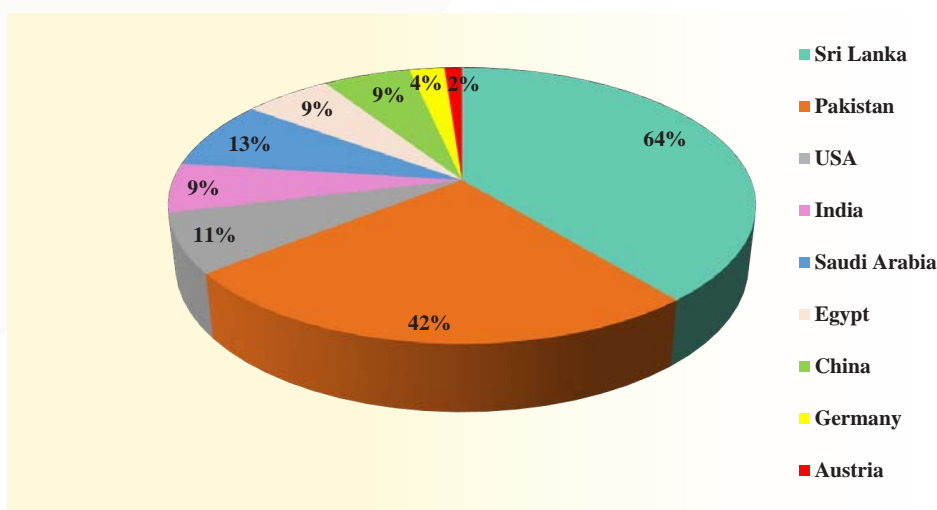


Figure 20: Contribution to issues by authors based on country.



## Sri Lanka Journal of Social Sciences (SLJSS)

Entertaining social science contributions in the form of research articles, review articles, work-in-progress articles, correspondence, and invited Book reviews, Sri Lanka Journal of Social Sciences (SLJSS) is published twice a year in June and December with articles in Sinhala, Tamil and English languages, on topics relevant to Sri Lanka in particular, and South Asia in general. The journal provides open access to all its articles through the Sri Lanka Journals Online (SLJOL) platform and published under the Creative Commons License 'Attribution-No Derivatives-CC-BY-ND 4.0'. SLJSS is currently indexed in SCOPUS and in the Emerging Sources Citation Index (ESCI) of Clarivate Analytics and is one of the only five Sri Lankan journals indexed in ESCI. New submissions in 2020 show a considerable increase highlighting the increasing popularity of the journal. In 2020, both local and foreign submissions show an increasing trend.

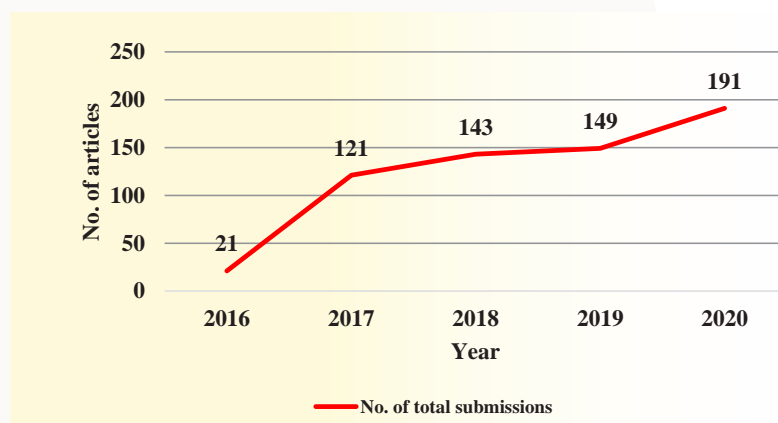


Figure 21: New article submissions for SLJSS (2016-2020).

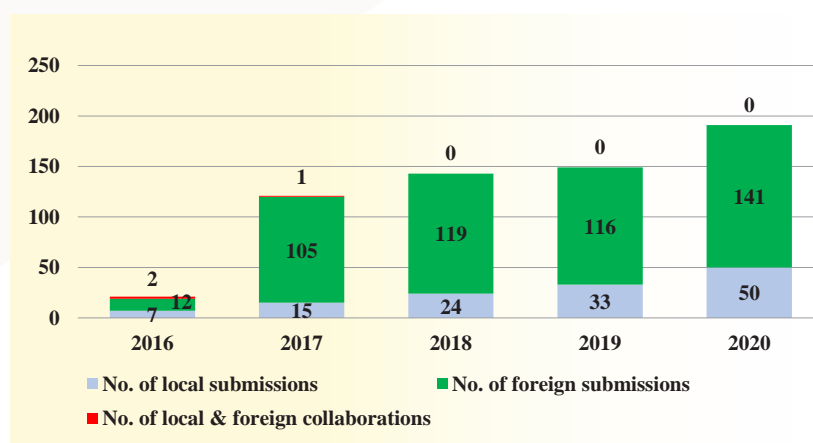


Figure 22: New article submissions by origin



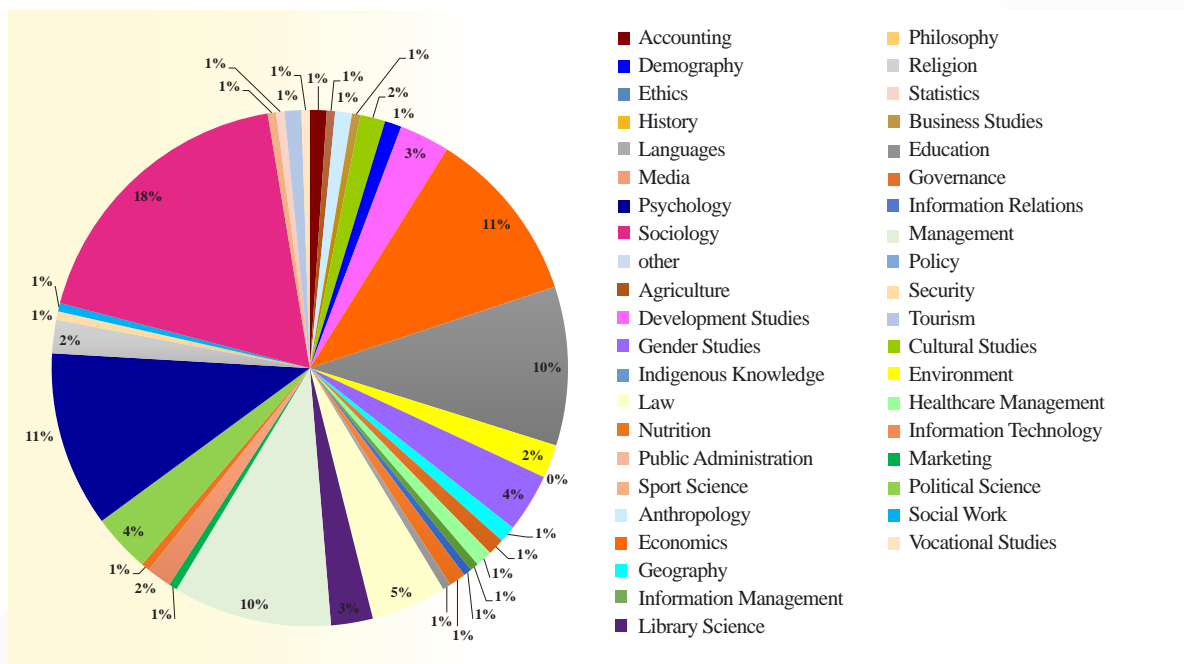


Figure 23: Submissions by discipline

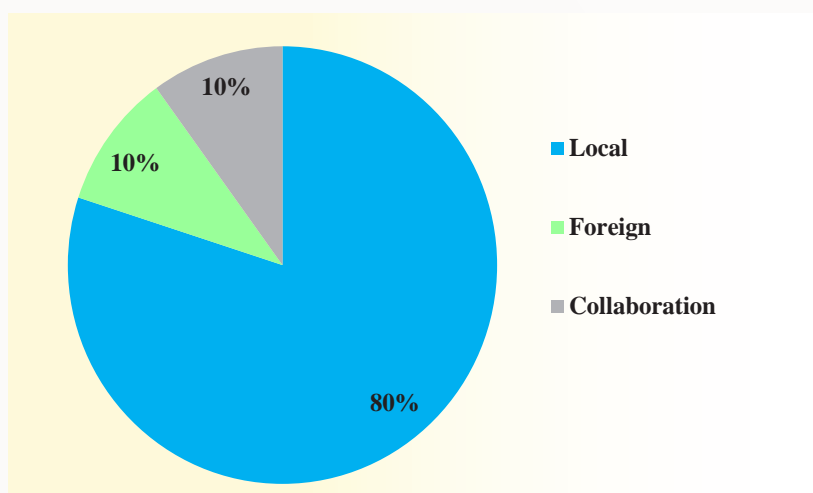


Figure 24: Origin of authors of published articles

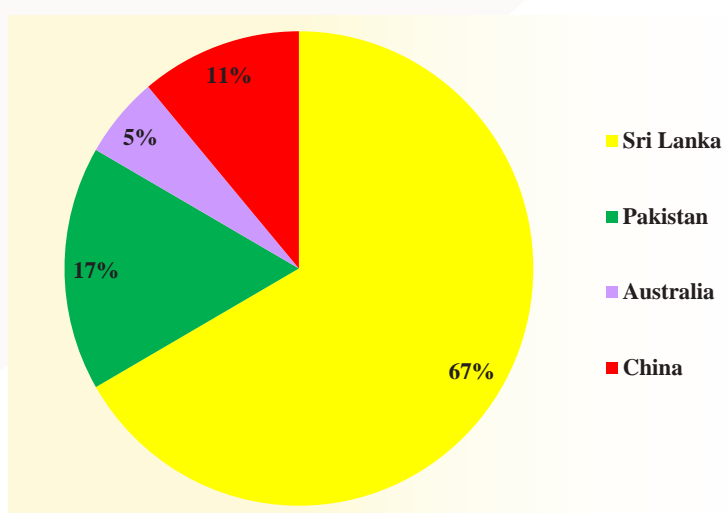


Figure 25: Authors by origin as a percentage.

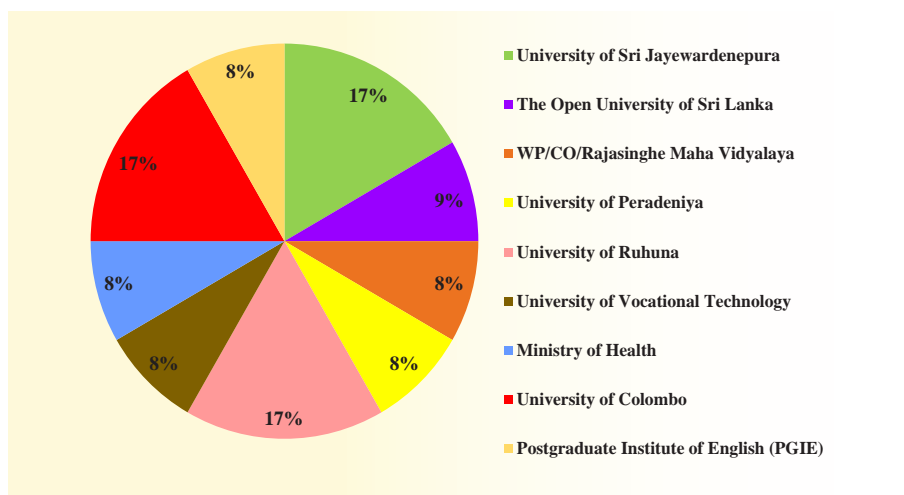


Figure 26: Representation of authors by institution

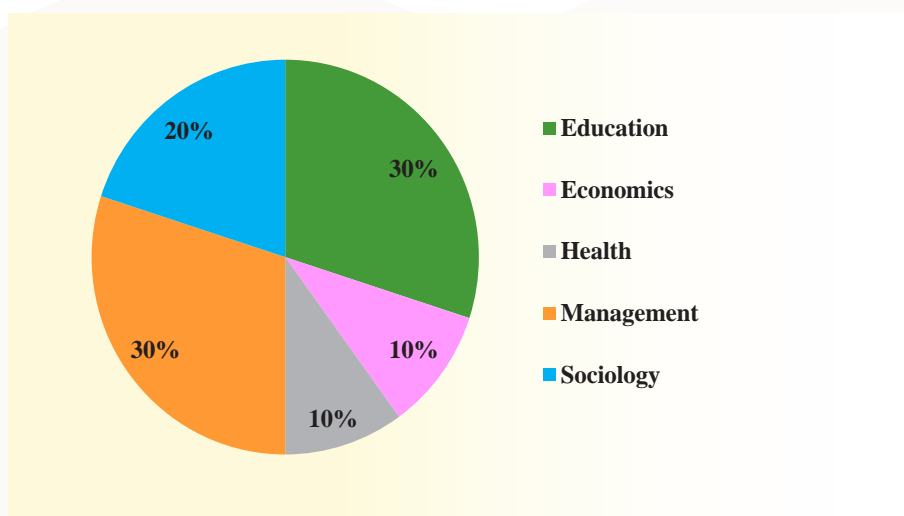


Figure 27: Articles published by disciplines



## Providing greater visibility for academic outputs of R&D

The way to reach a wider audience with research findings is to publish the research results in reputed journals. As some reputed journals charge high publication fees, the NSF supports Sri Lankan scientists to publish in reputed journals indexed in the Science Citation Index Expanded and Social Science Citation Index. Support Scheme for Publication Fees Grant Scheme (SSPF) thus, ensures greater visibility for R&D activities of scientists & researchers in the country.

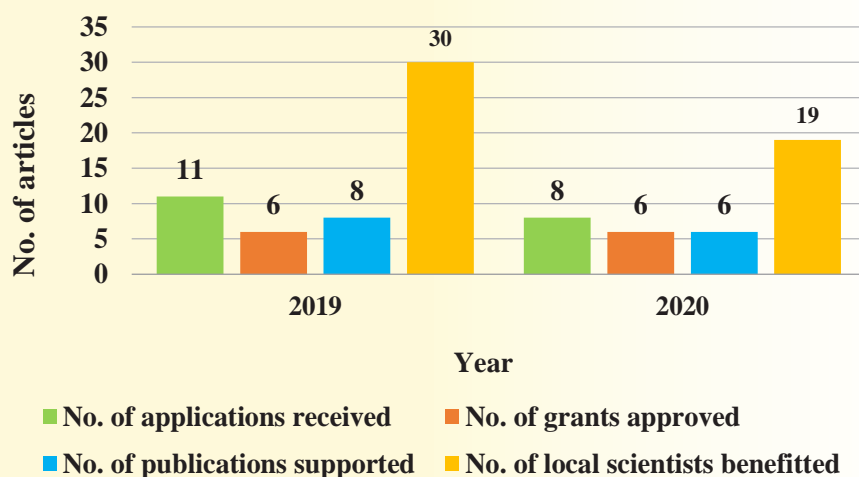


Figure 28: SSPF application status (2019-2020).

## Enhancing opportunities for Sri Lankan scientists to interact with peers

Support Scheme for Scientific Meetings & Events (SSSME) enhances opportunities for Sri Lankan scientists to interact with local and foreign scientists in their fields, creating a platform to share knowledge. This included the support provided to Sri Lanka Association for the Advancement of Science (SLAAS) to conduct the 76<sup>th</sup> Annual Sessions.

How the scheme functioned in 2020 is elaborated in the following figures.

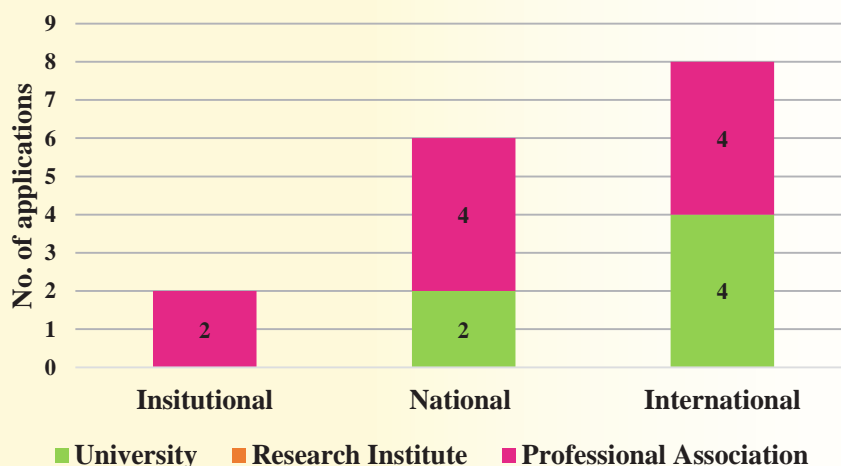


Figure 29: SSSME applications received.

## **Journal Support Scheme (JSS)**

As of 2020, only the Journal of the National Science Foundation (JNSF) has been able to reach the Science Citation Index expanded (SCIE), which is internationally considered as a measure of high standard. The success of the JNSF has been attributed to the quality of published articles, timely publication, peer review process, etc. There are 05 journals included in the Emerging Sources Citation Index (ESCI), which is considered as the initial step in getting indexed in SCIE. This includes Sri Lanka Journal of Social Sciences (SLJSS), which is also published by the NSF.

Many Sri Lankan institutions and professional bodies publish journals of their own, but face difficulties in publishing high quality journals in a timely manner. With adequate support, these journals will be able to improve the quality to reach international standards and get indexed in the ESCI and SCIE. The Journal Support Scheme (JSS) is intended to support Sri Lankan journals to reach and maintain the standards required to enter the SCIE or SSCI Index.

Initial preparatory work was done in 2020, after analyzing the information on Sri Lankan journals in the Sri Lanka Journals Online (SLJOL) platform. A total of 22 journals were shortlisted for possible inclusion in the initial phase of the scheme. Possible international organizations for collaborations were also identified and a questionnaire was developed for circulation among the selected journals.





## Programme 4

*Science Popularization is one of the key mandates assigned to the NSF by the Science & Technology Development Act no 11 of 1994. Accordingly, the NSF conduct science popularizing activities targeting all sectors in the society including the general public. A number of activities were conducted in 2020 specifically focusing school children.*

### Science societies

The network of School Science Societies (SSS) started in 2005 with the objective of fostering school children to acquire knowledge on the latest developments in various fields of Science and Technology, remained with a slight increase in the number, 1044, by the end of 2020 thus, expanding the science communication & outreach activities reaching to 570 1AB schools and 474 other school types.

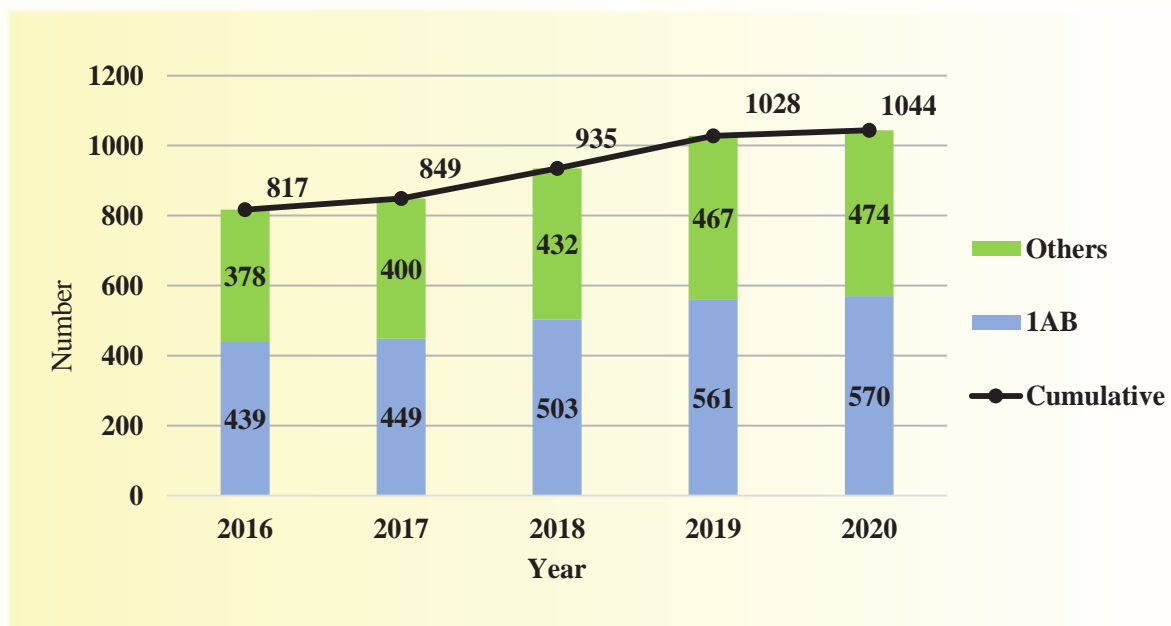


Figure 30: School Science Societies registered with NSF from 2016 to 2020

The NSF created a web portal in 2020 to make registrations easy. Despite the low response from schools, the effort was continued through the Ministry of Education by using various measures.

Aiming at expanding the science network, NSF initiated the Youth Science Societies (YSS) Programme in 2020. The YSSs will be established in vocational training institutes commissioned under the Ministry of Skills Development, Vocational Education, Research & Innovation and in the network of National Youth Services Council and National Youth Corps.

10 New university science societies were registered with NSF in 2020.

## Building resilience through science communication

Eight leaflets in English and Sinhala languages were prepared and distributed creating wider awareness among different communities about COVID 19.

Three video clips on the topics “Basic facts of COVID 19”, “Good practices to avoid spreading of COVID 19” and “Instructions to proper hand washing” were prepared and published.

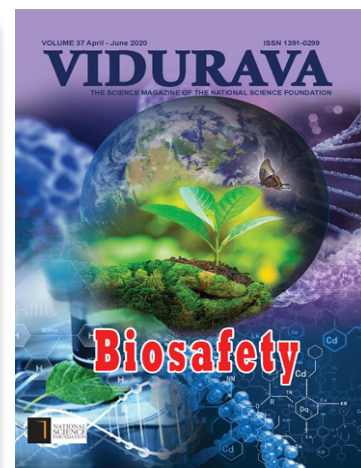
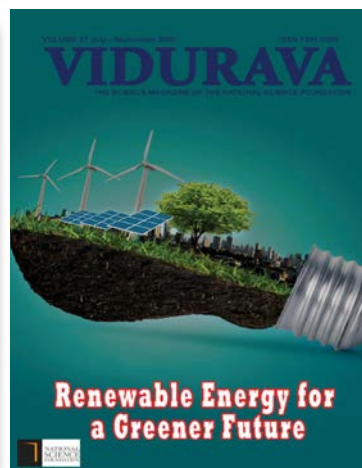
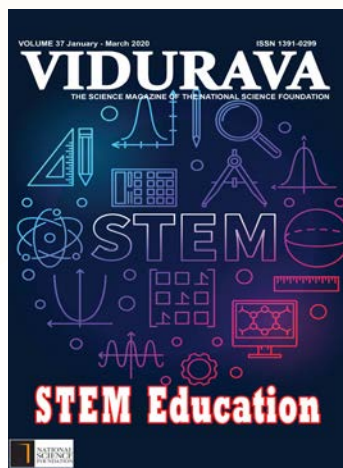


## Science education and popularization through printed and electronic media

09 books and 08 magazines were supported and published in 2020 targeting school children and general public.

Winning drama of Inter School Science Society Competitions 2019 was telecast on "Paata paata", the childrens' programme of Sri Lanka Rupavahini Corporation on 08<sup>th</sup> February 2020 from 5.00pm to 6.00pm

The Vidurava Science Magazine was published & distributed among schools under the themes; “STEM Education”, “Biosafety and Renewable Energy for a Greener Future” in Sinhala and English languages.





## Science popularization through competitions

### Inter School Science Competition (ISSSC)

Inter School Science Society Competitions (ISSSC) which were opened to only SSSs in previous years, were opened up for all government, private & international schools under the Ministry of Education in 2020.

Nine (09) competitions viz. Short Science Drama, Role Play, Viridu, Song, Science Essay, Science Fiction, Hand-painted Posters, Digital Storytelling, and Virtual Bridge Designing were successfully conducted in this year under the theme “Let’s apply science to rebuild the nation” despite the COVID pandemic situation. Evaluation of about 1500 applications under all competitions was in progress.

In addition to the ISSSCs, performance of the School Science Societies were evaluated under Star Ratings Competition based on the activities conducted by schools during 2019. Teachers’ performance in science communication was also in progress for the NSF Teacher’s award for science popularization.

**Inter School Science Society Competition 2020 Role Play Competition**

- Theme: "Let's Apply Science to Rebuild the Nation"
- Age Limit: With an age limit 10-16 (Be in Grades 6-11)
- Duration: 05 minutes (Role Play will be disqualified if the time duration is less than 04 minutes or exceeds 06 minutes)
- Role: Only one character can be performed by an applicant in one language. Performance should be done by a single person. Set and props, costumes, makeup, and background music can be used to make the role play more attractive.
- Criteria for evaluation: Scientific content, creative performance, and other practices (set & props/costume/makeup)
- Suggestions for Role Play: Edward Jenner, Louis Pasteur, Robert Hooke, Antonio van Leeuwenhoek or any other scientist EXCLUDING Charles Darwin, Mari Curie, Archimedes, Thomas Alva Edison, Isaac Newton, and Nicolaus Copernicus.
- Deadline for Application: 15th August 2020
- All submissions should be certified as own creations of the student by a parent. After schools request, the certification of the Principal of the school and relevant class teacher should be submitted to the NSF upon request.
- The performance of the role play should be done only by the students of the school.
- A recorded video clip of the role play with duly completed application should be sent on or before 15th August 2020 via WhatsApp on 07155079003 or email to lakshana@nsf.gov.lk. Please indicate "ISSSC 2020" in the subject line of the email or WhatsApp message.
- Creations received by the NSF will be evaluated by a special panel and the decision of the Panel of Judges will be the final. No grievances or appeal will be entertained once the winners are announced.
- The winners will be felicitated at a special ceremony organized by the NSF.

For further information:  
Please visit [www.nsf.gov.lk](http://www.nsf.gov.lk) or contact:  
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Colombo 03.  
(Tel: 011 2300509; 011 2686771 Fax: 180)  
E-mail: [lakshana@nsf.gov.lk](mailto:lakshana@nsf.gov.lk)

**Inter School Science Society Competition 2020 Viridu Competition**

- Theme: "Let's Apply Science to Rebuild the Nation"
- Age Limit: With an age limit 10-16 (Be in Grades 6-11)
- Duration: 05 minutes (Viridu will be disqualified if the time duration is less than 04 minutes or exceeds 06 minutes)
- Role: Only one character can be performed by an applicant in one language. Performance should be done by a single person. Set and props, costumes, makeup, and background music can be used to make the role play more attractive.
- Criteria for evaluation: Scientific content, creative performance, and other practices (set & props/costume/makeup)
- Suggestions for Role Play: Edward Jenner, Louis Pasteur, Robert Hooke, Antonio van Leeuwenhoek or any other scientist EXCLUDING Charles Darwin, Mari Curie, Archimedes, Thomas Alva Edison, Isaac Newton, and Nicolaus Copernicus.
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**Inter School Science Society Competition 2020 Viridu Competition**

- Theme: "Let's Apply Science to Rebuild the Nation"
- Age Limit: With an age limit 10-16 (Be in Grades 6-11)
- Duration: 05 minutes (Viridu will be disqualified if the time duration is less than 04 minutes or exceeds 06 minutes)
- Role: Only one character can be performed by an applicant in one language. Performance should be done by a single person. Set and props, costumes, makeup, and background music can be used to make the role play more attractive.
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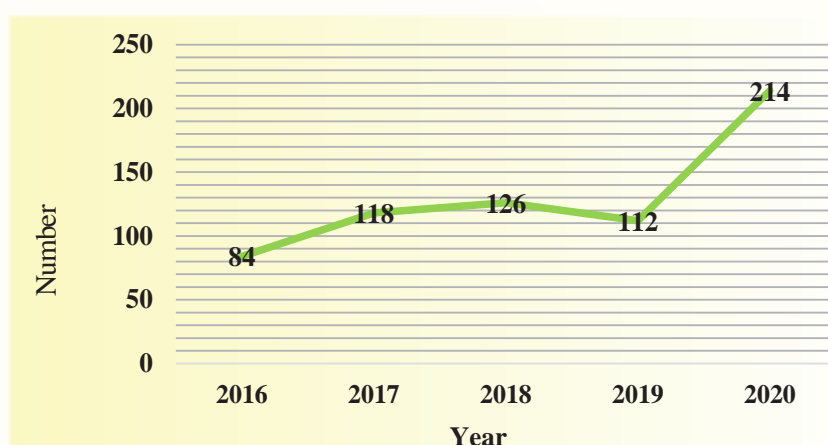
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## Science Research Projects Competition (SRPC)

As in previous years, the Science Research Project Competition (SRPC) was in progress. The top ten science research projects, with details of winners is given in *Annex 10*. Yenuli Fernando of Colombo International School, a winner of SRPC, published her research findings in the official journal of the Canadian Society of Allergy and Clinical Immunology. She won the prize for the best poster at the 133<sup>rd</sup> Anniversary (Virtual Medical Congress) of Sri Lanka Medical Association.

**Table 04: Participation at SRPC**

No of project proposals - Individual	74
No of project proposals - Team	140
Total no of projects	214
Total no of students participated	445
Total number of schools participated	71



**Figure 31: SRPC receipt of proposals**

## Kid Naturalist

The NSF introduced a new competition, “Kid Naturalist” for kids in Grades 1-5. This was introduced to ensure kids utilizing their time productively during the enforced school closer. The competition was opened to all schools island wide.

**Table 05: Participation at “Kid Naturalist” competition**

	Shown interest	Participation
No of schools	99	58
Student from Grades 1-3	182	73
Students from Grades 4-5	63	31
Total no of students	245	104
Response rate to the competition (%)	42.45	

## Events conducted popularizing science

Blockchain technology has attracted extensive attention in the recent past. It is a simple and decentralized method of passing information in fully automated and safe manner and can be applied to many fields providing unalterable public records of digital transactions. Blockchain-based applications are springing up in numerous fields including financial, insurance, health care, fraud detection services and education. A panel discussion was held on 7<sup>th</sup> February, 2020 to bring together Sri Lankan professionals, academics and stakeholders to share their expertise and brainstorm about possible applications.



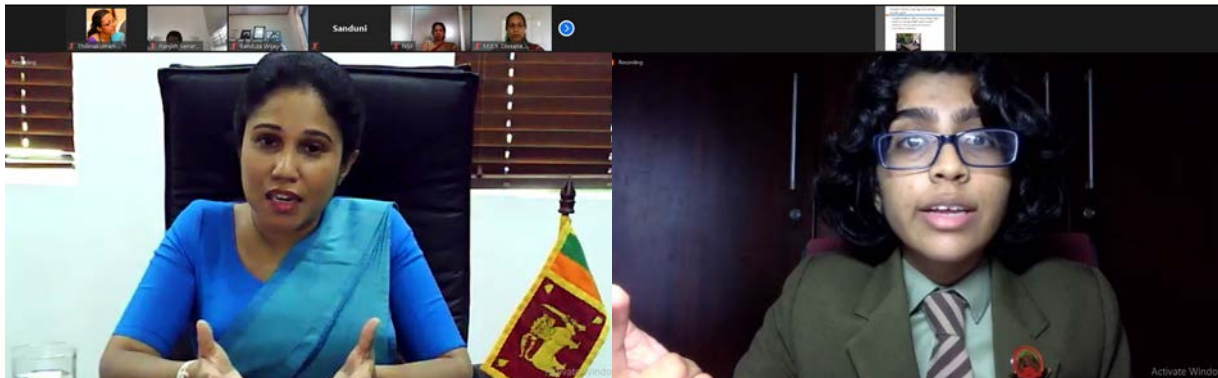
Under new education reforms that is targeted at establishing a student-centered Education System in place of examination-centered, NSF organized a roundtable discussion with key persons involved in education reforms. The discussion was held on 2<sup>nd</sup> July, 2020 at NSF with the participation of members of the President Task Force for Education, relevant Heads of institutions, key staff members of the Ministry of Education and members of NSF Working Committees on STEM Education & Science Popularization.

Dr Upali Sadera National Advisor to the Ministry of Education was the main speaker of the discussion who made a presentation on “Proposed activities of the Task force of Education”. Recommendations made during the discussion were documented.





Marking the World Science Day (WSD) for Peace and Development (10<sup>th</sup> November) declared by UNESCO, the NSF organized an online event via Zoom on 20<sup>th</sup> November 2020. The theme of the year 2020 was “Let’s Apply Science to Rebuild the Nation” (විද්‍යා නැණ යොදවමු, යළි රට නංවමු). The event was conducted in both Sinhala & Tamil as two sessions. Keynote address was delivered by an eminent scientist, Dr Bandula Wijay, CEO of LeoMed LLC (Manufacturer of Cardiovascular Devices), Houston, Texas, USA (TBC) and Ambassador to Science and Technology in USA. Several speeches on different topics related to research & innovation were included in the programme. About 300 participants including school children, teachers, scientists and other officials joined the event.



The chief guest of WSD Dr Seetha Arambepola the honourable state minister of the State Ministry of Skills Development, Vocational Education, Research & Innovations addressing the participants

Yenuli Fernando, a winner of SRPC presenting her research findings

Table 06: Viewer/ Participation statistics of WSD

	Sinhala Programme	Tamil Programme
Live participation	170	120
Facebook live reach	3100	687
Facebook live engagement	293	110
YouTube live views	846	0
Facebook reach as at 31.12.2020	3585	807
Facebook engagement as at 31.12.2020	423	141
YouTube views as at 31.12.2020	948	291

NSF's contribution to create a knowledge base economy and the services provided to the S&T community was published in the special issue of “Vidusara” on November 11, 2020.



## Programme 5

*Besides fostering RDI initiatives, the NSF was continuously engaged in multifaceted tasks enhancing S&T capacity building and strengthening partnerships with individuals of distinctions and organizations and associations locally and internationally for S&T development in the country.*

### Tapping the global talent pool for national development

Webinar No.	Country/Region	Date	Time (SL time)	Number of Expatriates
1	Australia	18 <sup>th</sup> August	02.00 p.m.	42
2	USA	08 <sup>th</sup> September	08.00 a.m.	41
3	UK	24 <sup>th</sup> September	02.00 p.m.	30
4	Canada	06 <sup>th</sup> October	08.00 a.m.	20
5	EU region	13 <sup>th</sup> October	02.00 p.m.	14
6	Japan	20 <sup>th</sup> October	02.30 p.m.	11



There are nearly three million Sri Lankan expatriates and emigrants, including an appreciable number of reputed scientists and professionals holding senior positions in academia, R&D institutions, and industry. They undoubtedly constitute a formidable potential asset of Sri Lanka which has hitherto been almost untapped and untouched for national development. Many expatriates are keen to contribute to the development of the motherland. However, the lack of a credible and pragmatic mechanism has hindered such contribution.

Noting the need, the NSF developed a digital platform: Sri Lanka Intellectuals, Professionals and Scientists Forum (SLIPS Forum) to harness the expatriate global talent pool for national development in key sectors such as higher education, S&T, FDI, trade/exports, tourism, enterprises, and industry with initial emphasis to be on S&T and higher education.

Main objective of this endeavour was to construct an online ecosystem to bring expatriates together to;



- Provide greater opportunities for higher education and capacity building
- Enhance academic cooperation and research collaboration
- Create a culture of creativity and innovation
- Promote joint publications and ranking of Sri Lankan universities
- Facilitate technology transfer

A special emphasis is given to the fact that the partnerships developed between the expatriates and S&T personnel in Sri Lanka will be mutually rewarding and reinforcing thereby making the platform sustainable. Therefore, it is expected that this platform could yield substantial benefits in the academic, scientific, industrial, economic, social and environmental spheres.

Nearly 750 expatriate Sri Lankan professionals residing in developed economies such as Australia, North America, Europe, Oceania and Asia are registered in this digital platform. The Sri Lanka Association for Software and Service Companies (SLASSCOM) provided the requisite technical support and guidance in developing the platform.

NSF conducted six webinars with the registered expatriate Sri Lankan Professionals in Australia, USA, Canada, UK, Europe and Japan from August to September 2020 to discuss and obtain views as to how best they could contribute for national development through this platform.

Preparatory work was in progress to officially launch the platform in 2021.

## Knowledge advancement through partnership

1

“GOVI NENA Ruhuna”, a mobile based organic farming information system was developed by a scholar team from Dept. of Computer Science, University of Ruhuna in collaboration with University of Moratuwa, University of Colombo and Western Sydney University, Australia as a collaborative effort with financial support provided under a travel grant. A mobile application installed on a smart phone provides real-time and reliable information on pest controlling, crop calendar, organic home gardening, suitable crop varieties for a given location etc. in a user-friendly manner enabling to accelerate economic, health and environmental benefits. Preparatory work was in progress to officially launch the platform.



2

The burning issues limiting the development of the fisheries industry remain poorly addressed. There is a need to empower the small-scale fisheries sector by relevant stakeholders participating in the decision-making through integrated management of the social, economic, and ecological systems underpinning the sector. Identifying this need, financial support was provided to the president of the small-scale fisheries association to harness the global practices and acquire new knowledge & techniques in the sector. Subsequent to this, as a followup activity, a refined policy document aligning with the national policy framework was prepared and submitted to the Ministry of Fisheries.

### 3

NSF facilitated to develop a robust PCR based technique for early detection and management of Weligama Coconut Leaf Wilt Disease by the Coconut Research Institute (CRI) through expertise from University of Queensland. Several Research Officers of Coconut Research Institute were also trained in this field.

### 4



A webinar on 'Modelling in epidemiology: challenges in existing data' was conducted on 22<sup>nd</sup> September 2020 to impart the knowledge on Mathematical Modelling in Epidemiology. The keynote speech was delivered by Prof. Thomas Goetz from Mathematics Institute, University of Koblenz-Landau, Germany. About 70 participants from Sri Lanka, Indonesia and Germany joined this online programme. The participation of the health sector practitioners from the Epidemiology Unit, Health Promotion Bureau, and the Health Information Unit of the Ministry of Health of Sri Lanka was noteworthy to acquire knowledge for direct practical applications.

Some of the important knowledge sharing areas were managing age-specific, area-specific data and time-specific data for advancing mathematical models and data processing that includes collection, storing, manipulation and better communication.

A concept note on 'Investigating challenges and prospects in data processing of infectious diseases – a way forward to a decision support system in Sri Lankan context' was submitted to the relevant health authorities for consideration for a collaborative project. Successful collaborations have been initiated between the research teams and the Epidemiology Unit, Health Information Unit and the Health Promotion Bureau of the Ministry of Health of Sri Lanka.

## Strengthening bilateral ties with Australia

A meeting was held with the delegates from the Australian High Commission of Sri Lanka on 20<sup>th</sup> February 2020 at the NSF to seek possibilities of strengthening ties with Australia to bring benefits to our country. HE David Holly/ Australian High Commissioner to Sri Lanka and Ambassador to the Republic of Maldives together with some other officials participated at this meeting where many areas were identified for collaboration.



*Delegation from the Australian High Commission together with NSF Staff*

## Technical cooperation with Brazil

Based on an initiative taken in 2019, the Brazilian Cooperation Agency (ABC) had expressed interest in providing technical cooperation in developing the sugarcane and Dairy sectors in Sri Lanka under 'South-South Cooperation'. Two stakeholders Meetings were conducted jointly with the Ministry of Foreign Affairs of Sri Lanka in December 2020 to develop the initial project concepts on technical cooperation. Academics, researchers, industrialists, and administrators took part at this meeting.



*First stakeholders meeting on sugarcane sector and dairy sector held at the Ministry of Foreign Affairs*



## Networking with International Units of Universities

A round table session was organized on 28<sup>th</sup> January 2020 at NSF with the Directors of International Units of Universities with a focus of establishing a collaborative local network for international scientific cooperation. Main objectives of this discussion were to;

- share knowledge on the types of international cooperative activities carried out by the respective institutions,
- share knowledge about the available opportunities for further international collaboration.
- identify synergies and to seek possibilities of establishing local linkages to carry out international cooperative scientific activities more effectively.

Representatives from European Union (EU), Japan International Cooperation agency (JICA), Sri Lanka Fulbright Commission, Sri Lanka National Commission for UNESCO and 14 universities participated at this event and several recommendations were made for follow up.



## Enhancing R&D through collaboration with ICGB

- NSF being the focal point for the International Centre for Genetic Engineering & Biotechnology (ICGEB), fosters Sri Lankan researchers to accrue benefits through the ICGEB to conduct research in biotechnology. A young eminent researcher from the Sabaragamuwa University of Sri Lanka was awarded a collaborative research grant (CRP grant), with a monetary value of Euro 40,000. The project is on "Investigating the role of Dengue NS1 protein in potentiating Dengue virus infection in uninfected cells by inducing changes in host plasma membrane proteome".
- A report on setting up of the International Centre for Genetic Engineering & Biotechnology-Regional Research Centres (ICGEB-RRC) was submitted to the Ministry of Higher Education, Technology & Research to take further actions.

## Facilitating sustainable management of biosphere reserves

Establishment and monitoring of Biosphere Reserves is a key function of Sri Lanka's Man and the Biosphere (MAB) Programme, following guidelines provided by the UNESCO MAB Programme. A survey was initiated, and information was compiled to identify research gaps with the objectives of addressing critical problems in biosphere reserves related to biodiversity and strengthening sustainable development of biosphere reserves.

## Joining to develop the UN research roadmap on COVID 19 recovery

United Nations took a participatory approach in mid-2020 to identify research priorities that will support an equitable global socio-economic recovery from COVID 19 and progressed towards the Sustainable Development Goals (SDGs) with a view to take coordinated, decisive and innovative policy action to build back from COVID 19 attuned to the needs of the most vulnerable populations.

This process included the outreach to research funding organizations, implementation leaders, and researchers in order to identify and articulate the research needs to support the local, national, regional and global decision-makers re-building strengthening their nations. The NSF was represented in this process by Ms Thilinakumari Kandanamulla, Scientific Officer who also co-chaired the Steering Group on 'Macroeconomic Response and Multilateral Collaborations'. UN noted the noteworthy contribution of the NSF in forming the research roadmap.

## Capacity Building

The Research Scholarship Scheme which provides financial support to Sri Lankan graduates to conduct full-time research within Sri Lanka leading to MPhil and PhD degrees was in progress. Out of fifty one (51) applications received, seven (07) new Research Scholarships were selected (*Annex 11*) for award. Twenty four (24) ongoing research scholarships were in progress and being monitored in multidisciplinary areas as indicated in Figure 30. Ten (10) scholarship grants were completed in 2020 (*Annex 12*).

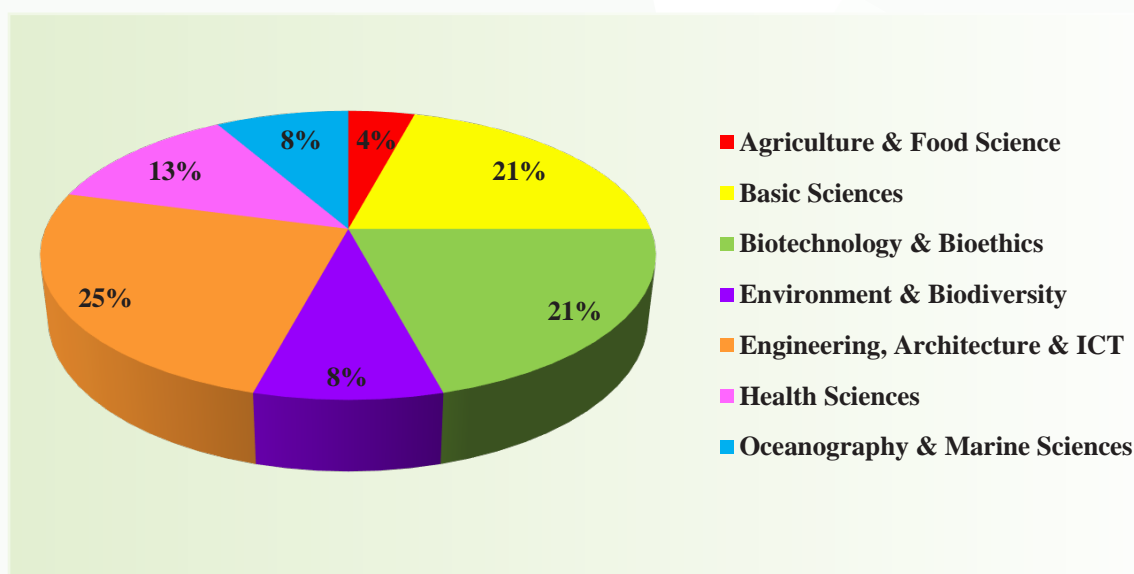


Figure 32: Ongoing research scholarships facet in 2020 (under different study disciplines)

One ongoing fellowship under Postdoctoral Research Scientist Grants scheme was in progress. The details are placed in *Annex 13*.

## Programme 6

*Core functions of the NSF under programmes 1-5 are supported by the programme 6 keeping in line with the government AR & FR and PED Guidelines. Staff motivation and skills development were attended using all available opportunities across the sphere.*

### Administrative support

General administration, human resource development, assets management and attending to logistics requirements are the key functions of the Admin Division of the NSF. During the year under review the Admin Division had been continuously supporting the other Divisions of the NSF to carry out core functions of the NSF.

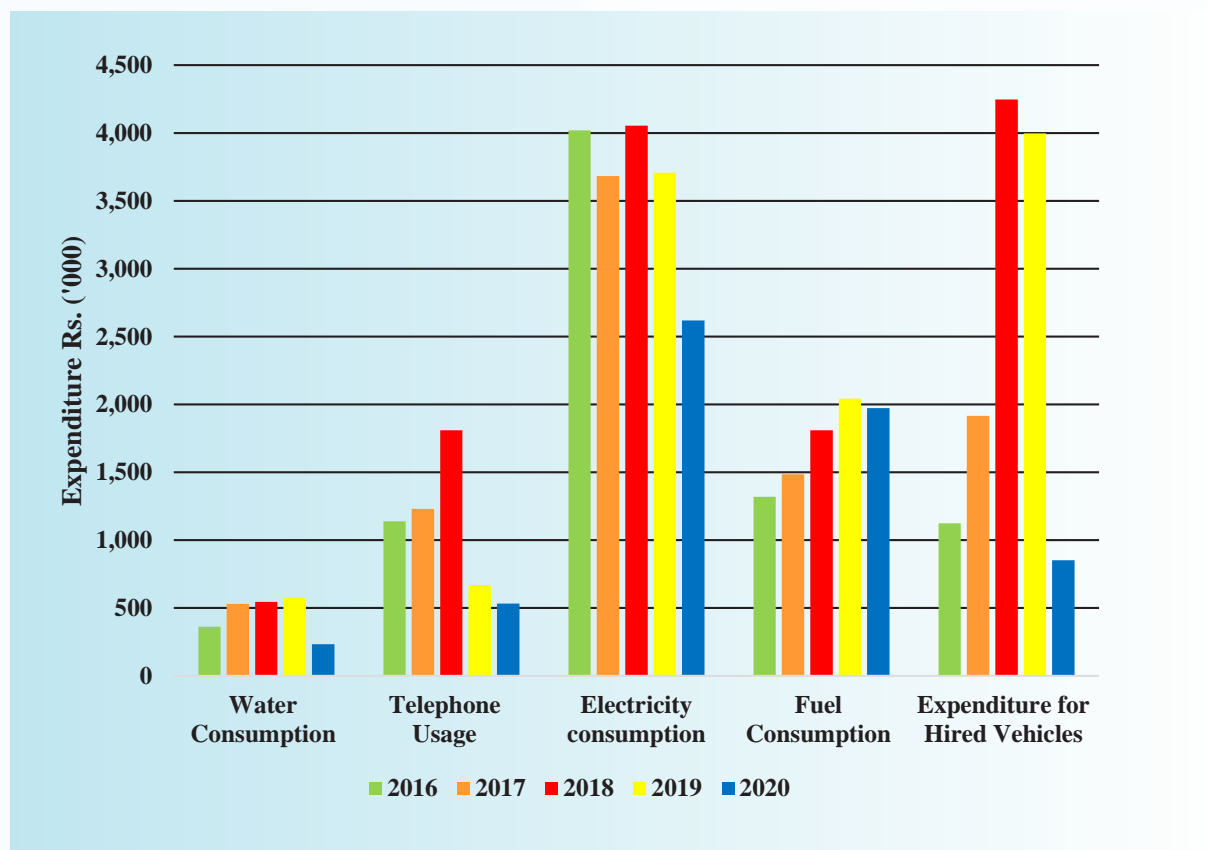


Figure 33: Expenditure on utility facilities (2016-2020)

## Financial support

The Finance Division manages all the financial activities in order to execute all planned and approved work under the specified schemes within the prevailing financial regulations approved by the Government Treasury. The following work was carried out during the year under review using up-to-date mechanisms and tools.

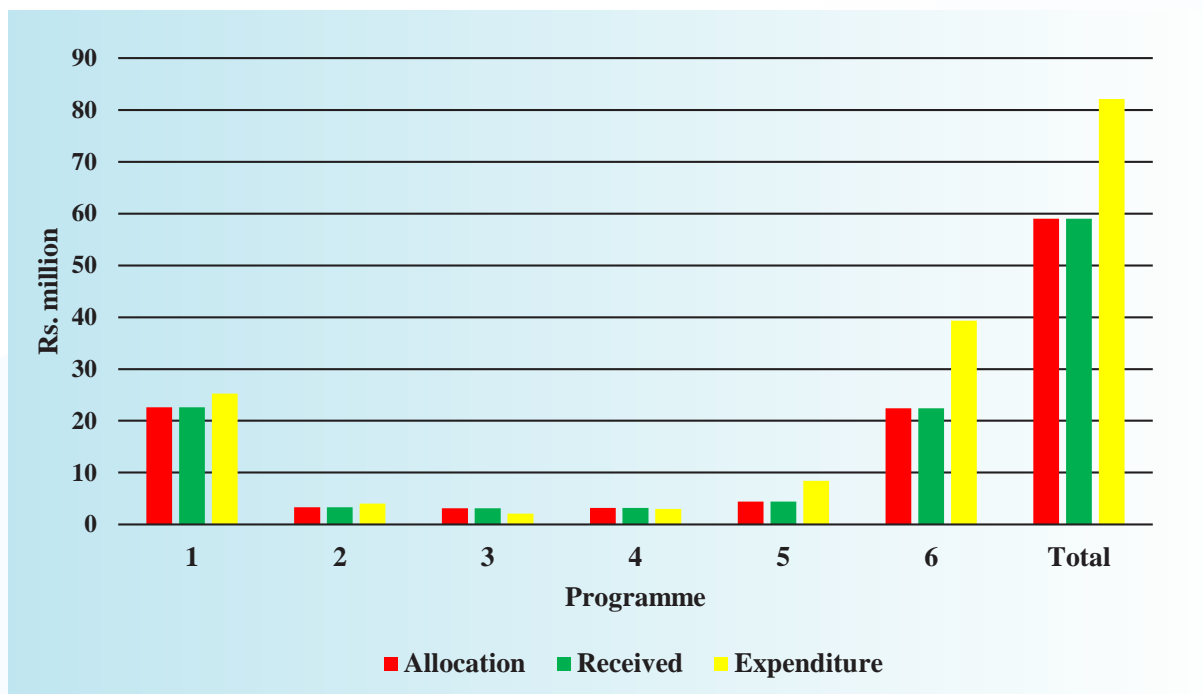


Figure 34: Financial performance under major programmes

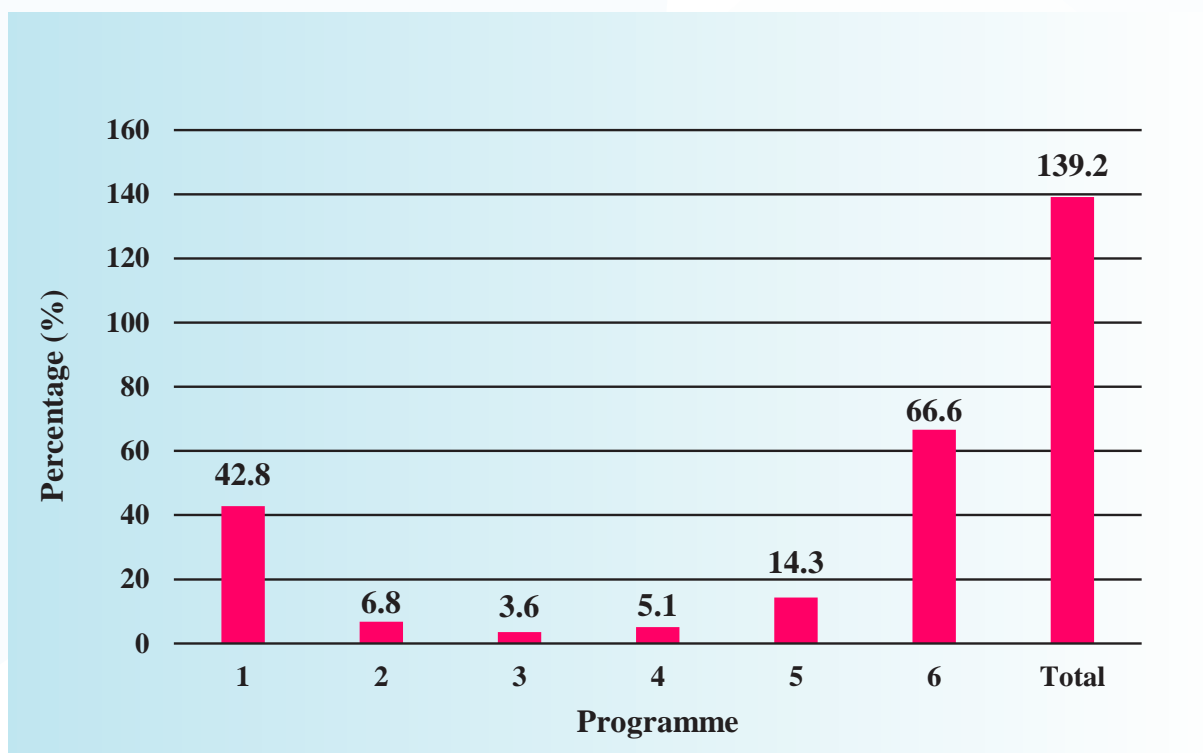


Figure 35: Expenditure under major programmes as a percentage against the total allocation Rs. 59 million

## Information technology support

The IT Unit is responsible to maintain the organizational ICT infostructure facilities and provide end-user IT supports to the NSF Staff.

During 2020, an internet payment facility was introduced to capture local currency online transactions for various activities with the support of Bank of Ceylon. The institutional firewall which is the key security filtering device in the institutional computer network was replaced with an advance security device focusing future network threats. The IT Unit has played a significant role to support institutional “Work from Home” online platforms by infostructure maintenance and providing technical supports.

## Printing support

Despite the pandemic situation in the country the Printing Unit was continuously engaged with the printing activities fulfilling the printing requirements of the Scientific Divisions with the available resources. Accordingly, the following work was completed with quality outputs in order to attract the stakeholders to printed new scientific information. Fifteen (15) different types of publications were printed during the period under review. The details of the Unit output are given in *Table 07*.

**Table 07: Variety of publications printed.**

Publication	Quantity
<b>SLJSS</b>	
December 2019 & Off prints	75+20
June 2020 & Off prints	75+20
<b>JNSF</b>	
December 2019 & Off prints	180 +20
March 2020 & Off prints	180 +20
<b>Vidurava</b>	
January - March (English)	1500
January - March (Sinhala)	1500
July - September 2019 Reprint (Sinhala)	1600
July - September 2019 Reprint (English)	1150
July - September 2019 Reprint (Tamil)	550
October - December 2019 (English)	1500
October - December 2019 (Sinhala)	1900
<b>Vidya Newsletter</b>	
Vol. 22 Issue 2	250
Vol. 21 Issue 4	600
Annual Report - 2018 (3 Languages)	03

In addition, the Printing Unit covered all the other printing requirements of the NSF by attending to twenty-five (25) other print jobs during the period under review.

## Improving processes & procedures

All the work during the year was conducted in accordance with the Action Plan prepared and approved in December of the previous year. Mid-year revisions were taken place to re-allocate the capital budget within the approved allocation based on the progress made under different mandatory activities. Financial and Physical Progress of the NSF was reported monthly, quarterly and mid yearly to the NSF Management and other relevant authorities.

In keeping with the scope as per the Public Enterprise Guidelines for Good Governance, the Heads of Divisions meetings (HoD) provided a regular platform facilitating decision making with regard to carrying out administrative functions and thereby paving the way for making timely recommendations to the Board of Management. Fifteen meetings of the HoD were held during the year under review.

11 regular Board meetings were held during the year.

## Audit & Management Committee report

The Board of Management of the NSF appointed three Members of the Board to serve in the Audit & Management Committee (AMC) at its meeting held on 27<sup>th</sup> February, 2020. Accordingly, the following Members were serving during the year.

- Mr R M D K G N Ranatunga (Chairman)
- Prof. M M Pathmalal
- Eng (Prof.) S B S Abaykoon
- Ms H D Anuruddhika (Chief Internal Auditor/MoSTR)
- Ms L S R Perera (Representative of the NAO)
- Mr Ananda (Representative of the NAO as an alternative member)

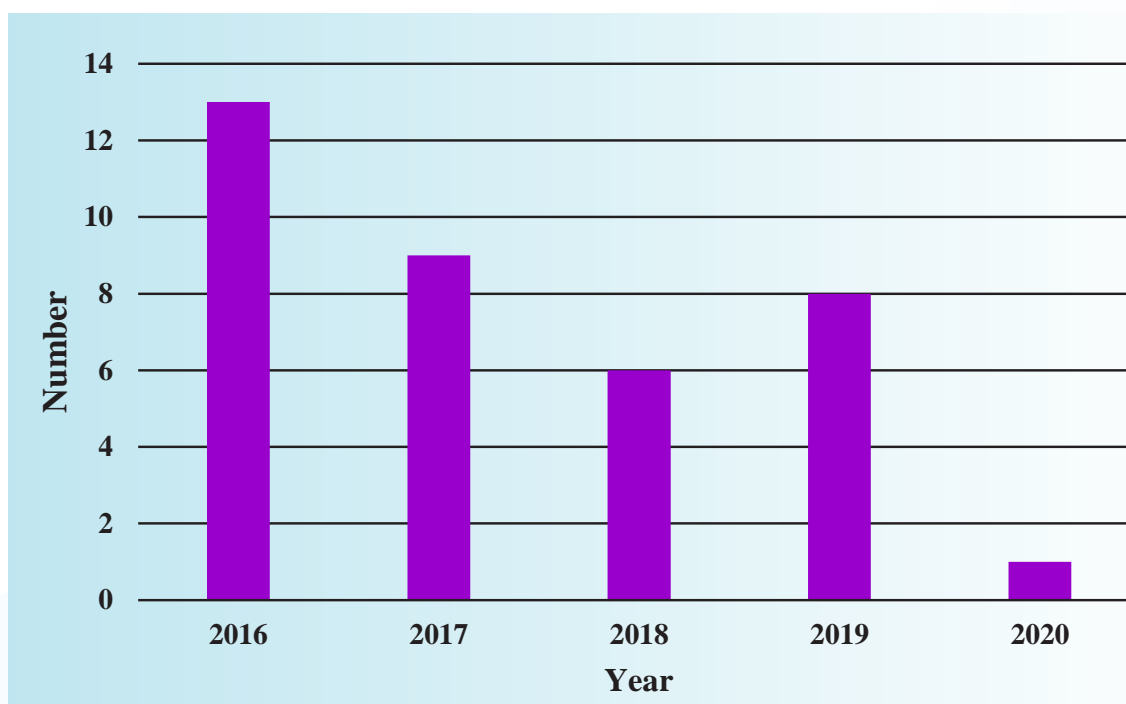
Two meetings were held on the 29<sup>th</sup> June & 25<sup>th</sup> November during the year 2020.

The Internal Auditor (IA) of the NSF conveyed the recommendations of the AMC to the Heads of the Divisions to take appropriate action for smooth functioning and taking corrective actions on matters. Progress reports on the actions taken were also reported to the next AMC meeting.

Special attention was drawn to following at the recommendation of the AMC.

- Follow-ups on the Board of Survey process
- Follow-ups on the statutory requirements of the NSF throughout the year
- Follow-ups on the NAO queries until completion
- Bringing improvements to replying to Audit Queries
- Review of activities of the NSF and making recommendations on corrective and preventive actions
- Avoid repetition of same Audit queries





**Figure 36:** Number of Audit Queries received (2016 - 2020)

### Improving technical competency of staff

The purpose of training is to equip people with necessary skills, knowledge and attitudes to meet the organization's needs in relation to its objectives. Training is undertaken after a critical appraisal of Institutional/Divisional needs in relation to its objectives, while taking into account the realistic aspirations of the employees. Training and development is a continuous process at NSF for every employee, irrespective of the category.

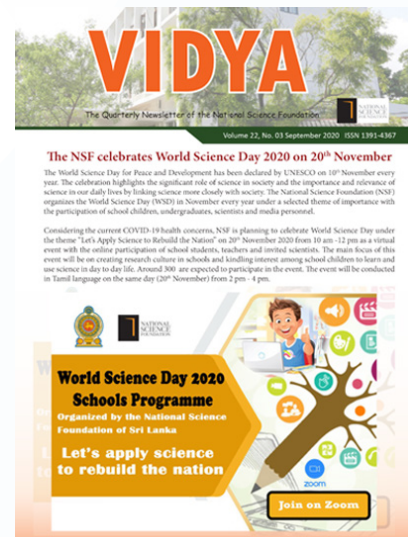
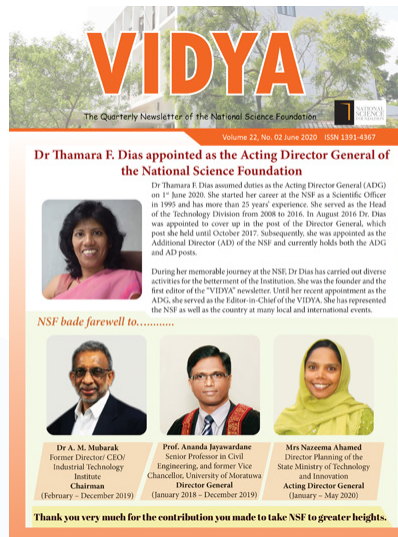
NSF recognizes the value and importance of providing opportunities to all staff, managerial, executive and other support staff, to develop their job-related knowledge and skills. NSF expects that with development and training, individual effectiveness will increase and the staff will make a richer contribution to the work of their Divisions in support of NSF obligations. By the effective utilization of limited resources and investing in peoples' training and development, the NSF expects to harness the full potential of the staff, while fulfilling their needs for personal development and job satisfaction.

Accordingly, the Staff Development Committee (SDC) of the NSF, prepared the Annual Training Plan for the institution based on the training needs identified by the Heads of Divisions and Units. Every effort was made by the SDC to provide need-based training opportunities to the staff during the year, within the annual allocation for staff development, complying with the guidelines given in the Staff Training Policy. Eventhough many traning oppertunities were obstructed by the COVID pandemic, the staff followed online programmes fulfilling the needs.

The details of training provided is given in *Annex 14*.

## "Vidya" newsletter

NSF published three issues of "Vidya" newsletter covering highlights of activities conducted during the year.



## New outlook to NSF website

The NSF launched its website with a new outlook on 1<sup>st</sup> June 2020 attracting many stakeholders in the field.





# Financial Review



## Observation of the accounting officer on performance 2020

NSF is a funding organization which is solely dependent on government funds. Funds recommended by the Department of National Budget under "Recurrent" and "Capital" expenditure for NSF for the year 2020 were Rs. 151 million and Rs. 59 million, respectively. Department of Treasury Operations released Rs. 150.9 million for "Recurrent" expenditure and Rs. 59 million for "Capital" expenditure in installments and NSF collected Rs. 14.4 million as balances remaining in the completed grants during the year. The details of expenditure are given in *Table 08 & 09*.

**Table 08: Recurrent and Capital expenditure in 2020**

Expenditure	Rs.'000	
	Estimate	Expenditure
<b>Recurrent Expenditure</b>		
Personal Emoluments	125,160	120,263
Other Recurrent	25,840	32,373
<b>Total Recurrent Expenditure</b>	<b>151,000</b>	<b>152,636</b>
<b>Capital Expenditure</b>	<b>59,000</b>	<b>82,070</b>

The details of Capital Expenditure for 2020 is given in *Table 09*.

**Table 09: Details of Capital expenditure in 2020**

	Description	Expenditure 2020 Rs.'000
01	To Support basic and applied research	25,235
02	To maintain a current register of scientific and technical personnel (Science and Technology Policy Research)	4,012
03	To foster interchange of scientific information among scientists in SL (National gateway to S & T information)	2,086
04	To popularize science amongst schools and general public (Science popularization programmes )	3,007
05	To promote and enhance capacity building through liaising with individuals (International co-operation)	8,435
06	Acquisition of Capital Assets, Maintenance & System administration	39,295
	<b>Total Capital Expenditure</b>	<b>82,070</b>

### Management Issues

Research Grants as was done in the past, were carried out under the supervision of the respective Heads of Departments of the respective Research Institutes and Universities. In spite of strong terms & conditions in force, it was noted that, timely implementation of projects was adversely affected by the procedures and systems applied by the grantees' institutions and universities. However, with appropriate management approaches in place the NSF achieved significant success by completing the activities as planned for the year with the available financial resources.



# Statement of financial position as at 31<sup>st</sup> December, 2020

	2020	2019	2018
	Rs.'000		
<b>ASSETS</b>			
<b>Current Assets</b>			
Cash & Cash Equivalents	18,268	26,536	11,084
Receivables - Current	6,204	21,546	7,934
Stocks	2,451	1,664	1,916
Pre Payments	1,444	1,163	1,322
Other Current Assets	109	109	3,407
Total Current Assets	28,476	51,018	25,663
<b>Non-Current Assets</b>			
Receivables - Non Current	11,771	10,994	9,575
Property, plant & Equipment	1,285,496	1,257,859	443,448
Capital Work in Progress	-	13,940	-
Intangible Assets	4,507	7,540	7,796
Investments	883,002	873,002	857,070
Total Non-current Assets	2,184,775	2,163,335	1,317,889
<b>Total Assets</b>	<b>2,213,251</b>	<b>2,214,354</b>	<b>1,343,552</b>
<b>Liabilities</b>			
<b>Current Liabilities</b>			
Accrued Charges	4,863	14,937	16,065
Creditors	7,208	5,365	3,643
	12,070	20,302	19,708
<b>Non-Current Liabilities</b>			
Provision for Retiring Gratuity	41,831	38,865	34,765
Deferred Revenue	63,977	29,789	49,814
	105,808	68,654	84,579
<b>Total Liabilities</b>	<b>117,878</b>	<b>88,957</b>	<b>104,287</b>
<b>Net Assets</b>	<b>2,095,373</b>	<b>2,125,397</b>	<b>1,239,265</b>
<b>Equity and Reserves</b>			
Accumulated Fund	(37,344)	2,778	(38,654)
Revaluation Reserve	1,249,216	1,249,216	420,849
Government Grant	883,002	873,002	857,070
NSF Development Fund	499	401	-
<b>Total Equity</b>	<b>2,095,373</b>	<b>2,125,397</b>	<b>1,239,265</b>

## Head Administration & Finance

The Accounting policies and Notes on pages 08 to 34 form an integral part of these Financial Statements. The Board of Directors is responsible for the preparation and presentation of these Financial Statements. These Financial Statements were approved by the Board of Directors and signed on their behalf,

Chairman

Director General

Board Member



## Statement of financial performance for the year ended 31<sup>st</sup> December, 2020

Rs.000

Revenue	2020	2019	
Government Grant	150,690	149,100	
<b>Other Income</b>			
Interest received	636	674	
Sundry Income	184	286	
Profit/(Loss) Sale of Publications	784	766	
Photocopy receipts	3	4	
NSLRC Income	101	26	
Income from Workshops	-	624	
Profit/(Loss) Sale of Fixed Assets	4	17	
Publications Charges Received - JNSF	179	231	
Other Income	61,435	308,359	
Differed Revenue	15,352	24,777	
	<u>229,368</u>	<u>484,863</u>	
<b>Expenditure</b>			
<b>Personal Emoluments</b>			
Salaries & allowances	87,416	88,090	
Employees Provident Fund	12,267	11,624	
Employees Trust Fund	2,453	2,325	
Transport & Fuel Allowances	6,357	6,651	
Provision for retiring gratuity	7,844	8,322	
Overtime	2,304	2,783	
Holiday payment	34	105	
Uniforms	304	272	
	<u>118,980</u>	<u>120,172</u>	
Travelling	862	3,430	
Supplies	3,098	3,627	
Maintenance	4,575	6,073	
Contractual Service	10,036	12,249	
Others	14,005	17,194	
Depreciation	19,210	17,328	
Capital Expenditure	82,071	277,829	
	<u>133,855</u>	<u>337,729</u>	
Surplus Deficit over the income			
before extraordinary items	(23,467)	26,962	
Extraordinary items (Net Profit or loss)	-	-	
<b>Net Surplus/ (Deficit) for the period</b>	<u>(23,467)</u>	<u>26,962</u>	

## Statement of financial position as at 31<sup>st</sup> December, 2020

As at 31.12.2019		Note	Rs.	Rs.
	<b>Assets</b>			
	<b>Current Assets</b>			
26,536,034.84	Cash & Cash Equivalents	14	18,267,547.64	
21,545,907.15	Receivables	15	6,204,345.42	
1,664,409.14	Stocks	16	2,451,155.57	
1,163,292.36	Pre Payments - ( Schedule - 08 )		1,444,387.94	
108,650.00	Other Current Assets	17	108,650.00	
51,018,293.49	Total Current Assets			28,476,086.57
	<b>Non-Current Assets</b>			
10,994,116.00	Receivables	15	11,770,580.00	
1,257,859,258.66	Property, plant & Equipment	18	1,285,495,959.80	
13,939,703.12	Capital Work in Progress		-	
7,540,458.51	Intangible Assets	19	4,506,617.43	
873,002,124.00	Investments	20	883,002,124.00	
2,163,335,660.29	Total Non-current Assets			2,184,775,281.23
2,214,353,953.78	<b>Total Assets</b>			2,213,251,367.80
	<b>Liabilities</b>			
	<b>Current Liabilities</b>			
14,937,310.81	Accrued Expenses	21	4,862,544.46	
5,364,744.91	Creditors	22	7,207,871.86	
20,302,055.72				12,070,416.32
	<b>Non-Current Liabilities</b>			
38,865,339.00	Provision for Retiring Gratuity	23	41,831,260.29	
29,789,654.77	Deferred Revenue	24	63,976,664.83	
68,654,993.77				105,807,925.12
88,957,049.49	<b>Total Liabilities</b>			117,878,341.44
2,125,396,904.29	<b>Net Asset</b>			2,095,373,026.36
	<b>Equity and Reserves</b>			
	<b>Accumulated Fund</b>			
(24,184,567.58)	NSF Fund		(13,876,605.15)	
26,962,258.35	Add: Excess of Expenditure over Income		(23,467,308.51)	
2,777,690.77	<b>Total Accumulated Funds</b>			(37,343,913.66)
1,249,216,114.91	Revaluation Reserve			1,249,216,114.91
873,002,124.00	Government Grant			883,002,124.00
400,974.61	NSF Development Fund	25		498,701.11
2,125,396,904.29	<b>Total Equity</b>			2,095,373,026.36

# Statement of financial performance for the year ended 31<sup>st</sup> December, 2020

As at 31.12.2019		Rs.	Rs.	Rs.
149,100,000.00	<b>Grants from Treasury - Recurrent</b>			150,690,000.00
	<b><u>Income for the year</u></b>			
673,775.85	Interest received	636,367.44		
285,998.52	Sundry Income	184,023.46		
765,500.00	Net Profit/(Loss) Sale of Publications - (Note 12.1) (Printed to disseminate Information)	783,971.21		
3,648.00	Photocopy receipts	2,994.00		
231,101.05	Publications Charges Received - JNSF	178,561.79		
25,750.00	NSLRC Income	101,125.00		
623,737.00	Income from Workshops	-		
17,174.69	Profit/(Loss) Disposal of Fixed Assets	4,368.75		
2,626,685.11			1,891,411.65	
	<b><u>Other</u></b>			
-	Payables Writeback	1,809,091.15		
24,777,204.65	Deferred Income (Assets)	15,352,181.35		
307,189,000.00	Deferred Income (Capital)	59,000,000.00		
1,169,694.80	Income form Projects	625,449.60		
-	Income form Workshops	-		
333,135,899.45			76,786,722.10	
335,762,584.56				78,678,133.75
<b>484,862,584.56</b>				<b>229,368,133.75</b>
	Less; Expenditure for the year			
	<b><u>Recurrent Expenditure</u></b>			
	<b><u>Office Expenditure</u></b>			
551,775.00	Traveling & Allowances for Board Members	457,700.00		
261,554.60	Refreshments for meetings	116,335.12		
-	Printing & Publications	-		
813,329.60			574,035.12	
	<b><u>Staff Emoluments</u></b>			
88,090,287.52	Salaries & Allowances	87,416,451.46		
11,623,778.31	Employees Provident Fund	12,267,452.76		
2,324,676.30	Employees Trust Fund	2,453,462.67		
6,651,106.77	Transport & Fuel Allowances	6,356,807.74		
8,322,306.33	Provision for Retiring Gratuity	7,843,554.61		
2,783,221.31	Overtime	2,303,836.04		
104,871.55	Holiday Payment	34,343.62		
271,701.93	Uniforms	304,457.30		
120,171,950.02			118,980,366.20	
	<b><u>Office Administration</u></b>			
3,429,586.89	Travelling - Office	861,571.06		
1,424,802.97	Stationery & Consumables	1,029,271.50		
3,708,506.42	Electricity	2,616,526.94		
3,276,043.03	Telephone/ Fax	2,948,729.31		
451,605.08	Postal charges	6,964.80		
534,600.00	Audit fees - Auditor General's Department	535,000.00		
71,500.00	Bank charges	55,060.00		
78,974.51	Medical Expenses	169,457.58		
727,185.25	Advertising	106,704.00		
2,201,983.27	Fuel Expenses	2,068,560.06		
2,432,464.50	Maintenance of Motor Vehicles	1,839,506.21		
2,616,091.56	Maintenance of Office Equipment & Furniture	2,063,098.47		
1,018,377.83	Maintenance of Building	672,049.40		

		Rs.	Rs.	Rs.
5,850.00	Maintenance of Land	-		
861,591.93	Insurance	951,047.55		
563,565.50	Water Consumption charges	399,153.52		
1,815,421.68	Security Services	1,628,675.00		
17,328,306.14	Depreciation	19,210,020.84		
1,596,760.27	Amortisation of intangible assets	1,678,416.48		
36,500.00	Legal Fees	-		
594,283.19	Sundry Expenses	497,222.00		
1,572,570.13	Janitorial Services	1,484,460.00		
176,709.10	Translation charges	345,015.00		
1,325.00	Stamp duty	825.00		
-	Intangible Assets Written off	4,047,894.03		
3,298,965.20	Debtors Written off	-		
399,132.32	Stock of Stationery & Consumables written off	-		
216,100.00	Stock of Magazines & Journals written off	406,850.00		
50,438,801.77			45,622,078.75	
	<b>Others</b>			
65,010.00	National Science Library & Resource Centre- <b>Note 12.2</b>	80,892.00		
3,024,868.72	Printing Division - <b>Note 12.3</b>	429,580.79		
5,558,526.69	Subscription for Internet Services	5,077,605.20		
8,648,405.41			5,588,077.99	
	<b>Capital Expenditure</b>			
163,913,260.98	Mandate 01 - <b>Note 13.1</b>	25,235,204.43		
8,491,927.81	Mandate 02 - <b>Note 13.2</b>	4,012,079.38		
10,423,433.18	Mandate 03 - <b>Note 13.3</b>	2,085,984.59		
20,543,768.73	Mandate 04 - <b>Note 13.4</b>	3,007,202.38		
49,883,665.50	Mandate 05 - <b>Note 13.5</b>	8,435,404.75		
24,571,783.21	Mandate 06 - <b>Note 13.6</b>	39,295,008.67		
277,827,839.41			82,070,884.20	
457,900,326.21				252,835,442.26
<b>26,962,258.35</b>	<b>Net Surplus/(Deficit) for the period</b>			<b>(23,467,308.51)</b>

## Statement of changes in net assets/equity

Summary	Contributed Capital	Revaluation Reserve	Other Reserve	Other Funds	NSF Fund	Total Accu. Fund	Total
Balance as at 01.01.2020	-	1,249,216,114.91	873,002,124.00	400,974.61	2,777,690.77	3,178,665.38	2,125,396,904.29
Changes in accounting Policy	-	-	-	-	-	-	-
Prior year adjustments	-	-	-	-	(16,654,295.92)	(16,654,295.92)	(16,654,295.92)
Restated balance	-	1,249,216,114.91	873,002,124.00	400,974.61	(13,876,605.15)	(13,475,630.54)	2,108,742,608.37
Change in net asset/equity for 2020							
Revaluation Surplus	-	-	-	-	-	-	-
Investment adjustment	-	-	10,000,000.00	-	-	-	10,000,000.00
Grants From Treasury							
Capital	-	-	-	-	59,000,000.00	59,000,000.00	59,000,000.00
Recurrent	-	-	-	-	150,690,000.00	150,690,000.00	150,690,000.00
Other operations	-	-	-	97,726.50	19,678,133.75	19,678,133.75	19,775,860.25
Expenditure during the year							
Capital	-	-	-	-	(82,070,884.20)	(82,070,884.20)	(82,070,884.20)
Recurrent	-	-	-	-	(170,764,558.06)	(170,764,558.06)	(170,764,558.06)
Total recognised revenue and expenses for the period	-	-	10,000,000.00	97,726.50	(23,467,308.51)	(23,467,308.51)	(13,369,582.01)
Balance as at 31st December 2020	-	1,249,216,114.91	883,002,124.00	498,701.11	(37,343,913.66)	(36,942,939.05)	2,095,373,026.36



## Statement of cash flow

	2020	2019	Rs'000
<b><u>Cash flows from operating Activities</u></b>			
Net excess of expenditure over income	(23,467)	26,962	
Add: NSF fund prior year adjustments	(16,654)	14,470	
	<b>(40,122)</b>	<b>41,432</b>	
<b><u>Adjustments for</u></b>			
Depreciation	19,210	17,328	
Amortisation of Intangible assets	1,678	1,597	
Gratuity paid during the year	(4,878)	(4,222)	
Provision for Gratuity	7,844	8,322	
Disposal of Fixed Assets	(4)	(17)	
Writeoff of Intangible Assets	4,048	-	
Deferred Revenue	(15,352)	(24,777)	
Operating profit/loss before working capital changes	<b>(27,576)</b>	<b>39,663</b>	
Net increase/decrease in trade other receivables	28,224	(25,513)	
Net increase/decrease in inventories	(787)	252	
Net decrease/increase in trade payables	(8,232)	594	
Cash generated from operations	19,205	(24,667)	
Net cash from operating activities		<b>(8,371)</b>	<b>14,996</b>
<b><u>Cash flows from Investing Activities</u></b>			
Proceed of Disposal of Fixed Assets	4	56	
Purchase of assets	(49,539)	(4,752)	
Net cash used in investing activities		<b>(49,535)</b>	<b>(4,696)</b>
<b><u>Cash Flows from Financial Activities</u></b>			
Contribution from Government	49,539	4,752	
Contribution from NSF Components	98	401	
	<b>49,637</b>	<b>5,153</b>	
Net cash from financing activities		<b>(8,268)</b>	<b>15,452</b>
Cash & cash equivalent at beginning period		26,536	11,084
<b>Cash &amp; cash equivalent at end of period</b>	<b>18,268</b>	<b>26,536</b>	

# Notes on accounting policies for the year ended 31<sup>st</sup> December, 2020

## 1 General Accounting

The Financial Statements have been prepared in accordance with Sri Lanka Public Sector Accounting Standards (SLPSAS) and presented in accordance to Sri Lanka Public Sector Accountnig Standards SLPSAS 01 - Presentation of Financial Statements.

## 2 Grants for Research & Other Scientific Work

Our policy in funding research grants as formulated in the Research Grants contractual agreement is to transfer the funds to the Institution where the grantee is employed in installments. After completion of the project unutilized balance to be refunded to NSF. Hence we treat the funds transferred to the Institution as expenditure. At the end of the project a debtor is created for the unutilized funds.

## 3 Assets & the basis of their valuation

### Depreciable assets & Depreciation

Depreciation has been provided on original cost or at valuation on a straight line basis from the date of purchase of the assets and is calculated to write off the assets over their estimated useful lives.

### Depreciation Rates as Follows

Building	5%
Office Equipment & Furniture	20%
Motor Vehicles	20%
Accessories & Miscellaneous	20%
Library Books	5%
Scientific & Laboratory Equipment out on loan	10%
Documentation Equipment	10%

### Intangible Assets

The Company measures intangible assets at cost less any accumulated amortisation and any impairment losses.

### Amortisation

The depreciable amount of an intangible asset in amortised on a straight line basis over the estimated useful life and is recognized as an expense. Depreciation Rates as Follows

Computer Software	20%
-------------------	-----

### Assets Revaluation

Land , Building ( Including Container Office ) and Motor Vehicles were revalued by the **Department of Government Valuation** and their revalued amounts are as follows.

Assets Group	Date of Letter	Value	Effective Date
Land	14.03.2019	1,122,000,000.00	14.03.2019
Building	14.03.2019	88,783,000.00	14.03.2019
Building - Container	03.03.2020	1,700,000.00	31.12.2019
Motor Vehicles	27.02.2020	25,300,000.00	31.12.2019

## **Disclosure on Land and Building**

According to the cabinet decision No. 20/1607/306/035, a Memorandum dated 2020-10-12 by the Minister of Urban Development & Housing on " **Vesting/Acquisition of State and Private Lands with the Urban Development Authority for proposed Projects centered on Major Cities including the City of Colombo**" granted approval to vest the National Science Foundation Land referred to under serial No.6 of the Annex - 1 to the Memorandum.

### **4 Publications**

These are published mainly to disseminate Scientific Knowledge to school children in particular & the society in general as well as to impart knowledge to the scientific community, policy makers, funding agencies etc.

Therefore in many occasions publications have to be given free of charge to schools & other relevant various organisations specially as prizes/ awards for science related activities with the Director General approval.

The Journals and Magazines over six months were written down by 50% and the value of Journals and Magazines which are over an year were written down to zero as per the decision of the Board of Management on 15th November 2010

The value of books/any other publications other than Journals & magazines were written down to Zero value after five years of printing as per the decision of the Board of Management on 12th August 2011.

The Cost of the Publications is treated as an expenditure to the relevant Division as per the decision of the Board of Management on 13th August 2015.

### **5 Presentation of Grants related to assets and income**

#### **Grants related to assets**

The treatment of depreciation related to assets have been dealt as deferred income which is recognized as income on a systematic and rational basis over the useful life of the asset in accordance to LKAS 20

#### **Grants related to income**

Grants related to income are presented as a credit in the statement of comprehensive income and alternatively they are deducted in reporting the related expense.

**6 INVESTMENT** - Investment of Rs. 883,002,124/- represents the NSF investment in SLINTEC

**7 Debtors** - NSF provides doubtful debts for debts which are outstanding for more than 3 years

### **8 Employees Benefit**

All employees are covered by EPF & ETF. An approved Medical Scheme is provided in addition to the normal Welfare facilities available.

## 9 Retiring Gratuity

Provisions have been made in the accounts in respect of liability for retiring gratuity for the employees who have completed one year of Service.

	Rs.	cts
Amount paid for the year		4,877,633.32
Provision for the year		7,843,554.61

10 NSF owns 07 vehicles as at 31.12.2020

## 11 Funds Drawn from the Treasury during - 2020

	Budget	Received	
	Rs.	Rs.	
Capital Funds	59,000,000.00	59,000,000.00	Note A
Recurrent Funds	151,000,000.00	150,690,000.00	

### Note A

#### Capital Funds Allocation to Relevant Mandates

1	Mandate 01	22,590,000.00
2	Mandate 02	3,290,000.00
3	Mandate 03	3,070,000.00
4	Mandate 04	3,200,000.00
5	Mandate 05	4,450,000.00
6	Mandate 06	22,400,000.00
		<u>59,000,000.00</u>

#### Funds drawn from the Treasury from 1968 to 2020

	Rs.
Consolidated funds	Rs. <u>3,087,422,826.45</u>
Foreign Aids	Rs. <u>338,908,549.60</u>

## Notes on accounts

### 13.1 Mandate 01

To Support basic and applied research in order to strengthen the scientific research potential, develop natural resources and support & facilitate technology development and product commercialization in order to enrich welfare of people.

	2020	2019
	Rs.	Rs.
1 Research Grants	19,498,498.80	79,570,746.00
2 Technology Grants	2,419,599.83	8,851,850.50
3 International Liasion Division	10,647.70	209,473.05
4 Director's Office Vote	900,000.00	5,869,545.00
5 Thematic Special Project Unit	5,838.10	25,010,524.17
6 Research Project Health Science - RPHS	2,400,620.00	44,401,122.26
	<b>25,235,204.43</b>	<b>163,913,260.98</b>

### 13.2 Mandate 02

To maintain a current register of scientific and technical personner, conduct surveys for determination of current and projected needs of S & T resources and provide a source of S T & I informations.

	2020	2019
	Rs.	Rs.
1 Science & Technology Policy Research Division	4,012,079.38	8,491,927.81
	<b>4,012,079.38</b>	<b>8,491,927.81</b>

### 13.3 Mandate 03

To foster interchange of scientific information among scientists in Sri Lanka and abroad and promote the publication of one or more journals at the national level.

	2020	2019
	Rs.	Rs.
<b>National Library and Resource Center</b>		
1 SLJOL Databse	600,698.42	5,279,831.10
2 Library Books	16,563.01	44,642.60
3 National Digitization	202,638.33	1,025,774.13
4 Seminars & Workshops	37,378.00	29,181.15
5 Subscriptions & Periodicals	13,433.27	369,188.98
6 Honararium for Committee Meeting	-	32,500.00
7 National Repository S & T	-	1,247,624.58
	<b>870,711.03</b>	<b>8,028,742.54</b>
<b>Journal Publication Unit</b>		
1 Journal of National Science Foundation - ( JNSF)	937,310.02	1,948,233.57
2 Sri Lanka Journal of Social Sciences - ( SLJSS)	277,963.54	446,457.07
	<b>1,215,273.56</b>	<b>2,394,690.64</b>
	<b>2,085,984.59</b>	<b>10,423,433.18</b>



#### 13.4 **Mandate 04**

To Popularize science amongst schools and general public

	2020	2019
	Rs.	Rs.
1 Science Popularization Division	3,007,202.38	20,543,768.73
	<b>3,007,202.38</b>	<b>20,543,768.73</b>

#### 13.5 **Mandate 05**

To Promote and enhance capacity building through liasing with individuals, associations or institutions locally and internationally and facilitate return of Sri Lankan scientists and technologists of distinction for S & T development.

1 Research Scholarship & Fellowships	6,795,000.00	26,251,787.56
2 International Contacts - Travel Grants	644,823.50	10,549,081.72
3 International Contacts - CERN	-	2,338,576.07
4 International Contacts - OSTP	9,005.00	4,615,161.93
5 International Contacts - IPSAT	-	4,193,472.55
6 International Liasion Division	35,076.25	675,360.45
7 Subscription to International Scientific Organizations	951,500.00	1,260,225.22
	<b>8,435,404.75</b>	<b>49,883,665.50</b>

#### 13.6 **Mandate 06**

Acquisition of Capital Assets and improve policies, proceses and procedures of NSF together with managerial and technical competency of staff by international benchmarking, enhance infrastructure facilities and improve working environment to create a happy and contended workforce.

1 Office Equipment & Furniture	514,237.14	1,956,904.15
2 Building	-	758,738.76
3 Motor Vehicles	-	-
4 Information Technology	5,089,200.84	8,147,604.30
5 Land & Improvements	31,799,318.71	-
6 Accessories & Miscellaneous	1,550.00	70,190.00
7 Staff Development Local	266,427.00	2,497,856.60
Foreign	-	898,781.98
8 Director's Office Vote	1,624,274.98	10,241,707.42
9 Women in Science Programme	-	-
	<b>39,295,008.67</b>	<b>24,571,783.21</b>

## Note No 12

### 12.1 Net Profit/(Loss) Sale of Publications

2020

Rs.

1	Other Publications	7,500.00
2	Sri Lanka Journal of Social Sciences	1,000.00
3	Sri Lanka Journal of Social Sciences Vol No. 42	5,100.00
4	Sri Lanka Journal of Social Sciences Vol No. 43	3,200.00
5	Vidurava	5,700.00
6	NSF Journal	-
7	Journal of National Science Foundation Vol No. 44	600.00
8	Journal of National Science Foundation Vol No. 46	(300.00)
9	Journal of National Science Foundation Vol No. 47	55,100.00
10	Journal of National Science Foundation Vol No. 48	63,600.00
11	Vidurava Vol. 36-1 (E)	(49,850.00)
12	Vidurava Vol. 36-1 (S)	(74,900.00)
13	Vidurava Vol. 36-1 (T)	(49,300.00)
14	Vidurava Vol. 36-2 (E)	(100,100.00)
15	Vidurava Vol. 36-2 (S)	(150,100.00)
16	Vidurava Vol. 36-3 (E)	114,872.50
17	Vidurava Vol. 36-3 (S)	157,904.00
18	Vidurava Vol. 36-3 (T)	65,750.50
19	Vidurava Vol. 36-4 (E)	151,834.50
20	Vidurava Vol. 36-4 (S)	199,078.21
21	Vidurava Vol. 37-1 (E)	178,590.00
22	Vidurava Vol. 37-1 (S)	198,691.50
		<b>783,971.21</b>

### 12.2 National Science Library & Resource Centre

2020

2019

Rs.

Rs.

1	Maintenance & Repairs	-	7,600.00
2	Consumables	80,892.00	57,410.00
		<b>80,892.00</b>	<b>65,010.00</b>

### 12.3 Printing Unit

2020

2019

Rs.

Rs.

1	Consumables & Chemicals	209,058.57	2,155,441.89
2	Paper & Boards	39,342.62	189,572.77
3	Maintenance & Repairs	181,179.60	679,854.06
		<b>429,580.79</b>	<b>3,024,868.72</b>

			2020	2019
Note No 14 - Cash and Cash Equivalents			Rs.	Rs.
<b>Bank Accounts</b>				
1	BOC - 0002323269	Note - A	15,972,660.18	24,029,835.67
2	BOC - 0002323270		147,619.76	26,423.24
3	BOC - 0002322471		475,043.16	293,881.37
4	BOC Savings - 80771519		803,644.61	2,029,832.62
5	Special cash imprest		100,000.00	100,000.00
6	Petty cash		5,000.00	5,000.00
7	Cash & Cheques in hand		763,579.93	51,061.94
			<b>18,267,547.64</b>	<b>26,536,034.84</b>
<b>Note A : Capital Cash Balance as at 31.12.2020</b>				
Treasury Funds - Capital			9,637,281.42	21,679,018.06
Covid - 19			1,000,000.00	-
Biosafety Project			3,759,945.50	1,842,364.75
Cinemon Project			1,575,433.26	508,452.86
			<b>15,972,660.18</b>	<b>24,029,835.67</b>
<b>Note No 15 - Receivables</b>				
<b>Cash Advances &amp; Advance payments</b>				
1	Miscellaneous		-	16,719.20
2	Advance Payment - Landscaping		-	5,538,405.97
3	<b>Loans to Staff</b>			
	i. Distress loan - 01	Schedule - 1	2,183,665.00	3,300,106.00
	ii. Distress loan - 02	Schedule - 2	14,091,109.00	11,677,230.00
	iii. Combined loan	Schedule - 3	-	-
4	Festival Advance	Schedule - 4	30,000.00	22,500.00
5	Staff Debtors	Schedule - 5	198,824.25	421,581.23
6	Sundry Debtors	Schedule - 6	1,471,327.17	11,563,480.75
			<b>17,974,925.42</b>	<b>32,540,023.15</b>
<b>Note 15.1 - Receivable Analysis</b>				
		Amount	Settlements With in	
			one Year	Settlements After one year
Distress Loan - 01		2,183,665.00	745,182.00	1,438,483.00
Distress Loan - 02		14,091,109.00	3,759,012.00	10,332,097.00
Other Receivables		1,700,151.42	1,700,151.42	-
		<b>17,974,925.42</b>	<b>6,204,345.42</b>	<b>11,770,580.00</b>
<b>Note No 16 - Stocks</b>				
1	Stationery and Consumables	Schedule - 7	1,260,870.61	832,845.39
2	Publications	Schedule - 7	1,190,284.96	831,563.75
			<b>2,451,155.57</b>	<b>1,664,409.14</b>
<b>Note No 17 - Other Current Assets</b>				
1	Refundable Deposit	Schedule - 8	108,650.00	108,650.00
			<b>108,650.00</b>	<b>108,650.00</b>

		Rs.	Rs.
<b>Note No 20 - Investments</b>			
1	SLINTEC <b>Note - B</b>	883,002,124.00	873,002,124.00
		<b>883,002,124.00</b>	<b>873,002,124.00</b>
<b>Note - B : Investments Breakup</b>			
	<b>No of Shares</b>		
	Ordinary Shares 43,680,777	394,036,527.00	394,036,527.00
	Preference Shares 47,982,211	488,965,597.00	478,965,597.00
		<b>883,002,124.00</b>	<b>873,002,124.00</b>
<b>Note No 21 - Accrued Expenses</b>			
1	Accrued Expenses <b>Schedule - 9</b>	4,862,544.46	14,937,310.81
		<b>4,862,544.46</b>	<b>14,937,310.81</b>
<b>Note No 22 - Creditors</b>			
Creditors amounting to Rs. 7,207,871.86 represents monies held by NSF as given below,			
1	Retention Payable - Ransavi Constructions	872,493.10	1,012,292.73
2	Ransavi Constructions	-	2,035,869.41
3	Covid - 19	1,000,000.00	-
4	Cinemon Project	1,575,433.26	508,452.86
5	Biosafety Project	3,759,945.50	1,754,189.75
6	Staff Creditors	-	3,940.16
7	Sundry Creditors	-	50,000.00
		<b>7,207,871.86</b>	<b>5,364,744.91</b>
<b>Note No 23 - Provision for Retiring Gratuity</b>			
	<b>Balance as at 01.01.2020</b>	38,865,339.00	34,765,095.17
	(+) Provision for the year	7,843,554.61	8,322,306.33
		46,708,893.61	43,087,401.50
	(-) Paid during the year	(4,877,633.32)	(4,222,062.50)
	<b>Balance as at 31.12.2020</b>	<b>41,831,260.29</b>	<b>38,865,339.00</b>
<b>Note No 24 - Deffrede Revenue</b>			
1	Deffred Revenue - Assets <b>Note - C</b>	63,976,664.83	29,789,654.77
		<b>63,976,664.83</b>	<b>29,789,654.77</b>
<b>Note C : Deffered Revenue - Assets</b>			
	<b>Balance as at 01.01.2020</b>	29,789,654.77	49,813,766.95
	(+) Assets Capitalized	49,539,191.41	4,753,092.47
		79,328,846.18	54,566,859.42
	(-) Depreciation Deffered	(15,352,181.35)	(24,777,204.65)
	<b>Balance as at 31.12.2020</b>	<b>63,976,664.83</b>	<b>29,789,654.77</b>
<b>Note No 25 - NSF Development Fund</b>			
1	NSF Component	338,966.31	241,239.81
2	Staff Component	159,734.80	159,734.80
		<b>498,701.11</b>	<b>400,974.61</b>

## Property plant and equipment as at 31<sup>st</sup> December, 2020

Description	Balance as at 01.01.2020 ( Rs. )	Additions	Revaluation Transfers	Disposals	Balance as at 31.12.2020 ( Rs. )
<b>Assets - (Cost &amp; Revaluation)</b>					
Land	1,122,000,000.00	12,314,859.19	-	-	1,134,314,859.19
Building	91,241,738.76	33,405,262.64	-	-	124,647,001.40
Office Equipment & Furniture	109,137,857.03	1,104,237.14	-	3,495.00	110,238,599.17
Motor Vehicles	25,300,000.00	-	-	-	25,300,000.00
Accessories & Miscellaneous	1,432,056.55	5,800.00	-	-	1,437,856.55
Library Books	5,673,120.26	16,563.01	-	-	5,689,683.27
Documentation Equipment	15,945,261.85	-	-	-	15,945,261.85
	<b>1,370,730,034.45</b>	<b>46,846,721.98</b>	<b>-</b>	<b>3,495.00</b>	<b>1,417,573,261.43</b>
<b>Accumulated Depreciation</b>					
Building	3,568,573.31	5,474,799.03	-	-	9,043,372.34
Office Equipment & Furniture	88,029,292.76	8,421,987.53	-	3,495.00	96,447,785.29
Motor Vehicles	-	5,060,000.00	-	-	5,060,000.00
Accessories & Miscellaneous	1,326,268.01	31,844.61	-	-	1,358,112.62
Library Books	4,001,379.86	221,389.67	-	-	4,222,769.53
Documentation Equipment	15,945,261.85	-	-	-	15,945,261.85
	<b>112,870,775.79</b>	<b>19,210,020.84</b>	<b>-</b>	<b>3,495.00</b>	<b>132,077,301.63</b>
<b>Net Value</b>	<b>1,257,859,258.66</b>				<b>1,285,495,959.80</b>

\* Land Additions include Improvement of Land expenditure under the Landscape Project.

### Note No 19 - Intangible Assets

#### Cost

Balance at the beginning of the year
Additions
Transfers/Disposals
<b>Balance as at the end of the year</b>

2020	2019
Rs.	Rs.
9,659,888.53	8,318,396.57
2,692,469.43	1,341,491.96
(5,786,158.41)	-
<b>6,566,199.55</b>	<b>9,659,888.53</b>

#### Accumulated amortisation

Balance at the beginning of the year
Charge for the year
Transfers/Disposals
<b>Balance as at the end of the year</b>
<b>Carrying amount as at the end of the year</b>

2,119,430.02	522,669.75
1,678,416.48	1,596,760.27
(1,738,264.38)	-
<b>2,059,582.12</b>	<b>2,119,430.02</b>
<b>4,506,617.43</b>	<b>7,540,458.51</b>

\* Intangible assets include computer software and software licenses purchased.



## Schedules for accounts for the year ended 31<sup>st</sup> December, 2020

Schedule - 9

### Accrued Charges

#### **Recurrent**

1	Audit Fees	2,910,175.00	
2	Water Consumption	18,829.71	
3	Electricity	183,589.20	
4	Salaries & Allowances	8,833.33	
5	Gratuity	120,050.00	
6	Fuel	267,409.42	
7	Telephone	42,473.03	
8	Medical Expenses	51,733.00	
9	Sundry Expenses	14,750.00	
10	Travelling	36,423.47	
11	Overtime	234,181.13	
12	Insurance	514.02	
13	Subscription for Internet Charges	399,630.24	4,288,591.55

#### **Capital**

1	National Digitization	48,333.33	
2	Biosafety Account	150,000.00	
3	Land & Improvement	327,286.25	
4	Science Popularization Division	48,333.33	573,952.91
	<b>Total</b>		<b>4,862,544.46</b>

Schedule - 7

### Stocks

	Rs.	Rs.
1 Stationary & Consumables - Stores	573,807.39	
- Printing	687,063.22	
		1,260,870.61

2	Coral Reef Posters	15,220.00
3	Horton Plains Vedio Cassettes	8,043.75

### Books & Periodicals

4	Sri Lanka Journal of Social Science Vol No 42	2,800.00	
5	Sri Lanka Journal of Social Science Vol No 43	3,200.00	
6	Vidurawa 36-3 (English)	115,172.50	
7	Vidurawa 36-3 (Sinhala)	157,504.00	
8	Vidurawa 36-3 (Tamil)	65,950.50	
9	Vidurawa 36-4 (English)	151,834.50	
10	Vidurawa 36-4 (Sinhala)	199,078.21	
11	Vidurawa 37-1 (English)	178,590.00	
12	Vidurawa 37-1 (Sinhala)	198,691.50	
13	Journal of National Science Foundation Vol No. 47	30,600.00	
14	Journal of National Science Foundation Vol No. 48	63,600.00	1,190,284.96

**Total**

**2,451,155.57**

# Loan Balance as at 31.12.2020

Schedule - 1

## Distress Loan - 01

	Rs.	Rs.
1 Mr.M.D.Vajira	62,120.00	
2 Mr.A.A. Dias	65,472.00	
3 Mrs.N.S.Liyanage	60,872.00	
4 Mrs.Dilani Jayaweera	76,650.00	
5 Mrs.J.A.C.H Samarasinghe	132,030.00	
6 Mrs.T.D.P.P Samaranayake	50,322.00	
7 Mrs.K.A.T.K.G.Kadanamulla	58,632.00	
8 Mrs.J.A.C.G.Samarasinghe	174,972.00	
9 Mr.Umeka Samaranayake	124,597.00	
10 Mr.E.M.D.C.B Ekanayaka	88,312.00	
11 Mrs.R.M.M Jayajeewani	119,490.00	
12 Mr.Asanga Indrajith Ahangama	126,144.00	
13 Mrs.D.M.W Sadari Dematagolla	171,864.00	
14 Mrs.Dilushi Munasingha	68,340.00	
15 Mr.S.A.Jayasinghe	67,440.00	
16 Mrs.Nisansala Hansamali	237,462.00	
17 Mr.Ranil Kumara de Silva	145,684.00	
18 Mrs.R.N.N.Gamage	84,378.00	
19 Mr.Dushantha Pushpakumara	86,502.00	
20 Mrs.K.W.D.Madushani	84,000.00	
21 Mrs.A.H.D.R Monali	98,382.00	
		<b><u>2,183,665.00</u></b>

**Distress Loan - 02*****Schedule - 2***

1	Mr.M.D.Vajira	42,040.00
2	MRs.H.A.Kanthi	162,474.00
3	Miss.N.Paranavidana	145,810.00
4	Mrs.V.R.Priyanganie	233,296.00
5	Mrs.N.S.Liyanage	172,368.00
6	Mrs.N.S.S Silva	226,707.00
7	Mr.Saman Sujeewa	229,130.00
8	Mrs.R.K.D.U Medhavi	229,130.00
9	Mrs.Monika Wijayamanne	229,130.00
10	Mr.K.A.D.P.N. Nanayakkara	187,470.00
11	Mr.B.S.Coaray	233,296.00
12	Mr.H.P.L Caldera	124,980.00
13	Mrs.D.M.R. Ippalawatte	162,474.00
14	Mrs.Hemamali Priyadarshani	233,296.00
15	Mrs..A.J.N. Silva	195,802.00
16	Mrs.D.M.N Prishathi	229,130.00
17	Mrs.Viraji Yasapalitha	233,296.00
18	Mrs.I.C.Ramani	233,296.00
19	Mr.K.G.J Karunasena	124,980.00
20	Mrs.W.A.D.A Perera	233,296.00
21	Mrs.D.N.Wickramarachchi	154,142.00
22	Ms.K.N.R.H.D.Mahapitiya	187,470.00
23	Mrs.Dilani Jayaweera	69,125.00
24	Mrs.J.A.C.H Samarasinghe	55,440.00
25	Mrs.M.A.R.L Millavithana	154,142.00
26	Mrs.S.V.P.M.Rukshani	191,636.00
27	Mr.S.N.P.K Sapumohotti	158,308.00
28	Mrs.T.D.P.P Samaranayake	137,172.00
29	Mrs.Dilrukshi Ekanayake	145,810.00
30	Mr.Chandrasiri Perera	229,130.00
31	Mrs.B.T.Wickramasingha	141,644.00
32	Mr.T.D.K.Gunasekara Zoysa	187,470.00
33	Mrs.R.A.A.R Ranathunga	154,142.00
34	Mrs.Maduka Senarathna	145,810.00
35	Mr.P.D Gunamuditha	233,296.00
36	Mr.W.P.S.Sammani Weerasingha	229,130.00
37	Mr.K.K.Yohan Chandeera	229,130.00
38	Mrs.Chani M De Silva	233,296.00
39	Mrs.Kanchana Sewwandhi	229,130.00
40	Mrs.H.K.C Priyadarshanie	229,130.00
41	Mr.Umeka Samaranayake	67,539.00
42	Mr.E.M.D.C.B Ekanayaka	62,439.00
43	Mrs.Pushpa Ellapallage	229,130.00

44	Mrs.Priyanka Bamunendra	229,130.00
45	Mrs.A.N.L Perera	237,462.00
46	Mrs.B.V.I.D Wimalarathna	166,640.00
47	Mr.Janaka Perera	189,934.00
48	Mr.Asanga Indrajith Ahangama	23,688.00
49	Mrs.Saroja Udayangani	155,440.00
50	Mrs.D.M.W Sadari Dematagolla	11,396.00
51	Mrs.Dilushi Munasinghe	144,126.00
52	Mr.S.C.S Fernando	233,296.00
53	Mrs.P.H.Hasni	183,304.00
54	Mrs.L.N.A.L.Nissanka	237,462.00
55	Mrs.M.Shamila	130,764.00
56	Mr.Ranil Kumara de Silva	31,820.00
57	Mr.Pujitha Hewawasam	162,474.00
58	Mrs.J.K Harsha Shamini	133,210.00
59	Mrs.W.A.H Vinoli Chandi	229,130.00
60	Mr.Sandun Fernando	104,190.00
61	Mrs.G.G.K.P.Sumudu Kumari	237,462.00
62	Mr.Manuja Karunaratna	183,304.00
63	Mr.Sajeewa Pannala	154,142.00
64	Mrs.S.Warnasooriya	166,640.00
65	Mrs.R.N.N.Gamage	86,387.00
66	Mrs.M.S.Weerasooriyagedara	166,640.00
67	Mrs.N Muhandiram	179,138.00
68	Mrs.K.N.Samanthi	166,640.00
69	Dr.K.B.Hasanthi	166,640.00
70	Mr.Dushantha Pushpakumara	57,681.00
71	Mohomad Rihas	151,577.00
72	Mr.Malith Dananjaya	170,062.00
73	Mrs.K.W.D.Madushani	82,640.00
74	Mr.Nuwan Nishantha	161,007.00
75	Mrs.N.M.Wickramsingha	170,806.00
76	Mrs.C.N.G Moragoda	170,806.00
77	Mrs.A.H.D.R Monali	139,080.00
78	Mr.G.D.N.Ranjan	229,130.00
79	Mrs.Chamathka Dias	241,628.00
80	Mr.P.J.M.C Perera	231,000.00
81	Mr.M.A.R.Bandara	226,875.00
82	Mr.R.D.S.D Wijesundara	233,296.00

**14,091,109.00**

## Schedule - 3

## Combined Loan as at 31.12.2020

	Rs.	Rs.
Not Available	-	-
		<u><u>-</u></u>

## Schedule - 4

## Festival Advance Balances as at 31.12.2020

Name	Rs.
Mr.K.A.D.P.N. Nanayakkara	10,000.00
Mr.S.C.S Fernando	10,000.00
Mr.Jude Malan	10,000.00
<b>Total</b>	<u><u>30,000.00</u></u>

## Schedule - 8

Prepayments

	Rs.
1 Information Technology	518,575.02
2 Insurance	175,777.97
3 Maintenance of Building	249,480.00
4 Maintenance of Office Equipments	446,861.95
5 Postage	53,693.00
	<u><u>1,444,387.94</u></u>

Deposits

	Rs.
1 Felix Perera & Sons	65,000.00
2 Director of Telecommunication	450.00
3 Telecom	5,000.00
4 Ceylon Electricity Board	10,000.00
5 Telecom - IDD facilities	5,000.00
6 Car Smile - Rent a car services	15,000.00
7 Laugh Holdings	8,200.00
	<u><u>108,650.00</u></u>

## Schedule - 5

Staff Debtors Schedule

Dr.Thamara Dias	238.03
Mrs.Nadeesha Sirangi	198,586.22
	<u><u>198,824.25</u></u>



**Sundry Debtors Schedule****Sundry Debtors Balances as at 31/12/2020**

Date	V.No	Grant No.	Grantee	Amount	
				Rs.	cts.
18-11-2019	JV - 467		Colombo Municipal Council	21,112.50	
28-11-2019	JV - 491		Ministry of Science & Technology - Election Duty	6,000.00	
31-12-2019	JV - 667	NSF/SCH/2017/06	Ms. G.D. Liyanaarachchi No.160, Gunasekara Mawatha, Maththumagala, Ragama.	91,491.00	
31-12-2019	JV - 688	RG/2005/DMM/05	Postgraduate Institute of Science, University of Peradeniya,	0.20	
31-12-2020	JV - 282	RG/2016/BS/05	Prof. C.V. Hettiarachchi Dept. of Chemistry Faculty of Science University of Peradeniya	95,521.56	
31-12-2020	JV - 282	RG/2017/BS/01	Dr. Dinari Gunasekara Sri Lanka Institute of Nanotechnology Pitipana Homagama	144,443.82	
31-12-2020	JV - 282	RG/2017/BS/02	Prof. G. A.K.S. Perera Dept. of Electronics Wayamba University of Sri Lanka	70,544.30	
31-12-2020	JV - 282	NSF/PDRS/2018/01	Dr. Chamindra Lakmali Vithana "Jayasewana" Konduruwa, Polgasowita	72,445.04	
31-12-2020	JV - 282	RG/2017/AG/02	Prof. C.V.L. Jayasinghe Dept. of Food Science & Technology Faculty of Livestock, Fisheries & Nutrition Wayamba University of Sri Lanka	119,664.64	
31-12-2020	JV - 282	NSF/SCH/2018/03	Mr. H.M.I. Chandralal Herath Central College Piliyandala	212,752.00	
31-12-2020	JV - 282	NSF/SCH/2019/03	Ms. M.S.K. Rabindakumar Dept. of Biochemistry & Molecular Biology, Faculty of Medicine University of Colombo	17,332.34	
31-12-2020	JV - 282	SP/CIN/2016/05	Prof. D.A.M. De Silva Department of Agribusiness Management Faculty of Agricultural Sciences Sabaragamuwa University of Sri Lanka	96,260.13	

31-12-2020	JV - 282	RG/2019/EQ-NSFC/01	Dr. Meththika Vithanage Ecosphere Resilience Centre Faculty of Applied Sciences University of Sri Jayawardenapura	148,798.00
31-12-2020	JV - 282	RG/2016/BT/04	Prof. R.S. Dassanayake Dept. of Chemistry Faculty of Science University of Colombo	164,390.47
31-12-2020	JV - 282	RG/2006/MS/03	Dr. S. Jayakody Wayamba University of Sri Lanka Makandura	133,571.17
31-12-2020	JV - 290	Invoice No - 5277	Mr. Harsha Koralage Sri Lanka Technology Campus Ingiriya Road, Padukka.	75,000.00
31-12-2020	JV - 290	Invoice No - 5278	Hon. Jayantha Samaraweera State Minister of Warehouse Facilities Layden Bastian Road Colombo - 01.	2,000.00
				<b>1,471,327.17</b>

### Capital Expenditure

Rs.000'

	<i>Estimate 2020</i>	<i>Actual Expenditure</i>	<i>Surplus/(Vareinces)</i>
Mandate - 01	22,590	25,235	(2,645)
Mandate - 02	3,290	4,012	(722)
Mandate - 03	3,070	2,086	984
Mandate - 04	3,200	3,007	193
Mandate - 05	4,450	8,435	(3,985)
Mandate - 06	22,400	39,295	(16,895)
Accruals	-	4,720	(4,720)
<b>Total</b>	<b>59,000</b>	<b>86,791</b>	<b>(27,791)</b>

### Recurrent Expenditure

Rs.000'

	<i>Estimate 2020</i>	<i>Actual Expenditure</i>	<i>Surplus/(Vareinces)</i>
Personal Emoluments	123,050	120,263	2,787
Travelling Expenses	900	862	38
Supplies	3,700	3,402	298
Maintenance Expenditure	4,650	4,575	75
Contractual Services	10,310	10,036	274
Others	8,390	7,871	519
Accruals	-	5,627	(5,627)
<b>Total</b>	<b>151,000</b>	<b>152,636</b>	<b>(1,636)</b>

## Budget & Actual Expenditure 2020

Rs.000'

	<i>Estimate 2020</i>	<i>Actual Expenditure</i>	<i>Surplus/(Variances)</i>
<b><u>Staff Emoluments</u></b>			
Salaries & Allowances	94,300	87,416	6,884
Salaries & Allowances - Prior year	-	4,553	(4,553)
Employees Provident Fund	12,300	12,267	33
Employees Trust Fund	2,450	2,453	(3)
Payment for unutilized leave	-	-	-
Fuel & Transport Allowance	6,400	6,357	43
Retiring Gratuity	5,000	4,878	122
Overtime	2,550	2,304	246
Holiday Payment	50	34	16
	<b>123,050</b>	<b>120,263</b>	<b>2,787</b>
<b><u>Traveling</u></b>			
Office Traveling	900	862	38
	<b>900</b>	<b>862</b>	<b>38</b>
<b><u>Supplies</u></b>			
Uniforms	300	304	(4)
Stationary & Consumables	1,050	1,029	21
Printing & Publications	-	-	-
Fuel & Lubricants	2,350	2,069	281
	<b>3,700</b>	<b>3,402</b>	<b>298</b>
<b><u>Maintenance</u></b>			
Maintenance of Motor vehicle	1,850	1,840	10
Maintenance of Office equipment & furniture	2,100	2,063	37
Maintenance of Building	700	672	28
Maintenance of Land	-	-	-
	<b>4,650</b>	<b>4,575</b>	<b>75</b>
<b><u>Services</u></b>			
Electricity	2,800	2,617	183
Postage	10	7	3
Telephone/ Fax	2,950	2,949	1
Insurance charges for vehicles & Building	950	951	(1)
Water consumption	450	399	51
Security Services	1,650	1,629	21
Janitorial Services	1,500	1,484	16
Leasing	-	-	-
	<b>10,310</b>	<b>10,036</b>	<b>274</b>

Rs.000'

	<i>Estimate 2020</i>	<i>Actual Expenditure</i>	<i>Surplus/(Variances)</i>
<b><u>Other Recurrent</u></b>			
Advertising	110	107	3
Allowances to Board members Audit Committee & travelling	450	458	(8)
Audit fees - Auditor General's Dept.	550	535	15
Bank charges	60	55	5
Entertainment	-	-	-
Legal fees	-	-	-
Medical scheme	230	169	61
Refreshments for committee meetings	120	116	4
National Science Library & Resources Centre	100	81	19
Printing unit	430	430	0
Stamp duty	5	1	4
Sundry Expenses	500	497	3
Translation charges	350	345	5
Internet membership fees	5,485	5,078	407
Subscription for S/W Licence Renewal	-	-	-
	<b>8,390</b>	<b>7,871</b>	<b>519</b>
<b>Total</b>	<b>151,000</b>	<b>147,008</b>	<b>3,992</b>
<b><u>Provision &amp; other</u></b>			
Gratuity Provision	-	7,844	-
Depreciation	-	19,210	-
Amortisation of Intangible Assets	-	1,678	-
Intangible Assets Written off	-	4,048	-
Debtors Write off	-	-	-
Stock Stationery & Consumables Written off	-	-	-
Stock Magazines & Journals Written off	-	407	-
<b>Total Other Recurrent</b>	<b>-</b>	<b>33,187</b>	<b>-</b>
<b>Total</b>	<b>151,000</b>	<b>180,195</b>	<b>-</b>

## Reconciliation of financial position

	Note	Audited Balance as at 31 December 2019	Adjustments	Adjusted Balance as at 31 December 2019
<b>ASSETS</b>				
<b>Current Assets</b>				
Cash & Cash Equivalents		26,536,035		26,536,035
Receivables		21,545,907		21,545,907
Stocks		1,664,409		1,664,409
Pre Payments		1,163,292		1,163,292
Other Current Assets		108,650		108,650
Total Current Assets		51,018,293	-	51,018,293
<b>Non-Current Assets</b>				
Receivables		10,994,116		10,994,116
Property, plant & Equipments	A	1,257,814,616	44,643	1,257,859,259
Intangible Assets		7,540,459	-	7,540,459
Capital Work in Progress		13,939,703		13,939,703
Investments		873,002,124		873,002,124
Total Non-current Assets		2,163,291,018	44,643	2,163,335,660
<b>Total Assets</b>		<b>2,214,309,311</b>	<b>44,643</b>	<b>2,214,353,954</b>
<b>Liabilities</b>				
<b>Current Liabilities</b>				
Accrued Charges		14,937,311		14,937,311
Creditors	B	5,452,920	(88,175)	5,364,745
		20,390,231	(88,175)	20,302,056
<b>Non-Current Liabilities</b>				
Provision for Retiring Gratuity		38,865,339		38,865,339
Deffered Revenue	A	29,745,012	44,643	29,789,655
		68,610,351	44,643	68,654,994
<b>Total Liabilities</b>		<b>89,000,582</b>	<b>(43,532)</b>	<b>88,957,049</b>
<b>Net Assets</b>		<b>2,125,308,729</b>	<b>88,175</b>	<b>2,125,396,904</b>
<b>Equity and Reserves</b>				
<b>Accumulated Funds</b>				
NSF Fund	B	2,689,515	88,175	2,777,690
Revaluation Reserve		1,249,216,115		1,249,216,115
Government Grant		873,002,124		873,002,124
NSF Development Fund		400,975		400,975
<b>Total Equity</b>		<b>2,125,308,729</b>	<b>88,175</b>	<b>2,125,396,904</b>

## Notes to financial statements

### Note - A

As per the audit observations of 2019, Library books value has been restated as follows.

	<u>Balance</u>	<u>Correction</u>	<u>Actual Balance</u>
Library Books	5,628,477.66	44,642.60	5,673,120.26
	<u>5,628,477.66</u>	<u>44,642.60</u>	<u>5,673,120.26</u>

### Note - B

Biosafety Account balance has been restated as follows.

	<u>Balance</u>	<u>Correction</u>	<u>Actual Balance</u>
Biosafety Account	1,842,364.75	(88,175.00)	1,754,189.75
	<u>1,842,364.75</u>	<u>(88,175.00)</u>	<u>1,754,189.75</u>

### Note - C

As per the audit observations of 2019, Statement of Comprehensive income has been restated - Please refer page no 33



# Reconciliation of comprehensive income

## NATIONAL SCIENCE FOUNDATION

### Reconciliation of Comprehensive Income

	Year ended 31 December 2019			
	Audited Balance 2019		Adjusted Balance 2019	
<b>Revenue</b>				
Government Grant	149,100,000		149,100,000	
<b>Other Income</b>				
Interest received	673,776		673,776	
Sundry Income	285,999		285,999	
Sale of Publications	765,500		765,500	
Photocopy receipts	3,648		3,648	
Publication Charges Received - JNSF	231,101		231,101	
NSLRC Income	25,750		25,750	
Income from Workshops	-	623,737	623,737	
Profit/(Loss) Sale of Fixed Assets	17,175		17,175	
Other	308,573,200	(214,505)	308,358,695	
Differed Revenue	24,777,205		24,777,205	
		484,453,353		484,862,585
<b>Expenditure</b>				
<b>Office Expenditure</b>				
Traveling & Allowances for Board Members	551,775		551,775	
Refreshments for meetings	261,555		261,555	
Printing & Publications	-	813,330	-	813,330
<b>Staff Emoluments</b>				
Salaries & Allowances	88,090,288		88,090,288	
Employees Provident Fund	11,623,778		11,623,778	
Employees Trust Fund	2,324,676		2,324,676	
Transport & Fuel Allowance	6,651,107		6,651,107	
Provision for Retiring Gratuity	8,322,306		8,322,306	
Overtime	2,783,221		2,783,221	
Holiday Payment	104,872		104,872	
Uniforms	271,702		271,702	
		120,171,950		120,171,950
<b>Office Administration</b>				
Travelling - Office	3,429,587		3,429,587	
Stationary & Consumables	1,424,803		1,424,803	
Electricity	3,708,506		3,708,506	
Telephone/ Fax	3,276,043		3,276,043	
Postal charges	451,605		451,605	
Audit fees - Auditor General's Dept.	534,600		534,600	
Legal fees	36,500		36,500	
Bank charges	71,500		71,500	
Medical Expenses	78,975		78,975	
Advertising	727,185		727,185	
Fuel Expenses	2,201,983		2,201,983	
Maintenance of Motor Vehicles	2,432,465		2,432,465	
Maintenance of Office Equipment & Furniture	2,616,092		2,616,092	
Maintenance of Building	1,018,378		1,018,378	
Maintenance of Land	5,850		5,850	
Insurance	861,592		861,592	
Water Consumption charges	563,566		563,566	
Security Services	1,815,422		1,815,422	
Depreciation	17,328,306		17,328,306	
Amortisation of intangible assets	1,596,760		1,596,760	
Sundry Expenses	594,283		594,283	
Janitorial Services	1,572,570		1,572,570	
Translation charges	176,709		176,709	
Stamp duty	1,325		1,325	
Debtors Written off	3,298,965		3,298,965	
Stock of Stationery & Consumables written off	399,132		399,132	
Stock of Magazines & Journals written off	216,100	50,438,802	216,100	50,438,802

**Others**

National Science Library & Resource Centre	65,010			65,010	
Printing Division	3,024,869			3,024,869	
Subscription for Internet Services	5,558,527	8,648,405		5,558,527	8,648,405

**Capital Expenditure**

Awards & Grants : Mandate 01	163,791,265		(121,996)	163,913,261	
Science & Tec Policy Research : Mandate 02	8,204,692		(287,235)	8,491,928	
National Gateway S & T Information : Mandate 03	10,423,433			10,423,433	
Science popularization programmes : Mandate 04	20,543,769			20,543,769	
International cooperation : Mandate 05	49,883,666			49,883,666	
Capital Assets, Maintenance & Admin : Mandate 06	24,659,958		(88,175)	24,571,783	
		277,506,783			277,827,839
<b>Excess of Income over expenditure</b>		<b>26,874,083</b>			<b>26,962,258</b>

## Reconciliation of statement of cash flow

### Reconciliation of Statement of Cash Flow

Rs'000

	Audited Balance 2019	Adjustments	Adjusted Balance 2019	
<b><u>Cash flows from operating Activities</u></b>				
Net excess of expenditure over income	26,874	88	26,962	
Add; NSF fund prior year adjustments	14,470		14,470	
	<b>41,344</b>		<b>41,432</b>	
<b><u>Adjustments for</u></b>				
Depreciation	17,328		17,328	
Amortisation of Intangible assets	1,597		1,597	
Gratuity paid during the year	(4,222)		(4,222)	
Provision for Gratuity	8,322		8,322	
Disposal of Fixed Assets	(17)		(17)	
Over Provision of Doubtfull Debtors	-		-	
Revaluation Reserve of Disposal Vehicles	-		-	
Deffered Revenue	(24,777)		(24,777)	
Debtor Written off	-		-	
Operating profit/loss before working capital changes	<b>39,575</b>		<b>39,663</b>	
Net increase/decrease in trade other receivables	(25,513)		(25,513)	
Net increase/decrease in inventories	252		252	
Net decrease/increase in trade payables	682	(88)	594	
Cash generated from operations	(24,579)		(24,667)	
Net cash from operating activities	<b>14,996</b>		<b>14,996</b>	
<b><u>Cash flows from Investing Activities</u></b>				
Proceed of Disposal of Fixed Assets	56		56	
Purchase of assets	(4,708)	(44)	(4,752)	
Proceeds from sale of books	-		-	
Net cash used in investing activities	<b>(4,652)</b>		<b>(4,696)</b>	
<b><u>Cash Flows from Financial Activities</u></b>				
Contribution from Government	4,708	44	4,752	
Contribution from NSF Component	401		401	
	<b>5,109</b>		<b>5,153</b>	
Net cash from financing activities	15,453		15,453	
Cash & cash equivalent at beginning period	11,084		11,084	
<b>Cash &amp; cash equivalent at end of period</b>	<b>26,537</b>		<b>26,537</b>	





# Auditor General's Report







# ජාතික විගණන කාර්යාලය

## தேசிய கணக்காய்வு அலுவலகம்

### NATIONAL AUDIT OFFICE



මගේ අංකය  
எனது இல.  
My No.

TEC/B/NSF/1/20/19

ඔබේ අංකය  
உமது இல.  
Your No.

දිනය  
திகதி  
Date

13 October 2021

Chairman  
National Science Foundation

**Report of the Auditor General on the Financial Statements and Other Legal and Regulatory Requirements of the National Science Foundation for the year ended 31 December 2020 in terms of Section 12 of the National Audit Act, No. 19 of 2018.**

## 1. Financial Statements

### 1.1 Opinion

The audit of the financial statements of the National Science Foundation for the year ended 31 December 2020 comprising the statement of financial position as at 31 December 2020 and the statement of financial performance, statement of changes in equity and cash flow statement for the year then ended, and notes to the financial statements, including a summary of significant accounting policies, was carried out under my direction in pursuance of provisions in Article 154(1) of the Constitution of the Democratic Socialist Republic of Sri Lanka read in conjunction with provisions of the National Audit Act No. 19 of 2018 and Finance Act No. 38 of 1971. My report to Parliament in pursuance of provisions in Article 154 (6) of the Constitution will be tabled in due course.

In my opinion, the accompanying financial statements give a true and fair view of the financial position of the Foundation as at 31 December 2020, and of its financial performance and its cash flows for the year then ended in accordance with Sri Lanka Public Sector Accounting Standards.

### 1.2 Basis for Opinion

I conducted my audit in accordance with Sri Lanka Auditing Standards (SLAuSs). My responsibilities, under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of my report. I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my opinion.

අංක 306/72, පොල්දූව පාර, බත්තරමුල්ල, ශ්‍රී ලංකාව

இல. 306/72, பொல்துவ வீதி, பத்தரமுல்லை, இலங்கை.

No. 306/72, Polduwa Road, Battaramulla, Sri Lanka.



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ag@auditorgeneral.gov.lk



www.naosl.gov.lk

### 1.3 Other information included in the Foundation's 2020 Annual Report.

The other information comprises the information included in the Foundation's 2020 Annual Report but does not include the financial statements and my auditor's report thereon, which is expected to be made available to me after the date of this auditor's report. Management is responsible for the other information.

My opinion on the financial statements does not cover the other information and I do not express any form of assurance conclusion thereon.

In connection with my audit of the financial statements, my responsibility is to read the other information identified above when it becomes available and, in doing so, consider whether the other information is materially inconsistent with the financial statements or my knowledge obtained in the audit or otherwise appears to be materially misstated.

When I read the Foundation's 2020 Annual Report, if I conclude that there are material misstatements therein, I am required to communicate that matter to those charged with governance for correction. If further material uncorrected misstatements are existed those will be included in my report to Parliament in pursuance of provisions in Article 154 (6) of the Constitution that will be tabled in due course.

### 1.4 Responsibilities of Management and Those Charged with Governance for the Financial Statements

Management is responsible for the preparation of financial statements that give a true and fair view in accordance with Sri Lanka Public Sector Accounting Standards, and for such internal control as management determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Foundation's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Foundation or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Foundation's financial reporting process.

As per Section 16(1) of the National Audit Act No. 19 of 2018, the Foundation is required to maintain proper books and records of all its income, expenditure, assets and liabilities, to enable annual and periodic financial statements to be prepared of the Foundation.

## 1.5 Auditor's Responsibilities for the Audit of the Financial Statements

My objective is to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes my opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Sri Lanka Auditing Standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with Sri Lanka Auditing Standards, I exercise professional judgment and maintain professional scepticism throughout the audit. I also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for my opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Foundation's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the management.
- Conclude on the appropriateness of the management's use of the going concern basis of accounting and based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Foundation's ability to continue as a going concern. If I conclude that a material uncertainty exists, I am required to draw attention in my auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify my opinion. My conclusions are based on the audit evidence obtained up to the date of my auditor's report. However, future events or conditions may cause the Foundation to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

I communicate with those charged with governance regarding, among other matters, significant audit findings, including any significant deficiencies in internal control that I identify during my audit.



## 2. Report on Other Legal and Regulatory Requirements

2.1 National Audit Act, No. 19 of 2018 include specific provisions for following requirements.

2.1.1 I have obtained all the information and explanation that required for the audit and as far as appears from my examination, proper accounting records have been kept by the Foundation as per the requirement of section 12 (a) of the National Audit Act, No. 19 of 2018.

2.1.2 The financial statements presented is consistent with the preceding year as per the requirement of section 6 (1) (d) (iii) of the National Audit Act, No. 19 of 2018.

2.1.3 The financial statements presented includes all the recommendations made by me in the previous year as per the requirement of section 6 (1) (d) (iv) of the National Audit Act, No. 19 of 2018.

2.2 Based on the procedures performed and evidence obtained were limited to matters that are material, nothing has come to my attention;

2.2.1 to state that any member of the governing body of the Foundation has any direct or indirect interest in any contract entered into by the Foundation which are out of the normal cause of business as per the requirement of section 12 (d) of the National Audit Act, No. 19 of 2018.

2.2.2 to state that the Foundation has not complied with any applicable written law, general and special directions issued by the governing body of the Foundation as per the requirement of section 12 (f) of the National Audit Act, No. 19 of 2018.

2.2.3 to state that the Foundation has not performed according to its powers, functions and duties as per the requirement of section 12 (g) of the National Audit Act, No. 19 of 2018.

2.2.4 to state that the resources of the Foundation had not been procured and utilized economically, efficiently and effectively within the time frames and in compliance with the applicable laws as per the requirement of section 12 (h) of the National Audit Act, No. 19 of 2018.

## 2.3 Other Matters

Action had not been taken to settle the payable audit fees worth of Rs. 2,375,175 which were carried forward from several years.

W.P.C. Wickramaratne  
Auditor General



# NSF feedback on the Auditor General's Report





Auditor General,  
National Audit Office.

Comments for the Draft Report of the Auditor General on the Financial Statements and Other Legal and Regulatory Requirements of the National Science Foundation for the year ended 31 December 2020 in terms of Section 12 of the National Audit Act, No. 19 of 2018.

## 1. Financial Statements

### 1.1 Opinion

### 1.2 Accounting Deficiencies

a) Disagree with the audit observation.

The software mentioned had been accounted as intangible assets according to the SLPSAS 20 as same were purchased for the first time in the years mentioned..

b) Disagree with the audit observation.

The costs for electricity and security had been stated by the contractor in the BOQ. However, the expenses were not incurred by the contractor. Therefore, no payments were made for same and were not borne by the National Science Foundation..

## 2 Report on other legal and regulatory requirement

### 2.2.2 Reference to law/direction

### Observation

F.R. 371 (2) (b)

Disagree with the audit observation.

This is an imprest given to the Senior Administrative Officer to bear the costs for refreshment throughout the year. As such, the imprest was settled on 31<sup>st</sup> December complying with the F.R .373 (1).

### 2.3 Other Matters

(a) NSF consent to pay audit fees of Rs. 2,375,175 has been sent to the Ministry. The payment will be made upon receipt of funds from the treasury.

(b) As shown in the audit observation, Rs. 327,704.40 out of the total balance of Rs.1,030,665/ 34 has been collected as at 28.04.2021 and only the total of Rs. 402,960/94 related to the following 3 grants have to be collected. The delays occurred as a result of COVID pandemic situation. However, reminders have been sent in this regard and action will be taken to recover the balance before 31.05.2021.

Grant Number	Name of the Grantee	Balance Money (Rs.)
RG/2017/BS/02	Prof. G A K S Perera	70,544.30
RG/2017/AG/02	Prof. C V L Jayasinghe	119,664.64
NSF/SCH/2018/03	Mr. H M I C Herath	212,752.00
<b>Total</b>		<b>402,960/94</b>

Action is taken to recover the balance funds through the establish procedure (2019) as per section 05 of the research grants guidelines, i.e., within one month after receiving the final financial report of the project.

In addition to this, a process of sending reminders has been introduced in 2019 to receive the balance money together with the final financial report within one month from the completion of the project.

Chairman  
National Science Foundation

A close-up photograph of a person's hand in a white shirt using a gold pen to point at a calculator. A glowing white line graph is superimposed over the calculator and the hand. The background is a soft-focus office setting. The image is partially covered by large, abstract orange and white curved shapes.

# Financial Highlights in the preceding 5 years

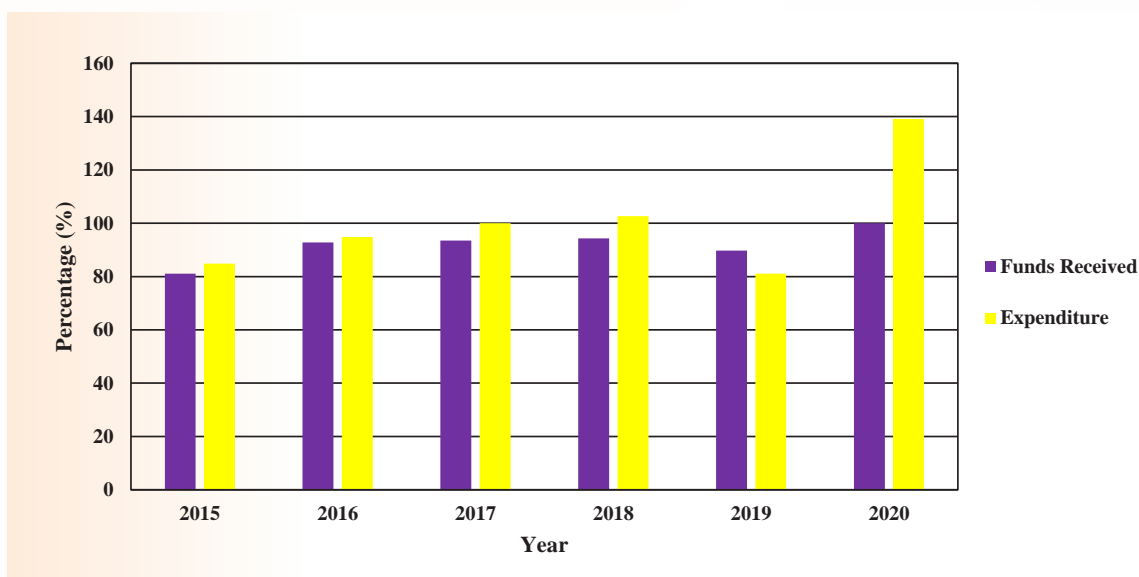


The NSF keeps records of all performance and review frequently for better investment in the priority areas for Science Technology & Innovation development, thus, reminding to be Know Your Customer (KYC) norms compliance. This analysis together with the information given in pages 103-104, provides current and future financial health at the NSF.

The investments for the preceding five years are given in *Table 10* and depicted in *Figures 37, 38 & 39*.

**Table 10:** Financial review for the preceding five years

Year	Financial Details (Rs. million)		
	Allocation	Funds Received	Expenditure
2015	290	235	246
2016	250	232	237
2017	260	243	259.97
2018	300	283	308
2019	342.32	307.19	277.51
2020	99	59	82.07



**Figure 37 :** Financial performance for 2014 - 2019: % against allocation

*Note :* For comparison, the figures for 2020 is also included in the graph.

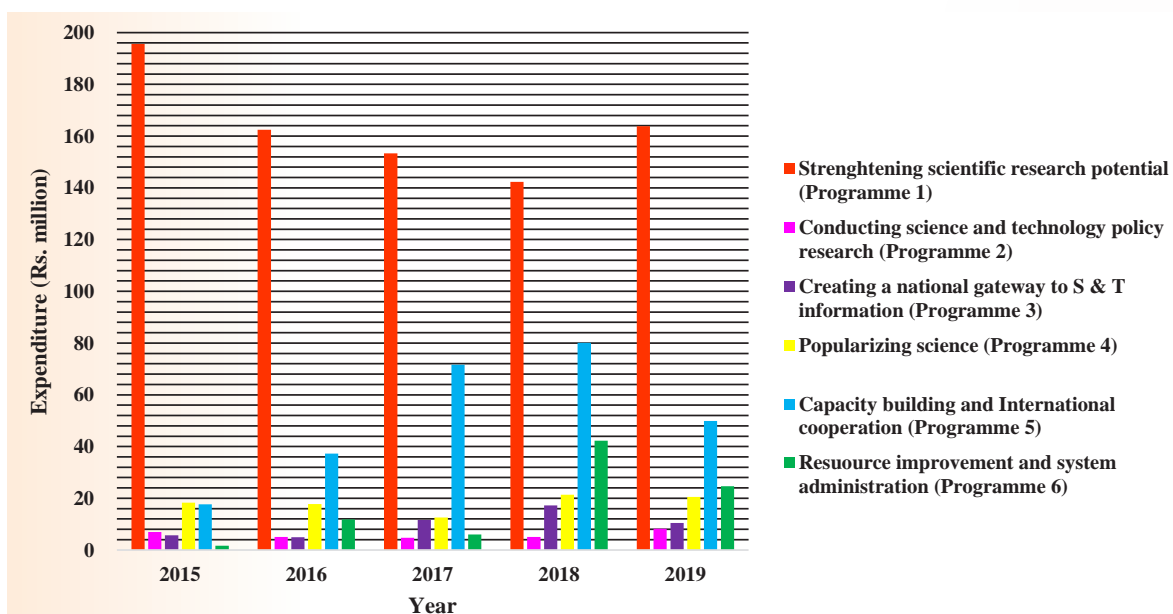


Figure 38 : Expenditure under major programmes

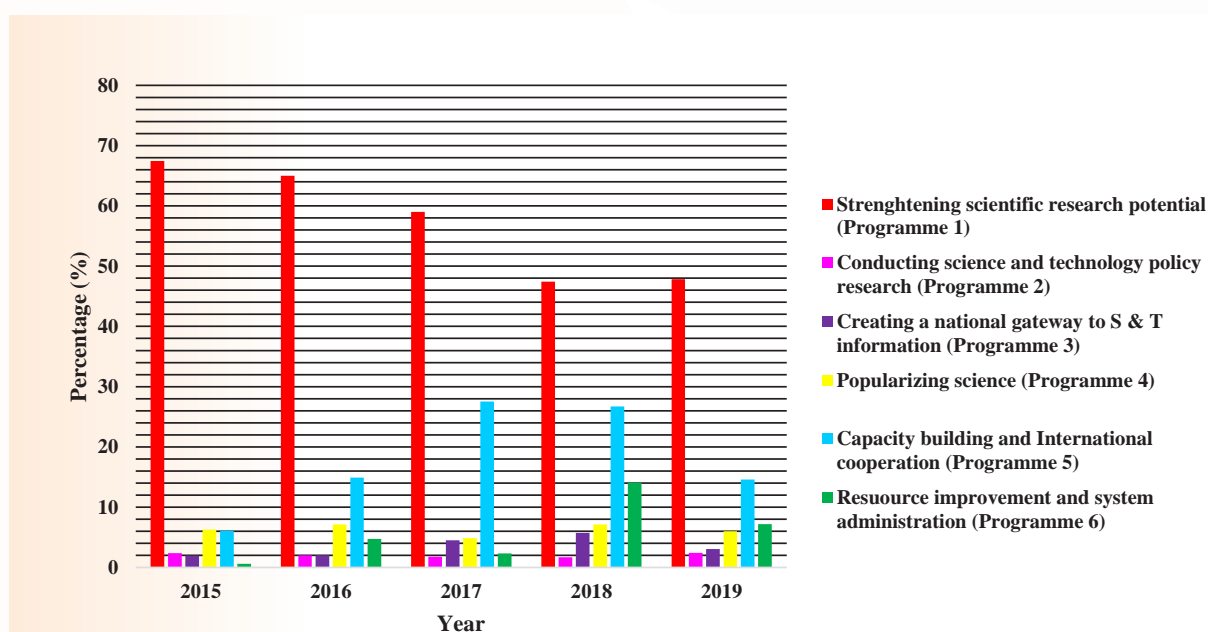


Figure 39: Expenditure under major programmes as a % against the total allocation

Note : The figure for 2020 are given in page 71.





# Annexures



## Principal Staff - As at 31<sup>st</sup> December, 2020

### Chairperson

Prof. Ranjith Senaratne

From 17<sup>th</sup> January, 2020

*Ph.D (Vienna), Ph.D (Durham) h.c.*

### Acting Director General

Dr Thamara F. Dias

*M.Sc (Hons) (Moscow), Ph.D (Moscow)*

*w.e.f 01.06.2020*

### Additional Director

Dr Thamara F Dias, *M.Sc. (Hons) (Moscow), Ph.D. (Moscow)*

### Research Division (RD)

Dr S A V Moorthy, *B.Sc. (Jaffna), M.Sc. (Colombo),  
Ph.D. (Colombo)*

Principal Scientific Officer/Head

Ms H D N Jayaweera, *B.Sc. (Hons.) (Sri Jayewardenepura)*

Scientific Officer & Head  
Thematic & Special Projects Unit  
(TSPU) up to 30<sup>th</sup> June, 2020

Ms W L C Dasanayake, *B.Sc. Agric. (Hons) (Peradeniya),  
M.Sc. (Peradeniya), M.Sc. (Japan), M.Eng (Germany)*

Senior Scientific Officer

Dr A M N S Nadugala, *B.Sc. Agric. (Hons) (Peradeniya),  
M.Sc. (Asian Institute of Technology),  
Ph.D. (Sir John Kothalawala Defence University)*

Senior Scientific Officer

Dr P V S Panawala, *B.V.Sc. (Peradeniya), M.Phil. (Peradeniya)*

Scientific Officer

Ms Amali Ranasinghe, *B.Sc. (Hons) (Bangalore),  
M.Sc. (Food & Nutrition) (Peradeniya)*

Scientific Officer

Dr H I Sandanayake, *B.V.Sc. (Peradeniya), M.Sc. (London)*

Scientific Officer

Mrs G G K P S Kumari, *B.Sc. Special in Agric. (Peradeniya)  
M.Phil in Agricultural Eng.. (Peradeniya)*

Scientific Officer

Dr S S Ediriweera, *B.Sc. Special (Kelaniya), M.Phil. (Colombo)  
Ph.D. (Colombo)*

Scientific Officer

Eng. Sureshinie Warnasooriya, *B.Sc. Special Eng. (Hons)  
(Moratuwa), M.Sc. Chemical & Process Eng. (Moratuwa)*

Scientific Officer

Ms M S Weerasooriyagedara, *B.Sc. Special (Uva Wellassa)*

Scientific Officer

### Science and Technology Policy Research Division (STPRD)

Mr S M A W Anuruddha, *B.Sc. (Hons) (Colombo),  
M.Sc. (Colombo)*

Principal Scientific Officer/Head

Ms Chamika Dharmasena, *B.Sc. Special (Hons) (Colombo)  
Postgraduate Diploma in Applied Sociology (Colombo)*

Scientific Officer

Ms M A D D Munasinghe, *B.Sc. Special (Agric.)  
(Hons) (Peradeniya), M.Sc. (Peradeniya)*

Scientific Officer

Mr P G I P Ariyadasa, B.Sc. Agric. (Hons) (Peradeniya),  
M.Sc. Financial Economics (Colombo)

Scientific Officer

Ms G R P I Abeysiri, B.Sc Agric. Special (Wayamba)  
M.Sc. (Crop Science), Peradeniya

Scientific Officer

### International Liaison Division (ILD)

Mr J G Shantha Siri, B.Sc. (Hons) (Colombo),  
M.Sc. (Kelaniya)

Principal Scientific Officer/Head

Ms E M D C K Ekanayake, B.Sc. Agric. (Hons) (Peradeniya),  
M.Sc. (Peradeniya)

Senior Scientific Officer

Ms K A T K G Kandanamulla, B.Sc. Agric. (Hons) (Ruhuna),  
M.Sc. (Colombo)

Scientific Officer

Ms N L Muhandiram, B.Sc. (Hons) (Uva Wellassa)

Scientific Officer

### Technology Division (TD)

Mr K G J Karunasena, B.Sc. Agric. (Hons) (Peradeniya)  
M.Phil. Agric. (Peradeniya)

Principal Scientific Officer/Head

Ms D N Wickramarachchi, B.Sc. (Hons) (The Open University),  
M.Sc. (Sri Jayewardenepura)

Senior Scientific Officer

Ms R N N Gamage, B.Sc. (Hons) (Asian University)  
Postgraduate Diploma in Health Dev. (Colombo)

Scientific Officer

Ms Sarani K Meneripitiya, B.Sc. Special (Hons) (Kelaniya)

Scientific Officer

### Science Popularization Division (SPD)

Dr P R M P Dilrukshi, B.Sc. Special (Hons) (Peradeniya),  
Ph.D. (Peradeniya)

Principal Scientific Officer/Head

Ms M D Senarathne, Graduateship in Chemistry (I. Chem.)  
M.Sc. Polymer Science (Sri Jayewardenepura)

Senior Scientific Officer

Ms R A A R Ranatunga, B.Sc. Special (Hons) (Colombo)

Scientific Officer

Mr W A D L R Warnakula, B.Sc. Special Agric. (Hons) (Wayamba)

Scientific Officer

Ms H M A J Herath, B.Sc. Special Food Science & Nutrition (Wayamba)

Scientific Officer

### Journal Publication Unit (JPU)

Dr C G Yapa, B.Sc. Special (Hons) (Colombo), Ph.D. (Colombo)

Principal Scientific Officer/Head  
Officer up to 21.12.2020

Ms Uthpala Karunarathne, B.Sc. Special (Hons) (Kelaniya),  
M.Sc. (Colombo)

Senior Scientific Officer

Ms W M U K Rathnayake, B.Sc. Special (Hons) (Wayamba)

Scientific Officer

Mrs S Samarasekera, B.Sc. Special (Hons.) (Sri Jayewardenepura),  
B.Sc. (Economic & Mgt.) (Uni. of London)

Scientific Officer

## Additional Director's Office

Dr K B Hasanthi, *B.V.Sc. (Peradeniya)* Scientific Officer

## National Science Library and Resource Centre (NSLRC)

Mr Manuja Karunarathne, *B.Sc. (Kelaniya), M.Sc. (Kelaniya)* Principal Information Officer/Head

Ms A Tennakoon, *B.Sc. (Kelaniya)* Senior Information Officer

Ms R P Sugathadasa, *B.Sc. (Sri Jayewardenepura)* Senior Information Officer

Mr Pujitha D Hewawasam, *B.Com. (Swinburn University)* Information Officer

Ms M Niyas Thasneem, *B.Sc. (Southern University)* Information Officer

*M.Sc. in Computer Science (Peradeniya)*

Mr P K B A S M Pannala, *B.Sc. (Hons.) (National Uni. of Ireland), M.Sc. (MIS) (Colombo)* Information Officer

Ms K N Samanthi, *B.A (Peradeniya), M.A (Kelaniya),* Information Officer

Ms N A H Priyadarshani, *Diploma in Library & Information Science* Junior Information Officer

## Printing Unit

Mr K P Senanayake, *M.SL.IOP* Printing Manager  
up to 18.12.2020

## Administration Division

Mr P Sapumohotti, *B.Sc. (Peradeniya), MPM (SLIDA)* Senior Administrative Officer

Ms B T Wickremasinghe, *B.Sc. (Sri Jayewardenepura)* Procurement & Transport Officer

Mr Saman Sujeewa, *Postgraduate Diploma in Public Mgt.* Human Resource Development Officer

## Finance Division

Ms T D P P Samaranayake, *Professional Part II of ICASL* Senior Accountant

Ms E M P Bamunendra, *B.Com. (Sri Jayewardenepura)* Accountant

*Licentiate Certificate of ICASL*

## Internal Audit Unit

Ms M M Jayajeewani, *B.Sc., B.Ad. Special (Sri Jayewardenepura)* Internal Auditor

## IT Unit

Mr H M M Perera, *MBCS* IT Manager

Mr W A B Fernando, *B.Sc. (Networking) (Wolverhampton)* Network Administrator

## Confidential Secretaries

Ms Ayomi Palihawadana

## Resigned during the year 2020

Ms. Shehani Imalka Ranasinghe	Library Assistant	From 31.08.2020
Ms. M S Fathima Samra	Management Assistant	From 02.09.2020
Dr. Surani S Ediriweera	Scientific Officer	From 01.10.2020
Ms. D M N S Dissanayake	Office Aide	From 01.11.2020

## Retired during the year 2020

Dr. C G Yapa	Principal Scientific Officer	From 22.12.2020
Mr. K P Senanayake	Printing Manager	Passed away on 18.12.2020



## Working Committee on Agriculture &amp; Food Science

No.	Grantee(s)/Institute	Project Title/Duration	Total Allocation (Rs.)
1.	<b>Dr Ruvini Liyanage</b> <b>Dr Nazrim Marikkar</b> National Institute of Fundamental Studies  <b>Dr Barana Jayawardana</b> <b>Department of Animal Science</b> Faculty of Agriculture University of Peradeniya	Physicochemical, morphological and functional characteristics of some unexploited and under exploited starch sources in Sri Lanka.  02 Years	3,181,000/-
2	<b>Dr W A U Vitharana</b> Department of Soil Science Faculty of Agriculture University of Peradeniya  <b>Mr R A C J Perera</b> Field Crops Research and Development Institute Mahalluppallama  <i>Collaborator:</i> <b>Mr Mohamed Farook Ahamed Zaneer</b> Office of the Deputy Director of Agriculture (Inter Province Extension) Ampara	Mapping of salinity development in paddy grown soils using proximal and remote sensing-based techniques  02 ½ Years	4,086,680/-
3.	<b>Prof. M Vithanage</b> Ecosphere Resilience Research Centre  <b>Dr A U Rajapaksha</b> Office of the Dean Faculty of Applied Sciences University of Sri Jayewardenepura  <b>Prof. C V L Jayasinghe</b> Department of Food Science and Technology  <b>Dr P U S Peiris</b> Biostatistics & Agronomy Unit Faculty of Livestock, Fisheries and Nutrition Wayamba Univ. of Sri Lanka  <i>Collaborators:</i> <b>Ms H M P K Herath</b> Chief Secretariat North Western Province Provincial Office Complex Kurunegala  <b>Mr S Kumara</b> Provincial Department of Agriculture Kurunegala	Synthesis of organo-mineral enriched biochar as a fertilizer and nemato-repellent to enhance soil nutrient cycling, yield and quality of organic export root-crops ginger and turmeric  02 ½ Years	3,180,000/-

4.	<p><b>Dr U S Liyanaarachchi</b> Department of Nano Science Technology Faculty of Technology Wayamba University of Sri Lanka</p> <p><b>Dr G G Chathuranga</b> ELTA-ELSE Faculty Development Project Office Faculty of Business Studies and Finance</p> <p><b>Mr H M A J Herath</b> ICT Centre</p> <p><b>Mr D H B R Dasanayake</b> Landscape Division Wayamba University of Sri Lanka</p> <p><i>Collaborators:</i> <b>Mr W A D V D Weerathilaka</b> Department of Livestock &amp; Avian Sciences Wayamba University of Sri Lanka</p> <p><b>Dr S M Sundaram</b> <b>Dr R Venkataramanan</b> Tamilnadu Veterinary &amp; Animal Sciences University India</p> <p><b>Dr P Mishra Wageningen</b> Food &amp; Biobased Research Wageningen University Netherland</p>	<p>Developing an industrial pilot scale "Hydroponic Fodder Unit" to facilitate livelihood development of smallholder farmers engaged in the livestock/dairy industry</p> <p>01 Year</p>	2,640,000/-
5.	<p><b>Dr B R Fernando</b> Department of Veterinary Public Health and Pharmacology Faculty of Veterinary Medicine and Animal Sciences University of Peradeniya</p> <p><b>Dr S S P Silva</b> Department of Animal Production and Health Peradeniya</p>	<p>Profiling of risks associated with veterinary drug residues in animal feed and food of animal origin to ensure consumer safety</p> <p>02 Years</p>	3,750,000/-

### Working Committee on Basic Sciences

No.	Grantee(s)/Institute	Project Title/Duration	Total Allocation (Rs.)
1.	<p><b>Ms D C K K Dissanayake</b> Sri Lanka Atomic Energy Board</p> <p><b>Dr L L W C Yalagama</b> <b>Dr Dushan Kumarathunge</b> Coconut Research Institute</p> <p><b>Ms Priyanga Rathnayake</b> Sri Lanka Atomic Energy Board</p>	<p>Applying Isotopic fingerprinting to authenticate Sri Lankan coconut kernel products to protect and promote in international market</p> <p>03 Years</p>	1,929,600/-

## Working Committee on Biotechnology

No.	Grantee(s)/Institute	Project Title/Duration	Total Allocation (Rs.)
1.	<p><b>Prof. Rupika S Rajakaruna</b> Department of Zoology Faculty of Science University of Peradeniya</p> <p><b>Dr E M L Ekanayake</b> Bio Conservation Society (BCSL) Kandy</p> <p><i>Collaborators:</i> <b>Dr Nancy Fitz Simmons</b> Griffith University Australia</p> <p><b>Mr Channa Suraweera</b> Marine Division Department of Wildlife Conservation Battaramulla</p>	<p>Population genetic affinities and stock structure of loggerhead, olive ridley and green turtles nesting in South and Southwestern coast of Sri Lanka from mitochondrial DNA sequences</p> <p>03 Years</p>	<b>4,040,000/-</b>
2.	<p><b>Prof. C L Goonasekara</b> <b>Dr Prasad Premaratne</b> General Sir John Kotelawala Defence University</p>	<p>Development of a preliminary dengue vaccine construct with previously identified broadly immunogenic neutralizing conserved epitopes and preclinical assessment of its efficacy and toxicity</p> <p>02 Years</p>	<b>4,643,647/-</b>
3.	<p><b>Dr T C Weeraratne</b> <b>Dr W A P P de Silva</b> Department of Zoology Faculty of Science University of Peradeniya</p> <p>Collaborator: <b>Prof. S H P P Karunaratne</b> Department of Zoology Faculty of Science University of Peradeniya</p>	<p>Molecular characterization of Sri Lankan mosquito species and population genetic structure of dengue vectors</p> <p>02 Years</p>	<b>2,909,750/-</b>

## Working Committee on Environment & Biodiversity

No.	Grantee(s)/Institute	Project Title/Duration	Total Allocation (Rs.)
1.	<p><b>Dr A M A S Attanayake</b> Royal Botanic Gardens Peradeniya</p> <p><b>Dr R A S W Ranasinghe</b> National Herbarium Royal Botanic Gardens Peradeniya</p> <p><i>Collaborator -</i> <b>Mr W W P W M R R B B Gopallawa</b> National Herbarium Royal Botanic Gardens Peradeniya</p>	<p>Study of Hill Top Flora of Sri Lanka: Floristic Diversity, Conservation and Ecosystem Red Listing of Adams Peak Mountain Range</p> <p>02 ½ Years</p>	<b>709,898/-</b>

## Working Committee on Health Sciences

No.	Grantee(s)/Institute	Project Title/Duration	Total Allocation (Rs.)
1.	<p><b>Dr A P Attanayake</b> Prof. K A P Jayatilaka Department of Biochemistry</p> <p><b>Prof. L K B Mudduwa</b> Department of Pathology Faculty of Medicine University of Ruhuna</p> <p><i>Collaborators:</i> <b>Dr L D A M Arawwawala</b> Industrial Technology Institute Colombo 7</p>	<p>Nephroprotective activity of a novel herbal nutraceutical mixture derived from selected medicinal plant extracts in rats with chemically induced nephrotoxicity</p> <p>01 Year</p>	1,200,000/-
2.	<p><b>Dr C J Ratnayake</b> Department of Obstetrics and Gynecology Faculty of Medicine</p> <p><b>Dr S A Kottawatta</b> Department of Veterinary Public Health and Pharmacology Faculty of Veterinary Medicine and Animal Science</p> <p><b>Dr Suranga P Kodithuwakku</b> Department of Animal Science</p> <p><b>Dr Dimanthi Jayatilake</b> Department of Agricultural Biology Faculty of Agriculture University of Peradeniya</p> <p><i>Collaborator:</i> <b>Dr Thusitha Karunarathna</b> Pirbright Institute United Kingdom</p>	<p>Establishment of Molecular Based Rapid Detection Method to Identify Group B Streptococcus colonization in Peri-Partum Pregnant Women</p> <p>02 Years</p>	3,897,500/-
3.	<p><b>Dr S F Jayamanne</b> Department of Medicine Faculty of Medicine University of Kelaniya</p> <p><b>Ms L G T Shanika</b> Department of Pharmacy and Pharmaceutical Sciences Faculty of Allied Health Sciences University of Sri Jayewardenepura</p> <p><i>Collaborator:</i> <b>Dr Lakshman Obeysekara</b> National Cancer Institute Sri Lanka</p>	<p>Impact of a ward-based clinical pharmacy service on quality of life and use of medicines among oncology patients in a tertiary care institute in Sri Lanka</p> <p>02 Years</p>	2,492,000/-

## Working Committee on Engineering Sciences, Architecture & ICT

No.	Grantee(s)/Institute	Project Title/Duration	Total Allocation (Rs.)
1.	<b>Dr Thilini U Ariyadasa</b> Department of Chemical and Process Engineering  <b>Prof. R A Attalage</b> <b>Eng. P H V Nimarshana</b> Department of Mechanical Engineering Faculty of Engineering University of Moratuwa	Investigation of the techno economic feasibility to integrate micro algal bio refinery for sequestration of carbon dioxide from flue gas emissions  03 Years	5,658,375/-
2.	<b>Prof. Rangika Umesh Halwatura</b> Department of Civil Engineering Faculty of Engineering University of Moratuwa	Decoding the potential of vernacular timber preservation technology for structural application  03 Years	3,913,064/-
3.	<b>Prof. W K Mampearachchi</b> Department of Civil Engineering Faculty of Engineering University of Moratuwa	The effect of firing temperature on microstructure and physical properties of internal curing concrete aggregate produced from reservoir sediment.  02 Years	1,990,000/-
4.	<b>Dr D P Chandima</b> Department of Electrical Engineering Faculty of Engineering University of Moratuwa	Sizing of Hybrid Energy Storage System and Energy Management Strategy with State of Charge Regulation for Standalone Microgrids  02 Years	1,440,000/-
5.	<b>Dr K M A K Kulatunga</b> <b>Ms U S S Dharmapriya</b> Department of Manufacturing & Industrial Engineering University of Peradeniya  <i>Collaborator:</i> <b>Ms Y M P Samarasinghe</b> National Institute of Post-Harvest Management Anuradhapura	Design and development of a decision support system to reconfigure fruit and vegetable supply chain to enhance the food security  03 Years	3,453,750/-
6.	<b>Dr D T K K Chamindu</b> Department of Civil Engineering Faculty of Engineering  <b>Dr A K Karunarathne</b> Department of Agricultural Engineering Faculty of Agriculture University of Peradeniya  <b>Dr S K Weragoda</b> Kandy South Water Treatment Plant National Water Supply and Drainage Board Peradeniya  <i>Collaborators:</i> <b>Prof. K Smits</b> Department of Civil Engineering University of Texas at Arlington USA  <b>Prof. T J Clough</b> Lincoln University New Zealand  <b>Prof. Bo Elberling</b> University of Copenhagen Denmark	Colloid Mobilization and Colloid-Facilitated Transport of Agrochemicals and Heavy Metals: A Geo-environmental Insight to the CKDu problem in Sri Lanka  02 Years	2,723,750/-

7.	<b>Dr R A C P Ranasinghe</b> <b>Dr M. A. Wijewardane</b> Department of Mechanical Engineering Faculty of Engineering University of Moratuwa	Computational modelling of clinical waste combustion, with the special emphasis on improving thermal efficiency and exhaust emissions in clinical waste incinerators  03 Years	<b>3,460,000/-</b>
8.	<b>Dr H D Yapa</b> Department of Civil Engineering  <b>Dr G S N Karunarathna</b> Department of Computer Engineering  <b>Dr W P D Fernando</b> Department of Mechanical Engineering Faculty of Engineering University of Peradeniya	Simulation of temperature development in concrete using finite difference approaches  02 Years	<b>2,662,000/-</b>



## COVID-19 Research Grants Awarded – 2020

### Working Committee on Agriculture & Food Science

Grant No.	Grantee(s)/Institute	Project Title/Duration	Total Allocation (Rs. M)
RG/COVID/2020/AG/01	<b>Dr N P Vidanapathirana</b> Institute for Agro technology and Rural Sciences University of Colombo Hambantota  <b>Prof. S Subasinghe</b> Department of Crop Science Faculty of Agriculture University of Ruhuna  <b>Mr H Rohanadheera</b> Institute for Agro technology and Rural Sciences University of Colombo	Development of <i>In-vitro</i> protocol for mass production of micro rhizomes of Turmeric ( <i>Curcuma longa</i> L.)  01 Year	1.58
RG/COVID/2020/AG/02	<b>Dr S J Arasakesary</b> Mr A. Amirthaloojanan Regional Agriculture Research Centre Department of Agriculture Kilinochchi  <b>Collaborators:</b> <b>S. Sivakumar</b> Provincial Director Northern Province  <b>Ms Kugapriya</b> Regional Agriculture Research Centre Department of Agriculture Kilinochchi	A research study to identify suitable location for onion production promotion through true seeds in the potential areas of north province of Sri Lanka  07 Months	1.94

### Working Committee on Health Sciences

Grant No.	Grantee(s)/Institute	Project Title/Duration	Total Allocation (Rs. M)
RG/COVID/2020/HS/01	<b>Prof. Punchi Bandage Ranjith</b> Dissanayake Department of Civil Engineering Faculty of Engineering University of Peradeniya	Development of Innovative Shelter Hospital Buildings for Infectious Diseases  01 Year	1.599
RG/COVID/2020/HS/02	<b>Dr Murugathas Thanishaichelvan</b> Department of Physics Faculty of Science University of Jaffna	Development of an Electronic Detection System for Rapid Diagnosis of COVID-19 caused by SARS-CoV-2  01 Year	1.5

## COVID-19 Technology Grants awarded - 2020

No	Grant No.	Grantee(s)/Institute	Project Title	Total Allocation (Rs. M)
1.	TD/2020/COVID/AG/01	Dr K K L B Adikaram University of Ruhuna	Upgrading the already developed IoT based protected house automation system for cultivating up-country vegetables in low-country areas in “medium scale poly-tunnels” and home gardening units (12 months)	1,673,000/-
2.	TD/2020/COVID/AG/02	Prof. S A Kulasooriya National Institute of Fundamental Studies	Biofertilizers for Vegetable Production through Eco-friendly Agriculture (12 months)	800,000/-
3.	TD/2020/COVID/HS/01	Prof. R M G Rajapaksa University of Peradeniya	Low-cost particle filter analyzer (06 months)	1,155,000/-

## Ongoing Research Grants - 2020

## Working Committee on Agriculture &amp; Food Science

No	Grant No.	Grantee(s)/Institute	Project Title/Duration	Total Allocation (Rs.)
1.	RG/2016/AG/01	<b>Dr T H P S Fernando</b> <b>Dr K V S Kudaligama</b> <b>Mr M K R Silva</b> <b>Dr P Senevirathne</b> Rubber Research Institute	Investigation on biological control measures for white root disease of rubber to improve integrated disease management strategies  03 Years	4,358,232/-
2.	RG/2017/AG/01	<b>Dr K V V S Kudaligama</b> <b>Dr T H P S Fernando</b> <b>Dr V H L Rodrigo</b> <b>Dr P Senevirathne</b> Rubber Research Institute  <b>Prof. K M E P Fernando</b> Department of Botany Faculty of Applied Sciences University of Sri Jayewardenepura	Development of in-country ethephon formulations to promote low cost harvesting systems for rubber plantations in Sri Lanka  03 Years	3,355,000/-
3.	RG/2017/AG/02	<b>Prof. C V L Jayasinghe</b> Department of Food Science & Technology Faculty of Livestock Fisheries & Nutrition Wayamba University of Sri Lanka  <b>Prof. D Chamara K. Illeperuma</b> Department of Food Science & Technology Faculty of Agriculture  <b>Prof. A N Navaratne</b> Department of Chemistry Faculty of Science University of Peradeniya	Industrial fruit waste derived ingredients for commercial food production.  02 Years	2,331,000/-
4.	RG/2017/AG/04	<b>Dr W M P B Weerasinghe</b> Veterinary Research Institute Peradeniya  <b>Dr Ariyanthilaka Manawadu</b> Department of Animal Science Faculty of Agriculture University of Ruhuna  <b>Dr Kumara Mahipala</b> Department of Animal Science Faculty of Agriculture University of Peradeniya	<i>In vitro</i> and <i>in vivo</i> screening of newly introduced forages for sustainable intensification of dairy production in the context of climate change  03 Years	3,985,823/-

5.	RG/2019/AG/01	<b>Dr Anupama P Halmillawewa</b> Department of Microbiology Faculty of Science University of Kelaniya	Bacteriophage-mediated biocontrol of soft rot in carrots ( <i>Dacus carota</i> ) caused by <i>Pectobacterium</i> spp. in Sri Lanka 02 Years	2,155,258/-
6.	RG/2019/AG/02	<b>Prof. Kapila Seneviratne</b> Department of Chemistry Faculty of Science University of Kelaniya	Effect of virgin coconut oil selected edible oils on the intestinal absorption of chlorogenic acid: an <i>in vivo</i> and <i>in vitro</i> study 03 Years	4,949,000/-
7.	RG/COVID/2020/AG/01	<b>Dr N P Vidanapathirana</b> Institute for Agro-Technology and Rural Sciences University of Colombo Hambantota  <b>Prof. S Subasinghe</b> Department of Crop Sciences Faculty of Agriculture University of Ruhuna  <b>Mr H. Rohanadheera</b> Institute for Agro-Technology and Rural Sciences University of Colombo Hambantota	Development of <i>in-vitro</i> protocol for mass production of micro rhizomes of Turmeric ( <i>Curcuma longa</i> L.) 01 Year	1,586,416/-
8.	RG/COVID/2020/AG/02	<b>Dr S J Arasakesary</b> Regional Agriculture Research and Development Centre Department of Agriculture Kilinochchi	A research study to identify suitable location for onion production promotion through true seeds in the potential areas of north province of Sri Lanka 01 Year	1,229,000/-

### Working Committee on Basic Sciences

No	Grant No.	Grantee(s)/Institute	Project Title/Duration	Total Allocation (Rs.)
1.	RG/2016/ BS/01	<b>Prof. R M G Rajapakse</b> Department of Chemistry Faculty of Science University of Peradeniya  <b>Prof. G R A Kumara</b> National Institute of Fundamental Studies	Photon upconversion as a tool to harvest infrared radiation for direct illumination in the dark and to fabricate dye-sensitized solar cells to generate electricity under illumination as well as in the dark 03 years	5,235,000/-
2.	RG/2017/ BS/01	<b>Prof. Veranja Karunathne</b> <b>Dr Dhanushi Welideniya</b> Sri Lanka Institute of Nanotechnology	Design and synthesis of novel pullulan and chitosan-based nano-polyplexes for gene therapy 02 Years	1,682,099/-

3.	RG/2017/ BS/03	<p><b>Prof. R M G Rajapakse</b> Department of Chemistry Faculty of Science</p> <p><b>Prof. R P V J Rajapakse</b> Department of Veterinary Pathobiology Faculty of Veterinary Medicine &amp; Animal Science</p> <p><b>Dr H M T U Herath</b> Department of Medical Laboratory Science Faculty of Allied Health Sciences University of Peradeniya</p>	<p><i>In vitro</i> evaluation of biocompatibility and antimicrobial properties of Hydroxyapatite Nanoparticles and their composites derived from naturally occurring Sri Lankan minerals for biomedical and water purification applications</p> <p>03 Years</p>	3,420,000/-
4.	RG/2017/ BS/05	<p><b>Dr M T Napagoda</b> Department of Biochemistry Faculty of Medicine University of Ruhuna</p>	<p>Development of effective sunscreen formulations from Sri Lankan medicinal plants</p> <p>2 ½ Years</p>	4,490,656/-
5.	RG/2017/ BS/06	<p><b>Prof. U L B Jayasinghe</b> <b>Prof. N S Kumar</b> National Institute of Fundamental Studies</p>	<p>Chemistry and bioactivity of endophytic fungi from four popular condiment plants <i>Curcuma longa</i>, <i>Myristica fragrans</i>, <i>Syzygium aromaticum</i> and <i>Zingiber officinale</i> used in indigenous system of medicine in Sri Lanka: Possible applications in health and agriculture</p> <p>03 Years</p>	3,086,300/-
6.	RG/2018/ BS/01	<p><b>Dr Chamanei Sandamali Perera</b> Department of Physics Faculty of Science University of Peradeniya</p>	<p>Synthesis of colloidal quantum dots for infra-red photo detection and solar cells</p> <p>01 Year</p>	885,000/-
7.	RG/2018/ BS/02	<p><b>Dr R Senthilnithy</b> Department of Chemistry Faculty of Natural Sciences Open University of Sri Lanka</p>	<p>Computational studies on inhibition of epigenetic modifications of cancer codes</p> <p>03 Years</p>	3,813,000/-
8.	RG/2018/ BS/03	<p><b>Prof. G R A Kumara</b> Research Professor National Institute of Fundamental Studies</p>	<p>Development of highly efficient and environmentally stable perovskite solar cells and perovskite solar panels by industrially viable methods for power generation</p> <p>03 Years</p>	5,977,000/-

9.	RG/2019/BS/01	<p><b>Dr Gayan Bowatte</b> Department of Basic Sciences Faculty of Allied Health Sciences</p> <p><b>Dr Sachith P. Abeysundara</b> Department of Statistics &amp; Computer Science Faculty of Science University of Peradeniya</p> <p><b>Prof. Rohan Weerasooriya</b> National Institute of Fundamental Studies</p>	<p>Building a 3D air pollution model for the city of Kandy: a platform to evaluate health outcome</p> <p>03 Years</p>	4,526,300/-
10.	RG/2019/BS/02	<p><b>Dr W M D G B Wijayaratne</b> Department of Microbiology Faculty of Medicine University of Ruhuna</p>	<p>Evaluation of anti-<i>Candida</i> activity of selected medicinal plants in Sri Lanka against oral candidiasis in cancer patients</p> <p>2 ½ Years</p>	2,915,000/-
11.	ICRP/NSF-NSFC/2019/BS/01	<p><b>Dr M S Vithanage</b> Office of the Dean Faculty of Applied Sciences University of Sri Jayewardenepura</p> <p><b>Dr D Magana Arachchi</b> National Institute of Fundamental Studies</p> <p><b>Dr R P Wanigatunge</b> Department of Botany Faculty of Science University of Kelaniya</p> <p><b>Dr A U Rajapaksha</b> Faculty of Applied Sciences University of Sri Jayewardenepura</p>	<p>Enrichment mechanisms of CKDu-risk factors in groundwaters, their uptake pathways and potential remedies</p> <p>3 ½ Years</p>	33,300,000/-
12.	ICRP/NSF-NSFC/2019/BS/02	<p><b>Prof. Rohana Chandrajith</b> <b>Dr N H Koralagedara</b> Department of Geology University of Peradeniya</p> <p><b>Prof. S K Gunatilake</b> Department of Natural Resources Sabaragamuwa University of Sri Lanka</p>	<p>Assessment of aquifer quality in relation to chronic kidney disease with unknown aetiology in dry zone of Sri Lanka through an integrated approach using isotopes and water chemistry</p> <p>3 ½ Years</p>	29,641,000/-



13.	<b>ICRP/NSF-NSFC/2019/BS/03</b>	<p><b>Dr K B S N Jinadasa</b> Department of Civil Engineering University of Peradeniya</p> <p><b>Dr S K Weragoda</b> National Water Supply and Drainage Board Katugastota</p> <p><b>Dr K G N Nanayakkara</b> Department of Civil Engineering University of Peradeniya</p> <p><b>Dr H M A M C Herath</b> Faculty of Applied Sciences Rajarata University of Sri Lanka</p>	<p>Membrane fouling mechanism and control of high-pressure membrane processes (NF/RO) and electrodialysis (ED) purifying groundwater with DOM and high hardness in CKDu affected areas of Sri Lanka</p> <p>3 ½ Years</p>	<b>34,912,000/-</b>
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### Working Committee on Biotechnology

No.	Grant No.	Grantee(s)/Institute	Project Title/Duration	Total Allocation (Rs.)
1.	<b>RG/2016/BT/03</b>	<p><b>Dr A Arulkanthan</b> <b>Dr S S S De Jagoda</b> Centre for Aquatic Animal Disease Diagnosis and Research Faculty of Veterinary Medicine and Animal Science University of Peradeniya</p>	<p>Studies on mycobacteria in freshwater ornamental fish: identification of risk factors, and clinic –pathology features, and development of rapid diagnostic technique</p> <p>03 Years</p>	<b>3,759,000/-</b>
2.	<b>RG/2016/BT/04</b>	<p><b>Prof. R S Dassanayake</b> Department of Chemistry Faculty of Science University of Colombo</p> <p><b>Prof. Y I N S Gunawardena</b> Molecular Medicine Unit Faculty of Medicine University of Kelaniya</p>	<p>Transgenic reconstitution of RNA interference pathway in <i>Pichia pastoris</i> yeast model system</p> <p>04 Years</p>	<b>4,534,000/-</b>
3.	<b>RG/2019/BT/01</b>	<p><b>Prof. Rupika Rajakaruna</b> Department of Zoology Faculty of Science University of Peradeniya</p>	<p>Tick borne spotted fever group rickettsioses in the Central province: type of pathogens, vertebrate reservoir host community composition and tick species involved in circulation and maintenance of pathogens</p> <p>03 Years</p>	<b>4,988,000/-</b>

4.	RG/2019/BT/02	<b>Dr Thusitha Wickramasinghe</b> Department of Biochemistry & Clinical Chemistry Faculty of Medicine University of Kelaniya	Optimization of bead-based SELEX for selection of aptamers and evaluation of a novel real time PCR based approach for monitoring SELEX  02 Years	1,497,000/-
5.	RG/2019/BT/03	<b>Dr R N Attanayake</b> Department of Botany Faculty of Science University of Kelaniya	Genetic Dissection of polyethylene degradation ability of <i>Perenniporia</i> sp isolated from decaying hard woods in Sri Lanka  02 Years	1,595,000/-

### Working Committee on Engineering, Architecture & ICT

No	Grant No.	Grantee(s)/Institute	Project Title/Duration	Total Allocation (Rs.)
1.	RG/2017/EA & ICT/02	<b>Prof. R U Halwatura</b> Department of Civil Engineering Faculty of Engineering University of Moratuwa	Investigation of alternative stabilizer for soil and develop low cost, eco-friendly load bearing walling material  03 Years	4,471,015/-
2.	RG/2017/EA & ICT/03	<b>Prof. L W P R Udayanga</b> Department of Electronic and Telecommunication Engineering Faculty of Engineering University of Moratuwa  <b>Dr Y A A Kumarayapa</b> Department of Electronics Faculty of Applied Sciences Wayamba University of Sri Lanka	Optical injection locking and characterization for direct modulation in optical communication  03 Years	4,686,750/-
3.	NSF-PSE/ICRP/2017/EA&ICT/01	<b>Dr K Vignarooban</b> <b>Mr S Senthuran</b> <b>Mr K Prashanthan</b> Department of Physics Faculty of Engineering University of Jaffna	Novel materials for secondary sodium-ion batteries and proton exchange membrane fuel cells  03 Years	2,480,000/-
4.	NSF-PSE/ICRP/2017/EA&ICT/02	<b>Prof. L B D R P Wijesundera</b> <b>Prof. W P Siripala</b> <b>Dr K M D C Jayathilaka</b> <b>Dr W T M A P K Wanninayake</b> Department of Physics Faculty of Science University of Kelaniya	Optimization of donor acceptor materials for fabrication of efficient solar cells  02 Years	2,913,500/-
5.	NSF-PSE/ICRP/2017/EA&ICT/03	<b>Dr N Gunawardhana</b> <b>Dr B S Dassanayake</b> Department of Physics Faculty of Science University of Peradeniya	Novel nanoparticle (M=Ti/V/CdS/CdTe)- graphene based material for lithium ion batteries and solar cells  02 Years	3,689,000/-

6.	<b>NSF-PSE/ ICRP/ 2017/ EA&amp;ICT/04</b>	<b>Prof. M A K L Dissanayake Dr G K R Senadeera</b> National Institute of Fundamental Studies	Development of carbon-based nanomaterial for counter electrodes in dye sensitized solar cells  03 Years	<b>3,100,000/-</b>
7.	<b>RG/2018/ EA&amp;ICT/01</b>	<b>Dr M P B Ekanayake Dr G M R J Godaliyadda Prof. J B Ekanayake</b> Department of Electrical and Electronic Engineering Faculty of Engineering University of Peradeniya	Development of novel predictive based Smart Distribution Management System (S-DMS) to maximize the rooftop PV absorption capacity of last mile networks  02 Years	<b>2,183,289/-</b>
8.	<b>RG/2019/ EA&amp;ICT/01</b>	<b>Dr S H P Gunawardena Dr S A D T Subasinghe</b> Department of Chemical & Process Engineering Faculty of Engineering University of Moratuwa	Optimization of biorefinery processes for conversion of rice straw extracted cellulose to platform chemicals  02 Years	<b>3,415,500/-</b>
9.	<b>RG/2019/ EA&amp;ICT/02</b>	<b>Dr M A Wijewardena Dr M M I D Manthilake Dr R A C P Ranasinghe</b> Department of Mechanical Engineering Faculty of Engineering University of Moratuwa	Design, Development and Modelling of a Thermo-Acoustic generator for low grade heat recovery  03 Years	<b>3,380,350/-</b>

## Working Committee on Environment & Biodiversity

No.	Grant No.	Grantee(s)/Institute	Project Title/Duration	Total Allocation (Rs.)
1.	RG/2011/NRB/02	<b>Dr R Gnaneswaran</b> Department of Zoology Faculty of Science University of Jaffna  <b>Dr N A J P Karunaratne</b> Department of Zoology University of Peradeniya	The role of Mangrove Ecosystem in connecting other ecosystems by maintaining above ground Invertebrate biodiversity  03 Years	843,590/-
2.	RG/2014/EB/04	<b>Dr Suyama Meegaskumbura</b> <b>Dr Madhava Meegaskumbura</b> Department of Zoology Faculty of Science University of Peradeniya	Systematics and phylogenetic relationships of Murine rodents of Sri Lanka  03 Years	3,521,100/-
3.	RG/2017/EB/01	<b>Dr Chandima D. Dangalle</b> Department of Zoology Faculty of Science University of Colombo  <b>Mr Yahas W. Mallwarachchi</b> SLIIT Malambe	Diversity, distribution and habitat type of arboreal tiger beetles ( <i>Coleoptera cicindelidae</i> ) of Sri Lanka  03 Years	4,267,505/-
4.	RG/2017/EB/02	<b>Prof. L D Amarasinghe</b> Department of Zoology Faculty of Science University of Kelaniya	Micro-fauna and micro-flora diversity in mosquito breeding habitats and their effects on mosquito larvae  02 ½ Years	2,264,030/-
5.	RG/2017/EB/03	<b>Prof. M D Amarasinghe</b> <b>Dr R M C S Ratnayake</b> Department of Botany Faculty of Science University of Kelaniya	Studies on ecology of <i>Typha angustifolia</i> , its current and potential uses to develop a community-based management strategy to control its invasion in the Man & Biosphere (MAB) wetland reserve at Bundala  03 Years	4,336,500/-
6.	RG/2017/EB/05	<b>Dr N P S Kumburegama</b> <b>Prof. K B Ranawana</b> Department of Zoology Faculty of Science University of Peradeniya	Distribution of terrestrial gastropod pests, their seasonal abundance and degree of damage to crops in agricultural lands in Nuwara-Eliya  02 Years	2,565,600/-
7.	RG/2018/EB/01	<b>Prof. Deepthi Yakandawala</b> Department of Botany Faculty of Science University of Peradeniya  <b>Dr Kapila Yakandawala</b> Department of Horticulture & landscape Gardening Faculty of Agriculture & Plantation Management Wayamba University of Sri Lanka	Taxonomic study of the Sri Lankan species, belonging to Family <i>Elaeocarpaceae</i>  03 Years	5,552,492/-

## Working Committee on Health Sciences

No	Grant No.	Grantee(s)/Institute	Project Title/Duration	Total Allocation (Rs.)
1.	RG/2014/HS/08	<b>Prof. Mangala Gunatilake</b> Department of Physiology Faculty of Medicine University of Colombo  <b>Dr Susilakanthi Nanayakkara</b> Department of Rabies Research and Vaccine Quality Control Medical Research Institute	Pattern of immunogenicity in domestic dogs following primary and subsequent booster vaccination against rabies in Dehiwala Municipality area  03 Years	7,328,975/-
2.	RG/2017/HS/01	<b>Prof. P R Jayasooriya</b> Department of Oral Pathology Faculty of Dental Sciences  <b>Dr R P Illeperuma</b> Department of Medical Laboratory Science Faculty of Allied Health Sciences University of Peradeniya	Evaluation of "senescence associated secretory phenotype" and the role of senescent fibroblasts in oral submucous fibrosis  02 Years	2,963,070/-
3.	RG/2017/HS/03	<b>Dr Prasanna Galhena</b> <b>Dr Yasanandana Supunsiri</b> Department of Biochemistry & Clinical Chemistry Faculty of Medicine University of Kelaniya	<i>In-vitro</i> assessment of insulin sensitization and anti-adipogenic effects of selected antidiabetic plant extracts  02 Years	2,366,500/-
4.	RG/2017/HS/04	<b>Dr Shaluka Francis Jayamanne</b> Department of Medicine Faculty of Medicine University of Kelaniya  <b>Dr Abdul Cader Mohamed Fahim</b> Department of Pharmacy Faculty of Allied Health Sciences University of Peradeniya	A study to evaluate the effect of clinical pharmacy interventions on management outcomes in Chronic Kidney Disease of uncertain etiology patients undergoing hemodialysis in Sri Lanka  02 Years	3,785,750/-
5.	NSF -PSF / ICRP/2017/HS/01	<b>Dr Dhammika N Magana-Arachchi</b> National Institute of Fundamental Studies  <b>Dr Dushantha Madegedara</b> Teaching Hospital Kandy	Genetic characterization of drug resistant <i>Mycobacterium tuberculosis</i> isolates from Sri Lankan and Pakistani TB patients and identification of associated biomarkers  03 Years	3,190,650/-

6.	NSF-PSF / ICRP/2017/HS/02	<b>Prof. G M Kamal B Gunaherath</b> Department of Chemistry  <b>Dr K Hector Jayewardena</b> Department of Zoology  <b>Dr Chandani Ranasinghe</b> Department of Chemistry The Open University of Sri Lanka	Preparation of cost-effective synthetic skin grafts for the treatment of burns and chronic ulcer wounds: bioactivity directed investigation of angiogenic and cell-migration potentials of plant extracts  03 Years	3,720,000/-
7.	NSF-NSFC/ICRP/ 2019/HS/01	<b>Prof. Chandu de Silva</b> <b>Prof. Dilani Lokuhetty</b> Department of Pathology  <b>Prof. Upul Senerath</b> Dept. of Community Medicine  <b>Dr Niranthi Perera</b> Department of Pathology Faculty of Medicine University of Colombo	Pathogenesis of fibrosis in chronic kidney disease of known and unknown origin in Sri Lanka  3 ½ Years	33,502,650/-
8.	NSF-NSFC/ICRP/ 2019/HS/02	<b>Prof. Kamani Wanigasuriya</b> Department of Medicine  <b>Dr P P Rasika Perera</b> Department of Biochemistry Faculty of Medical Sciences University of Sri Jayewardenepura	Novel urinary biomarkers for early detection of Chronic Kidney Disease of Unknown Aetiology (CKDu) in Sri Lanka  03 Years	29,112,271/-
9.	RG/2019/HS/01	<b>Dr R N Mohamed Jalaldeen</b> Department of Zoology and Environment Sciences Faculty of Science University of Colombo	Identifying colorectal cancer specific autoantibodies and their role in diagnosis, prognosis and prediction of colorectal cancer  01 Year	1,000,000/-
10.	RG/2019/HS/02	<b>Prof. S Nobel Surendran</b> Department of Zoology University of Jaffna	Dengue transmission intervention using lure-based adult suction traps and gravid <i>Aedes</i> traps (GAT): A cluster randomized trial approach in Jaffna municipal area.  02 Years	4,165,000/-
11.	RG/COVID/2020/ HS/01	<b>Prof. P B Ranjith Dissanayake</b> Department of Civil Engineering University of Peradeniya	Development of Innovative Shelter Hospital Buildings for Infectious Diseases  01 Year	1,599,500/-
12.	RG/COVID/2020/ HS/02	<b>Dr Murugathas Thanihaichelvan</b> Department of Physics University of Jaffna	Development of an Electronic Detection system for rapid diagnosis of COVID-19 caused by SARS-CoV-2  01 Year	1,500,000/-



## Working Committee on Social Sciences

No	Grant No.	Grantee/Institute	Project Title/Duration	Total Allocation (Rs.)
1.	RG/2019/SS/01	<b>Dr S Wijeratne</b> Department of Geography Faculty of Humanities and Social Sciences University of Ruhuna	Risk Analysis if the Landslides at Morawaka Kanda Area in Matara District  1 ½ years	939,775/-

## Ongoing NTRP grants

No	Grant No.	Grantee/Institute	Project Title/Duration	Total Allocation (Rs.)
1	NTRP/2017/CC&ND/TA-04/P-02/01	<b>Prof. G L L Pradeepa Silva</b> Department of Animal Science Faculty of Agriculture University of Peradeniya	Comparative Analysis of Climate-Resilient Biodiversity of Home-garden ecosystems in different Agro-ecological Regions of Sri Lanka 04 Years	29,384,000/-
2	NTRP/2017/CC&ND/TA-02/P-02/01	<b>Prof. J C Edirisinghe</b> Department of Agribusiness Management Faculty of Agriculture and Plantation Management Wayamba University of Sri Lanka	Assessment of Spatial Impacts of Climate Change on Geographic, Economic and Social Vulnerability on the Plantation Sector in Sri Lanka 03 Years	12,000,000/-
3	NTRP/2017/CC&ND/TA-05/P-01/01	<b>Dr P Nalaka Ranasinghe</b> Department of Oceanography and Marine Geology Faculty of Fisheries and Marine Sciences & Technology University of Ruhuna	Understanding the long term influence of Indian Ocean Warm Pool and Indian Ocean Dipole on the monsoon variability of Sri Lanka 03 Years	14,500,000/-
4	NTRP/2017/CC&ND/TA-04/P-01/01	<b>Prof. W J A M De Costa</b> Department of Crop Science Faculty of Agriculture University of Peradeniya	Quantification of the response of tropical rain forests of Sri Lanka to varying atmospheric temperature for prediction of the impact of future climate change on their carbon balance and biodiversity 04 Years	27,000,000/-
5	NTRP/2017/CC&ND/TA-01/P-01/01	<b>Prof. Indrika Rajapakshe</b> Department of Architecture University of Moratuwa	Assessment of vulnerabilities and challenges on Quality of Life (QoL) of national ageing population due to climate change risks 03 Years	6,000,000/-

No	Grant No.	Grantee/Affiliation	Out put	Total Budget (Rs. Mn)
1	TG/2015/ Tech-D/ 08	Mr Jagath Vithanachchi Samson Compund (Pvt) Ltd	Biodegradable slipper compound and quantification of biodegradability of the products promoting use of environmentally friendly products with a goal of creating a greener environment.	1.067
2	TG/2016/ Tech-D/ 02	Prof. Karunaratne Faculty of Engineering University of Peradeniya	Value-added products for local industrial sectors; rubber, textile, chemical from dolomitic lime	15.69
3	TG/2016/ Tech-D/ 04	Mr S K Seneviratne ART Logistic Pvt Ltd Holcim Pvt Ltd University of Peradeniya	Driver assisted interface system for Truck Trailer combination vehicle providing innovative solution for automobile industry.)	1.01
4	TG/2016/ Tech-D/ 05	Mr Thilak Dharmaratne Gem & Jewelry Research & Training Institute	Value added gem quality minerals for exports from non-gem quality minerals enhancing foreign market opportunities.	9.98
5	TG/2017/ Tech-D/ 03	Prof. Navaratne Food Science & Technology Department University of Sri Jayewardenepura	Fermentation chamber for making high quality rice-based products. This will enable supply of quality food for consumers and to make available the knowledge of making quality rice-based products to community.	3.66
6	TG/2017/ Tech-D/ 05	Mr G G N Gunewardena	Low-cost water treatment plant for rural water supply scheme.	10.764
7	TG/2017/ Tech-D/ 06	Prof. Jayasundera Bandara National institute of Fundamental Science	An industrial reactor for purification of waste oil water from service stations reducing environmental pollution.	8.323
8	TG/2017/ Tech-D/ 07	Mr Susantha Priyadarshana	Conical screw conveyor mixer for making Cementous water proofing material and well dispersed waterproofed materials in solid form)	2.189
9	TG/2018/ Tech-D/ 01	Dr Nanda Senanayake	Reduce acid sulphate conditions in paddy tracks near Nilwala Ganga flood protection plain to create environment for re-cultivation.	2.108

## Summary of Research Grants Scheme - 2020

		Agriculture & Food Science	Basic Sciences	Biotechnology & Bioethics	Environment & Biodiversity	Engineering, Architecture & ICT	Health Sciences	Indigenous Knowledge	Social Sciences	Science Education	Library & Information Science	Oceanography & Marine Sciences	Total
01	Total no. of ongoing grants as at 31.12.2020	08	13	05	07	09	12	-	01	-	-	-	55
02	CRG applications received in 2020	44	28	12	26	35	50	02	09	03	03	-	212
03	Grants awarded	CRG	-	-	-	-	-	-	-	-	-	-	-
		COVID-19	02	-	-	-	02	-	-	-	-	-	04
04	Grants completed	01	04	01	09	02	08	01	-	-	-	01	27
05	Grants withdrawn	-	-	-	-	-	-	-	-	-	-	-	-
06	Grants terminated	-	-	-	-	-	-	-	-	-	-	-	-
07	RSs appointed/to be appointed	01	05	02	-	01	01	-	-	-	-	-	10
08	RSs registered for postgraduate degree/to be registered for postgraduate degree	01	08	01	06	-	01	-	-	-	-	-	17
09	TAs appointed/to be appointed	-	-	-	-	-	-	-	-	-	-	-	-
10	PG degrees completed												
	PhD	-	-	01	-	-	03	-	-	-	-	01	05
	MPhil	-	03	-	06	-	01	01	-	-	-	-	11
	MSc	-	-	-	-	-	-	-	-	-	-	-	-
	MD	-	-	-	-	-	-	-	-	-	-	-	-
11	Publications												
	Foreign publications	-	06	02	01	04	04	-	-	-	-	-	17
	Local publications	-	04	-	-	-	-	-	-	-	-	03	07
	Communications	02	15	01	03	05	05	02	-	-	-	13	46
12	Patents arising from grants	-	-	02	-	-	-	-	-	-	-	-	02

## Research Grants Completed

## Working Committee on Agriculture &amp; Food Science

No	Grant No.	Grantee(s)/Institute	Project Title/Duration	Total Allocation (Rs.)
1.	RG/2016/AG/02	<b>Dr Ilmi G. N. Hewajulige</b> Industrial Technology Institute Malabe  <b>Dr Chandrika M. Nanayakkara</b> Department of Plant Science University of Colombo  <b>Dr W W P Rodrigo</b> Ms D U Rajawardana Industrial Technology Institute Malabe	Biodiversity and technological potential of micro-flora from selected Sri Lankan dairies         02 ½ Years	2,000,500/-

## Working Committee on Basic Sciences

No.	Grant No.	Grantee(s)/Institute	Project Title/Duration	Total Allocation (Rs.)
1.	RG/2016/BS/02	<b>Prof. Anura Wickramasinghe</b> <b>Dr Susanthi Jayasinghe</b> Department of Chemistry Faculty of Science University of Peradeniya	Synthesis of biologically active natural product libraries of 3b-[a-L arabinopyranosyl) oxy]olean-12-en-28-oic acid    03 Years	4,407,000/-
2.	RG/2016/BS/05	<b>Prof. C V Hettiarachchi</b> <b>Dr Ishanie Rageeka Perera</b> Department of Chemistry Faculty of Science University of Peradeniya	Development of metal organic frameworks as semiconductor materials for dye sensitized solar cells    03 Years	4,419,500/-
3.	RG/2017/BS/02	<b>Prof. G A K S Perera</b> <b>Prof. K P Vidanapathirana</b> Department of Electronics Faculty of Applied Science Wayamba University of Sri Lanka	Synthesis and characterization of ionic liquid based gel polymer electrolytes to be used for rechargeable cells and supercapacitors    03 Years	2,841,600/-
4.	RG/2017/BS/04	<b>Dr Sutharsini Ubenthiran</b> Department of Physics Faculty of Science University of Jaffna	Fundamental Studies on Y-TZP ceramics and mechanisms for enhancing the hydrothermal ageing resistance    02 Years	1,490,000/-

## Working Committee on Biotechnology

No	Grant No.	Grantee(s)/Institute	Project Title/Duration	Total Allocation (Rs.)
1.	RG/2015/ BT/05	<b>Prof. Janakie P. Eeswara</b> <b>Prof. T Madhujith</b> Department Crop Science Faculty of Agriculture University of Peradeniya  <b>Prof. P Bandaranayake</b> Agriculture Biotechnology Centre University of Peradeniya  <b>Dr Kalyani Ketepearachchi</b> Department of Agriculture Gannoruwa Peradeniya	Biochemical and molecular characterization and rapid multiplication of 5 selected accession of <i>Aegle marmelos</i> (Lin.) Correa (Bale)  03 Years	4,733,000/-

## Working Committee on Environment & Biodiversity

No	Grant No.	Grantee(s)/Institute	Project Title/Duration	Total Allocation (Rs.)
1.	RG/2014/ EB/02	<b>Prof. Rupika Subashini Rajakaruna</b> <b>Prof. Madhava Meegaskumbura</b> Department of Zoology Faculty of Science University of Peradeniya	Identifying the culprits threatening local amphibians: trematode induced deformities and toxicity to agrochemicals and ultraviolet radiation  03 Years	2,959,400/-
2.	RG/2015/ EB/02	<b>Dr J W Damunupola</b> Department of Botany <b>Prof. B M R Bandara</b> Department of Chemistry Faculty of Science University of Peradeniya	Screening selected invasive plant extracts/ compounds for antifungal action against pathogens of ornamental foliage plants  03 Years	3,713,210/-
3.	RG/2015/ EB/04	<b>Dr Suresh P. Benjamin</b> National Institute of Fundamental Studies	Diversity of crab spiders of Sri Lanka based on morphology and DNA barcodes  03 Years	4,088,600/-
4.	RG/2016/ EB/01	<b>Dr Sumudu C. K. Rubasinghe</b> Department of Botany Faculty of Science University of Peradeniya	Taxonomy and biogeography of Sri Lankan leafy liverworts (Jungermanniidae)  02 ½ Years	2,613,500/-

5.	RG/2016/ EB/02	<b>Dr Sisira Ediriweera</b> Department of Science & Technology Uva Wellassa University  <b>Prof. B M P Singhakumara</b> Department of Forestry and Environmental Science Faculty of Applied Sciences University of Sri Jayewardenepura	Study on vegetation structure and above- ground carbon dynamics over a 40-year period in a Lowland rainforest in Sri Lanka  03 Years	2,225,000/-
6.	RG/2016/ EB/03	<b>Dr Pamoda B. Ratnaweera</b> Department of Science & Technology Uva Wellassa University	Antibacterial drug leads and insecticidal agents from endophytic fungi of a selected <i>Cyperus</i> species  02 Years and 11 months	2,370,000/-
7.	RG/2016/ EB/04	<b>Prof M M Pathmalal</b> Department of Zoology  <b>Dr S D M Chinthaka</b> Department of Chemistry University of Sri Jayewardenepura	Detection and removal of geosmin and MIB (2-methylisoborneol) in drinking water by native bacteria; Bioremediation approach for green solution  03 Years	4,094,219/-
8.	RG/2016/ EB/05	<b>Dr W A A Priyanka de Silva</b> <b>Prof. S H P P Karunaratne</b> Department of Zoology Faculty of Science University of Peradeniya	Species diversity and the potential vector status of frog-biting mosquitoes in selected localities in the wet dry zones of Sri Lanka  02 Years and 08 months	1,424,120/-
9.	RG/2017/ EB/04	<b>Dr Maheshi Danthurebandara</b> Department of Chemical & Process Engineering Faculty of Engineering University of Peradeniya	Environmental and economic assessment of rehabilitation of waste dumpsite at Biyagama Export processing zone  01 Years	995,000/-

### Working Committee on Engineering Sciences, Architecture & ICT

No	Grant No.	Grantee(s)/Institute	Project Title/Duration	Total Allocation (Rs.)
1.	RG/2015/ EA&CT/01	<b>Prof. R Shanthini</b> Department of Chemical and Process Engineering  <b>Prof. K S Walgama</b>  Department of Engineering Mathematics Faculty of Engineering University of Peradeniya	Optimization of the processing parameters used in the traditional sesame oil production unit (sekku) and in the screw - press oil expeller used in Sri Lanka [to enhance the quality and the consistency of the quality of sesame oil produced]  03 Years	4,125,704/-
2.	RG/2017/ EA&ICT/01	<b>Dr H M I Prasanna</b> <b>Dr M D E K Gunathilake</b> <b>Dr D R Welikanna</b>  Department of Survey and Geodesy Faculty of Geomatics Sabaragamuwa University of Sri Lanka	Development of a unified vertical reference framework for land & hydrographic surveying in Sri Lanka  02 Years	1,653,280/-



## Working Committee on Health Sciences

No.	Grant No.	Grantee(s)/Institute	Project Title/Duration	Total Allocation (Rs.)
1.	RG/2015/HS/01	<b>Prof. Preethi V. Udagama</b> Department of Zoology Faculty of Science  <b>Prof. Sumedha Wijeratne</b> Department of Obstetrics and Gynaecology  <b>Prof. Preethi Soysa</b> Department of Biochemistry and Molecular Biology Faculty of Medicine University of Colombo	Proliferative, differentiation and toxicological effects of selected herbal / sponge extracts tested on in house established mesenchymal and haematopoietic stem cell lines  03 Years	4,009,109/-
2.	RG/2015/HS/05	<b>Dr Sulochana Wijetunga</b> <b>Dr Rasika Kotakadeniya</b> Department of Pathology Faculty of Medicine University of Peradeniya	Applicability of multilayered epithelium and squamous islands in determining the oesophageal origin of endoscopic biopsies obtained from the gastro-oesophageal junction, in assessing gastro-oesophageal reflux induced metaplastic changes  02 Years	1,854,000/-
3.	RG/2015/HS/07	<b>Dr Charitha Lakshini Goonasekara</b> Department of Pre-Clinical Sciences Faculty of Medicine General Sir John Kotelawala Defence University	The effect of vaccination against Japanese Encephalitis virus on the severity of Dengue disease.  03 Years	3,325,500/-
4.	RG/2016/HS/01	<b>Dr Lochana C. Menikarachchi</b> Department of Pharmacy Faculty of Allied Health Sciences University of Peradeniya	Development of a software platform for fully automated chemical structure identification in metabolomics  02 Years	1,924,000/-
5.	RG/2016/HS/02	<b>Dr A P de Silva</b> <b>Dr Rashan Haniffa</b> National Intensive Care Surveillance Quality Secretariat Building Castle Street Hospital for Women Colombo - 08.	Develop, implement and assess effectiveness of a Rapid Response System (RRS) utilizing an Early Warning Score (EWS) for Moneragala District General Hospital  01 Year	3,266,000/-
6.	RG/2016/HS/03	<b>Dr A P Attanayake</b> <b>Prof. K A P W Jayatilaka</b> Department of Biochemistry  <b>Prof. L K B Mudduwa</b> Department of Pathology Faculty of Medicine University of Ruhuna	Protective effects of selected medicinal plant extracts in rats with chemically induced nephropathy  02 ½ Years	1,545,000/-
7.	RG/2016/HS/04	<b>Dr Nilupa R. Amarasinghe</b> Department of Pharmacy Faculty of Allied Health Sciences University of Peradeniya	Investigation of acetylcholine esterase inhibitory activity of Sri Lankan grown spices as potential therapeutic agents for Alzheimer's disease  03 Years	2,475,000/-

8.	RG/2016/HS/05	<b>Prof. Neelika Malavige</b> Department of Microbiology Faculty of Medical Sciences University of Sri Jayawardenepura  <b>Dr Ananda Wijewickrama</b> Infectious Disease Hospital Angoda	Determining the functionality and phenotype of T cell responses that associate with protection in acute dengue infection     02 Years	6,305,000/-
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### Working Committee on Indigenous Knowledge

No	Grant No.	Grantee(s)/Institute	Project Title/Duration	Total Allocation (Rs.)
01.	RG/2017/IK/01	<b>Prof. Raj Somadeva</b> Postgraduate Institute of Archaeology Colombo 07  <b>Dr T R Prematilleke</b> Postgraduate Institute of Archaeology  <b>Dr Gamini Piyadasa</b> Sri Lanka Institute of Nanotechnology (SLINTEC) Nanotechnology & Science Park Homagama	Human adaptations in the Middle Holocene in Sri Lanka and further techno-cultural development towards formative historical period   03 Years	3,770,172/-

### Working Committee on Oceanography and Marine Resources

No	Grant No.	Grantee(s)/Institute	Project Title/Duration	Total Allocation (Rs.)
01.	RG/2016/OMR/01	<b>Dr M D S T de Croos</b> Department of Aquaculture & Fisheries Wayamba University of Sri Lanka	Taxonomical Identification and Present status of Jellyfish resource in the coastal waters of Sri Lanka   03 Years	3,053,168/-

### Technology Grants Completed

No	Grant No/Category	Grantee	Project Title /Duration
1	TG/2016/ Tech-D/06  Private Sector	<b>Mr Sunil Rodrigo</b> Lilli Cheese (Pvt) Ltd	Formulation of whey- protein rich energy beverage Technology   18 months (one-Years extension)
2	TG/2017/ Tech-D/02  State Sector	<b>Dr Udayanga Galappaththi</b> University of Ruhuna	Vacuum Assisted Resin Transfer Moulding (VARTM) process for Sri Lanka Boat Industry   18 months

## Research Equipment Grants – Approved and to be Awarded 2020

No	Grantee / Institute	Equipment	Approved Amount (Rs.)
1.	<b>Prof. Rohana Chandrajith</b> Department of Geology University of Peradeniya	Ultra-pure Water Purification System	<b>1,554,662/-</b>
2.	<b>Prof. Rohana Chandrajith</b> Department of Geology University of Peradeniya	pH/conductivity/TDS/Salinity meter	<b>542,700/-</b>

## Support Scheme for Supervision of Research Degrees (SUSRED) (to be Awarded) 2020

No	Names and affiliations of Supervisory Team	Title of the thesis	Student & awarding University
- PhD -			
1	<b>Prof. Menaka Hapugoda</b> Molecular Medicine Unit Faculty of Medicine University of Kelaniya  <b>Prof. W Abeyewickreme</b> Department of Para Clinical Sciences Faculty of Medicine General Sir John Kotelawala Defence University	Study on effect of quality of water in <i>Anopheles</i> mosquito breeding habitats and control of <i>Anopheles</i> mosquitoes using larvivorous fish and carnivorous copepods	<b>Dr R M T B Ranathunge</b> University of Kelaniya
2	<b>Prof. Lohini Vijayendran Athiththan</b> Department of Biochemistry Faculty of Medical Sciences University of Sri Jayewardenepura,  <b>Dr Sunil Perera</b> The Central Hospitals Colombo  <b>Prof. Hemantha Peiris</b> Department of Biochemistry Faculty of Medical Sciences University of Sri Jayewardenepura	Factors associated with herniation of the lumbar intervertebral discs in patients undergoing lumbar discectomy in a selected neurosurgical unit in Sri Lanka	<b>Dr N D Withanage</b> University of Sri Jayewardenepura
3	<b>Prof. Rangika U Halwathura</b> Department of Civil Engineering Faculty of Engineering University of Moratuwa	The effectiveness of alternative stabilizer for mud concrete technology	<b>Dr Chameera Dussantha Udawattha</b> University of Moratuwa
4	<b>Prof. R K Sriyani Dias</b> Department of Zoology and Environmental Management Faculty of Science University of Kelaniya	Dynamics of nest attributes and worker occurrence in <i>Aneuretus simoni</i> Emery associated ant community in a selected region of two forest reserves in the wet zone, Sri Lanka	<b>Dr W S Udayakantha</b> University of Kelaniya
5	<b>Prof. Pathmalal M Manage</b> <b>Prof. S M D A U De Alwis</b> <b>Prof. B G D N K De Silva</b> Department of Zoology Faculty of Applied Sciences University of Sri Jayewardenepura	Screening of selected antibiotics contaminations and characterization of antibiotic resistant bacteria in water and sediments	<b>Dr Gayani Y Liyanage</b> University of Sri Jayewardenepura
6	<b>Prof. K K D S Ranaweera</b> Department of Food Science and Technology Faculty of Applied Sciences University of Sri Jayewardenepura	Identification and characterization of antioxidant and anti-inflammatory properties of under-utilized green leafy vegetables grown in Sri Lanka	<b>Dr K D P P Gunathilake</b> University of Sri Jayewardenepura
7	<b>Prof. M Y Udugala-Ganehenegge</b> Department of Chemistry Faculty of Science  <b>Dr C S Kalpage</b> Department of Chemical and Process Engineering Faculty of Engineering University of Peradeniya	Utilization of environmental pollutants and biomass for the production of biofuels and industrial chemicals using heterogeneous catalysts	<b>Dr T M M Marso</b> University of Peradeniya

8	<b>Prof. C A N Fernando</b> <b>Dr S N T De Silva</b> Department of Nano Science Technology Faculty of Technology Wayamba University of Sri Lanka	Fabrication of n-Cu <sub>2</sub> O quantum dots (QDS) sensitized solar cells and enhancement of their photo-characteristic properties through deposition of CAC and p-Ag <sub>2</sub> O thin films	<b>Dr P G D C K Karunarathna</b> Wayamba University of Sri Lanka
9	<b>Prof. C A N Fernando</b> Department of Nano Science Technology Faculty of Technology Wayamba University of Sri Lanka	Investigation of photo-effects and their implications on solar energy conversion devices fabricated from low cost nano-materials	<b>Dr S P A U K Samarakoon</b> Wayamba University of Sri Lanka
10	<b>Prof. L B D R P Wijesundera</b> <b>Prof. W P Siripala</b> Department of Physics and Electronics Faculty of Science University of Kelaniya	Interfacial properties of electrodeposited Cu <sub>2</sub> O junctions and development of efficient homojunction solar cells	<b>Dr F S B Kafi</b> University of Kelaniya
11	<b>Prof. Y K Weerakoon Banda</b> Department of Finance Faculty of Management Studies and Commerce University of Sri Jayewardenepura  <b>Prof. A A Azeez</b> Department of Finance Faculty of Management and Finance University of Colombo	Determinants of dividend policy and its effect on stock price volatility evidence from Sri Lanka	<b>Dr D N Jayantha</b> University of Colombo
12	<b>Prof. P V Udagama</b> Department of Zoology and Environment Sciences Faculty of Science University of Colombo  <b>Prof. W D Ratnasooriya</b> Department of Basic Sciences Faculty of Allied Health Sciences General Sir John Kotalawala Defence University  <b>Dr G A S Premakumara</b> Department of Basic Science and Social Science Faculty of Nursing University of Sri Jayewardenepura	Haematological, immunomodulatory and cancer chemopreventive activities of the mature leaf concentrate of <i>Carica papaya L</i> Sri Lankan wild type cultivar	<b>Dr Chanika D Jayasinghe</b> University of Colombo
13	<b>Prof. R A R C Gopura</b> <b>Dr Y W R Amarasinghe</b> Department of Mechanical Engineering Faculty of Engineering University of Moratuwa	Development of a vision aided reach-to-grasp path planning and controlling method for trans-humeral robotic prostheses	<b>Dr D G Kanishka Madusanka</b> University of Moratuwa
14	<b>Dr A G B P Jayasekara</b> Department of Electrical Engineering Faculty of Engineering University of Moratuwa	Enhancing interpretation of uncertain information in navigational commands for service robots using neuro-fuzzy approach	<b>Dr M A V J Muthugala</b> University of Moratuwa

No	Names and affiliations of Supervisory Team	Title of the thesis	Student & awarding University
<b>-MPhil -</b>			
1	<b>Prof. S B Navaratne</b> Department of Food Science and Technology Faculty of Applied Sciences University of Sri Jayewardenepura  <b>Prof. C M Navaratne</b> <b>Dr B M Jinendra Sirivijaya</b> Department of Agricultural Engineering Faculty of Agriculture University of Ruhuna	Assessment of post-harvest losses of paddy stored under different temperatures in compliance with global warming and possible adaptation techniques	<b>Ms M G G Awanthi</b> University of Sri Jayewardenepura
2	<b>Dr R N Attanayake</b> Department of Botany  <b>Dr C S K Rajapakse</b> Department of Chemistry Faculty of Science University of Kelaniya  <b>Mr K P Somachandra</b> Deputy Director Regional Agricultural Research & Development Centre Banadarawela	Population diversity and carbon source dependent anaerobic soil disinfestation (ASD) of Sclerotinia sclerotiorum on cabbage	<b>Ms Thirega Mahalingam</b> University of Kelaniya
3	<b>Dr D Romaine Jayewardene</b> <b>Dr Jayampathy K Ratnayake</b> Department of Mathematics Faculty of Science University of Colombo	On the initial algebras and final coalgebras of endofunctors arising from self-similar systems on the category of k-pointed metric spaces	<b>Mr M Annanthakrishna</b> University of Colombo
4	<b>Dr K M Thilini Dhakshina</b> Gunasekara Department of Polymer Science  <b>Dr Asitha T Cooray</b> Department of Chemistry Faculty of Applied Sciences University of Sri Jayewardenepura  <b>Dr Dilru Ratnaweera</b> Head of Discovery Labs MAS Innovation Pvt. Ltd. Colombo 02	Polyacrylic acid-acrylamide based water purification systems for the removal of selected anions and cations from aqueous media	<b>Ms S K T Thathsara</b> University of Sri Jayewardenepura
5	<b>Prof. Rupika Rajakaruna</b> Department of Zoology Faculty of Science University of Peradeniya	Trematode infections in common hourglass tree frog (Polypedates cruciger): multiple parasitism and age dependent resistance and tolerance	<b>Ms Nuwandi U K Pathirana</b> University of Peradeniya



## SRPC 2019 - Winners

No	Name	School	Project Title
1.	G R Kavindu Gamlath Vishwa Chathumina De Silva Pamudu N. Wickramarathne	Bandaranayake College Gampaha	A study of the reasons for the drop in student attendance in the science stream during the A/L studies
2.	D A Sachindu Nethmina D M Thisari Dissanayake K W Tharuki Ishara	Dutugemunu Central College Buttala	What to do with electronic waste after use
3.	Kavindu Kusal Abeywardhana	Harishchandra National School Negombo	Chemical composition analysis of a tea prepared by dried leaf powers of Vernonia cinerea and observation of its cholesterol reduction properties using Wistar rats animal model
4.	Yenuli Fernando	Colombo International School Colombo 07	Measurement of markers of oxidative stress in children with Asthma
5.	G Ahinsa Tharushi Kumari M Romesh Gayantha M A Asitha Dilshan Aberathna	Moradana Maha Vidyalaya Kegalle	How to reduce landslides and protect humans in high mountain areas
6.	Risindi Peiris Apeksha Deekiriwewa	Musaeus College Colombo 7	Knowledge, attitude and practices regarding refractive errors among parents of selected preschools in the Colombo district
7.	M H M S N Herath	Nalanda College Colombo 10	An efficient method of removing heavy metals from polluted soil while preserving the environment
8.	N Krunthikaran V Chithdassan G Abeelaashanan	Paddirippu M.M. Vidyalaya Kaluwanchikudy	Evaluation of antioxidant property of banana leaf -medicated green synthesis of iron oxide nanoparticles
9.	V Arthikeshan V Rusitha L Kishopika	Sally Ambal Maha Vidyalaya Trincomalee	A control study of evaluate for Sooriya Namaskar and Pranayama for slow learners
10.	P S Yashoda H M Kavindi Vidusari T L Sherangi Imesha Silva	Viharamahadevi Balika Vidyalaya Kiribathgoda	Investigating whether the corona effect can be used to generate electricity for streetlamp

No.	Scholar and Institution	Supervisors	Title and Duration
1.	<b>Ms Majuran Shajini</b> Faculty of Graduate Studies University of Jaffna	<b>Dr A Ramanan</b> Department of Computer Science University of Jaffna	A semi-supervised Deep learning approach based on attentive visual features for fashion clothing category clarification  03 Years
2.	<b>Ms Eeriyawala Hewage Chinthani Malsha</b> Postgraduate Institute of Science (PGIS) University of Peradeniya	<b>Dr H A C K Ariyaratna</b> <b>Dr A M T A Gunaratne</b> Department of Botany Faculty of Science University of Peradeniya  <b>Dr A M A S Attanayake</b> Royal Botanical Gardens Peradeniya	Strategic recovery plan for <i>Osbeckia lanata</i> (Endemic, EN) wild populations in Sri Lanka  02 Years
3.	<b>Ms G Regina Amanda Fonseka</b> Department of Microbiology Faculty of Medicine University of Peradeniya	<b>Dr Chandika D. Gamage</b> Department of Microbiology Faculty of Medicine University of Peradeniya  <b>Dr Nishantha Nanayakkara</b> Kidney Transplantation and Nephrology Unit Kandy Teaching Hospital	Exposure to pathogenic leptospires in a selected cohort of chronic kidney disease with uncertain etiology (CKDu) patients and non-CKDu individuals in selected CKDu affected areas of Sri Lanka  02 Years
4.	<b>Mr M Nalin Chandana Samarawickrama</b> University of Moratuwa	<b>Prof. U G A Puswewala</b> Department of Civil Engineering Faculty of Engineering University of Moratuwa  <b>Prof. H S Thilaksiri</b> Faculty of Engineering Sri Lanka Institute of Information Technology (SLIIT) Malabe  <b>Dr L A Udamulla</b> Department of Civil Engineering The Open University of Sri Lanka	Rock Socket Skin Friction behavior of Cast-in-situ Bored (CIB) piles in Hard Crystalline Rocks - Emphasis on Sri Lankan Metamorphic Rocks  03 Years
5.	<b>Mr R A Mihiran Abayasiri</b> Department of Electrical Engineering University of Moratuwa	<b>Dr A G B P Jayasekara</b> Department of Electrical Engineering University of Moratuwa  <b>Prof. R A R C Gopura</b> Department of Mechanical Engineering University of Moratuwa  <b>Prof. Kazuo Kiguchi</b> Department of Mechanical Engineering Kyushu, Japan	Incorporating Biological signals for understanding user intentions for intelligent wheelchair  02 Years

6.	<b>Ms Niroscha Priyadarshani Edirisinghe</b> University of Sri Jayewardenepura	<b>Prof. C S E Goonewardena</b> Department of Community Medicine Faculty of Medical Sciences University of Sri Jayewardenepura  <b>Dr P T R Makuloluwa</b> University Hospital General Sir John Kotelawala Defence University  <b>Dr A A T D Amarasekara</b> Department of Nursing and Midwifery Faculty of Allied Health Sciences University of Sri Jayewardenepura  <b>Dr Suraj N. Perera</b> National Cancer Control Programme Colombo 05	Holistic assessment of cancer pain: Development and validation of a follow up pain assessment diary among patients with cancer pain  02 Years
7.	<b>Ms Fathima Asma Rahman</b> Department of Surgery Faculty of Medicine University of Colombo	<b>Prof. Ishan De Zoysa</b> <b>Prof. Suranjith Seneviratne</b> Department of Surgery Faculty of Medicine University of Colombo  <b>Dr Roshan Niloofa</b> Department of Zoology and Environment Sciences Faculty of Science University of Colombo  <b>Dr Chamindri Witharana</b> Department of Biochemistry Faculty of Medicine University of Colombo	Identifying colorectal cancer specific autoantibodies and their role in diagnosis, prognosis and prediction of colorectal cancer in Sri Lanka  03 Years

No	Grant no. & Duration	Scholar and Institution	Supervisor/s	Title	Postgraduate Degree obtained
01.	NSF/SCH/2018/01 2 Years	Ms Sathees Sasrubi Department of Biochemistry Faculty of Medicine University of Jaffna	Prof. V Arasaratnam Dr M G Sathiadas	Growth, neurodevelopment and behavioral outcome of pre-term babies born at a tertiary care center, Jaffna	MPhil
02.	NSF/SCH/2018/03 2 Years	Mr H M I Chandralal Herath Industrial Technology Institute Colombo 07	Dr T D C M K Wijayasiriwardene Dr G A S Premakumara	Pharmacognostical investigation of <i>Curcuma albifloara</i> Thw. (Harankaha)	PhD
03.	NSF/SCH/2018/05 2 Years	Dr Sivarangini Sivagnanam Department of Biochemistry Faculty of Medicine University of Jaffna	Prof. Vasanthy Arasaratnam Prof. Mangala Gunatilake	<i>In vitro</i> lithontriptic effect of selected basin drugs on urinary calculi occurring in various locations of urinary system with and without different Anupaanam and the predisposing factors	MPhil
04.	NSF/SCH/2018/09 1 Year	Ms M M K Peiris Department of Microbiology Faculty of Medical Sciences University of Sri Jayewardenepura	Prof. S S N Fernando Dr T D C P Gunasekara Prof. P M Jayaweera	Biological synthesis, characterization and assessment of antimicrobial properties of silver and titanium dioxide nanoparticles	PhD
05.	NSF/SCH/2015/01 3 ½ y Years	Ms R W P Madhushika Rajapaksha Wayamba University of Sri Lanka	Prof. D P S T G Attanayake	Molecular detection of quarantine important microbial pathogens in imported seed potato	PhD
06.	NSF/SCH/2016/05 2 Years	Ms D M C M Kumari Dassanayake Department of Food Science & Technology Faculty of Livestock, Fisheries and Nutrition Wayamba University of Sri Lanka	Prof. C V L Jayasinghe Dr M A Wijewardana	Energy efficiency and renewable energy potential in the fruits and vegetable value chain in Sri Lanka	MPhil
07.	NSF/SCH/2018/07 1 Year	Ms K A A Dilhari Department of Microbiology Faculty of Medical Sciences University of Sri Jayawardenapura	Dr Manjula M. Weerasekera Dr T D C P Gunasekara Prof. S S N Fernando	Molecular Profiling, Biofilm Architecture and Investigation of Microbiota Associate in Diabetes Chronic Wound Infection	MPhil
08.	NSF/SCH/2017/10 2 Years	Ms M Dhanusha Nirmani Department of Zoology and Environment Sciences Faculty of Science University of Colombo	Dr Gayani Galhena	Dengue infection rates in vector mosquitoes <i>Aedes aegypti</i> and <i>Aedes albopictus</i> and their role in current dengue outbreaks in Sri Lanka	PhD

09.	<b>NSF/ SCH/2018/06</b>  2 Years	<b>Ms H M K Madhushani Premaratne</b> Department of Geology University of Peradeniya	<b>Dr R L R Chandrajith Prof. N P Ratnayake</b>	Millennial and sub-millennial- scale variability of northeast monsoon and its impact on terrestrial ecosystems in Sri Lanka	MPhil
10.	<b>NSF/ SCH/2019/03</b>  1 Year	<b>Ms M S K Rabindrakumar</b> Department of Biochemistry and Molecular Biology Faculty of Medicine University of Colombo	<b>Dr Tharanga Thoradeniya Prof. Pujitha Wickramasinghe Prof. Veranja Karunaratne</b>	Iron, Vitamin A and folate status and the distribution and effects of un-metabolized folic acid among pregnant women and their offspring in an urban area of Sri Lanka	PhD

### Postgraduate Research Fellowship ongoing - 2020

No	Fellowship No.	Fellow/Institute	Project Title/Duration	Total Allocation (Rs.)
1.	NSF/PDRS/2018/01	<b>Dr Chamindra Lakmali Vithana</b> Postgraduate Institute of Science University of peradeniya	Characterization and hazard assessment of acid sulfate soil (ASS) materials in Muthurajawela wetland in Sri Lanka - A preliminary study  2 Years	<b>999,410/-</b>



Individual Training programmes 2020				
1	287	Mr B S Cooray	Book Binding & Finishing	SL Inst. Of Printing
2	442	Mr S C S Fernando	NVQ 05	Technical College Kalutara
5	332	Mr K G J Karunasena	Patent serch skills & training workshop	17-20 Feb COSTI
6	517	Ms R N N Gamage	Patent serch skills & training workshop	17-20 Feb COSTI
Webinars 2020				
1	400	Ms Thilina Kandanamulla	Webinar on 'Science Diplomacy and Pandemics: A Call for Greater International Cooperation' by the Barcelona SciTech DiploHub	26.03.2020
2	400	Ms Thilina Kandanamulla	Webinar by the Sri Lanka Telecom Ltd. on 'Sailing through rough seas: reviving the work /business during the CoVID 19 pandemic'	24.04.2020
3	400	Ms Thilina Kandanamulla	APACPH International Webinar on 'COVID 19 in collaboration with the Sri Lanka Medical Association'	30.04.2020
4	400	Ms Thilina Kandanamulla	World Energy Council webinar on 'Addressing energy trilemma through national energy policy' by the Sustainable Energy Authority	06.05.2020
5	400	Ms Thilina Kandanamulla	UNESCO NDL Webinar on 'Futures of Education and Knowledge Economy with emphasis on Sri Lanka and the South Asian Region'	20.05.2020
6	400	Ms Thilina Kandanamulla	Webinar on 'The Researcher Journey Through a Gender Lens' by Elsevier Ltd.	27.05.2020
7	513	Mr Manuja Karunaratne	UNESCO NDL Webinar on 'Futures of Education and Knowledge Economy with emphasis on Sri Lanka and the South Asian Region'	20.05.2020
8	399	Ms Maduka Senaratne	Course on "GIS as an Effective Decision Supporting Tool" for Gov Officers	09.06.2020
9	344	Ms.Nadeeja Wickramarachchi	IP Management DL 450	
10	213	Dr C G Yapa	Journal Indexing and Journal Hosting	28.04.2020
11	391	Ms U T Karunaratne	Journal Indexing and Journal Hosting	28.04.2020
12	457	M. S C Samarasekara	Journal Indexing and Journal Hosting	28.04.2020
13	367	Ms Upuli Ratnayake	Journal Indexing and Journal Hosting	28.04.2020
14	513	Mr Manuja Karunaratne	Journal Indexing and Journal Hosting	28.04.2020
15	213	Dr C G Yapa	Journal Citation Reports (JCR) Training & Certification Program 2020	12.05.2020 and 15.05.2020
16	513	Mr Manuja Karunaratne	Journal Citation Reports (JCR) Training & Certification Program 2020	12.05.2020 and 15.05.2020
17	391	Ms U T Karunaratne	Journal Citation Reports (JCR) Training & Certification Program 2020	12.05.2020 and 15.05.2020
18	457	Ms S C Samarasekara	Journal Citation Reports (JCR) Training & Certification Program 2020	12.05.2020 and 15.05.2020

19	277	Mr I W S Sujeewa	Productivity Certificate Course	26,27 Nov and 3,4,10,11 Dec 2020
20	520	Ms N L Muhandiram	Productivity Certificate Course	26,27 Nov and 3,4,10,11 Dec 2020
21	521	Ms K N Samanthi	Productivity Certificate Course	26,27 Nov and 3,4,10,11 Dec 2020
22	370	Mr.S N P K Sapumohotti	Public Procurement and Contract administration (DIPPCA)	One year
23	389	Dr. L M N S Nadugala	SLAAS Theme seminar “ Science for quality life”	14.12.2020
24	391	Ms U T Karunaratne	SLAAS Theme seminar “ Science for quality life”	14.12.2020
25	399	Ms M D Senaratne	SLAAS Theme seminar “ Science for quality life”	14.12.2020
26	395	Ms R A A R Ranatunge	SLAAS Theme seminar “ Science for quality life”	14.12.2020
27	457	Ms S C Samarasekara	SLAAS Theme seminar “ Science for quality life”	14.12.2020
28	519	Ms M S Weerasooriyagedara	Workshop on Hydrologic, Hydraulic and Groundwater modeling	16,18,21,23 Dec 2020
<b>Common Trainings 2020</b>				
1	Filing Systems for 86 members			



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