2022

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ஆண்டறிக்கை
Annual Report

ජාතික විද්‍යා පදනම
தேசிய விஞ்ஞான மன்றம்
National Science Foundation

NSF; a Centre of Excellence in Science and Technology

Keeping with its mandate and aligning with the National Policies and the Sustainable Development Goals (SDGs), the NSF progressed in 2022 with encouragement and guidance of the Chairman, Director General and the Board of Management.

As a competent and capable Institute, with a Team leading the way in exploring and adopting new technological tools, techniques, and practices, NSF is dedicated to promote Science, Technology and Innovation for the economic and social prosperity of Sri Lanka. The NSF Team operates across many areas, with a focus on providing thought leadership and direction, by establishing and promoting best practices on research and development to provide appropriate recommendations and supporting science education in specific focus areas considered critical. For the success of the overall organization, the NSF is supported through a popular management philosophy "knowledge-creating" company, of which the sole business is continuous innovation.

The staff was committed in delivering productive output. This year's Annual Report captures the work completed as set out in the Action Plan for the year and achievements and success stories through the year.

All relevant information that would enable interested parties to form a judgment on the performance, future prospects and constraints of the institute is contained in this report with 34 graphical presentations, 14 tables, 106 pictures and 06 annexes.

The entire Annual Report contains 190 pages together with the Audit Report and the NSF feedback on the Audit Report. The report is prepared following the guidelines for preparation of Annual Reports published by the Department of Public Enterprises in 2022.

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Oraganizational Overview

About

The National Science Foundation functions under the purview of the Ministry of Education. The organization was initially established as the National Science Council (NSC) in 1968 (Act No. 09 of 1968). NSC was reorganized as the Natural Resources, Energy and Science Authority (NARESA) in 1982 (Act No. 78 of 1981). After 16 years of service, NARESA was renamed as the National Science Foundation (NSF) in 1998 by Act No. 11 of 1994.

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) of strengthening scientific research potential, including research in the social sciences, and science education programmes;

  (ii) of developing natural resources of Sri Lanka;

  (iii) of promoting the welfare of people of Sri Lanka; and

  (iv) of 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 information for policy formulation on science, technology and other fields;

(e) to popularize science amongst the people by funding programmes for that purpose.

Vision

Be the nation's premier driving force in promoting Science, Technology and Innovation for economic and social prosperity of Sri Lanka

Mission

Promote Science, Technology and Innovation for economic and social prosperity of Sri Lanka by:

- Initiating, facilitating and supporting research, development, innovation and technology transfer;
- Enabling and funding for knowledge creation, dissemination, capacity building, partnerships, popularizing science and promoting STEM education; and
- Conducting policy research and supporting policy development;

Goal

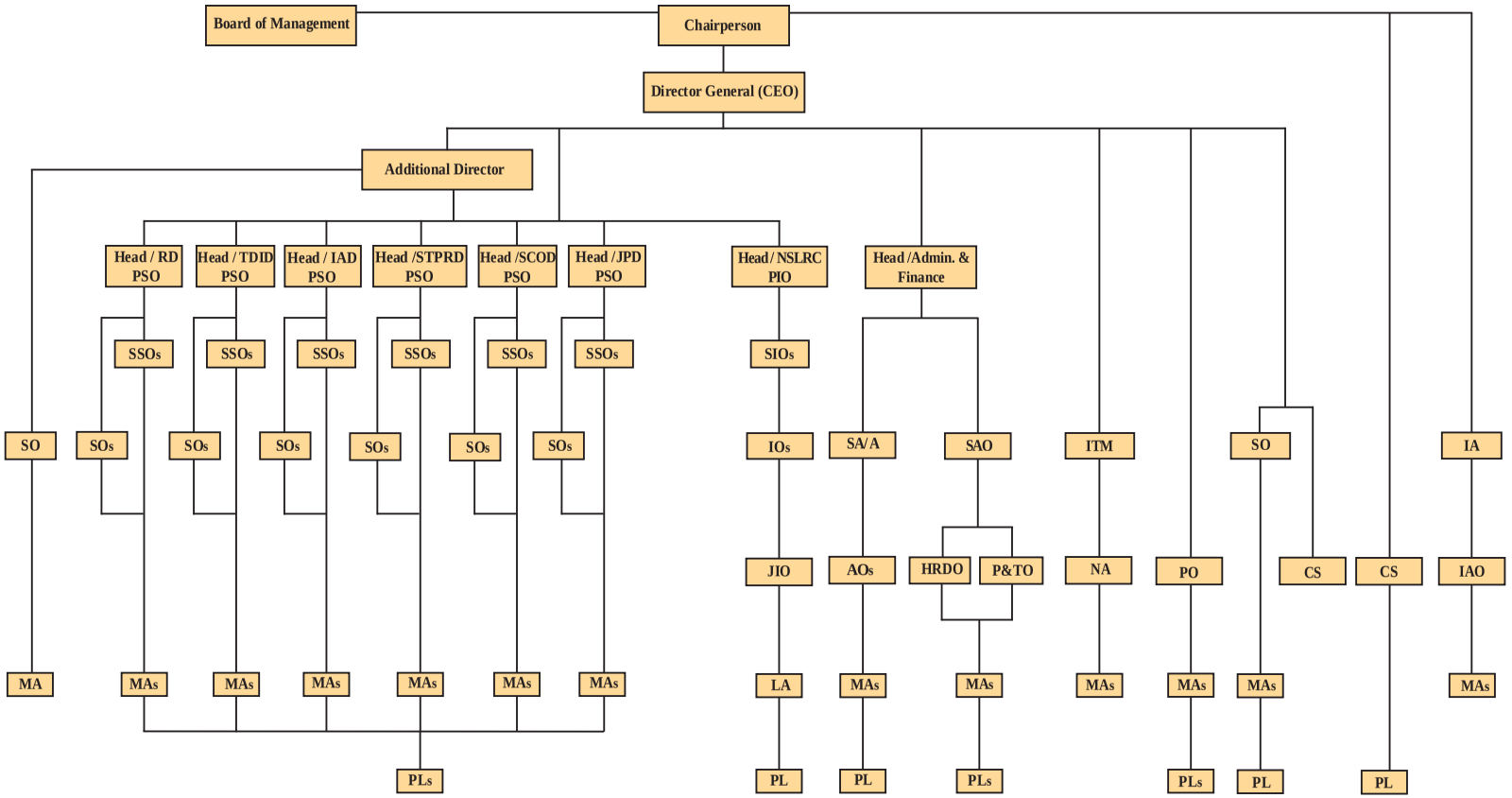
To contribute actively and effectively to the rapid development of the nation by implementing programmes under priorities of the National Policy Framework (NPF).

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.

Governance Framework

Organizational Structure



AO - Accounting Officers
CS - Confidential Secretary
HRDO - Human Resource Development Officer
IA - Internal Auditor
IAO - Internal Audit Officer
IAD - International Affairs Division
IO - Information Officer
ITM - IT Manager

JIO - Junior Information Officer
JPD - Journal Publication Division
LA - Library Assistant
MA - Management Assistant
NA - Network Administrator
NSLRC - National Science Library and Resource Centre
P & TO - Procurement and Transport Officer
PIO - Principal Information Officer

PL - Primary Level
PM - Printing Manager
PO - Printing Officer
PSO - Principal Scientific Officer
RD - Research Division
SA/ A - Senior Accountant / Accountant
SAO - Senior Admin. Officer
SIO - Senior Information Officer

SO - Scientific Officer
SCOD - Science Communication and Outreach Division
SSO - Senior Scientific Officer
STPRD - Science and Technology Policy Research Division
TDID - Technology Development and Innovation Division
* - Personal to the holder

*Approval of the Board of Management was granted to this organizational structure on 31.10.2019. It does not include the Media & Event Management (MEM) Division which was established in April 2022. Cadre positions for this division are yet to be approved.

Brief Profile of 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 Education.

Emeritus Prof. Ranjith Senaratne
Chairman

Dr Sepalika Sudasinghe
CEO/Director General
(w.e.f. 11th March 2022)

Prof. M. M. Pathmalal
Dean
Faculty of Graculate Studies
University of Sri Jayewardenepura

Prof. N. N. J. Nawarathne
Professor
Department of Human Resources Management
Faculty of Management & Finance
University of Colombo

Prof. Lakshman Wedikkarage
Professor
Department of Social Science Education
Faculty of Education
University of Colombo

Prof. Ananda Jayawardane
Professor
Department of Civil Engineering
University of Moratuwa

Prof. Manuj C. Weerasinghe
Consultant Community Physician
Professor & Head of the Department
Department of Community Medicine
Faculty of Medicine
University of Colombo
(w.e.f. 04th April 2022 to 17th January 2023)

Dr Sunil Jayantha Nawaratne
Director General
National Institute of Education

Eng. (Dr) Kamal Laksiri
President
Institute of Engineers Sri Lanka
(w.e.f. 09th May 2022)

Ms A. Y. Harshani Anuruddha
Deputy Director (Health)
Department of National Planning
Ministry of Finance
(w.e.f. 09th May 2022 to 28th February 2023)

Staff Strength

The NSF performed in 2022 with 106 staff memebers despite staff shortage from its proposed cadre of 144. A comparison of the staff occupation in different employee categories in year 2021 and 2022 is given in *Table 01.*

Table 01: Staff occupation categorywise in 2021 and 2022.

Category	Year					
	As of 31.12.2021			As of 31.12.2022		
	Approved	Existing	Vacant	Approved	Existing	Vacant
HM	10	8	2	10	9	1
AR 2	6	5	1	6	5	1
AR 1	26	19	7	26	16	10
MM	11	9	2	11	9	2
JM	10	4	6	10	4	6
MA	56	47	9	56	46	10
PL	25	18	7	25	17	8
Total	**144**	**110**	**34**	**144**	**106**	**38**

The details of Principal Staff of NSF as of 31st December 2022 are given in *Annex 01.*

NSF consists of both Scientific and non-Scientific Sectors. Support from the Administrative, Finance, IT, Printing, Internal Audit and Procurement sector staff play a major role in smooth functioning of the activities of the Institute. *Figure 01* shows existing and vacant % against the approved Staff in differnt categories in 2022.

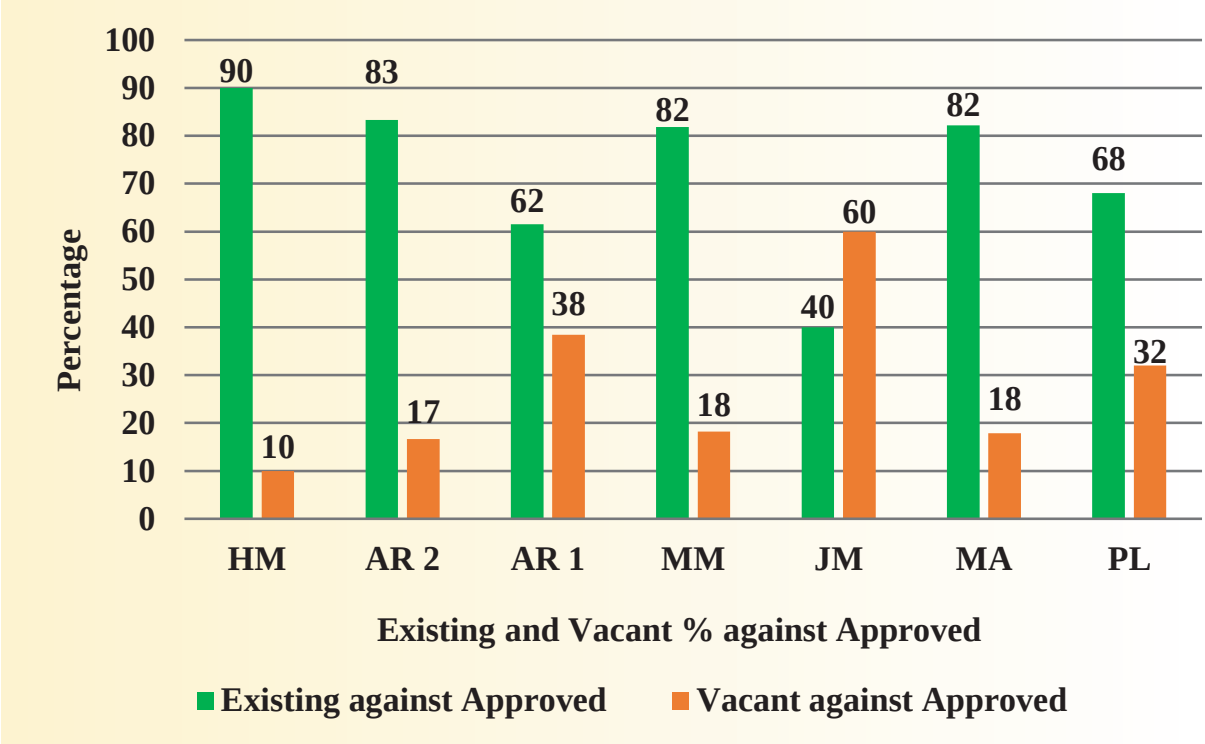


Figure 01: Existing and vacant % against the approved Staff in differnt categories in 2022

NSF External Resource Pool

To help in the process of carrying out NSF's mandate and to support the regular NSF activities, the following Committees, Editorial Boards and Working Groups were established and/or continued in year 2022.

The Research Arm and the Technology Development & Innovation Arm (TDIA) were established in year 2021, due to the urgent need to re-orientate the scientific research initiatives promoted by the institute, and were continued in year 2022. This initiative enabled the identification of national priority R&D needs to bridge the gaps that existed in industries and product development frameworks. The ultimate objective was to ensure economic return of investments made through awarding of grants. The best available scientific resources in the country were harnessed and directed towards the implementation of national policies.

1. Editorial Board of the JNSF (Journal of the National Science Foundation)
2. Editorial Board of SLJSS (Sri Lanka Journal of Social Science)
3. Working Committee on Science & Technology Policy
4. Working Committee on Science Popularization
5. Working Group on Quality Control and Quality Assurance of Herbal Products Entering the Market
6. Working Group on Food Safety and Potential Health Risks from Food
7. Working Group on Quality Assurance (QA)
8. Working Group on National Innovation Ecosystem Development with the Stakeholders
9. Working Group on Compiling an Instrument Database
10. Working Group on Collaboration with University Business Link Cells
11. Working Group on Industry Sector Development
12. National Committee on Man and Biosphere
13. Technical Evaluation Panel of the Research Division
14. NSF Working Committee on Media

Chairman's Review

It is with great pleasure that I send this message to the Annual Report of 2022 of the National Science Foundation, the premier national institution mandated to promote science, technology and innovation for socio-economic development of the country.

Our country is currently facing unprecedented economic, social and environmental challenges and issues and the general public is increasingly turning to and looking to scientists, technologists and professionals to turn around the current situation and usher in a better and secure tomorrow. Therefore, the obligation of scientific institutions such as NSF to the community and the nation is much greater now than ever before.

The challenges such as climate change, pandemics, food insecurity, poverty alleviation and natural hazards are complex, multi-faceted and multi-dimensional; they demand a transdisciplinary and transnational approach where cooperation, regardless of territorial boundaries, between specialists with diverse backgrounds in both the natural and social sciences is essential. Besides, there is growing recognition that new approaches and different types of expertise are needed to renew science. Therefore, the NSF is promoting interdisciplinary and transdisciplinary studies to address the real-life issues more effectively.

In order to respond effectively to the high-priority needs, the NSF has embarked upon several novel initiatives. Establishment of a National Instrument Database to rationalize the use of high-end analytical, testing and research instruments available in academia, R&D institutions and industry, conduct of a programme for improved food and nutrition security together with the Presidential Secretariat and promotion of STEAM education and green hydrogen as a source of renewable energy merit special mention.

The NSF, in keeping with its mandate and national needs, will sustain its unremitting efforts to advance the cause of S&T for the common good and national development.

Prof. Ranjith Senaratne
Chairman

Director General's Report

The year 2022 was fruitful with many regular and new programmes performed under the five mandated tasks, empowered by the Science & Technology Development Act No. 11 of 1994. The NSF with a clear vision and focus has carried forward its mission aligning with the SDGs and NPF priorities. The review contains a summary, highlighting the progress against the action plan with main achievements, followed by a detailed account on the work performed. It was our aim to achieve and deliver the outstanding outputs and outcomes, by means of the Key Performance Indicators (KPIs) identified in the Action Plan.

Our future direction would be towards increasing the performance of NSF by facilitating research (more in applied sciences and targeting commercialization), capacity building through strengthened collaborative activities and popularizing the outputs amongst key stakeholders and people in the country through improved methodologies and processes. Continuous review of existing schemes and programmes, will be performed as in previous years, for adaptation and smooth functioning of activities.

I express my sincere appreciation to the Chairman and the Board of Management of the NSF for their guidance provided throughout in carrying out the many activities and the NSF Team, which is the greatest strength of the institution, for their dedication and commitment in attending to their assigned work diligently, to the best of their ability amidst constrained resources.

Dr Sepalika Sudasinghe
CEO/Director General

Action Plan 2022 with KPIs

Priority Area	Objectives of the Ministry	Relevancy to SDG goal & Target	Programme	Research Activities	Allocation (Rs. Mn.)	Target: Financial (Rs.Mn) Q1	Q2	Q3	Q4	Target: Cumulative Physical Target Q1	Q2	Q3	Q4	KPI	Expected Output	Expected Outcome	Responsible Officer: Name	Contact No:
1.Establishing Sri Lanka as an Innovation Hub by maximizing the use of Internet of Things, Artificial Intelligence, Biotechnology, Robotics, Augmented Reality, Cloud Computing, Nanotechnology and 3D Printing 2.Making efficient the system to issue patents to researches for their innovations and to secure ownership to their research designs 3.Providing facilities to local research institutions to collaborate with the international research institutions 4.Providing tax reliefs to private enterprises contributing to research 5.Introducing domestic or foreign investors required for manufacturing under a domestic brand with innovation products 6.Formulating an efficient mechanism to channel innovations and research results to investors and relevant users	1.Establishing and networking dynamic organizational structures to assist in the process of vesting the public with science, technology and research-based knowledge. 2.Directing institutions to impart scientific principles and technological concepts essential for the efficacy and efficiency of products to benefit the society. 3.Strengthening the human resources base and organizational structure for the promotion of research, inventions and innovations. 4.Identifying the concept-based applications of researchers and inventors, encouraging competencies leading to their practical application. 5.Facilitating and increasing opportunities for the commercialization of innovations. 6.Facilitating the increase of local and foreign investments being made in the research and development field. 7.Establishing continual and wider discussions and joint approaches among all the stakeholders encompassing S & T communities, entrepreneurs and policy makers. 8.Introducing modern technology and promoting its applications 9.Value addition to products utilizing modern technology 10.Promoting high end tech inventions and innovations to be on par with the competitiveness of foreign markets	Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture Goal 3: Ensure healthy lives and promote well-being for all at all ages Goal 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all Goal 6: Ensure availability and sustainable management of water and sanitation for all Goal 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable Goal 13: Take urgent action to combat climate change and its impacts Goal 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss Goal 16: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels Goal 17: Strengthen the means of implementation and revitalize the global partnership for sustainable development	**NSF mandate a) Promoting R&D**															
			Implementing Research & Technology Development Projects	i. Creating new knowledge , Technology development, establishing start ups/PPPS, Technology Transfers, commercialization and branding activities	25.957	2	7.998	11.94	4.017	Conduct brainstorming sessions. Identification of priority concerns/research needs of SMEs and relevant R D & I projects. Award Technology specific grants Monitoring of ongoing grants & Research Scholarships and bring to completion. Identifying followup activities for completed research grants. Upgrading and updating RGRA/TGRA database. Continuation with the R&D partnership programme on batik apparel.	Calling for EOIs & evaluate Calling for full proposals Monitoring of ongoing grants & Research Scholarships and bring to completion. Upgrading and updating RGRA/TGRA database. Develop & validate quality standards/quality assuarance for batik appeal and other R&D work.	Organize pitching events and identify commercial partners for PPPs/ Start-ups targeting at creating local brands etc. Award of R&D grants Monitoring of ongoing grants & Research Scholarships and bring to completion. Preparation of outreach material for research information dissemination. Upgrading and updating RGRA/TGRA database. Priority settings for 2023 through brainstorming sessions.	Monitoring of ongoing grants & Research Scholarships and bring to completion. Upgrading and updating RGRA/TGRA database. Obtaining approvals for identified R&D projects for 2023. Establishment of quality standards for batik apparel.	No. of PPP established - 6 No. of TTs - 02 No of start ups - 01 No. of commercialized products/ processes - 1 No. of new brands - 02 No. of patents - 3 No. of research publications (in IF > 3 journals) No. of M.Phil/PhD produced - 10 No of international awards made on local R&D - 2	No. of grants/scholarships awarded No. of new products/processes developed No. of students registered for PG degrees No.of research Grants/ Scholarships/ Fellowship completed No. of publications (in IF < 3 journals) No. of communications No. of completed research grants identified for further actions Updated RGRA database Quality standards developed for batik apparel. Efficiently used RGRA & TGRA for R&D project evaluation & decision making.	Knowledge enhancement & sharing, Capacity building, Infrastructure development S&T contribution to the national economy	Head/RD, Head / TDID	Ext 120/ 140
				ii. Establishment of the national analytical & testing facility (Instrument database)						Completion of data collection and establishment of the database with required features.				User statistics (BP to be established)	Completed national database on equipment and testing facility.			
				iii. Providing recognition for S&T excellence (NSF Awards)						Calling for applications and conduct evaluations for all kinds of awards.		Obtaining approvals for selected awards	Organize the ceremony	No. of recognized S&T personnel	No. of National & NSF Awards and Commendation Certificates conferred	Scientists, researchers and technologists encouraged for contributing to new knowledge creation and national economy.		
			NSF mandate b) S&T information dissemination															
			Publication of scientific research	i. Publication of Journal of National Science Foundation (JNSF)	2.254	0.21	0.966	0.639	0.437	Processing 75 manuscripts Publishing of Vol 50 special Issue & Vol. 50 Issue 1 No. of articles published - 20 Hamessing at least 04 high-end research findings for publishing Enhancing review pool by 25 reviewers (local + foreign) Developing journal matrics and updating quarterly.	Processing 150 manuscripts Publishing Vol 50 Issue 02 of JNSF (with at least 10 articles). Total no. of articles published - 30 Hamessing at least 08 high-end research findings for publishing. Enhancing review pool by 25 reviewers (local + foreign)	Processing 225 articles Publishing Vol 50 Issue 03 of JNSF (with at least 10 articles). Total no. of articles published - 40 Harnessing at least 12 high-end research findings for publishing. Enhancing review pool by 30 reviewers (local + foreign)	Processing 300 manuscripts Publishing Vol 50 Issue 04 of JNSF (with at least 10 articles). Total no. of articles published - 50 Harnessing at least 16 high-end research findings for publishing. Enhancing review pool by 40 reviewers (local + foreign)	Reduced TAT by 25%	No. of Articles published No. of JNSF issues published (04 normal issues & the JNSF 50th anniversary issue) No. of high-end research findings published No of new entries added to the review pool.	Dissemination of local and foreign research findings to local and global scientific community contributing to scientific advancement Knowledge creation	Head/JPD	Ext 269
				ii.Publication of Sri Lanka Journal of Social Sciences (SLJSS)	1.980	0.22	0.670	0.430	0.660	Processing 60 manuscripts Harnessing manuscripts addressing policy recommendations for important social issues from SL and South Asian region. No. of manuscripts - 03 Enhancing review pool by 15 reviewers (local + foreign) Developing journal matrics and updating quarterly.	Processing 120 manuscripts Publishing Vol 45 Issue 01 of SLJSS (with at least 10 articles). No. of articles published 10 Harnessing manuscripts addressing policy recommendations for important social issues from SL and South Asian region. No. of manuscripts - 06 Enhancing review pool by 15 reviewers (local + foreign)	Processing 180 manuscripts Harnessing manuscripts addressing policy recommendations for important social issues from SL and South Asian region. No. of manuscripts - 09 Enhancing review pool by 25 reviewers (local + foreign)	Processing 240 manuscripts Publishing Vol 45 Issue 02 of SLJSS (with at least 10 articles). Total no. of articles published 10 Harnessing manuscripts addressing policy recommendations for important social issues from SL and South Asian region. No. of manuscripts - 12 Enhancing review pool by 15 reviewers (local + foreign)	Reduced TAT by 20%	No. of SLJSS issues published 02 No. o f articles published - 20 No. o f articles published with policy recommendation on important social issues - 3	Dissemination of local and foreign research findings to local and global scientific community. Knowledge creation SLJSS Indexed in the Social Science Citation Index of Clarivate Analytics		
				iii.Publishing other local journals at Sri Lanka Journals Online (SLJOL)	1.300	0.45	0.850			Making available of Sri Lankan scientific journals online via SLJOL platform and carry out related routine work of the online platform by adding 1200 research articles, 140 journal issues with 1150 DOIs for 118 SL journals.				Incresed access by 10 %	No. o f research articles uploaded No. o f journal issues uploaded No. of DOIs provided (system generated) No. o f journals available at SLJOL	Providing a platform for prominence to local scientists and researchers for their S&T work S&T information dissemination locally and internationally	Head/NSLRC	Ext 190
			Providing access to S&T databases	i. Subscriptions to S&T literature	1.150	0.85	0.100		0.200	Making payments for local & foreign subscriptions for memberships & databases	Making payments for local & foreign subscriptions for databases & online journals	..	Making payments for local & foreign subscriptions for books & other	Incresed usage by 5 %	No.of Databases subscribed No. of journals subscribed No. of memberships subscribed No. of downloads No. of access provided			
				ii. National Digital Library Consortium (National E-consortium of digital resources: a proposal for electronic resource sharing being under consideration by the Ministry)						Proposal to be evaluated by the Ministry.	Obtain approval from the NPD	Appointing the Steering Committee and Working Committee for the consortium	Project execution by purchasing digital resources	Incresed number of databases subscribed - 10 Amount of foreign currency saved (Rs Mn)	No of databases subscribed No of Institutes benefited			
				iii. National Digitization Project - Digital Library software and Database development & maintenance	0.100	0.03	0.020	0.025	0.025	Add 2,500 full texts to digital repositories Execution of Environment Ministry DL project (50%) Execution of Presidential secretariate DL project (25%) Add 1,250 records to "Vidiulettha" Databases Implementation of KOHA at NSLRC (50%)	Add 2,500 full texts to digital repositories Execution of Environment Ministry DL project (50%) Execution of Presidential secretariate DL project (25%) Add 1,250 records to "Vidiulettha" Databases Implementation of KOHA at NSLRC (50%)	Add 2,500 full texts to digital repositories Execution of Presidential secretariate DL project (25%) Add 1,250 records to "Vidiulettha" Databases	Add 2,500 full texts to digital repositories Execution of Presidential secretariate DL project (25%) Add 1,250 records to "Vidiulettha" Databases	Incresed usage by 2% Increased content availability by 2%	No of projects undertaken to digitze S&T information No of projects completed No of full text S&T articles added Amount of income generated (Rs. Mn) No of S&T records added to NSLRC Databases No of S&T records updated in the databases. Fully implemented KOHA in the NSF library.			
				iv. Science and Technology Management Information System (STMIS) a.) Maintaining, networking and data dissemination	0.200			0.050	0.150	Maintaining, networking and data dissemination through the STMIS Improving the visibility of STMIS	Maintaining, networking and data dissemination through the STMIS Improving the visibility of STMIS Explore avenues to benefit S&T personnel and organizations in the STMIS			Incresed usage of the STMIS (BP to be established)	Total number of registrants	Increased networking among Sri Lankan scientific community	Head/STPRD	
				b.) Improving the visibility											Number of new registrations			
				c.) Exploring avenues for benefits											Number of circulations (information dissemination via STMIS)			
															Number of visits to the STMIS database			

Priority Area	Objectives of the Ministry	Relevancy to SDG goal & Target	Programme	Research Activities	Allocation (Rs. Mn.)	Target								KPI	Expected Output	Expected Outcome	Responsible Officer	
						Financial (Rs.Mn)				Cumulative Physical Target								
						Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				Name	Contact No:
1.Establishing Sri Lanka as an Innovation Hub by maximizing the use of Internet of Things, Artificial Intelligence, Biotechnology, Robotics, Augmented Reality, Cloud Computing, Nanotechnology and 3D Printing 2.Making efficient the system to issue patents to researches for their innovations and to secure ownership to their research designs 3.Providing facilities to local research institutions to collaborate with the international research institutions 4.Providing tax reliefs to private enterprises contributing to research 5.Introducing domestic or foreign investors required for manufacturing under a domestic brand with innovation products 6.Formulating an efficient mechanism to channel innovations and research results to investors and relevant users	1.Establishing and networking dynamic organizational structures to assist in the process of vesting the public with science, technology and research-based knowledge. 2.Directing institutions to impart scientific principles and technological concepts essential for the efficacy and efficiency of products to benefit the society. 3.Strengthening the human resources base and organizational structure for the promotion of research, inventions and innovations. 4.Identifying the concept-based applications of researchers and inventors, encouraging competencies leading to their practical application. 5.Facilitating and increasing opportunities for the commercialization of innovations. 6.Facilitating the increase of local and foreign investments being made in the research and development field. 7.Establishing continual and wider discussions and joint approaches among all the stakeholders encompassing S & T communities, entrepreneurs and policy makers. 8.Introducing modern technology and promoting its applications 9.Value addition to products utilizing modern technology 10.Promoting high end tech inventions and innovations to be on par with the competitiveness of foreign markets	Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture Goal 3: Ensure healthy lives and promote well-being for all at all ages Goal 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all Goal 6: Ensure availability and sustainable management of water and sanitation for all Goal 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable Goal 13: Take urgent action to combat climate change and its impacts Goal 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss Goal 16: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels Goal 17: Strengthen the means of implementation and revitalize the global partnership for sustainable development	**NSF mandate c) S&T capacity Building**													
			Tapping the Sri Lankan expatriate talent pool in abroad for leveraging R&D outputs	Strengthen and expansion of expatriate base and commissioning the Digital Platform	1.000		1.000			To increase the number of new expatriate registrants by 50	To increase the number of new expatriate registrants by 50	To increase the number of new expatriate registrants by 50	To increase the number of new expatriate registrants by 50	Percentage increase in foreign funding harnessed compared to 2021. Percentage increase in number of collaborations/partnerships established compared to 2021. Increased number of fellowships harnessed for capacity building compared to 2021. Increased number of proposals submitted/ received aiming at foreign funding compared to 2021.	No. of expatriates registered in the digital platform. No.of fruitful partnerships established for the benefit of local researchers/industry	A comprehensive expatriate base with diverse range of expertise. Advancement of local innovation ecosystem benefitted through global opportunities. Enhanced global prominence of Sri Lanka's STI landscape. Increased knowledge sharing. Benefits reaped in terms of funding and capacity development Linkages established with international scientists Visibility for the SLISS in ASSREC website.	Head/IAD	Ext 155
			Capacity building for STI development	Facilitate training of Sri Lankan researchers in emerging fields addressing national priorities	1.600	0.4	0.400	0.400	0.400	To train two researchers	To train three researchers	To train four researchers	To train two researchers		No. of trained researchers No. of new initiatives taken by the trained researchers to implement new know-how acquired at training			
			Networking with international STI organizations (focal points)	Payment of membership fees for ICGEB, ISC, AASSREC	2.300	0.3	2.000			–	Timely endorement of applications from Sri Lankan researchers to the ICGEB under CRP. Renewal of the AASSREC Membership.	–	–		No. of grants obtained No. of short-term training fellowships secured No. of R&D activities conducted		Head/IAD,	Ext 155
										Renewal of the AASSREC membership.							Head/STPRD	Ext 165
			MAB programme	Facilitate sustainable management of national biosphere reserves	0.400	0.1	0.100	0.100	0.100	Make an e-publication on ecosystem services of national biosphere reserve	Facilitating implementation of the preparatory works required for periodic review	Facilitating R&D required for sustainable management of biosphere reserves	Facilitating R&D required for sustainable management of biosphere reserves		e-publication on ecosystem services of biosphere reserves No. of stakeholders benefitted	Enhanced awareness on ecosystem services of national biosphere reserves	Head/IAD	Ext 155
			NSF mandate d) S&T policy research															
			Policy Studies	**National R&D Survey** i. Complete the R&D Survey-2020 ii. Improve statistics on R&D iii. Preparatory activities for R&D Survey 2022.	2.600	0.6	1.500	0.400	0.100	Complete the R&D survey 2020 for Government and NGO sectors	Complete the R&D Survey 2020 for the Business Enterprises sector Analysis of data Data submission to UIS	Preparation of Statistical handbook Preparatory activities for R&D Survey 2022	Printing and publishing of statistical handbook	Stakeholder satisfaction on publication (BP to be established)	Completed National R&D survey Published R&D Statistical Handbook 2020 Finalized data collection tools for R&D survey 2022	Availability of internationally comparable R&D statistics to Sri Lankan and global community	Head/STPRD	Ext 165
				Initiate studies i. Review the current situation with respect to the 4th Industrial Revolution ii. Ascertain the current status of alternative and renewable energy iii. Revisit the Biotechnology Policy	0.650		0.100	0.250	0.300	Obtaining necessary approval Finalise work plan Appointing expert group/s	Obtaining necessary approval Holding discussions and collecting data Initiate study/ies	Obtaining necessary approval Inititate study/ies Conduct consultative meetings	Obtaining necessary approval Consultative meetings Developing the concept/s	Cumulative number of studies/success stories gathered, documented, disseminated	No. of policy studies initiated No. of concept notes developed Number of consultative meetings held No. of policy studies completed	Availability of brief reports to the NSF Management		
				Publishing the NSF Gender in STEM study report	0.429	0.31	0.094	0.030		Restructuring the report according to the reviewers' comments and with statistical input. Complete the 1st draft	Complete the 2nd draft	Complete the study report	–		Evaluate the Gender balance associate with STEM	Gender data available for making policy decision	Ms. Thilina Kandanamulla (SO) and Ms Sanduni Samarasekera (SO)	Ext: 156 /266

Priority Area	Objectives of the Ministry	Relevancy to SDG goal & Target	Programme	Research Activities	Allocation (Rs. Mn.)	Target								KPI	Expected Output	Expected Outcome	Responsible Officer	
						Financial (Rs.Mn)				Cumulative Physical Target								
						Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				Name	Contact No:
1.Establishing Sri Lanka as an Innovation Hub by maximizing the use of Internet of Things, Artificial Intelligence, Biotechnology, Robotics, Augmented Reality, Cloud Computing, Nanotechnology and 3D Printing 2.Making efficient the system to issue patents to researches for their innovations and to secure ownership to their research designs 3.Providing facilities to local research institutions to collaborate with the international research institutions 4.Providing tax reliefs to private enterprises contributing to research 5.Introducing domestic or foreign investors required for manufacturing under a domestic brand with innovation products 6.Formulating an efficient mechanism to channel innovations and research results to investors and relevant users	1.Establishing and networking dynamic organizational structures to assist in the process of vesting the public with science, technology and research-based knowledge. 2.Directing institutions to impart scientific principles and technological concepts essential for the efficacy and efficiency of products to benefit the society. 3.Strengthening the human resources base and organizational structure for the promotion of research, inventions and innovations. 4.Identifying the concept-based applications of researchers and inventors, encouraging competencies leading to their practical application. 5.Facilitating and increasing opportunities for the commercialization of innovations. 6.Facilitating the increase of local and foreign investments being made in the research and development field. 7.Establishing continual and wider discussions and joint approaches among all the stakeholders encompassing S & T communities, entrepreneurs and policy makers. 8.Introducing modern technology and promoting its applications 9.Value addition to products utilizing modern technology 10.Promoting high end tech inventions and innovations to be on par with the competitiveness of foreign markets	Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture Goal 3: Ensure healthy lives and promote well-being for all at all ages Goal 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all Goal 6: Ensure availability and sustainable management of water and sanitation for all Goal 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable Goal 13: Take urgent action to combat climate change and its impacts Goal 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss Goal 16: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels Goal 17: Strengthen the means of implementation and revitalize the global partnership for sustainable development	**NSF mandate e) Science popularization**														
			Awarding Grants	Science education popularization programmes (SEPP) Supporting 02 Schools - Stage-1	0.500		0.300	0.200		Complete site visit for inspection (04 schools)	Award 01 grant Monitoring progress	Award 01 grant Monitoring progress.	Monitoring progress.	No.of Grants awarded No. of schools supported	Improved lab facilities in schools	Motivated school children engaged in Science	Head/SPD	Ext 180
			Improving public awareness on STI	i. Conducting Competitions on Science education and science popularization	2.000	0.5	0.500	0.500	0.500	SRPC 2020/21 - Complete competition and publish proceedings. Kid naturalist Programme: i. Complete Training programme for teachers ii.Initiate Kidnaturalist programme for kids	Calling applications for Science Research project Competiton 2022 Evaluation of project proposals Kid naturalist program Calling applications for Scince Competitions	Compeletion of	Condcut 02 progress review meetings with project teams Complete SRPC 2022 Complete evaluation and selection of winners for science competitions Kid naturalist programme - initiate teacher training pogram	Increased science literacy of the nation (BP to be established) Percentage of student cohort pursuing STEAM education (BP to be established)	No.of Competitions conducted No.of students participated No. of high-graded R&D proposals received No. of science communicators developed	Enhanced research culture Enhanced public awareness on science Motivated students to take up science		
				ii. Science Communication via printed and digital media	1.000	0.25	0.250	0.250	0.250	Publish issue 1 of "Vidurava" Work on upcoming issues of "Vidurava" and other. Proceed work on 03 books	Publication of "Vidurava" Issue 2 Work on upcoming issues of "Vidurava" and other.	Publication of "Vidurava" Issue 3 Work on upcoming issues of "Vidurava" and other.	Publication of "Vidurava" Issue 4 Work on upcoming issues of "Vidurava" and other. Award 01 publication grant		No.of "Vidurava" issues published No.of books/handbooks published No.of documentaries made No.of TV/Radio programmes conducted No. of news articles/tabloids published No.of posters created			
				iii. Conducting outreach programmes for science popularization a) Training for science Teachers/youth/community) b) Training for effective science communication for scientists and undergraduates	1.750	0.35	0.700	0.500	0.200	Organize one training programme and 02 public lectures	Conducut one training programme for teachers and 01 for youth. One outreach programme for community	Conducut one training programme for teachers and 01 for youth. One outreach programme for community	_		No of programmes/webinars completed enhancing science literacy among people and developing science communicators. No. of training/capacity development programmes conducted No. of personnel trained No. of persons benefitted No. of outreach programmes conducted No. of technologies/research outputs shared/disseminated	Improved community wellbeing		
				Training/capacity development workshops on technology transfer and knowledge sharing						_	_	_	Capacity development workshops - 08	Increased IP literacy (BP to be established)			Head/TDID	Ext 140
				Outreach awareness programmes on Scientific Information Dissemination & NSF Services and promoting scientific activities and achievements via Science Media Hub						Conduct 05 awareness programmes/webinars. One webinar series on health related issues.	Conduct 04 awareness programmes/webinars. One webinar series on health related issues.	Conduct 04 awareness programmes/webinars. Two webinar series on health related issues.	Conduct 07 awareness programmes/webinars. Two webinar series on health related issues.	Increased awareness on R&D outputs by 10%			Head/NSLRC, Head/RD	Ext 190/120
				Providing S&T e-resource awareness to library professionals						Conduct 01 awareness programme	Conduct 01 awareness programme	Conduct 01 awareness programme	Conduct 01 awareness programme				Head/NSLRC	
			Acquisition of capital assets, maintenance and system administration															
			HR development	Provide training for work performance enhancement	1.180	0.39	0.370	0.250	0.170	Provide training on Office Management Systems & Financial Regulations for 50 staff members. Providing Specific Training programmes to 10 staff members. Provide training on Fire fitting for all staff.	Conduct the English Course for 25 staff members for office use. Provide Tamil language Course for PL category staff. Provide Specific training programme to 10 staff members.	Provide training on Compeering to 15 staff members. Conduct a Training programme on Team Building Skills for 65 staff members. Provide training on leadership to career Development for 65 staff members.	Provide training on time Management for all staff. Conduct a training programme on Motivation / Positive Thinking to all staff.	Increased Staff happiness index (BP to be established)	No. of staff members trained	Enhanced motivation and work output	SAO & HRDO	Ext 235
			Maintaining the IT infostructure	Improving IT networking	1.650	0.35	1.300			Upgrading auditorium multimedia facilities	Network switch replacements at two locations. Core network switch expension in the Server Room	_	_	Quality increased IT platform	Trouble free computer networking facilities Reduced badndwith bottlenec for servers.		IT Manager	Ext 210

Performance Highlights

Physical Performance Highlights – 2022

Physical performance of NSF in the year 2022, against the Action Plan and in line with the NSF Mandate, and the 10 priorities of the National Policy Framework (NPF) are show in this chapter. *Figures 02* shows the respective performances in percentages. Accordingly Mandate 1 (Promoting Research and Development) has the highest performance of 95% and Mandate 6 (Acquisition of Capital Assets, Maintenance and System Administration) has the lowest performance of 45%.

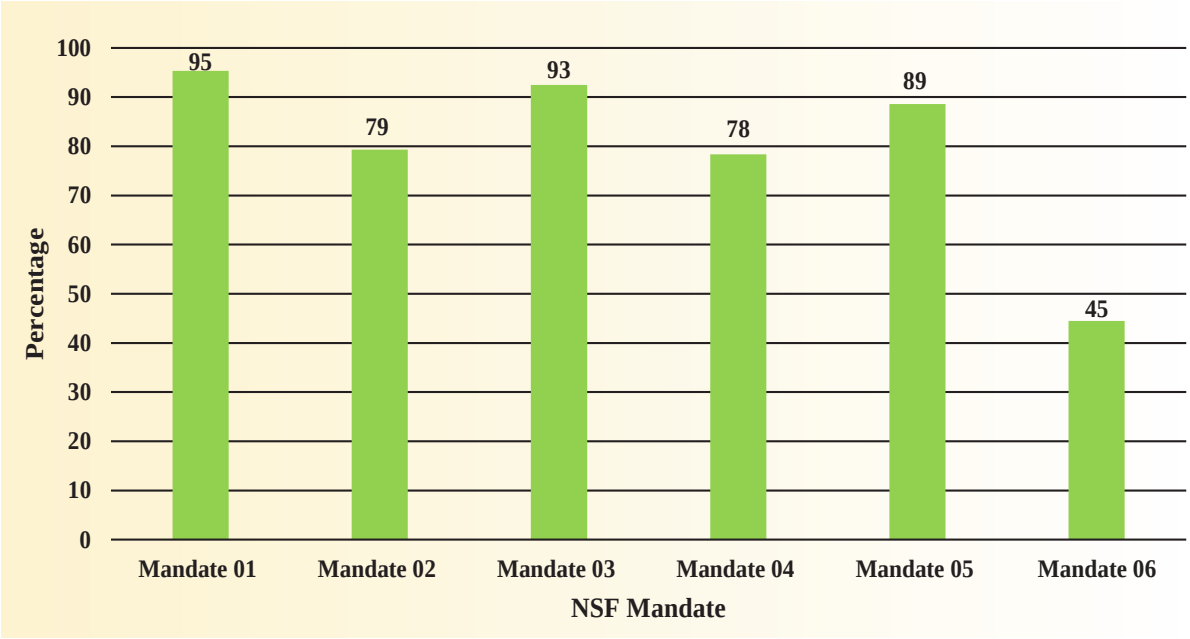


Figure 02: Percentage of Physical Performance against the 2022 NSF Mandated Functions

NSF Mandate 01 - Promoting Research and Development
NSF Mandate 02 - S&T Information Dissemination
NSF Mandate 03 - S&T Capacity Building
NSF Mandate 04 - Science & Technology Policy Research
NSF Mandate 05 - Science Popularization
NSF Mandate 06 - Acquisition of Capital Assets, Maintenance and System Administration

The 10 priorities under the NPF are as follows;

1) Priority to National Security
2) Friendly, Non-aligned, Foreign Policy
3) An Administration free from corruption
4) New Constitution that fulfills the People's wishes
5) Productive Citizenry and a vibrant Human resource
6) People Centric Economic Development
7) Technology Based Society
8) Development of Physical Resources
9) Sustainable Environmental Management
10) Disciplined, Law Abiding and values-based society

These 10 priorities have been aligned to the six NSF Mandated Areas as depicted in *Table 02*.

Table 02: Mapping NSF Mandate with NPF Priorities

NSF Mandated Areas	Relevant NPF Priority/ Priorities
NSF Mandate 01 - Promoting Research and Development	Priority 01, Priority 02, Priority 04, Priority 05, Priority 08, Priority 09
NSF Mandate 02 - S&T Information Dissemination	Priority 01, Priority 06, Priority 07
NSF Mandate 03 - S&T Capacity Building	Priority 03
NSF Mandate 04 - Science & Technology Policy Research	Priority 01
NSF Mandate 05 - Science Popularization	Priority 01, Priority 06, Priority 07
NSF Mandate 06 - Acquisition of Capital Assets, Maintenance and System Administration	Priority 10

When the physical performance is aligned to NPF priorities the values are according to *Figure 03*. Accordingly, the best performance comes under Priorities 02, 04, 05, 08 and 09 as 95%. The least performance is shown under the Priority 10 as 45%.

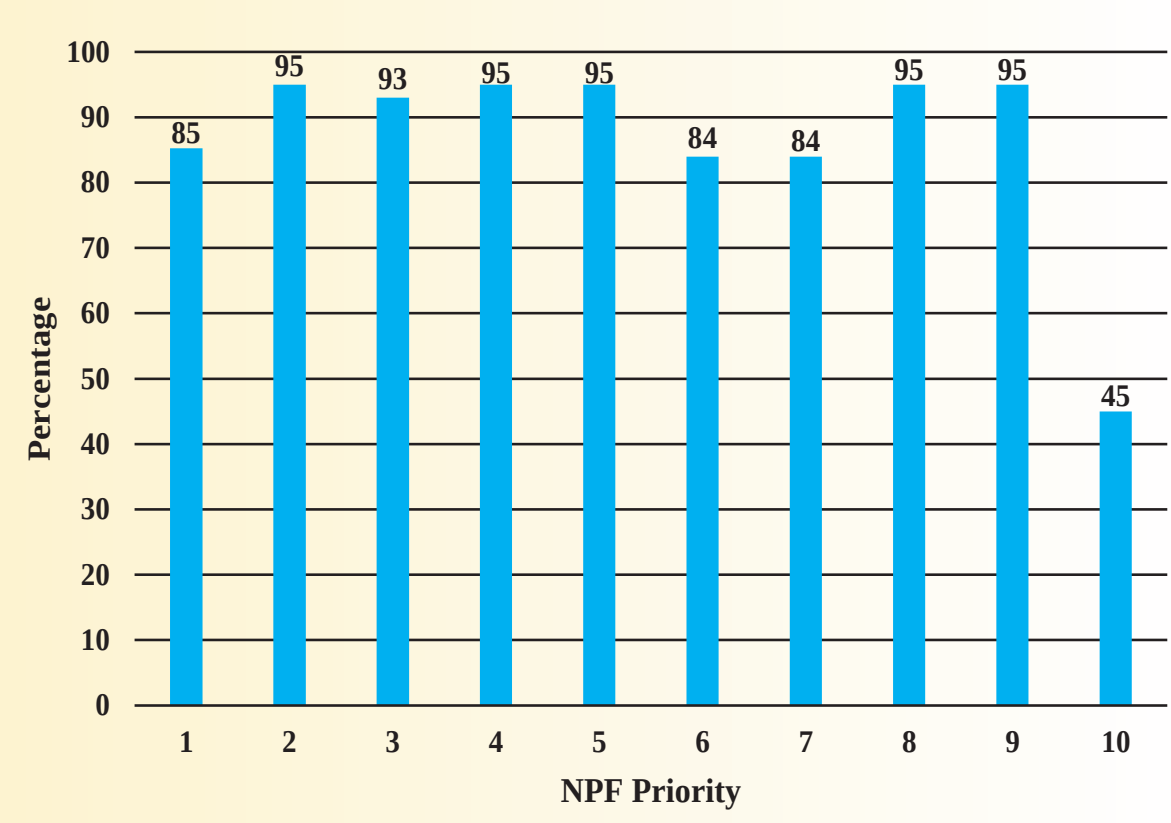


Figure 03: Percentage of Physical Performance against the National Policy Framework (NPF) Priorities

Throughout 2022, 48 R&D projects were monitored and 24 projects were completed successfully. The NSF has contributed to Science and Development by supporting completion of Post Graduate Degrees, research publications from R&D projects of NSF grants which were also published in SCIE Journals and non-SCIE journals, communications and patents obtained, partnerships established, technology transfers, commercialized products etc. *Figure 04*, gives a detailed account.

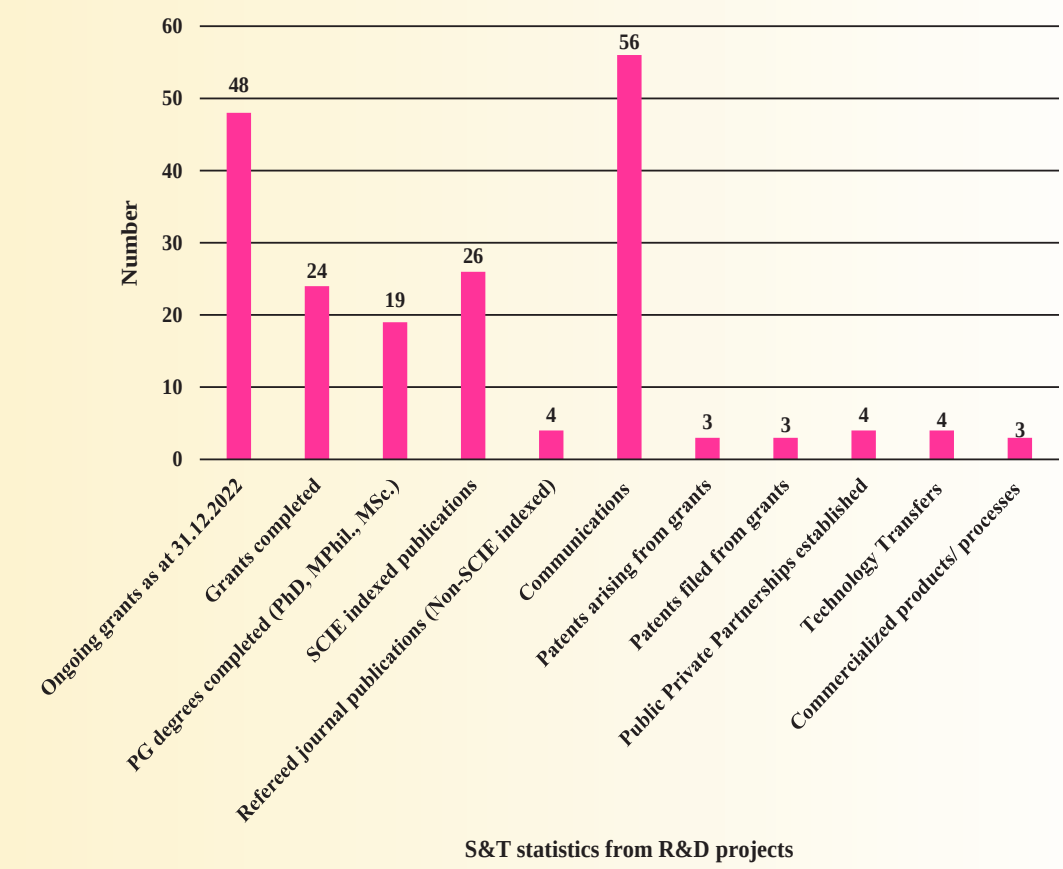
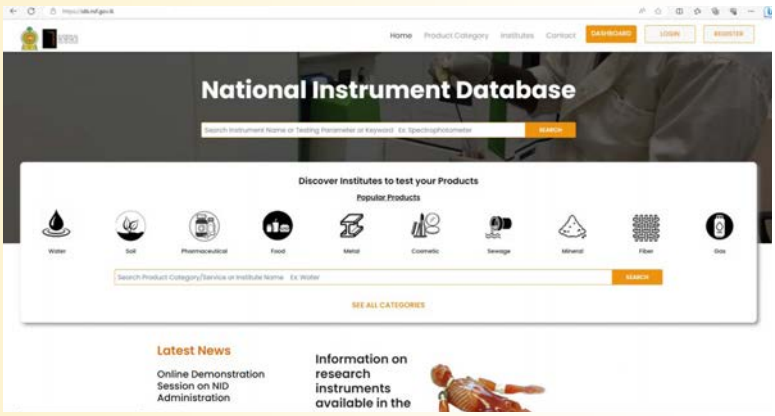


Figure 04: Analysis of R&D Projects and their contribution to S&T Development

Establishment of the National Instrument Database (NID)

The National Instrument Database (NID), was developed by the NSLRC in collaboration with the Research Division, under the guidance of the appointed experts committee. The aim of establishing the NID was to have a detailed database of high-end analytical, testing and research instruments scattered across Sri Lanka, in universities and R&D institutions. It has now enabled researchers to expand their scientific analyses through collaboration with other universities, research institutes and government laboratories. It will reduce capital expenditure on the purchase of new scientific instruments, as the NID will enable researchers to find a suitable local lab where the particular instrument is available.



Moreover, the database will enable funding agencies to identify gaps in the fleet of high-end analytical and testing instruments available in the country and prevent unnecessary duplication of equipment, thus paving the way toward sustainable resource utilization. The NID was launched on 15th September 2022, by the Hon. Minister of Education, Dr Susil Premajayantha with the presence of other dignitaries.

NSF Celebrates the National Science Day 2022

The National Science Day was celebrated on the 10th of November 2022, with 1500 participants (school children (including the award winners of the NSF Science Research Project Competition (SRPC) 2020/21, NSF Kids Naturalist Programme 2022), parents, teachers, students, and scientists). The event was oraganized in collaboration with the Ministry of Education. The theme for this year was "Science for Sustainable Future, Global Trends with Local Blend". Participation was online via Zoom, through YouTube and inhouse. Award winners were felicitated and two special NSF life-time awards were conferred to Mr Asoka De Silva and Mr Thusitha Malalasekara acknowledging their outstanding and longstanding contribution to popularize science among citizens of Sri Lanka.

Presentation of the 5-star Award by the Hon. Minister of Education - Dr Susil Premajayantha to Harishchandra National School, Negombo, accompanied by the Chairman and the Director General of NSF and some invited delegates and participants

NSF wins at the Best Annual Report Award Ceremony 2022

The Best Annual Report Award Ceremony 2022 organized by the APFA, and CA was held on the 2nd of December 2022 at the BMICH under the theme "Transforming the Public Sector for Economic Revival". This was the sixth annual competition conducted by the APFA, and CA based on the year 2020 accounts. The competition provides all public sector organizations that produce annual reports and accounts an opportunity to benchmark their reports against Best Annual Reports and Accounts (BARA) criteria which are based on relevant statutes & circulars, guidelines, as well as the Sri Lanka Public Sector Accounting Standards, and international best practices.

The NSF has taken part in this competition four times since 2018 and was honored for the fourth consecutive year. The NSF Annual report 2020 won the silver award under the category "Research Institutions" at the Best Annual Report Award Ceremony 2022.

JNSF Published its 50th vloume as a special issue

The JNSF was published in 2022 as 4 issues of Volume 50 and as a special issue, with a total of 70 articles. 183 local authors and 80 foreign authors who represented 34 local institutes and 41 foreign institutes had published timely and important articles.

Launching of the Global Digital Platform (GDP)

The ceremonial launching of the GDP was held on the 21st of February 2022 at the BMICH under the patronage of then Prime Minister of the Democratic Socialist Republic of Sri Lanka.

The Global Digital Platform (GDP) was launched in 2022, to harness the enormous potential of reputed expatriate scientists and professionals holding senior positions in academia, R&D institutions and industry abroad for national development. It is envisaged that the key sectors, including higher education, Science and Technology, Foreign Direct Investment (FDI), trade/exports, tourism, enterprises and industry could benefit therefrom. The initial emphasis is on the fields of Science and Technology and Higher Education. The GDP of the NSF will facilitate effective harnessing, mobilizing and channeling intellectual assets at home and abroad – the most precious and treasured resource in a knowledge economy for development.

National R&D Survey – 2020 Providing Indicators for R&D - related Policy Development and Planning

The National Research and Development Survey of 2020 was completed and published as the "Statistical Handbook on Research and Development of Sri Lanka – 2020". This Survey investigated performance of R&D activities of the country in the fiscal year 2020. This publication will be supported for future policy development and planning in R&D sector.

Financial Performance Highlights – 2022

Figure 05 depicts the allocations and expenditure (in Rs. Million) for each of the six mandated areas at NSF in 2022 and *Figure 06* shows the same in percentage according to the NPF priorities. Accordingly, NSF Mandate 01 has the highest allocation and the expenditure and NSF Mandate 04 and 06 have the lowest allocations and Mandate 04 has the lowest expenditure. When considering the NPF priorities, over expenditure can be observed under priority 07.

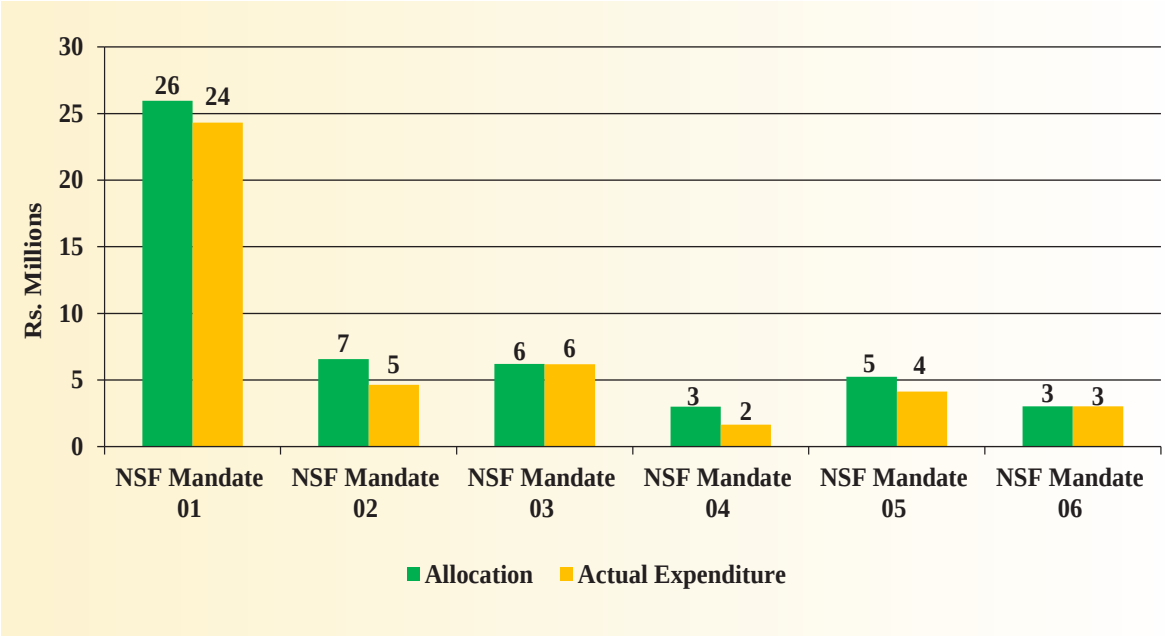


Figure 05: Allocation and Actual Expenditure for each Mandated Area in 2022 (in Rs. Millions)

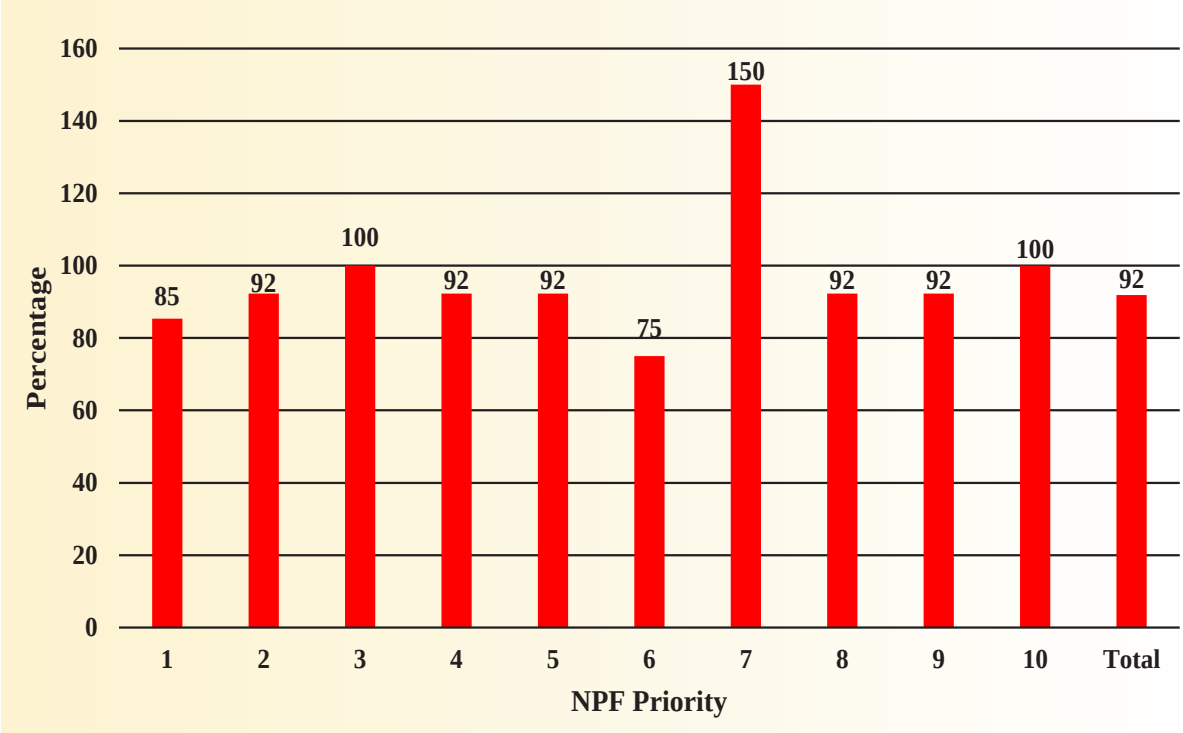


Figure 06: Percentage between Allocation and Expenditure under each priority of the National Policy Framework (NPF) in 2022

The NSF has generated an income of Rs. 2,177,275.00 in 2022 and their avenues are depicted in *Figure 07.*

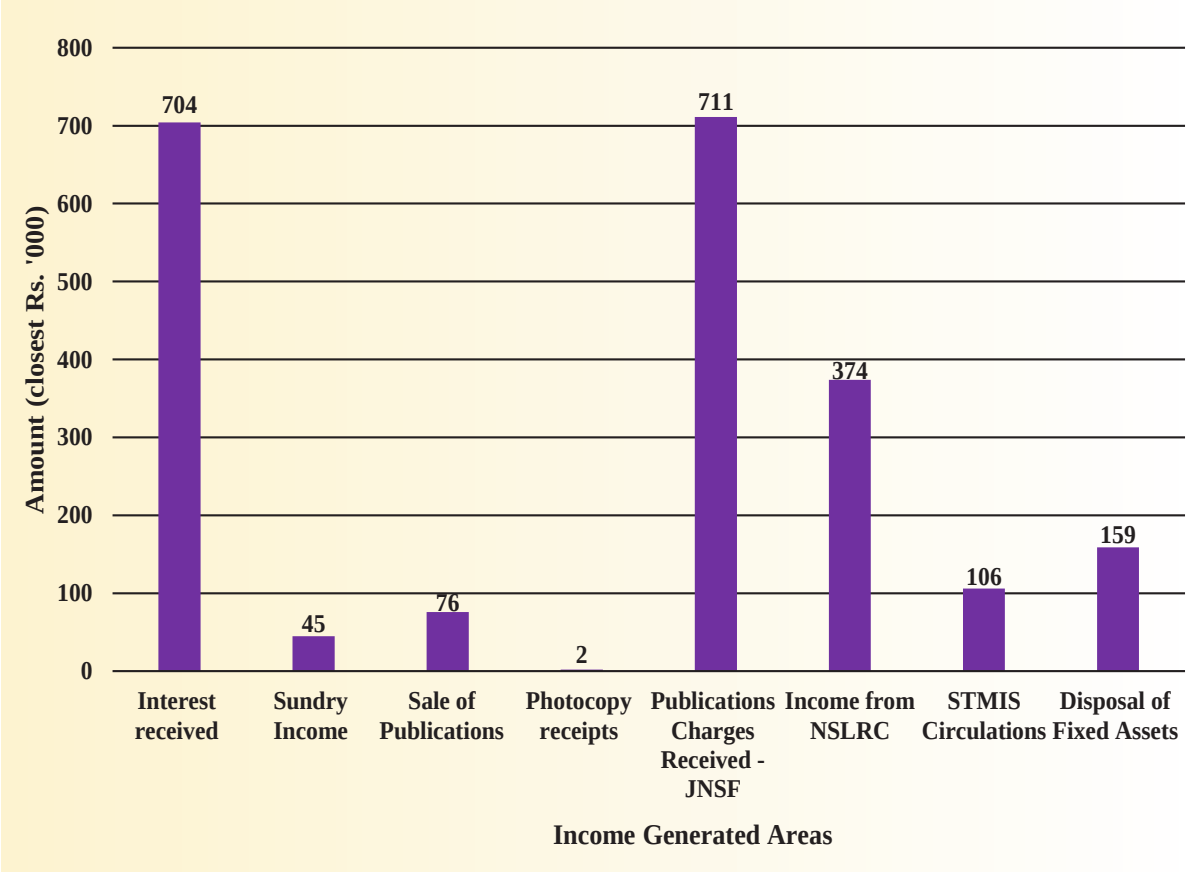


Figure 07: Income Generated by NSF in 2022

Mapping NSF Functions with the Sustainable Development Goals (SDGs) and the National Policy Framework (NPF)

The NSF Mandated areas have been mapped to be in line with the United Nations Sustainable Development Goals (SDGs) and the National Policy Framework of Sri Lanka as in *Figure 08*. Accordingly, all activities of NSF are in par with the SDGs and the NPF.

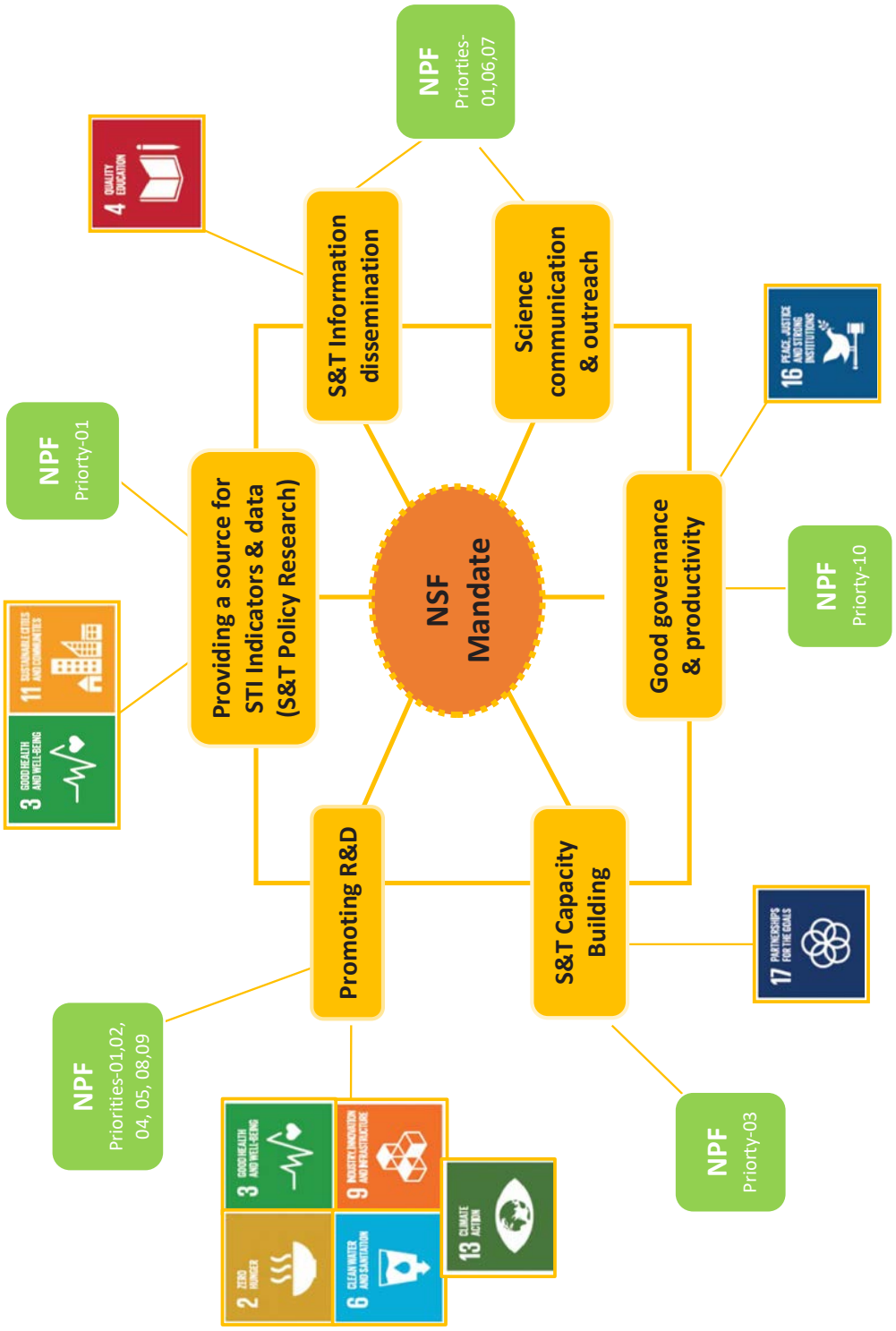


Figure 08: NSF Mandate Aligned with the SDGs and the NPF

Achievements Against the Action Plan 2022

NSF Mandate a) Promoting Research & Development

Programme: Implementing Research & Technology Development Projects

The following grant scheme have being continuted to support R&D and to generate new knowldege.

- Competitive Research Grants scheme (CRG)
- International Collaborative Research Projects (ICRP)
- Gap-filling Research Grants (GapF)
- Research Programme on Health Sciences (RPHS)
- National Thematic Research Programme (NTRP)

However, grant activities were severely affected by the economic situation in the country. A total of forty-eight (48) research projects were monitored under the above schemes in 2022. A total of 129 researchers (PIs and Co-Is) in twenty-six (26) institutions benefitted from these research grants. The types and numbers of ongoing research grants and the distribution of grants and the grantees among the institutions are given in *Figure 09* and *Figure 10.*

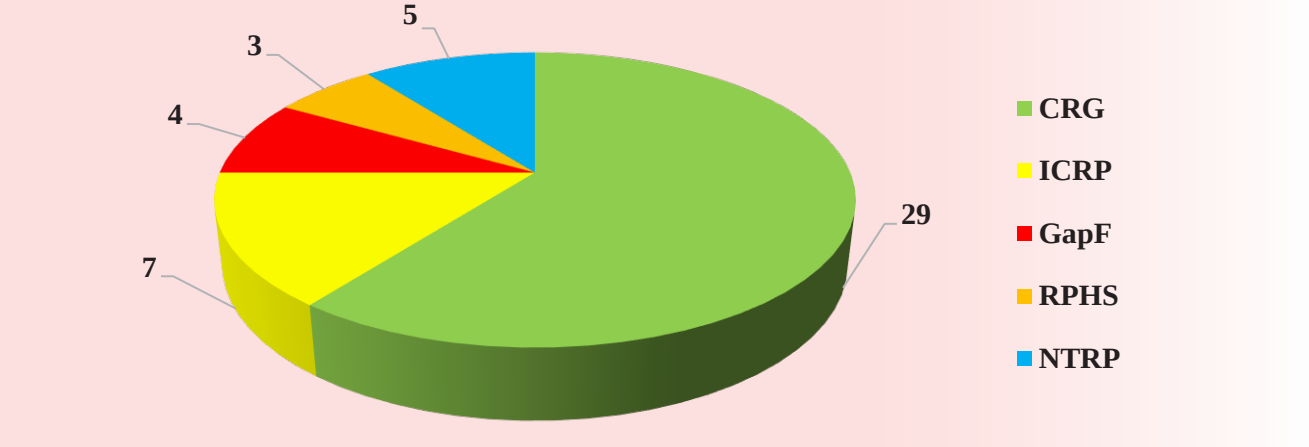


Figure 09: Types and Numbers of Ongoing Research Grants facilitated under different grant schemes in 2022

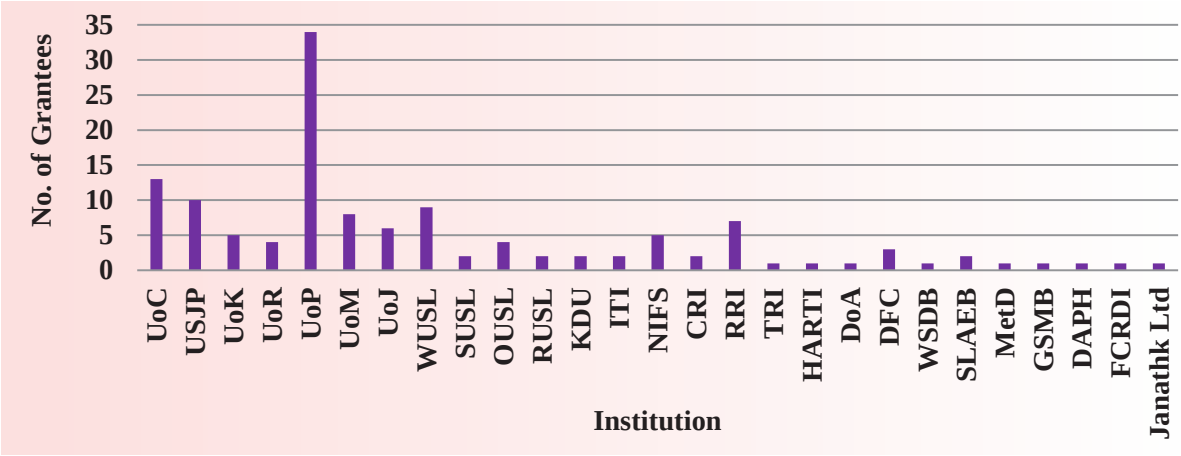


Figure 10: Distribution of Grantees Among Institutions

A total of 86 publications were resulted from all ongoing grants in 2022, including 26 SCIE indexed publications, 04 refereed journal publications and 56 communications *(Figure 11)*. In addition, 03 patents were granted, and 03 more patents were filed from grants awarded in the fields of Biotechnology and Health Sciences.

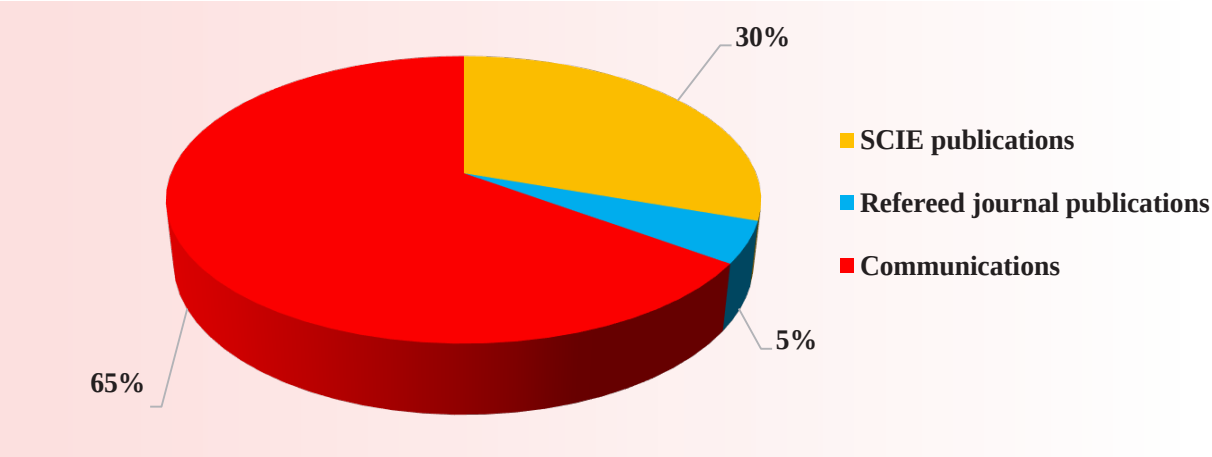


Figure 11: Publications Arising from Research Grants in 2022

NSF Competitive Research Grants Scheme

The NSF Competitive Research Grants Scheme provides assistance to supplement the financial, physical and manpower resources available in S&T Institutions in Sri Lanka for scientific research. It facilitates to harness independent, individual and intellectual capacity of scientists and encourages them to carry out research of high standard, directed towards socio-economic development of the country. Competitive Research Grants are awarded in all fields of Science & Technology including Social Sciences.

Due to financial constraints, new grants could not be awarded in 2022. However, forty-eight (48) projects *(Annex 02)* were monitored, and funds were released acording to need. A total of 88 researchers (PIs and Co-Is) benefitted from these ongoing grants.

A total of 24 grants out of 48 were completed in 2022. Details are given in *Annex 03*. During the year, seven Research Students have been appointed and 19 postgraduate degrees (10 PhDs, 08 MPhils, 01 MSc) were completed. A summary of the status of research grants as at 31.12.2022 is given in *Annex 04.*

Highlights of Completed Grants

Grant Number : G/2017/EA&ICT/02
Principal Investigator : Prof. Rangika Umesh Halwatura, Department of Civil Engineering, Faculty of Engineering, University of Moratuwa
Project Title : Investigation of alternative stabilizers for soil and develop low cost, eco-friendly load bearing walling material

Many building materials are imported to the country but are not economically sustainable. Therefore, the country needs to look for affordable building materials that are eco-friendly yet provide suitable structural capacity. Therefore, this research was conducted with the objectives of investigating alternative stabilizers for soil and to develop low-cost, eco-friendly load bearing walling material and development of soil-based wall care putty. The research finding resolve one of the biggest problems by developing a low-cost alternative stabilizer for soil and soil-based wall care putty using fly ash and bottom ash which are waste products of coal plants and cement plants. The application of these waste materials for any product itself is an economic saving for the country and a mass scale environmental

saving to people living in those areas. This project was successfully completed with five journal publications, nine conference publications, a book chapter, four patents: (Fly Ash stabilized mud concrete block for load-bearing walls – 19495, Rubber stabilized earth blocks for load-bearing walls – 19379, Geo-polymerized self-compacting mud block -19567, Soil based wall care putty developed from drinking water treatment plant waste alum sludge – 21020). The products developed during this research has potential to improve as a start-up business with some further developments.

Developed soil-based wall care putty and applications

Laboratory experiments

Grant Number : RG/2018/EA&ICT/01

Principal Investigator : Prof. M. P. B. Ekanayake, Department of Electrical and Electronic Engineering, Faculty of Engineering, University of Peradeniya

Project Title : Development of a novel predictive based Smart Distribution Management System (S-DMS) to maximize the rooftop PV absorption capacity of last mile networks

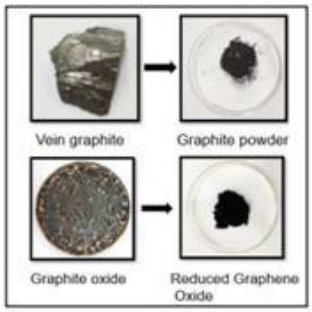
In this research, network management strategies executed through a Smart Distribution Management System (S-DMS) that integrates different controllable entities in distribution networks is considered to support these networks thus increasing the Photovoltaic (PV) integration. A novel strategy to minimize unbalance in Low-voltage (LV) networks based on automatic re-phasing of grid-connected rooftop PV systems was proposed with PV re-phasing switch to perform automatic re-phasing of the PV systems. The discrete bacterial foraging optimization algorithm (DBFOA) was introduced to determine the optimal phase combination of grid-connected single-phase PV systems. A three-phase three-limb inverter was hardware implemented and tested. A three-phase four-wire distribution system of 540 m is modeled using resistors and inductors. The proposed method can be tested in a real network with the collaboration of solar panel producers. By convincing the customers about the extra income with the proposed method, they will be persuaded to install rooftop PV systems. This will be both beneficial to the solar panel producers and customers as well as to the environment.

Front panel of the distribution line model designed to test voltage violations and mitigation methods

Fabricated circuit for re-phasing inverter

Grant Number : NSF-PSF/ICRP/2017/EA&ICT/04
Principal Investigator : Prof. M. A. K. L. Dissanayake Research Professor, National Institute of Fundamental Studies, Kandy
Project Title : Development of carbon-based nanomaterials for counter electrodes in dye sensitized solar cells

Under this collaborative project between Sri Lanka and Pakistan, research was focused on developing low-cost, carbon-based materials for counter electrodes in dye sensitized solar cells, to replace expensive platinum-based counter electrodes. Particular attention was given to develop these counter electrodes using naturally occurring Sri Lankan vein graphite. Researchers have developed several carbon-based, low-cost counter electrodes for dye sensitized solar cells using vein graphite/tin oxide nanoparticle composites, reduced graphene oxide and polyaniline embedded tin oxide composites, stainless steel substrate with novel activated carbon and sugar composites. In addition, gel and solid polymer-based electrolytes for these solar cells were developed. These research findings were published in international journals during 2020-2022 period and also formed the major part of a Ph.D. thesis. The research findings on low cost, dye solar cells, successfully proven and validated at laboratory scale, can be further developed through a Research and Development (R&D) phase of about 2-3 years to fabricate practical and prototype dye solar cells and panels. The necessary scientific knowledge and trained scientists are available in Sri Lanka to undertake such a challenge if a government or a private sector agency is prepared to invest the necessary funds.



Prepared graphite powder and reduced graphene oxide from Sri Lankan natural vein graphite

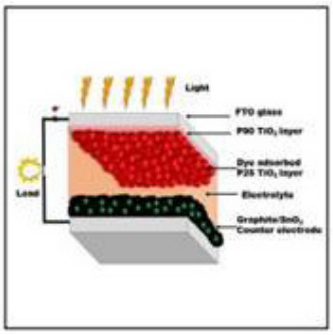


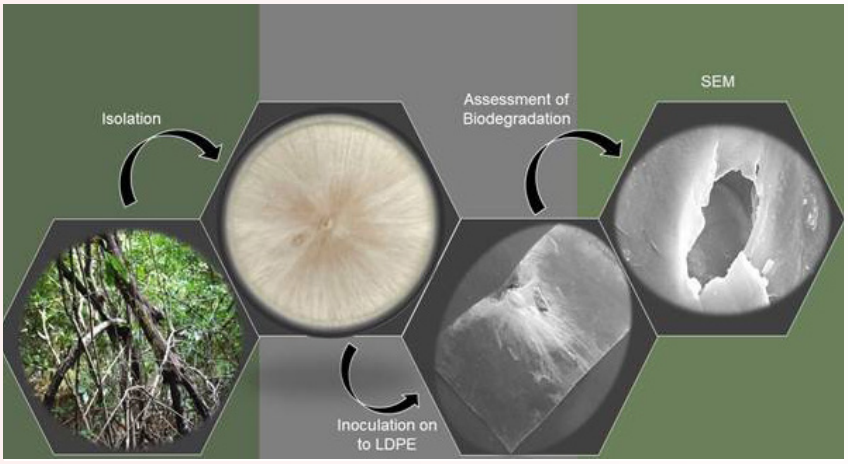
Diagram of a dye solar cell with graphite based counter electrode, fabricated at NIFS.


Counter electrodes for dye solar cells, prepared using activated carbon and sugar composite on conducting glass substrate and

Grant Number : RG/2019/BT/03
Principal Investigator : Dr R. N. Attanayake, Department of Botany, Faculty of Science University of Kelaniya
Project Title : Genetic Dissection of polyethylene degradation ability of *Perennipora* sp. isolated from decaying hard woods in Sri Lanka

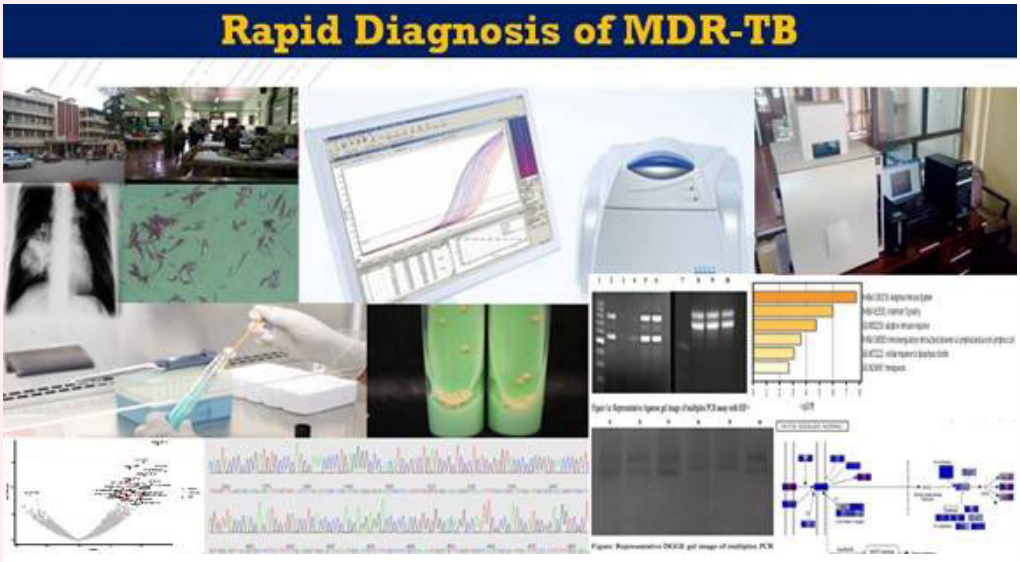
This research project was initiated to find a solution for a burning global issue, the accumulation of polyethylene. Previous research findings have reported that fungal depolymerization enzymes play a role in polyethylene degradation. In this project, fungi were isolated from decaying hardwood species from dry zone forests of Sri Lanka rich in decay-resistant hardwoods such as "Kaluwara" and "Burutha". During the study, eighty-five fungal samples were identified using the latest DNA-based technologies. All the identified species were tested for their ability to secrete economically important polymer degrading enzyme, called "laccase". The laccase enzyme has a wide range of industrial applications such as: industrial dye decolonization, polymer degradation, paper industry, and many more. The best laccase producers were assessed for their abilities to secrete other polymer degrading biotechnologically important enzymes that have the potential to be used in other industrial applications.
Parallelly, the isolates were grown in polyethylene sheet containing media as the only carbon source. Several tests were conducted to determine the level of degradation viz, use of a scanning electron microscope, weight loss, reduction in the strength of the sheets, and changing of chemical properties. A sample isolated from hardwood had a strong potential to degrade polyethylene and it was also

capable of utilizing polyethylene as the only C source in the media. 3% degradation was confirmed after the 45-day incubation period. The next step would be to optimize laccase production and characterization and compare it with laccases from other fungal species. The research project was co-funded by the International Centre for Genetic Engineering and Biotechnology (ICGEB) and NSF.



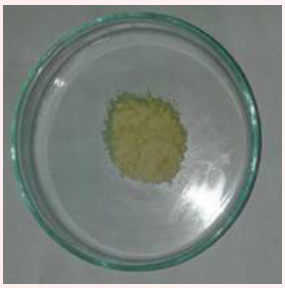
Grant Number : NSF -PSF/ICRP/2017/HS/01
Principal Investigator : Dr Dhammika N. Magana-Arachchi, National Institute of Fundamental Studies
Project Title : Genetic characterization of drug resistant *Mycobacterium tuberculosis* isolation from Sri Lankan and Pakistani TB patients and identification of associated biomarkers

This research project is a collaborative study with Pakistan, intended to identify bacterial mutations that are responsible for drug resistant Tuberculosis (TB). Advanced molecular techniques were carried out to identify common mutations as well as uncommon mutations that circulated within the two countries that could be responsible for drug resistance. As such, more attention needs to be given to the improvement of current diagnostics as there is a chance of false negatives. In addition, the genetic alterations in human blood of drug resistant and sensitive patients were compared using advanced molecular techniques. From Sri Lankan study, a signature panel comprising of 22 markers were identified majority of which are related to immune functions, implying that the immune system of drug resistant patients signals to activate certain immune functions to fight against drug resistant tuberculosis. These markers should be further tested to understand their potential in diagnostics. Further, the researchers were able to develop a rapid and low-cost real-time multiplex PCR (RT-PCR) technique that can be used in a clinical setting for diagnostic purposes of MDR-TB.

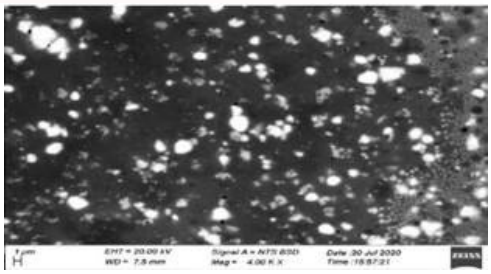


Grant Number : RG/2017/BS/05
Principal Investigator : Dr Mayuri Napagoda, Department of Biochemistry Faculty of Medicine, University of Ruhuna
Project Title : Development of effective sunscreen formulations from Sri Lankan medicinal plants

Although synthetic sunscreens are widely employed against detrimental effects caused by solar ultraviolet (UV) radiation, the demand for herbal sunscreen formulations has been increasing over the years. Therefore, this study was undertaken to evaluate the suitability of some Sri Lankan medicinal plants to develop as efficacious and safe herbal sunscreen formulations. Six herbal sunscreen formulations were developed by incorporating alcoholic extracts of *Atalantia ceylanica, Hibiscus furcatus, Leucas zeylanica, Mollugo cerviana, Olax zeylanica*, and *Ophiorrhiza mungos* into a 100% natural cream base prepared in-house. A similar set of sunscreen formulations were prepared with each of the above extracts, natural cream base, and 5% nano-TiO_2 for comparative purposes. The sun screening potential of all these formulations was evaluated with respect to the SPF (sun protection factor), UV absorption potency, and photostability. The SPF values of all the sunscreen formulations were in the range of 20-28 and were found to be superior to the commercial sunscreen products tested in this study in terms of SPF value and broad-range sun screening activity. All the prepared sunscreen formulations displayed photostability as well as compliance to other parameters of commercial sunscreens. As sunscreen products with SPF values ≥ 15, broad-range UV absorption, and photostability are considered as high-quality sunscreens, all our formulations appear to be promising. Although the incorporation of 5% nano-TiO_2 to the herbal sunscreen formulations resulted in a slight improvement in the appearance of the products, it has not caused a remarkable increment in the sun screening potential of the herbal formulations. Therefore, both sets of sunscreen formulations developed from our study would be suitable for commercialization.



Natural base cream



SME image of nano herbal sunscreen formulation prepared from L. zeylanica

NSF Technology Grants

Grants awarded under the Technology Development Grant scheme and Grants on COVID Research which were awarded during previous years were continued as ongoing Grants in 2022. Details of these Grants are given in *Annex 02.*

Technology Grant (Introduce Most Effective and Efficient Colour and Clarity Enhancement methods for Semi Precious Gem Minerals Found in Gem gravel Beds in Sri Lanka) has been completed in 2022. Details of this Grant is given in *Annex 03.*

National Thematic Research Programme (NTRP)

The National Thematic Research Programme (NTRP) was conceptualized as a mission oriented, multidisciplinary collaborative research programme with a view for addressing national needs and to drive the national research system to produce well defined research outputs for national development. Accordingly, in 2010, NSF took steps to initiate this new research programme named the NTRP, where the themes were decided according to national priorities. The NSF identified Food Security, Climate Change & Natural Disasters, Water Security, Energy Security and Ocean and Marine Resources. Based on the experience and based on the success of the completed Food Security Programme the Climate Change & Natural Disasters was initiated as the second NTRP Programme.

NTRP on Climate Change & Natural Disasters (CC&ND)

The CC&ND Thematic Research programme has been developed considering the national development priorities while being in line with the key global agendas such as Paris Climate Agreement to which Sri Lanka became a signatory in April 2016, Sustainable Development Goals (SDGs) for people and the planet for 2030; and Sendai Framework for Action on Disaster Risk Reduction till 2030, which also include climate adaptation. Sri Lanka is an active participant in international initiatives addressing both: Mitigation (which involves reducing the emission of greenhouse gases that cause man-made global warming) and Adaptation (or living with the climate change impacts that are inevitable in the coming years). Climate change impacts will be far reaching, affecting many sectors of the Sri Lankan economy and touching every segment of its population. While impacts are potentially immense in both degree and scale, resources and capacity to deal with such challenges are not sufficient in the present context. These grants will addres issues relavant to,

1. Climate change resilience on settlements, human health and infrastructure
2. Minimize climate change impacts on food security
3. Safeguard natural resources and biodiversity from climate change impacts
4. Future climates, climate scenarios and natural disasters and early warning

The five ongoing grants awarded in 2018 were continued. Their activities in 2022 gave rise to 08 peer reviewed publications, 33 communications and 18 bachelor's degrees were generated,

The five ongoing grants have demonstrated success which was assessed at the 04th Research Coordination Meeting (RCM) in April 2022 and the Progress review meetings. Cyclic nature of climate change, effect of CC on the elder population, plantation sector, home gardening and natural resources in Sri Lanka have been proved by these grants. In addition, for capacity building of Sri Lankan scientists, there are nine students registered for Postgraduate degrees. Other important findings/contributions of the programme are;

- A comprehensive data set on environmental and vegetation characteristics of the tropical rainforests of Sri Lanka. This will ultimately be developed into a database, which may be used by other researchers and policy makers upon approval and prior permission from the Principal Investigator of the project.
- A network of automated weather stations to continuously monitor the climatic and soil conditions in these tropical rainforest plots. These will enable a comprehensive characterization of the climate of the tropical rainforests of Sri Lanka and monitor its future variation.
- Estimates of impacts [negative or positive] of tea against coconut. Technical Efficiency, Productivity, Profitability and Yield in all growing areas of the country against the expected climate change by 2050.
- An open access database consists of all the important survey data and findings of the research project on model (sustainable and resilient) home garden systems. Fellow researchers, academics and undergraduate students will have the opportunity to access and utilize these data for their research and study purposes.
- Initiation of micropaleontology and coral-based paleoceanography research in Sri Lanka.
- Assess effects of energy poverty and societal poverty on well-being and Quality of Life of elders living in tropical cities.

Progress Review Seminar of NTRP-CC & ND

NSF Partnership Programme

Enhancing the quality of Sri Lankan Batik

NSF Partnership Progrmme, initiated in 2021 to uplift the local batik industry continued in 2022, addressing nationally important issues in line with the National Research and Development Framework.

The above progrmme was initiated as a participatory approach to indentify the research needs of the local batik sector, enabling rural entrepreneurship development. This is an important task to uplift the living standards of rural entrepreneurs in Sri Lanka, specially to sustain during critical social and economic situations. The project was conducted in collaboration with the National Design Centre (NDC), Sri Lanka Standard Institute (SLSI) and National Crafts Council (NCC) with the purpose of uplifting the Sri Lankan batik sector through improvements of production process, sustainability and enhancing the quality of batik products, finally contributing to the national economy.

By the end of 2022, the following tasks were conducted.

1. Brain storming session with NDC (At this session SLSI, NCC and consumer products analysis laboratories and Batik manufacturers were identified as stakeholders).
2. Questionnaire survey for selected Batik manufacturers in Western Province at different scales of production.
3. Analysis of the data gathered.
4. Two awareness seminars on "Chemical safety in Batik Industry" to Batik manufactures.
5. Four stakeholders' meetings with state and non-state sector organizations (NDC, NCC, SLSI and companies (two pioneer private industries engage in developing certification system for Batik products).
6. Collection of information on imported types of dyes and wax commonly used in Batik sector
7. Three field visits were made to the Batik Industry to identify different processing stages at household, medium and large scale.
8. Formation of "Working Group on new Sri Lanka Standard; Good Manufacturing Practices (GMP) for Batik industry" by SLSI for the purpose of developing the guideline for GMP for Batik sector both in English and Sinhala version simultaneously.


DRAFT STANDARD FOR PUBLIC COMMENT

Activities of the Batik Industry and the Draft Guidelines

Launching of the National Instrument Database (NID)

https://idb.nsf.gov.lk

The NSF recognized the need and importance of establishing a National Instrument Database integrating high-end analytical, testing and research equipment available in all higher educational and R&D Institutions in the country. This, besides providing an overall picture on the current strength and potential of the analytical and testing services available in the state sector, helps to identify needs/gaps which are crucially important for strategic R&D, technology development, industrial growth and export promotion. Therefore, the NSF developed and launched a user-friendly national database of high-end analytical and testing equipment which could be updated by the relevant institutes through a nominee appointed by them.

The ceremonial launching of the National Instrument Database (NID) was held on 14th September 2022 at the auditorium of Ministry of Education under the patronage of the Hon. Minister of Education as the Chief Guest.

The NSF will coordinate with institutional representatives from universities and R&D institutes to liaise with the NID and strengthen the database. In the year 2022, 48 universities/institutes and 340 users registered, 235 product categories, 350 laboratories and 1030 records on instruments were entered. Information gathered from the database will benefit multiple users to search availability of research instruments and analytical testing services together with their locations and contact information. This will also help avoid duplicate purchase of same instrument. Further, neither pre-registration nor payment is required to retrieve information from the database.

Special features of the NID are;

- Developed and owned by NSF
- Registered institutes have ownership and responsibility of their data
- Registered institutes have their own sub database and a dashboard
- Well defined authorization hierarchy
- Report generation ability
- Location in Google maps to save time and money
- Suggest correct spellings (fuzzy logic)
- Ability to search by different features
    - Instrument Name
    - Product Category

Launching of the National Instrument Database

Awareness Seminar for New Grantees

An awareness seminar for recipients of research grants awarded in 2021, was held online on 25th March 2022 to make them aware of rules and regulations of NSF grants. Dr Sepalika Sudasinghe, Director General welcomed the participants and Eng. Mahesh Dissanayake, Head, Research Division gave some introductory remarks. Dr Inoka Sandanayake, Scientific Officer, Research Division presented obligations of grantees and NSF procedures, while Ms Priyanka Bamunendra, Accountant discussed the financial regulations and procedures. This webinar was attended by around 20 grantees and research students.

Programme : Providing recognition for S&T excellence

Support Scheme for Supervision of Research Degrees (SUSRED)

The National Science Foundation implemented the Support Scheme for Supervision of Research Degrees (SUSRED) in 2011 with the expectation of strengthening the National Research System with an increased number of trained/ qualified research personnel within a vibrant and dynamic research culture. This will be achieved by motivating, supporting and recognizing scientists/engineers engaged in supervising students conducting research in all areas of Science and Technology leading to postgraduate degrees (MPhils and PhDs).

Objectives of the scheme are:

- Motivation of senior researchers to supervise postgraduate research degrees.
- Encourage universities and research institutions to promote and facilitate postgraduate research training.
- Encourage supervisors to complete the postgraduate research degrees within the stipulated time period without compromising quality.

This year 58 supervisory teams consisting of 129 researchers were successful in securing awards (PhD - 32 awards, MPhil – 26 awards) under this scheme. The distribution of SUSRED awards among different institutions is shown in *Figure 12*. The details of the award winners are given in *Annex 05*.

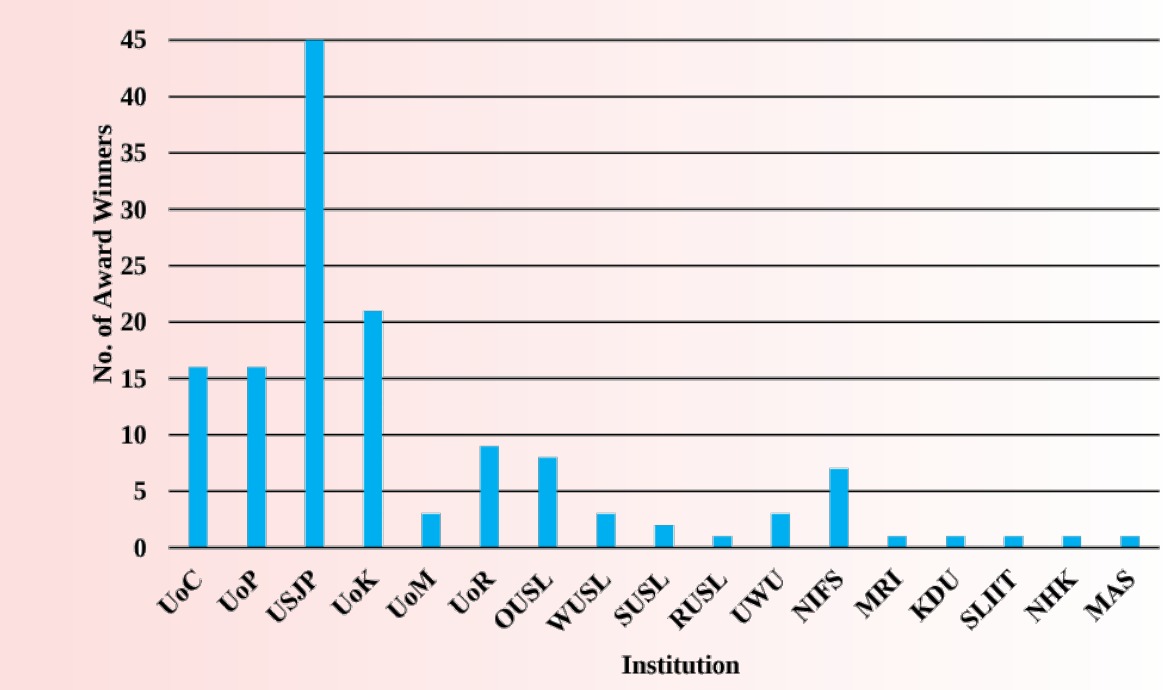


Figure 12: Distribution of SUSRED awardees in different institutions

Research Scholarships

The Research Scholarships scheme provides financial support to Sri Lankan graduates to conduct full-time research (within Sri Lanka) leading to MPhil. and PhD degrees. In 2022 no new Scholarships were called for or awarded, due to finacial constraints.

Eight (08) Research Scholarships were monitored in 2022 *(Annex 02)*. Out of them, three (03) scholarships were completed in 2022 *(Annex 03)*. Out of the three, two MPhils and one PhD was awarded. A total of thirteen (13) publications (04 full papers and 09 communications) resulted from completed Research Scholarships.

Gap Filling Research Grants (GapF) - New Scheme of Research Grants

The Research Division (RD) noted that there were some grants which needed further research before coming up with a product/process with a commercial potential.

Being the current trend in research in the country and the government, is to promote commercialization and technology development, the GapF grant scheme was developed by the RD with the objective of supporting further research of NSF funded completed grants with a commercial potential. This scheme enables and encourages scientists to carry out further research of high standard preferably with collaboration with the industry sector, targeting commercialization. This scheme also encourages continuation of research to come up with an output of commercial value, encourage researchers to utilize their knowledge to carry out research to address the gap between research and commercialization and achieve a high technology readiness level. This scheme will also encourage collaborations between the researchers and the industry sector leading to develop and strengthen operational framework for R&D.

The NSF Board of Management having considered the importance of this scheme approved same and the NSF awarded four grants under this new scheme. They are now ongoing with possibilities for commercialization (*Annex 02*).

Outreach Programmes

The Second Awareness Programme on Intellectual Property: Basics of Copyright

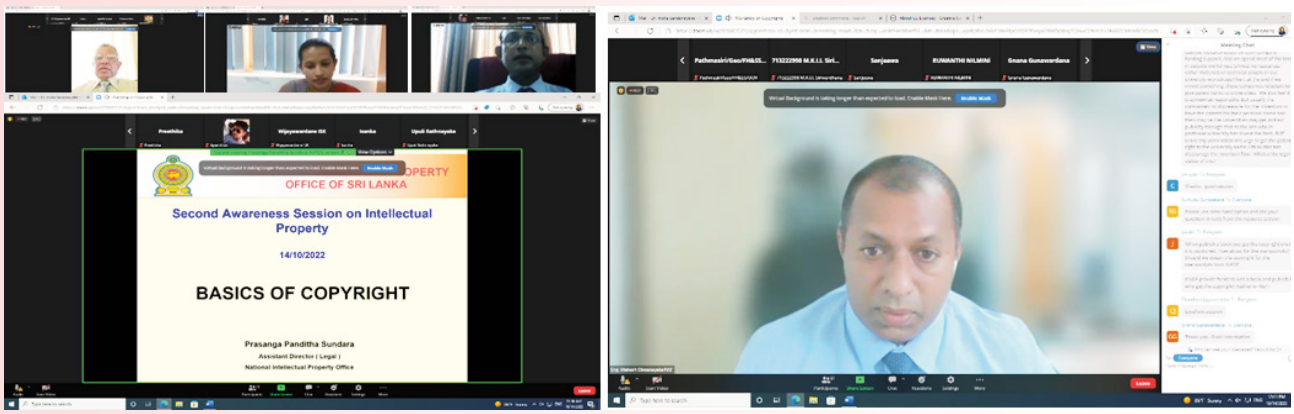
Copyright is a type of intellectual property that protects original work of authorship as soon as an author fixes the work in a tangible form of expression. In copyright law, there are many types of work, including paintings, photographs, illustrations, musical compositions, sound recordings, computer programs, books, poems, blog posts, movies, architectural work, plays, and many more.

With the directive of the working group on "Collaboration with University Business Link Cells", under the Technology Development and Innovation Arm of the Technology Development & Innovation Division of National Science Foundation, the Second Awareness Workshop on Intellectual Property; Basics of Copyright was successfully held on 14th of October, 2022 via zoom in collaboration with National Intellectual Property Office (NIPO) with 90 participants.

This workshop started with opening remarks of Dr Chandra Embuldeniya, the Chairman of Technology, Development & Innovation Arm of the NSF. The importance of NSF and the background of organizing this event was explained by Dr Embuldeniya.

The content of the awareness workshop was; Overview of interllectual property, Introduction to copyrights, Protected rights, What is fair use? and Infringement of copyrights.

Attorney Mr Prasanga Panditha Sundara was the resource person of the workshop. He is the Assistant Director (Legal) at NIPO.



Awareness workshop on Basics of Copyright

Webinars

Towards a Carbon Neutral Nation by 2050: Status, Challenges and Way Forward

As an initiative of the NSF Steering Committee on Environmental Science a webinar titled, "Towards a carbon neutral nation by 2050: Status, Challenges and Way Forward" was organized in collaboration with the Ministry of Environment on 19th May 2022 from 7.00 pm - 8.30 pm. The objective of the webinar was to identify the status and the challenges faced by different sectors in achieving carbon neutrality. As this was held during the power crisis of the country it provided valuable insights as to how to achieve carbon neutrality in the country in a crisis situation. There were 80 participants representing public and private sectors who had lively discussions with the resource personnel.

NSF Home-Garden Initiative

In line with the government directives to address food security issues in the country, NSF has initiated the programme, "Raising awareness on urban home gardening concepts and activities". A series of webinars on "Promoting agriculture to mitigate the impact of the current economic crisis on food and nutrition security" were among the planned activities. Accordingly two webinars were organized for the NSF staff to make them aware of home gardening and its benefits and educate them on food safety issues. Mr S Kumarasinghe, Extension Officer, Department of Agriculture presented on home gardening and Prof. Ilmi Hewajulige, Principal Research Officer, ITI discussed aspects of food safety giving special emphasis on safe storage in the refrigerator and how to maintain a hygienic kitchen.

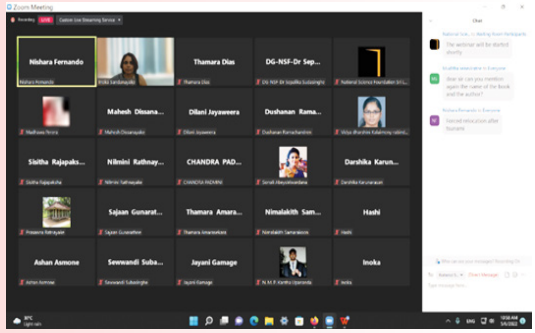
Webinar Series on Healthy Eating

An online webinar series on Healthy Eating was conducted from mid-August 2022 to September 2022 targeting the general public to cover the following objectives:

- to understand how to prepare healthy food plates for kids, young and old adults.
- to understand the new food pyramid and food plate concepts.
- to make participants aware on color coding of food for prevention of non-communicable diseases.

Dr Renuka Jayatissa, Head, Department of Nutrition, Medical Research Institute and Consultant Medical Nutritionist, Dr Shanthi Gunawardena, Consultant Community Physician, Ministry of Health and Dr Bhanuja S. Wijayatilaka, Public Health Consultant, Ministry of Health were the resource pool for the webinar series. Altogether more than 250 participant representing many public and private sectors benefited from this webinar series.

Workshop on Effective Research Proposal Writing



A series of webinars on Effective Research Proposal Writing was organized by the Research Division on 2nd, 4th and 6th May 2022 for prospective applicants of NSF Competitive Research Grants. The three webinars were conducted for applicants in the fields of Natural Sciences, Management & Social

Sciences with a total of 150 participants. Dr Thamara Dias, Additional Director of NSF welcomed the participants and stressed the importance of writing successful proposals in order to receive a grant. The Director General, Dr Sepalika Sudasinghe emphasized the importance of translating research evidence into practice and how it should be planned from the point of writing the proposal. Dr Inoka Sandanayake from the Research Division gave an introduction to the NSF Research Grants Scheme and highlighted how to submit error free proposals.

In addition to the above presentations, Prof. Suneth Agampodi, Department of Community Medicine, Rajarata University of Sri Lanka, presented on How to write a winning research proposal, with special reference to Natural Sciences and Prof. Ajith De Alwis, Department of Chemical and Process Engineering, University of Moratuwa, discussed about Research in times of crisis: how to plan your research?

Prof. Indralal De Silva, Department of Demography, University of Colombo presented on How to write a winning research proposal, with special reference to Management Sciences and Prof. Nishara Fernando discussed the same in relation to Social Sciences.

At the end of each day a general discussion was held where the audience had many questions and the panel of presenters were most helpful in answering them.

Regional Conference on Biosafety 2022

A regional conference was organized by the National Biosafety Project to make aware of the key achievements of the biosafety capacity building project completed in Sri Lanka with the technical support of NSF. The project strengthened the Sri Lanka's regulatory, institutional and technical capacities for the safe handling, transport and use of living modified organisms (LMOs)/ genetically modified organisms (GMOs), the products of modern biotechnology in keeping with international norms. The conference brought together representatives of national and regional institutions to harmonize national guidelines, manuals, application formats and procedures, especially among the South Asian Association for Regional Cooperation (SAARC) countries. The conference was hosted by Food and Agriculture Organization (FAO), Sri Lanka with the Ministry of Environment. NSF provided expertise for organizing the conference.

During the virtual conference held from 10 - 11 March 2022, regional partners were made aware of the key achievements in the biosafety capacity building project in Sri Lanka. The conference provided an inclusive platform for experience and knowledge sharing on biosafety related matters among Sri Lanka, India, Bangladesh, Bhutan, Malaysia and Philippines while priority activities such as implementing the developed guidelines and creating awareness to be executed jointly as a regional community of practice were identified. The conference also drew attention to the need for increased public awareness on the importance of biosafety for food security, nutrition and the safeguarding of biodiversity.

Identifying R&D needs in Industrial Waste Management

A round-table discussion was held on 13th December 2022 with the aim of identifying research needs for effective management of industrial waste. This exercise further aimed at promoting collaborative engagement between local and international universities and other research organizations to find

solutions in managing industrial wastes through new knowledge shared, best practices applied, and partnerships built.

Prof. Yuansong Wei from Chinese Academy of Sciences was also present seeking possibilities for developing a proposal for a new bilateral call between Natural Science Foundation China (NSFC) and NSF under the International Collaborative Research Programme (ICRP) in industrial waste management.

Representatives from the Board of Investment of Sri Lanka, Industrial Technology Institute, National Water Supply and Drainage Board and National Cleaner Production Centre joined the discussion with Prof. Wei and Dr Yawei Wang from the Chinese Academy of Sciences. Some other academics from University of Peradeniya, University of Moratuwa and University of Sri Jayewardenepura were also present. A detailed presentation was done by Prof. Wei on industrial waste management giving special emphasis to industrial wastewater treatment technologies.

Participants shared their views on common problems related to industrial waste management and common types of waste to be managed in Sri Lanka. Sludge management and treatment in industrial zones were identified as priority needs. Follow up work is in progress.

Research Programme on Health Science

This special programme which was initiated by a budget proposal in 2016 with the objective of addressing the research needs in three non – communicable health issues (Diabetes, Cancer & CKDu) and a major mosquito-borne threat in the country, Dengue. Under this Programme, 22 research projects were awarded in 2016/2017. 20 projects out of 22 have been completed by December 2022 and 12 of them were completed during 2022.

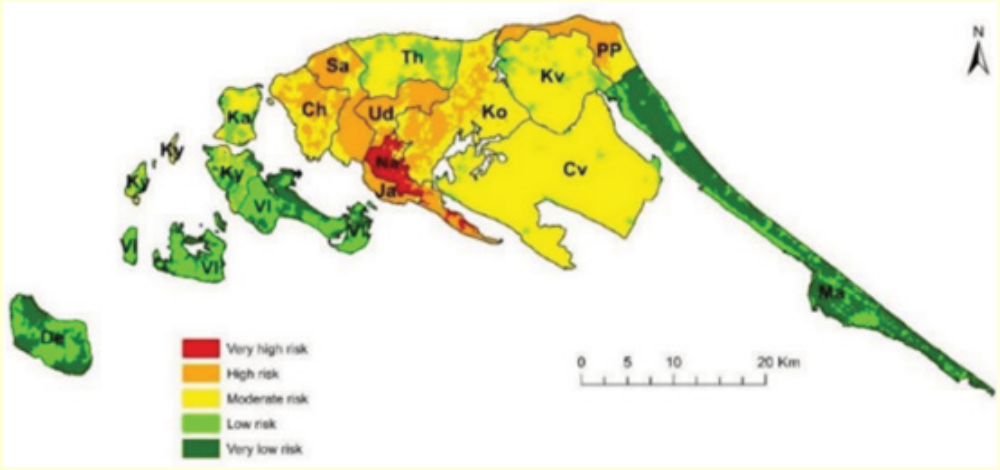
The COVID-19 situation in the country as well as financial constraints severely affected the progress of this programme which had very broad objectives to achieve. However, 13 projects submitted the Final reports, and some highlights are given below.

01) Grant Number : RPHS/2016/D O2
Title of the Project : Development of an early warning system, a risk map and a predication model for dengue and establishment of roles of asymptomatic carriers and brackish water derived mosquitoes in dengue transmission in Jaffna District.
Grantee : Prof. S. N. Surendran, University of Jaffna

Jaffna district, which is in the Northern Province of Sri Lanka has been experiencing an increase in the number of dengue infections in recent years. In order to investigate larval bionomics of Aedes vectors and to identify the emergence of different virus (DENV) serotypes and development of a dengue risk map to understand the changing epidemiology of dengue and to initiate timely control measures, the about titled research project was awarded to Dr Noble Surendran and his team at University of Jaffna.

From this study, for the first time the presence of *Aedes cogilli* was identified in Sri Lanka. DENV serotype 2 was detected in *Ae. aegypti* collected from ovitraps in the city of Jaffna. Of the 563 patients recruited during 2018-2019 DENV serotypes could only be identified in 219 samples. All four DENV serotypes were identified in both years with the predominance of DENV2 accounting for 56% of all cases in 2018 and DENV1 emerging as the dominant serotype in 2019. Higher number of infections were found in the ages between 20–29 years followed by <19 years. There were no significant differences in clinical or laboratory features between the different serotypes, Dengue Fever (DF) and Dengue Hemorrhagic Fever (DHF) and also probable primary dengue and secondary dengue. DENV1 genotype I and DENV3 genotype I were identified for the first time in Jaffna district. Dengue risk map identified Nallur MOH area as a very high-risk area. Circulation of all four DENV serotypes and Aedes larval indices in populated areas of the peninsula showed a high potential for dengue epidemics. Therefore, of the outcome of the present study related to Aedes survey, circulation of DENV serotypes, and availability of a dengue risk map is essential to develop dengue control measures in Jaffna District.

The current dengue vector control guidelines target only freshwater habitats. However, the present study shows that potential dengue vectors are undergoing a typical adaptation to develop in salt and polluted environments. Therefore, it is recommended to revisit the national policies and include fresh water, salt water and polluted water environments to target dengue vector preimaginal forms to control dengue transmission.



GIS based dengue risk map for Jaffna District

The availability of the GIS based dengue risk map helps to identify dengue hotspots that helps to plan controlling strategies, continuous surveillance of dengue vectors and thereby to reduce dengue transmission.

Two research students completed PhDs under this project and this generated 05 peer reviewed journal publications.

Research Outputs :

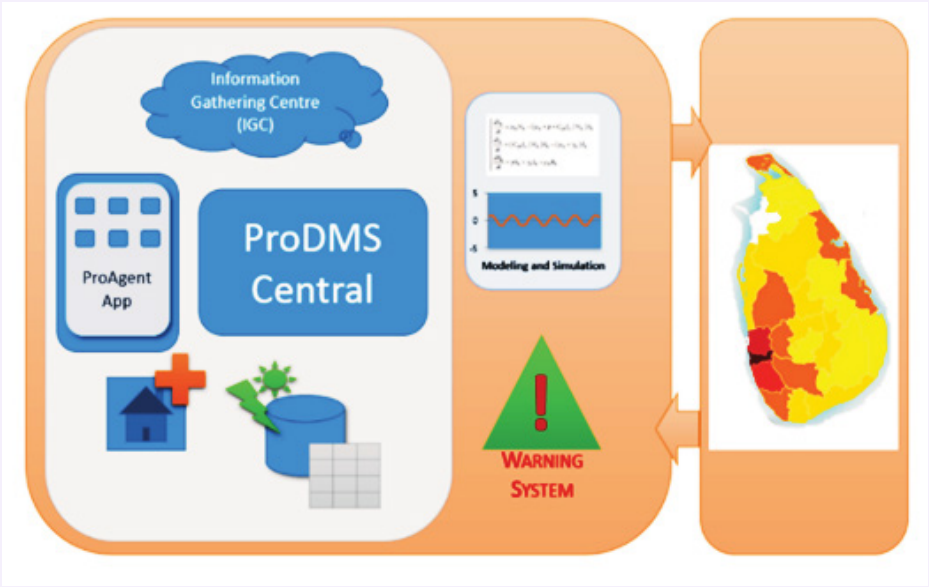
1) The present study reveals that Aedes larval indices such as Breteau index, house index and container index are higher than the expected level indicating the inefficiency of the current vector control measures carried out by the Health Sector in Jaffna district (Udayanga et al., 2020). The present study identifies variety of Aedes preimaginal development habitats including polluted drain water in urban and semi-urban areas of the Jaffna district with the salinity range of 0-8ppt.
2) The present study confirms the circulation of all four serotypes in Jaffna with the predominace of DENV2 in 2018 and DENV1 in 2019
3) The present study reveals that youngsters (less than 30 yrs) were the most affected group by

dengue. Even though, leukocytopenia, neutropenia, lymphopenia, and thrombocytopenia observed in the patients, no statistical significance was observed between the serotypes, DF and DHF even between the possible primary and secondary dengue

4) The partial sequence analysis of DENV1 and DENV3 revealed the presence of the DENV1 genotype I and DENV3 genotype I. This is the first time DENV is sequenced for Jaffna samples. As Sri Lanka has the record of circulating other genotypes than genotype I from DENV1 and DENV3 more frequent and large scale sequencing is needed for clear understanding of the transmission trend of dengue.
5) Availability of a GIS based Dengue risk map for Jaffna district

02) Grant Number : RPHS/2016/D 05
Title of the Project : Proactive Dengue Management System (ProDMS)
Grantee : Prof. S. S. N. Perera, Research Development Centre for Mathematical Modelling, Department of Mathematics, Faculty of Science, University of Colombo

In the past 10 years we have witnessed a dramatic increase in the incidence of dengue and its continuous severe manifestations making this infectious disease a major public health problem. Therefore continues monitoring, analyzing, forecasting and controlling strategies are mandatory to control the spread of the dengue disease and avoid further transmission of dengue. ProDMS is a multi-platformed informative and distributed system for monitoring, forecasting and controlling the dengue epidemics. Ultimately, ProDM provides solution to eliminate the impediment created by lack of transparency and the liquidity of information flows among different communities involving with dengue controlling. The broad purpose of ProDMS is to provide an integrated environment to policy-makers, researchers and general public to synergize the prevention of Dengue epidemics through sharing information, knowledge enhancements, collaborations and community engagements. Thus, the system unites scattered information and work as one single entity with the objective of dengue prevention.



Proactive Dengue Management System - ProDMS

- Information Gathering Centre (IGC): a centralized database for the management of multiple data sources foreseen as pertinent for the control of dengue, including spacetime disease forecasts based on climate and dengue disease data.
- ProAgent: a mobile application as a communication agent with the IGC and the enrolled communities as well as public
- Platform to integrate a pool of geographical sensitive mathematical and statistical models for forecasting dengue dynamics epidemic intensities. This platform will enable plug-and-play facilities in integration of different models and their simulations. In particular, computational model based integrated environment for analyzing and optimizing the of epidemic controller activities (physical activities for preventing dengue epidemics).
- Feedback gathering mechanism towards improving exists or creating new dengue management strategies. Feedback can be provided by health officers, research collaborators and general public

Methodology of developing ProDMS is mainly aligned with its components and their implementation.

1. System Architecture
2. Mathematical Modeling Simulator
3. Statistical Modeling Simulator

The system architecture is designed to function all components concurrently working as a single entity. All the components are centrally manage by a web-based system called ProDMS Central. The components: Modeling and Simulation, Database Modules, ProAgen mobile app, Information gathering center and warning system, are connected to the ProDMS central.

The project, was successfully completed and with the established management system (ProDMS). Two PhDs, one MPhil, 16 journal publications were resulted as spin offs. The grantee was able to produce 07 book chapters, 19 conference abstracts and 10 conference papers during the project period.

During the COVID-19 pandemic, developed models and simulators for the project, were utilized to understand the dynamic behavior of COVID-19 transmission. Obtained results were published for better understanding of COVID spreading.

03) Grant Number : RPHS/2016/C/07
Title of the Project : Development of anticancer compound libraries
Grantee : Prof. Kamani H Tennekoon

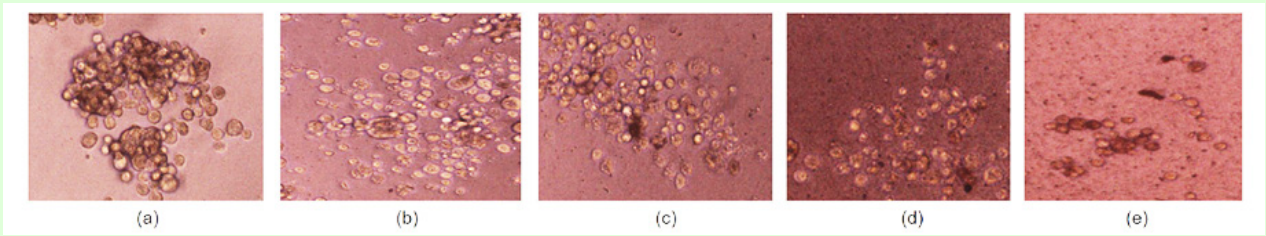
Cancer is a deadly disease with continuously increasing incidence worldwide and in Sri Lanka. Its rank as a leading cause of death worldwide speaks itself for the inadequacy of current treatment. A research project titled "Identification of new cancer biomarkers and validating existing biomarkers for the Sri Lankan setting and identification and development of anti-cancer compound libraries" was one out of the 07 projects awarded under this program to address research needs in the area of cancer, in Sri Lanka.

The study attempted to develop anticancer compound libraries by isolating anticancer agents from natural resources, namely Sri Lankan medicinal and endemic plants and their endophytic fungi (by screening for cytotoxicity, bioactivity guided fractionation and spectroscopy to elucidate structures), by screening available compound libraries in silico to predict anticancer potential and by chemically synthesizing derivatives for already identified anticancer agents to enhance activity. Furthermore, the study evaluated mechanism of anticancer effects of these isolated compounds and selected compounds identified via in silico analysis. Several compounds were also tested on a panel of cancer cells for cytotoxicity of identified compounds which will be effective not just against one type of cancer but against several cancers.

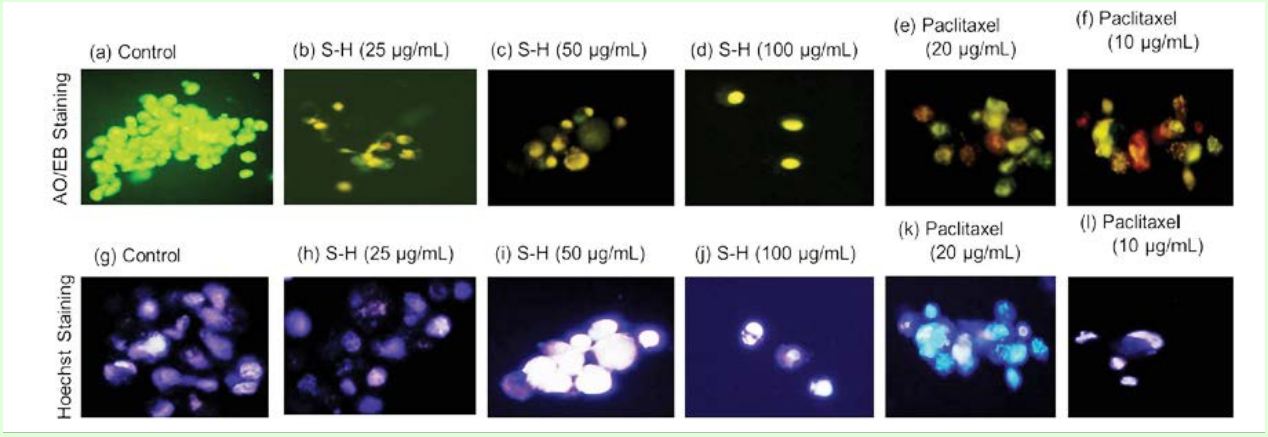
Major findings of this research are

1) Isolation of five anticancer compounds effective against breast cancer from an endemic plant *(Gardenia crameri)* and a native plant *(Dillenia suffruticosa)*
2) Isolation of three anticancer compounds effective against liver cancer from an endophytic fungal strain (They have not given the compounds due to patent rights)
3) Identification of cytotoxic plant extracts with significant antioxidant activity (*Elaeocarpus subvillosus* bark , *Munronia pinnata* bark, *Gardenia crameri, Erigeron sp*)
4) Identification of all or several of the following mechanisms as the mechanisms underlying anticancer mechanisms activity for four newly isolated and three previously isolated compounds (apoptosis, cell cycle regulation, impairment of colony formation and cell migration, impairment of epithelial mesenchymal transition)
5) In *silico* prediction of 10 compounds with the potential to kill cancer stem cells (6 potent inhibitors of b catenin and 4 with gamma secretase activity) They have not given the compounds due to patent rights)
6) Identification of four compounds cytotoxic to 14 or more cancer cell lines
7) Establishment of nano – delivery systems for two anti cancer compounds (Hyalouronic acid coated garcinol loaded nanoparticles, liposomal nanocarrier for co-delivery of gedunin and p-glycoprotein siRNA)
8) Standardization and establishment of lack of acute toxicity for 3 anticancer formulations

In addition to this knowledge creation was done through eight journal publications and 12 communications and capacity building by producing seven Master of Science dissertations and three students following post graduate degrees. One patent has been obtained and one patent application has been submitted.



Phase contrast microscopy images of breast Cancer Stem Cells (bCSCs) treated with the hexane extract of G. quaesita fruits. a – Untreated control; b – 25 µg/mL; c-50 µg/mL; d – 100 µg/mL; e – 200 µg/mL Magnification 200x.



Fluorescent microscopy images of breast Cancer Stem Cells (bCSCs) treated with the hexane extract of G. kquaesita fruits and paclitaxel following staining with acridine orange/ethidium bromide (AO/EB) and Hoechst 33258. a and g-untreated controls; b and h - 25µg/mL; c and i – 50 µg/mL; d and j – 100 µg/mL; e and k - 10 µg/mL of paclitaxel; f and l - 20 µg/mL of paclitaxel. Magnification 200x.

NSF Mandate b) Science & Technology Information Dissemination

Publication of Scientific Research

Like in previous years the Journal Publication Division was continuing its core function of publication of the two internationally indexed journals: Journal of National Science Foundation (JNSF) and the Sri Lanka Journal of Social Sciences (SLJSS). Both these journals are multidisciplinary in their scope; natural sciences and social sciences, respectively. All papers eligible for peer review was subject to stringent double-blind peer review by total of 218 external reviewers. Both journals published all its articles through the Sri Lanka Journals Online (SLJOL) platform under the Creative Commons License 'Attribution-No Derivatives-CC-BY-ND 4.0'.

Journal of the National Science Foundation (JNSF)

Year 2022 was a golden year for the Journal of National Science Foundation. The journal celebrated its 50 years of publication with a special issue , themed "Meeting global challenges: a transdisciplinary and transnational approach", published to mark the golden jubilee Anniversary. The issue contains invited reviews from expatriate and eminent scientists based in Sri Lanka and aborad.

JNSF impact factor was reported as 0.682 (total citations 530) in 2022, which is an increse from 0.515 in 2021. A comparison of the same with the previous 12 years is given in *Figure 14*. Articles of JNSF were downloaded 9704 times from the Sri Lanka Journals Online Platform during the year. The JNSF processed 639 manuscripts and 217 manuscripts (34%) were peer-reviewed. The total rejection rate was 77% while the acceptance rate was 11%. Four issues of the Volume 50 and the special issue of the JNSF were published with a total of 70 artilces benefitting 183 local authors and 80 foreign authors from 34 local institutes and 41 foreign institutes. The foreign authors represented 20 counties in 05 continents (Asia, Africa, Europe, Australia and North America). There was a significant increase (25.7%) in the number of articles published in 2022 compared to 2021. Sixty two percent of the articles published within the year were by local authors while foreign and local-foreign collaborations represented 21% and 17%, respectively. The JNSF review pool was increased by 143 new added entries. This information is summarized in *Table 03* and *Figures 13 to 20*).

Table 03: Metrics of JNSF

SCIE Impact Factor	**0.682**
Annual downloads (SLJOL)	9704
JCR Rank	87/134
JCR Quartile	Q3
JCR Percentage	35.45
SCIMAGO H-Index	21
Total Submissions	639
Acceptance rate	11%
Total Rejection rate	77%

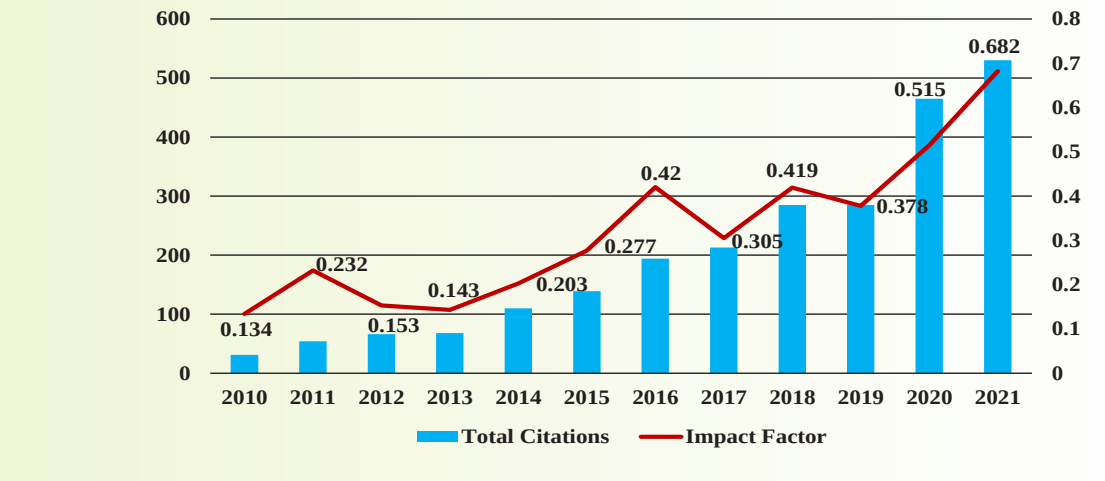


Figure 13: Increase in JNSF Impact Factor and Total Citations

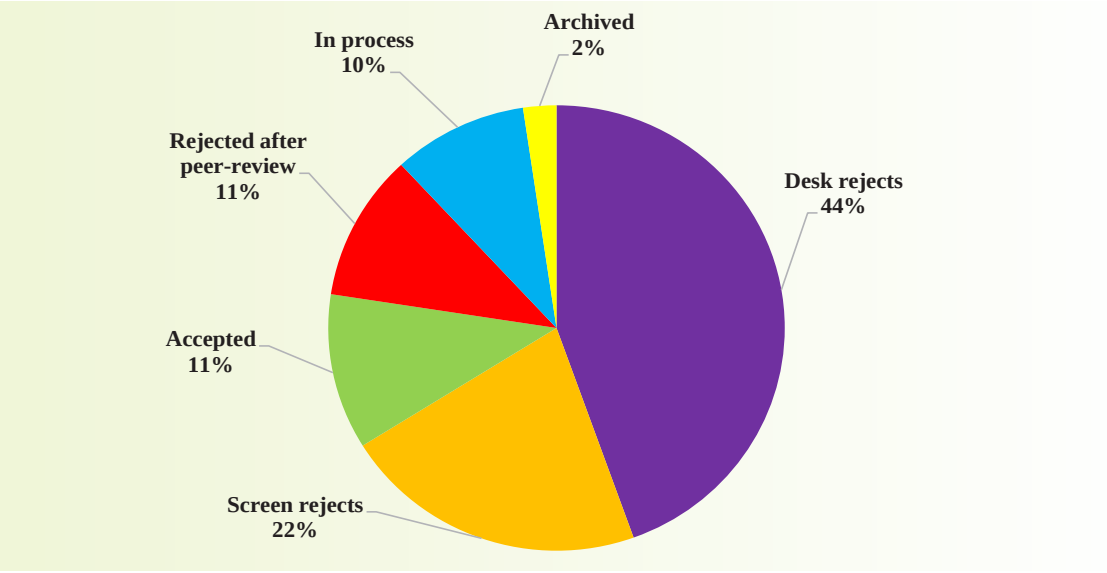


Figure 14: Details of Submissions-2022 of JNSF

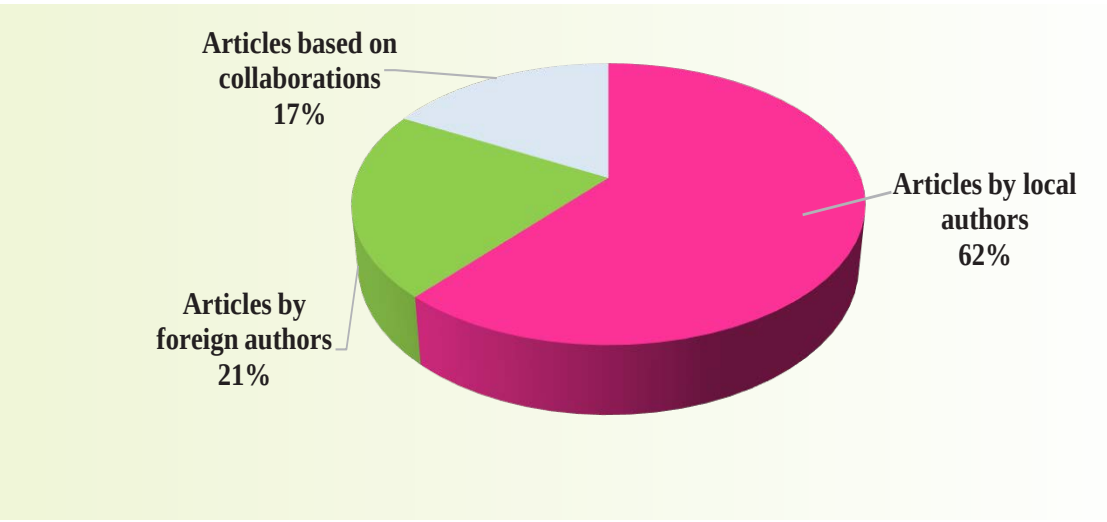


Figure 15: Articles Published in JNSF based on Origin

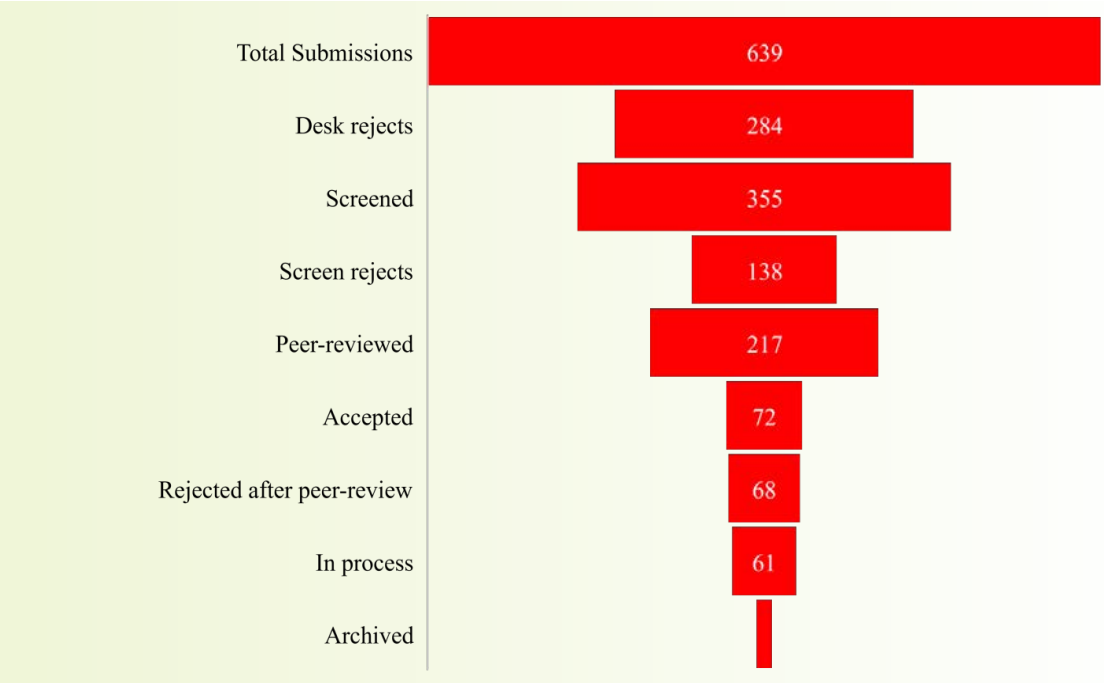


Figure 16: Statistics of Submissions for JNSF in 2022

Out of the 183 local authors contributed to volume 50 of the JNSF, 21% were from the University of Peradeniya, while authors from University of Sri Jayewardenepura and University of Ruhuna contributed 15% and 11%, respectively.

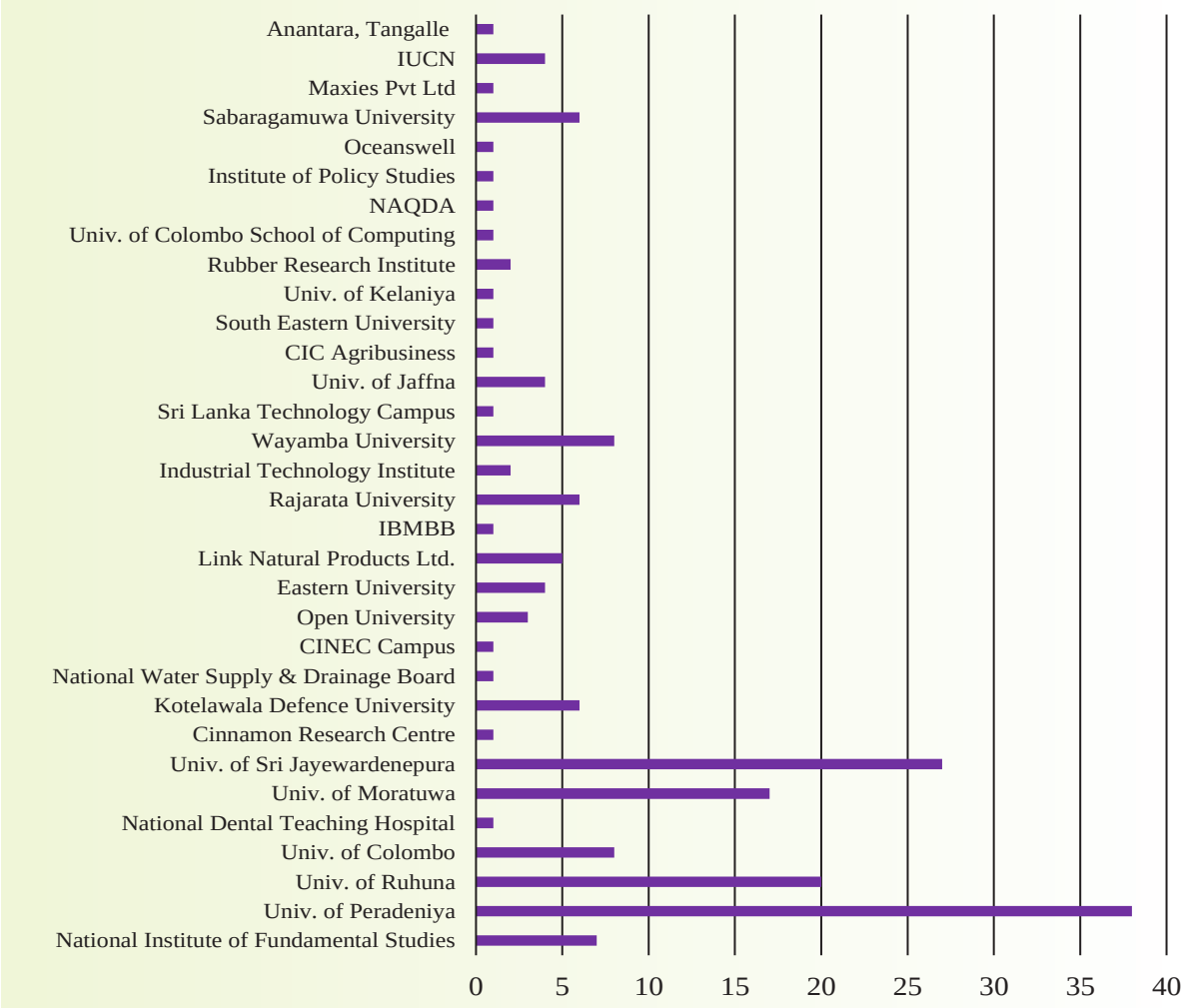


Figure 17: Local author Affiliations (in 2022 published articles)

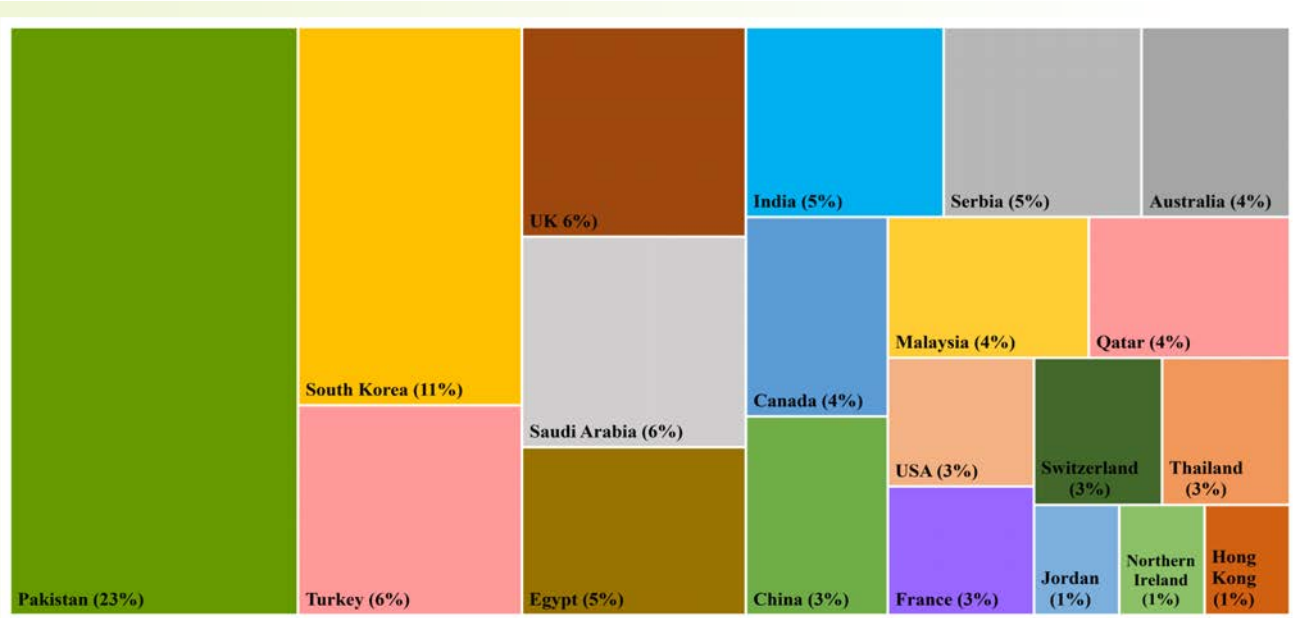


Figure 18: Geographical distribution of authors (2022)

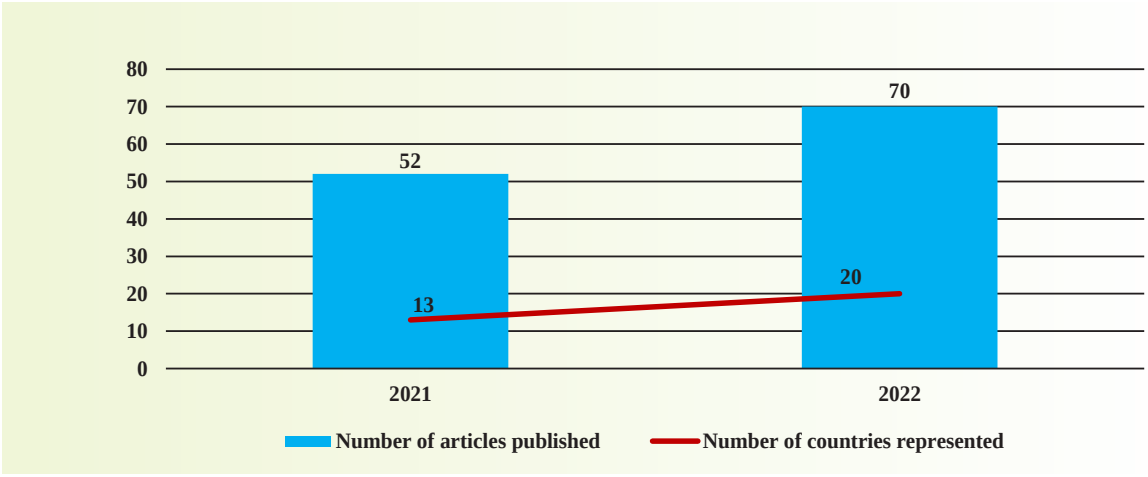


Figure 19: Increase in Number of Aricles Published and Countries Represented in JNSF (2021 vs. 2022)

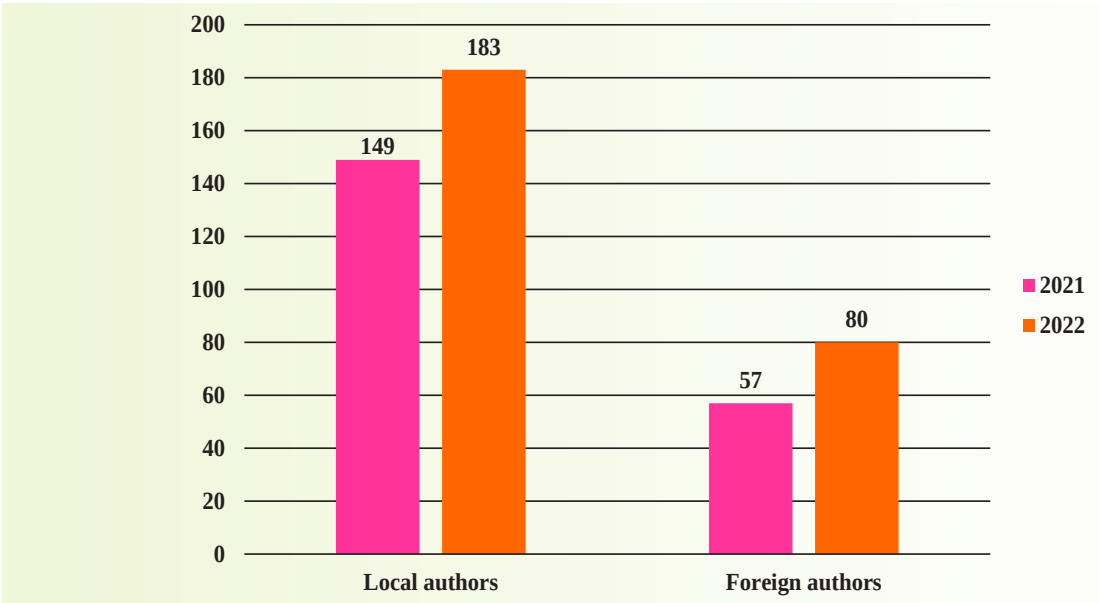


Figure 20: Increase in Number of authors benefitted in 2022 Compared to 2021 in JNSF

Sri Lanka Journal of Social Sciences (SLJSS)

Sri Lanka Journal of Social Sciences (SLJSS) is published twice a year (in June and December), entertaining social science contributions in the form of Research articles, Review articles, Work-in-progress articles, Correspondence and invited Book reviews. The journal publishes social science articles in Sinhala, Tamil and English languages, on topics relevant to Sri Lanka in particular, and South Asia in general.

A total of 189 new manuscripts were received and processed. Twenty five manuscripts brought forward from 2021 were continued reviewing in 2022. Accordingly, a total of 214 manuscripts were processed. 135 manuscripts were rejected at desk screening stage due to non-compliance to basic guidelines of the journal. This accounts for 71% of the new submissions. Rejections at desk screening, pre-screening and reviewing has contributed to 74% rejection rate during the year 2022. The acceptance rate was 16%. By end of December 2022, Issue 1 of Volume 44 was published and the second issue was at the final editorial corrections. A total of 20 articles was finalized to publish in 2022, giving the opportunity for 43 of local authors and 11 foreign authors to share their research findings under multidisciplinary areas of social science. Publications originated from Sri Lankan authors dominated in 2022, which is 75% of the total publications. The other geographical regions where the authors contributed are India (10%), Pakistan (5%) & Thailand (5%). (*Figure 21 to Figure 23*).

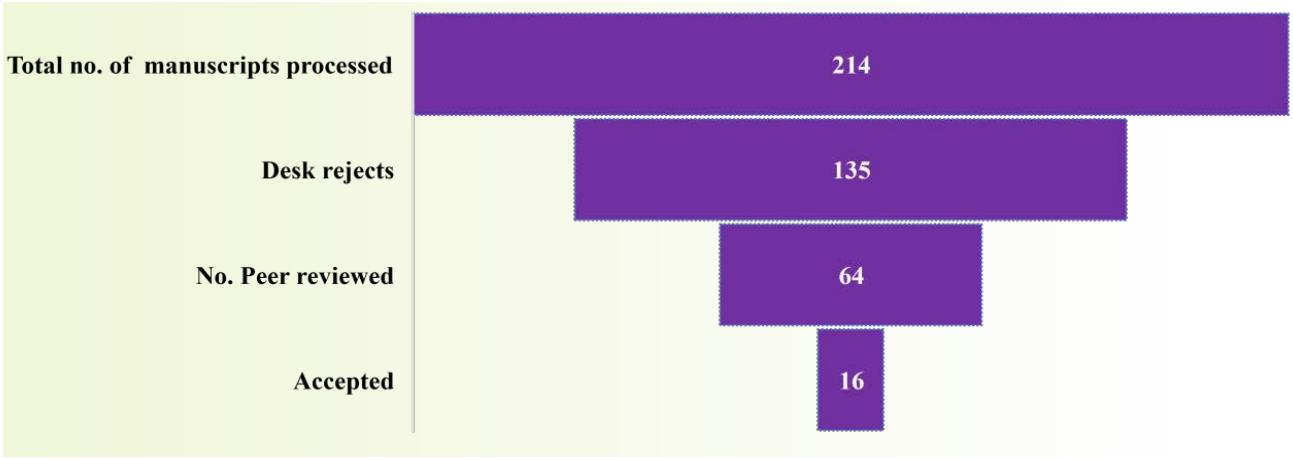


Figure 21: Processing of Manuscripts in SLJSS

2022 showed a higher distribution of local authors in articles published within the year.

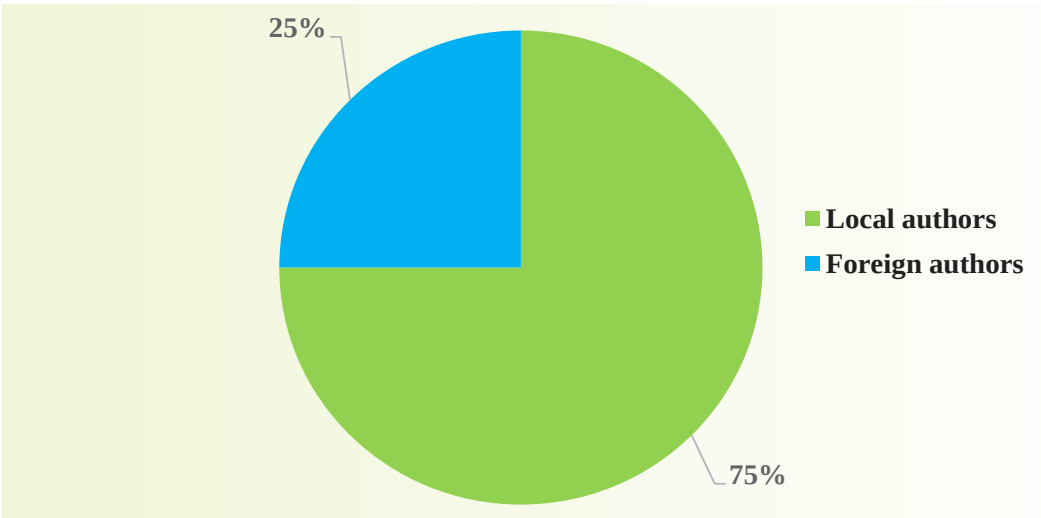


Figure 22: Geographical distribution of authors in SLJSS

Similar to 2021 Sri Lankan authors dominated in 2022 by taking 75% of authorship of the Vol. 45. Foreign authors from India, Pakistan, Thailand also contributed to this Volume.

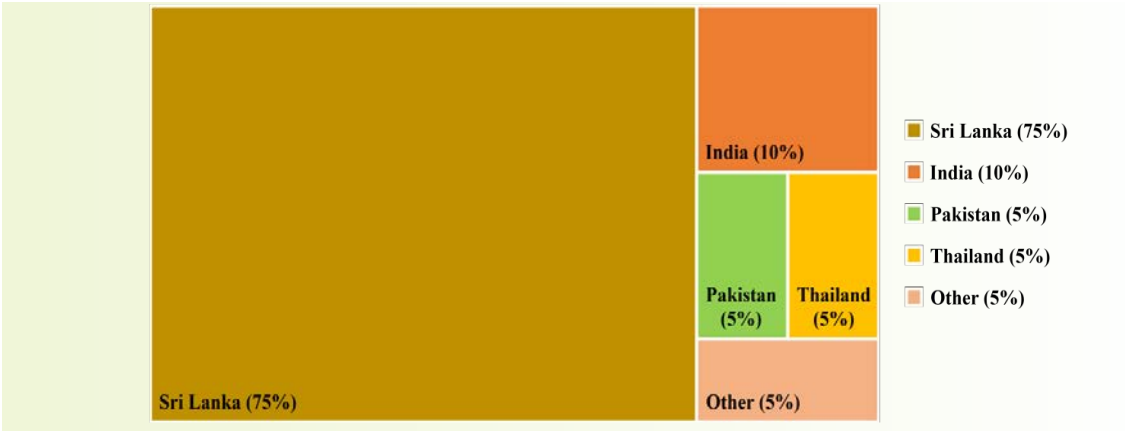


Figure 23: Geographical Distribution of Authorship of SLJSS Vol. 45

Sri Lanka Journals Online (SLJOL)

Sri Lanka Journals Online (SLJOL) *(https://www.sljol.info/)* is a unique online platform at the country level which makes an opportunity to 'Shine a Light' on Sri Lankan research expertise by providing worldwide visibility to their research output of the full range of academic disciplines via Google Scholar with no cost. Subsequently, it overcomes the great challenge faced by them in disseminating their findings worldwide. The SLJOL, a conglomeration of one hundred twenty-nine (129) scholarly peer-reviewed journals published in Sri Lanka is a member of the Journals Online (JOL) project established by the International Network for the Availability of Scientific Publications (INASP) of the United Kingdom (UK). The website is operated by Ubiquity Press, a company registered in England and Wales and administrated by the National Science Library & Resource Centre (NSLRC) of the National Science Foundation (NSF). The subject areas covered in SLJOL and their numbers are as in *Figure 24*.

Since its inception in 2008 with 06 journals, SLJOL has extensively matured in the last one and a half decades and it continues to grow fast even today (*Figure 25*). As of 31st December 2022, 18,280 research articles from 2,085 issues of 129 Sri Lankan scholarly journals were securely archived and made freely available with an ability to reuse the content to develop new knowledge subject to terms and conditions that all reuse is fully credited to the original authors and the original publications.

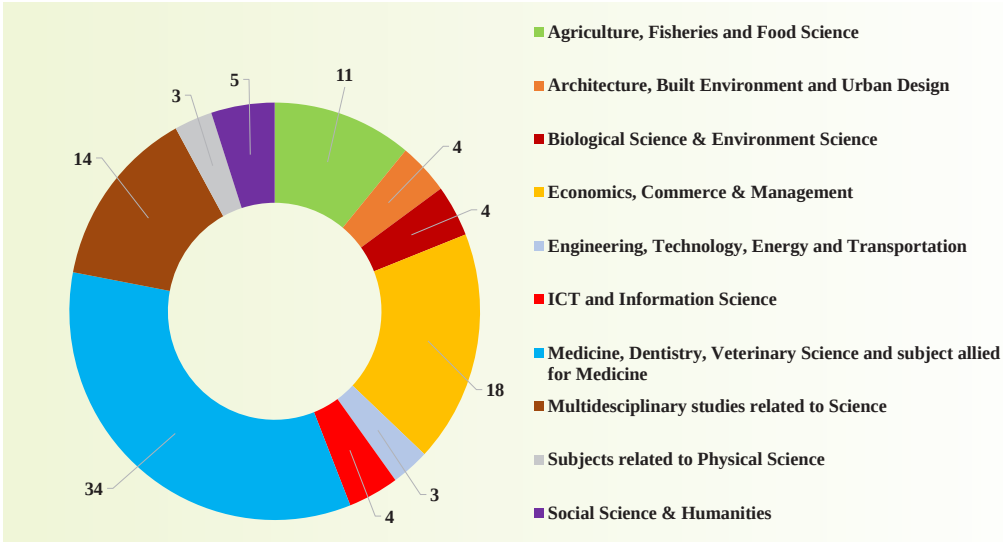


Figure 24: Subject Areas Coverd by SLJOL in Numbers

The value and necessity of having an open-access journal publishing platform were widely realized by local publishers, editors, and authors (researchers) to host their scholarly journals in the face of

the COVID-19 pandemic. Since SLJOL provides the same service to journals by hosting their content online and actively promoting the website to encourage the discovery of relevant titles and articles, there was a high demand from 24 local open-access journals to join the SLJOL. Upon fulfilment of standards and rigorous evaluation criteria required by the SLJOL 18 journals newly joined the SLJOL during the year 2022.

Following verification of key elements that should be displayed on the front page of each article in relation to article quality standards according to the Journal Publishing Practices Standards developed in 2017 by INASP and African Journals Online, 2,550 research articles from 301 journal issues were published on SLJOL in 2022.

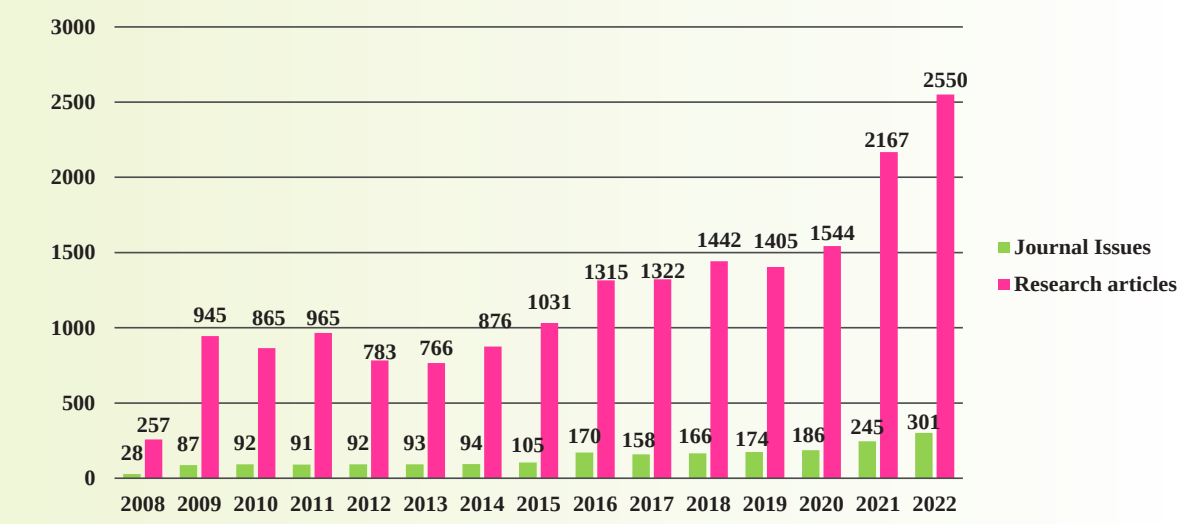


Figure 25: Growth of SLJOL

The website has a sophisticated search tool, to help researchers in locating articles of interest and relevance to their area of study. According to the statistics given on Google analytics in 2022, 324,836 viewers have been recorded from 213 countries (Top 36 countries showen in *Table 04*) for the SLJOL and 159,103 full-text articles have been globally downloaded from the same.

Table 04: Global Distribution of SLJOL Users (Top Thirty-Six Countries)

Country	Users	Country	Users	Country	Users
Sri Lanka	121076	Canada	3029	South Korea	1276
India	33112	France	2878	Nepal	1269
United States	21796	Singapore	2544	Ireland	1214
China	14312	Japan	2028	Egypt	1194
Philippines	9899	Turkey	1957	Mexico	1136
UK	7606	Bangladesh	1918	South Africa	1029
Indonesia	6385	Brazil	1709	Vietnam	1028
Australia	4850	Thailand	1637	Hong Kong	969
Nigeria	4012	Netherlands	1444	Russia	946
Pakistan	3573	Taiwan	1372	Saudi Arabia	945
Malaysia	3517	Ethiopia	1367	Sweden	927
Germany	3396	Italy	1327	Spain	878

As shown in *Figure 26*, the usage of SLJOL has increased considerably and full-text downloads have boosted during the period 2015-2022. Upon the movement to a new platform in 2015, SLJOL allows to share its content to users via their accounts on social media. The top 10 most downloaded local journals from SLJOL is given in *Table 05*.

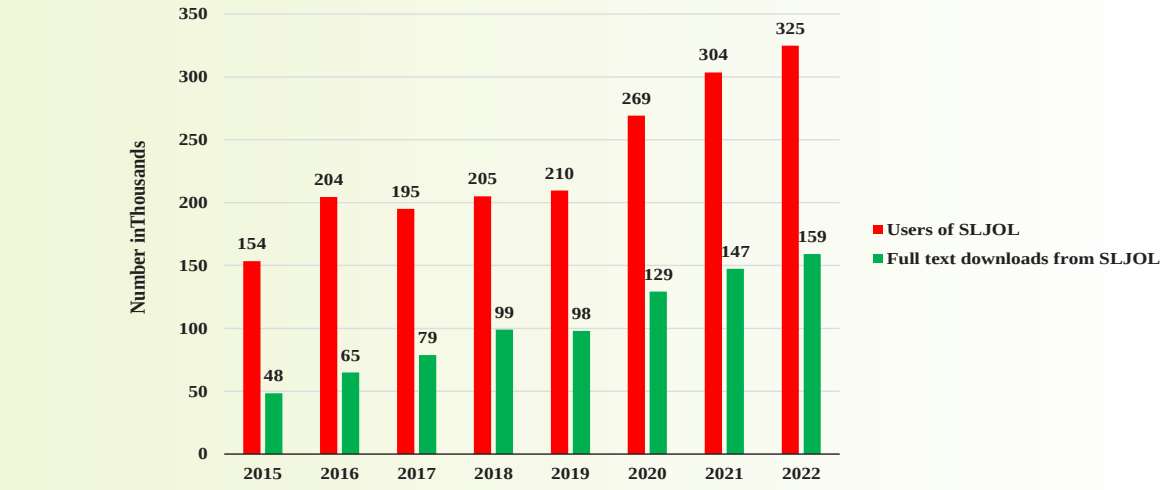


Figure 26: Users of and Full text downloads from SLJOL (given on google analytics from 2015 to 2022)

Table 05: Top 10 most downloaded local journals from SLJOL given on Google Analytics 2022

Journal Name	No. of downloads
1. Ceylon Medical Journal	15,795
2. Sri Lanka Journal of Child Health	12,180
3. Journal of the National Science Foundation of Sri Lanka	9704
4. Journal of Agricultural Sciences	7478
5. Tropical Agricultural Research	5067
6. Ceylon Journal of Science	4525
7. Engineer: Journal of the Institution of Engineers Sri Lanka	4403
8. Sri Lanka Journal of Anesthesiology	4212
9. Sri Lanka Journal of Surgery	3905
10. Sri Lanka Journal of Obstetrics and Gynecology	3615

Evaluating Journals on the SLJOL

One important responsibility of the Sri Lanka Journals Online is to periodically evaluate the quality of the journals for its sustainability.

In 2022, SLJOL supported editors in various ways to fulfill the above task as follows.

- Facilitated 18 journals to allow online submission of articles to be able to conduct the whole editorial process in an online environment via the journal management system operated by the SLJOL.

- Facilitated 04 journals to perform the editorial and publishing process via the SLJOL platform which can be considered as an effective, reliable, and consistent system to attract high quality submissions with geographical spread, better use of members of the editorial board, better performance with a minimum number of cadres of the editorial office, increasing citation level and awareness of the journal, ranking in indexes, and finally improving the journal's reputation.

- Gold Open Access Journals of SLJOL
  Gold Open Access Journal means that the journal makes its article available open access under a Creative Commons (CC) Attribution 4.0 International Public License *(https://creativecommons org/licenses/by/4.0/)*. Twelve journal editors were supported to publish on SLJOL to generate relevant machine-readable CC statements and incorporated them into the journal's web site and front page of each article to indicate how its content can be used by readers.

- Two hundred fifty-one (251) web announcements with relevant cover images and twitters were made on the SLJOL home page about publishing of new journal issues and two hundred and forty two (242) troubleshooting sessions were successfully attended. Thirty-four (34) demonstrations and awareness sessions were conducted to editors to provide a comprehensive knowledge of all the processes related to publishing a new issue on SLJOL.

- Ensured that all system options of the SLJOL platform were properly executed and enrolled 128 users as editors, section editors, authors, reviewers, and copy editors.

- Requests were made to twelve (12) SLJOL editors to inform their corresponding authors to obtain a free personal, validated ORC ID *(http://www.orcid.org)* to be displayed on the front page of the articles with their email- addresses.

- One hundred and ninety-two (192) web updates of the following sections of journals' home pages were made more informative.

    1. Up-to-date and accurate details about the Editor and Editorial Boards
    2. Clear and comprehensive guidelines for authors
    3. Details about editorial policies, data policies and peer-reviewed processes
    4. Review forms for the online peer review process
    5. The formal copyright statements including an official licensing statement.
    6. Statements related to membership of the Committee on Publication Ethics (COPE)

- 'Research Integrity' category was newly added to four (04) journal's home pages as requested by editors and incorporated details related to the responsibilities of editors, reviewers, authors and ethical research which are more useful to fulfil the criteria to index in citation databases.

- Offering Digital Object Identifiers (DOIs) to each article of journal's issues during the year, 2532 articles from the 301 journal issues were offered Digital Object Identifiers by submitting batch files of required metadata to crossref.org. DOI offered to an article acts as the persistent unique identifier of the article despite changes in location or metadata.

- Provided comprehensive knowledge to twelve (12) editors through informative emails about the criteria of the Journal Publishing Practices and Standards (JPPS) framework made up of internationally recognized high standards of publishing and editorial best practices and supported them to incorporate the essential elements to the first page of the contents of the journal and upgraded the quality of articles through the addition of required links.

Online Training Courses conducted in 2022 for Journal Editors

Facilitated journal editors (whose journals are on SLJOL) to participate in four online training programmes on Journal Management Systems (JMS) conducted by Ubiquity Press UK on 27th April 2022 (Two Sessions), 29th April 2022 and 24th June 2022. All training programmes were more useful for editors to familiarize themselves with the core activities of assigning manuscripts, conducting peer review, and making decisions on the current version of JMS.

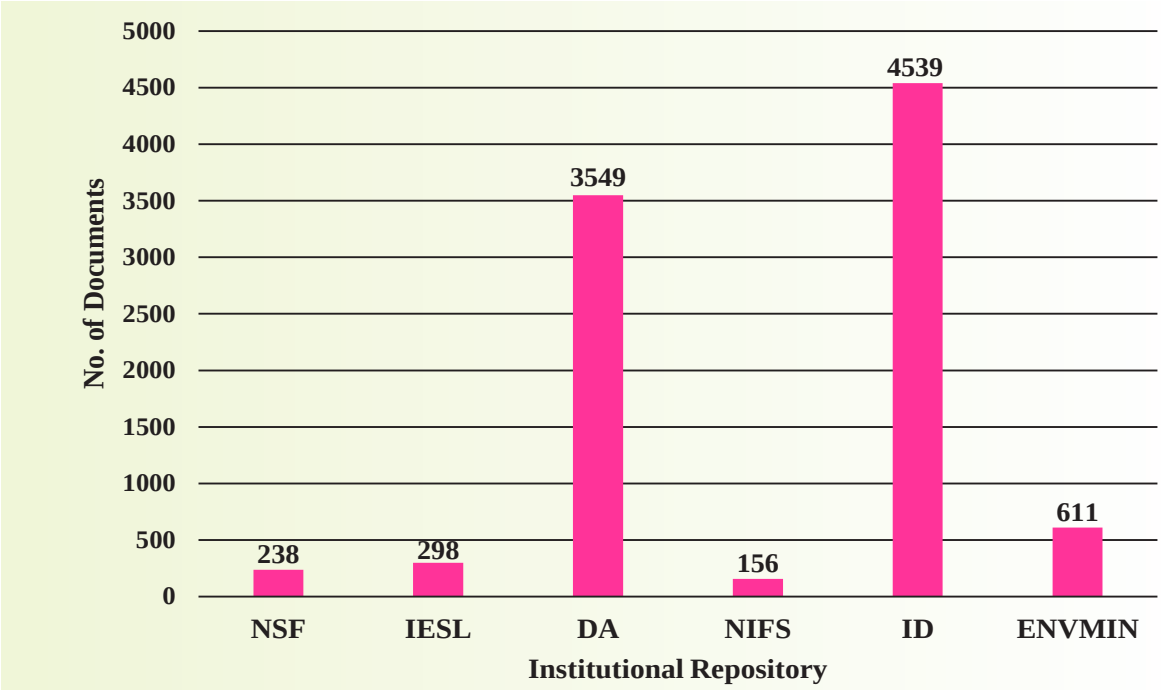
Achievements of the SLJOL

As of 31st December 2022, eighteen (18) journals hosted on SLJOL are indexed in the Directory of Open Access Journals (DOAJ). The DOAJ is a unique and extensive index of diverse open-access journals from around the world, driven by a growing community, committed to ensuring quality content is freely available online for everyone.

National Digitization Project

The National Science Foundation as the focal point for dissemination of S&T information in the country has been facilitating the other S&T libraries with digitization of their literature collections and establishment of Institutional Repositories (IRs) since 2011 through implementation of the National Digitization Project (NDP). This Project was progressing successfully at its third phase (Phase III) during the year 2022. Having completed digitization of 25 library collections & establishment of 25 Institutional Repositories (IRs) on DSpace software in past few years, approximately 90,000 documents were made available for online access through the IRs by the end of 2022.

Figure 27 given below depicts the total number of articles for which online access was provided via six e-Repositories hosted in the NSF server in 2022 and in total 9391 new documents were made available for online access.



NSF – National Science Foundation
IESL - Institution of Engineers Sri Lanka
DA - Department of Agriculture
NIFS - National Institute of Fundamental Studies
ID - Irrigation Department
ENVMIN – Ministry of Environment

Figure 27: Documents/ Articles made availble for Online Access in Year 2022 for Institute

Recognition was received for the National Digitization Project. As a result, NSF was encouraged to establish a digital library for the Ministry of Environment in 2021 which was successfully completed in 2022 and launched by the Ministry under the patronage of the Minister of Environment, Hon. Naseer Ahamed.

Preliminary arrangements were made for two new digitization projects for the Presidential Secretariat and the Bhiksu University of Sri Lanka, Anuradhapura. These will be implemented in 2023.

One of the main objectives of the NDP is to increase the visibility and online accessibility for users. It is measured by the number of views made and the number of documents downloaded. A significant increase in the usage of repositories in 2022 was observed compared to 2021. More than 2.7 million views and more than 546,000 full text document downloads were recorded in the year under review *(Figure 28 & Figure 29)*.

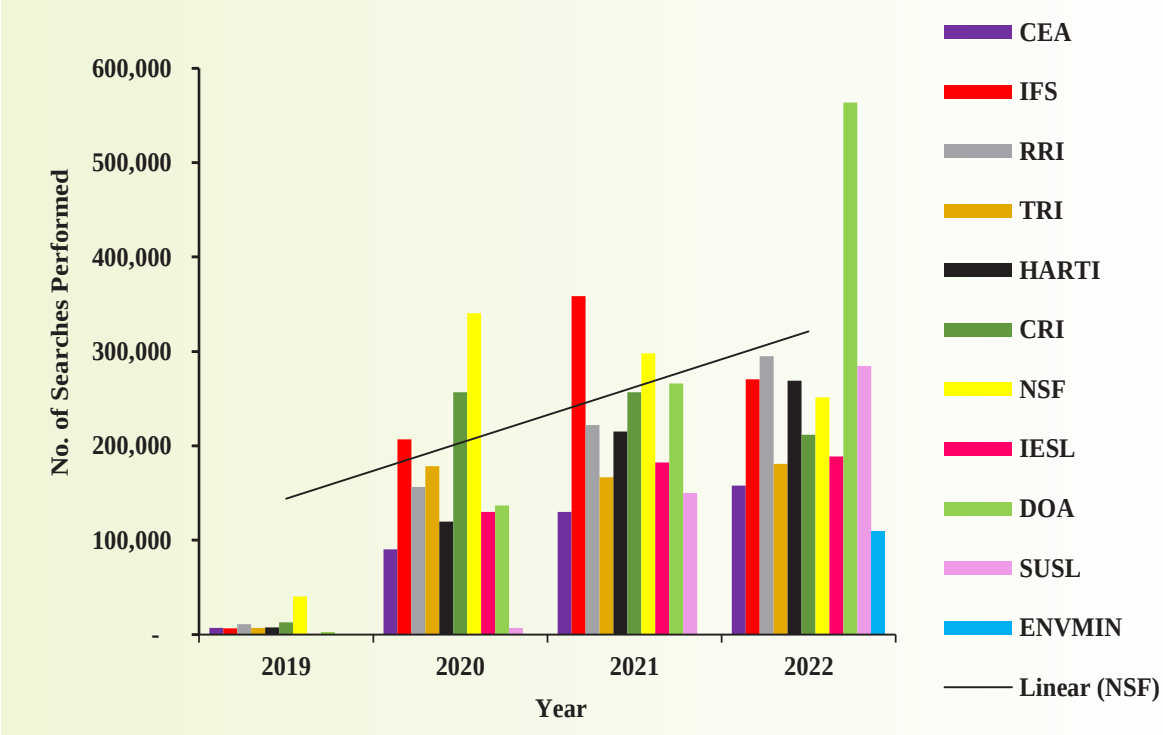


Figure 28: Usage of Repositories Hosted on NSF Server (Number of Searches Performed)

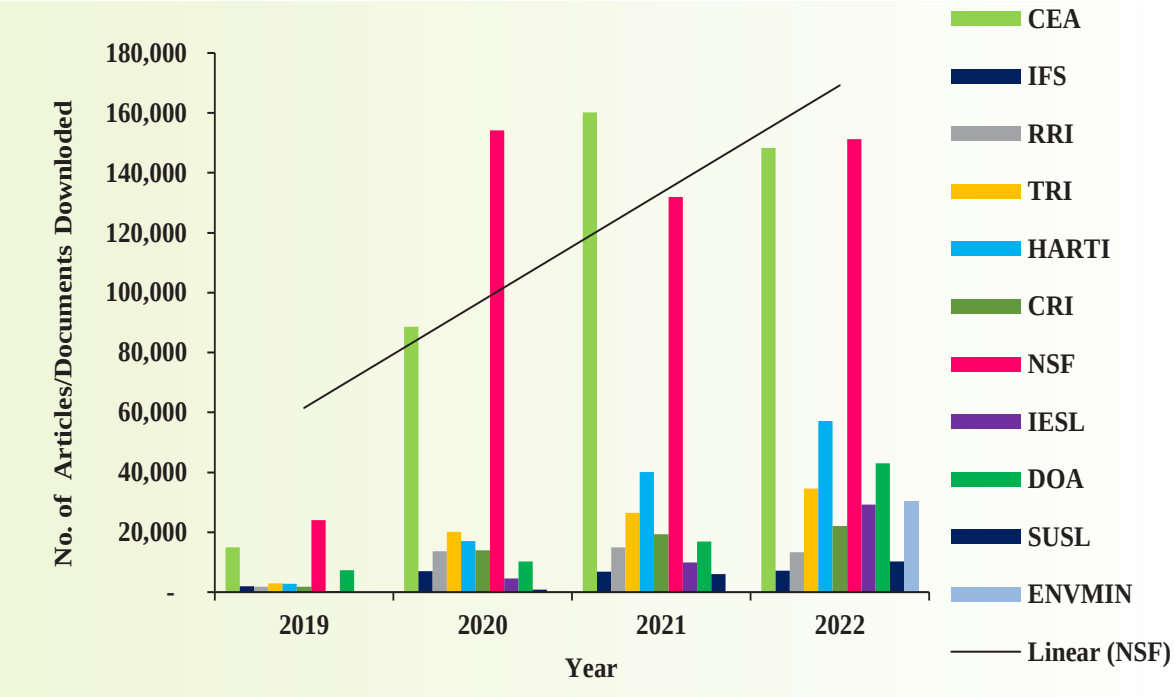


Figure 29: Usage of Repositories Hosted on NSF Server (Number of Articles/Documents Downloaded)

Development and Maintenance of National Databases of Scientific Information

In 2022, NSLRC of the NSF mainly focused on improving the quality of the national scientific literature databases developed by the NSF. In this context, data editing & data accuracy checking were performed for the Sri Lanka Science Index database (SLSI), which contains a huge number of records, approximately 70,000. It was recorded that 2529 records were checked & updated in SLSI during the year 2022. Further, data editing and updating of the library catalogue on KOHA Integrated Library Management Software was continued with a progress of 2,076 edited records & 279 newly added records.

The NSF was able to further strengthen its Scientific Information by adding 1429 new records to SLSI, SLSTICAT (Library catalogue on JISIS software) and SLAAS (Abstracts of Proceedings of the Sri Lanka Association for Advancement of Science) databases during the year under review *(Figure 30)*.

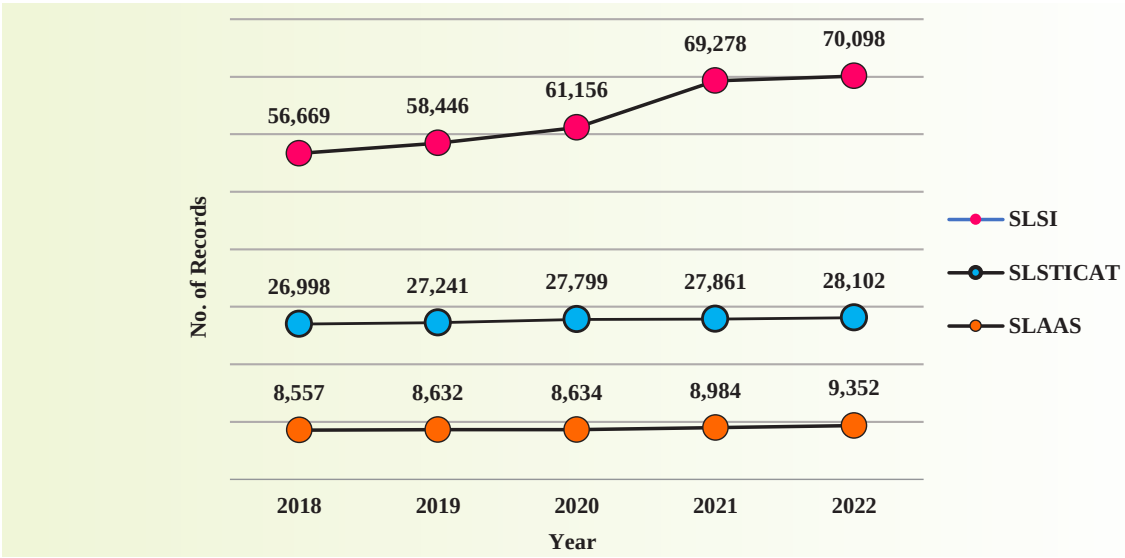


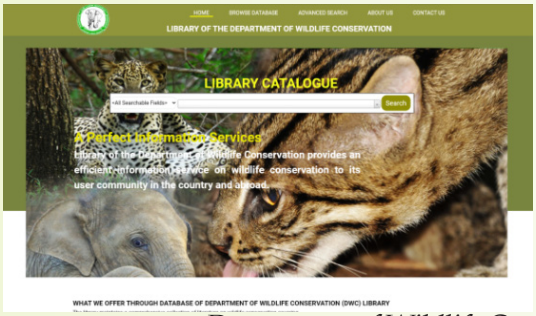
Figure 30: Growth Records of Scientific Information Databases (2018-2022)

Develop/Maintain Bibliographic Databases, Library Catalogues for NSF and other S&T organizations by using Open-Source Library Management Software

The National Science Library & Resource Centre (NSLRC) of the National Science Foundation (NSF) of Sri Lanka has been developing several online Scientific Database Platforms, Library Catalogues for National Science Foundation, SLSTINET (Sri Lanka Scientific and Technical Information Network) and other libraries using Open-Source Library Management Software, DSpace, Koha, Java CDS/ISIS etc. with other advanced Graphical User Interface (GUI) tools used by IT experts at NSLRC. *Table 06* depicts the Bibliographic Databases and Library Catalogues Developed/Modified by NSLRC in 2022.

These database platforms comprise of online access to bibliographic databases & repositories, online cataloguing, automated circulation systems, and well developed and formalized personnel policies and procedures etc.

NSLRC assists to maintain comprehensive, accurate and timely intellectual records in their online resources. To maintain the created databases, manipulate data, support their users, provide online access and host the site, the NSLRC provides continuous training for library & IT professionals on these software tools, customization of the platforms, essential Operating Systems, network configuration, supporting software engineering tools, various information formats and data migration etc. These developments have led to explore the possibility of resource-sharing among Science and Technological institutions.



Department of Wildlife Conservation and Coconut Research Institute

Table 06: Bibliographic Databases, Library Catalogues Developed/Modified by NSLRC in 2022

	Institute Name	AvailableDatabases	New/Modified Project	Total Number of Records
01	National Science Foundation Sri Lanka Integrated Research Information Platform *http://viduketha.nsf.gov.lk*	04	Modified	79,279
02	National Science Foundation Research & Technology Grant Database *http://viduketha.nsf.gov.lk/rtgra*	02	Modified	2,180
03	Industrial Development Board *http://viduketha.nsf.gov.lk/idbdbs*	06	New	28,393
04	Department of Wildlife Conservation *http://viduketha.nsf.gov.lk/dwcbib*	06	New	3,165
05	Coconut Research Institute *http://viduketha.nsf.gov.lk/cribib*	02	New	9,884
06	Maris Stella College Thimbirigaskatuwa *http://38.242.147.208*	Ongoing	New	Ongoing
07	Kalutara Bodhi Gnana Library (Desktop Application)	02	New	56,553
08	Department of Agriculture (Desktop Application)	03	New	13,405
09	Tholangamuwa Central, Kegalle (Desktop Application)	01	New	2,305

National Research and Development Survey

The National Research and Development Survey of 2020 was completed in the year in review. This survey investigates performance of Research and Development activities of the country in the fiscal year 2020. 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 following four sectors:

- Higher Education sector
- Government R&D sector
- Business Enterprise sector
- Private Nonprofit Organization sector

Partnerships established to collect data with the Department of Census and Statistics and the University Grants Commission were able to enhance the accuracy of the data gathered. R&D indicators of financial resources for R&D, human resources in R&D and performance/outputs of R&D were generated.

The national R&D statistics of 2020 will be provided to the UNESCO Institute of Statistics (UIS) to enhance its international readership and usability. In addition, R&D statistics of 2020 relevant to SDG goals will be inserted to the SDG data portal.

Science and Technology Management Information System (STMIS)

Science and Technology Management Information System (STMIS) is a computerized information system developed and maintained by the NSF since 2004. An upgraded system was introduced in 2019, with improved features. The STMIS database contains information on S&T related institutions, S&T personnel, advanced scientific equipment available in the institutions, ongoing research activities, technologies developed and transferred by the institutions, services and training programs offered by the S&T institutions for the public and research publications done by the individual scientists. A feedback survey of STMIS registrants was conducted to explore avenues for improvement. Various initiatives were taken to streamline the processes within the STMIS to provide a better service. By the end of 2022, STMIS recorded 7137 registrants in the STMIS database, of which 156 are new registrants within the year *(Figure 31)*.

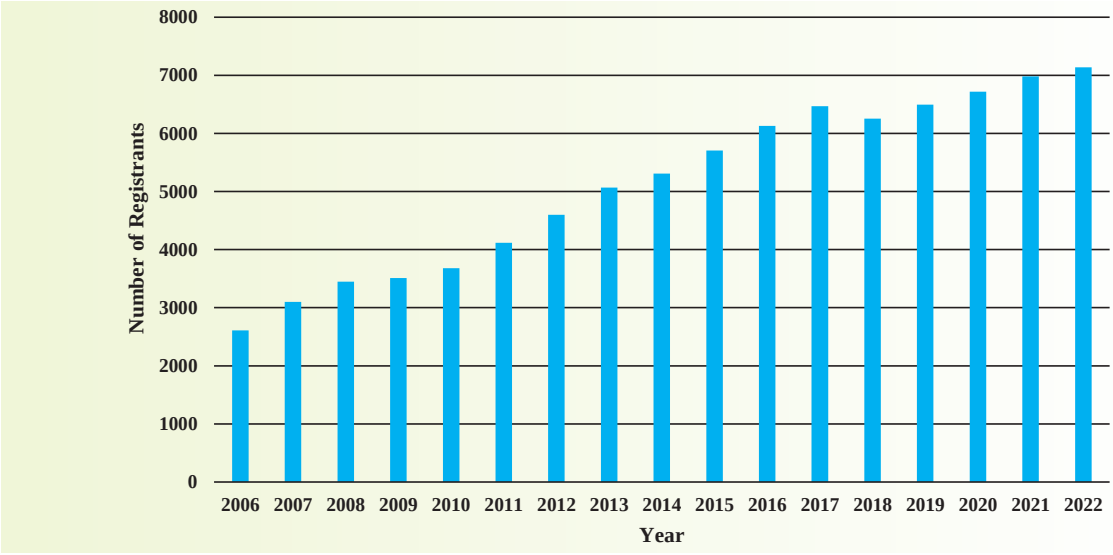


Figure 31: Increased Number of Registrants in STMIS Database from 2006 to date

Facility of Circulating Information

Facility of disseminating important updates, such as scientific courses and events, grant calls and other career opportunities was for the benefit of the registrants through the STMIS was introduced in early 2020. The facility was introduced with defined guidelines and streamlined processes, facilitated external institutions who are organizing scientific events to publicize updates and information about their events among a wider community through the STMIS. Formal introduction of this facility has benefitted the STMIS registrants in receiving most current updates regarding the opportunities available to them both nationally and internationally. Circulations are done either as a general circulation or a customized circulation where information is circulated among the pre-determined field/s of expertise upon the preference of the requesting party and the relevance of the content. A total of 110 circulations were done during the year 2022 making this a source of income generating activity to the NSF. This service provided through the STMIS with the support of the NSF IT Unit, is becoming popular among the S&T community in the country as a reliable passage in reaching wider and relevant audiences.

Requests for Information

Thirteen customized comprehensive reports were generated based on the requests of different stakeholders. The reports include verified details of over 1000 experts in relevant fields.

In addition, STMIS *(https://stmis.nsf.gov.lk/)* could achieve 15,531 hits for the year which is and indicative of increased usage of this online System among the public or Scientific community.

Liaising with Association of Asian Social Science Research Councils (AASSREC)

The NSF is a member of the AASSREC which is an association of number of Social Science entities in Asia. This network of Social Scientists in Asia facilitates opportunities for the Sri Lankan Social Scientists to get involved in regional activities to share knowledge, participation at regional workshops, conferences etc. The 25th Conference will be held in 2023 and some topics were suggested by the NSF, for this as a member institute. The AASSREC and NSF intend to initiate some collaborative activities between the two institutes for the betterment of the Social Scientists in Sri Lanka and preliminary communications have been made for this task. The AASSREC Mentoring Initiative is a programme where mentors and mentees get together to solve their academic and research related problems. This opportunity was circulated through the STMIS database to Social Scientists to explore the opportunity and enhance their performance.

Awareness Programmes

This year 12 library awareness programmes were conducted in 12 SLSTINET member libraries; named HARTI, ITI, NERD, CDI, AEA, NARA, ACCIMT, IIM, OUSL, USJP, Cepetco, SLSI. These programmes aimed to make awareness and popularize NSF and library e-resources services available among the SLSTINET libraries and the scientific community. About 345 participants joined these progrmmes held physically and online.

Development of the National Instrument Database

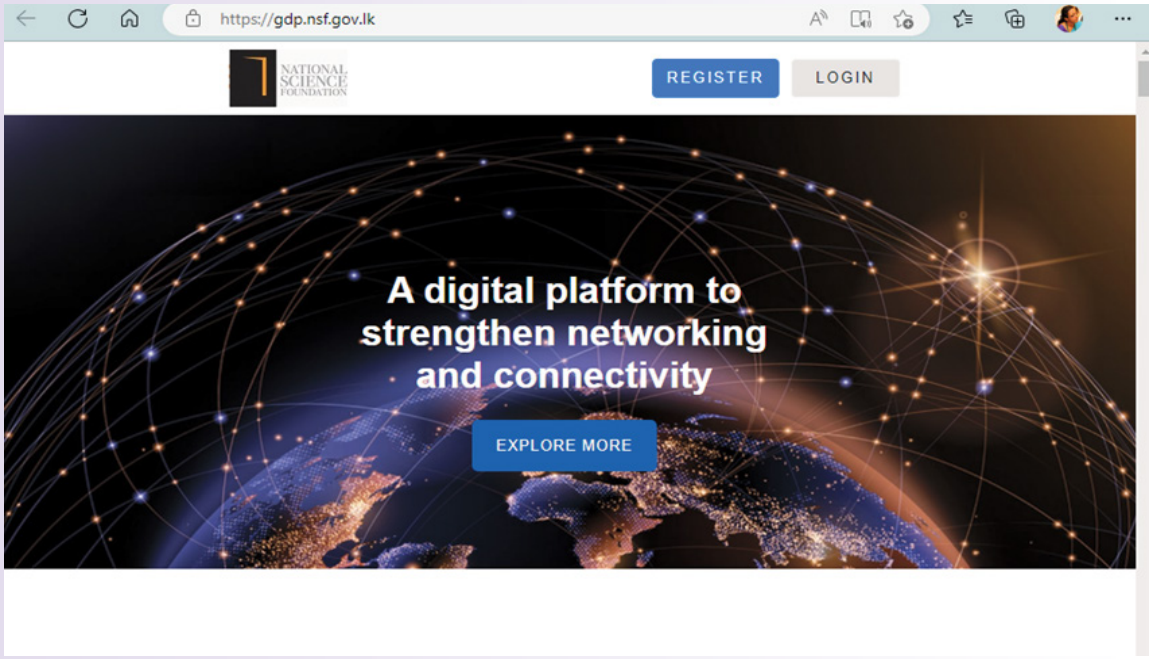
NSLRC developed the National Instrument Database in collaboration with the Research Division. The National Instrument Database was initiated to share details of high-end analytical, testing and research instruments scattered across Sri Lanka in universities and R&D institutions. It has now enabled researchers to expand their scientific analyses through collaboration with other universities, research institutes and government laboratories leading to quality publications and innovations. With recived facitities, the National Instrument Database will enable researchers to find a suitable local lab to conduct the analysis. Moreover, the database will enable funding agencies to identify gaps in the fleet of high-end analytical and testing instruments available in the country and prevent duplication of equipment, paving the way toward for sustainable resource utilization.

NSF Mandate c) Science & Technology Capacity Building

NSF launched its Global Digital Platform (GDP) to harness the enormous potential of reputed expatriate Sri Lankan scientists and professionals holding senior positions in academia, R&D institutions and industry abroad for national development. It is envisaged that the key sectors, including higher education, Science and Technology, Foreign Direct Investment (FDI), trade/exports, tourism, enterprises and industry could benefit therefrom. The initial emphasis is on the fields of Science and Technology and Higher Education. Activities pertaining to the GDP were focused the following aspects during the year.

- Tapping the Sri Lankan expatriate talent pool abroad for leveraging R&D outputs.
- Strengthen and expansion of expatriate base registered with the GDP.

Wider publicity was given for the Global Digital Platform (GDP) through every possible link and were invited expatriates to register with the GDP. A total of 230 new registrants and five partnerships were established during the year of review.



Global Digital Platform Website

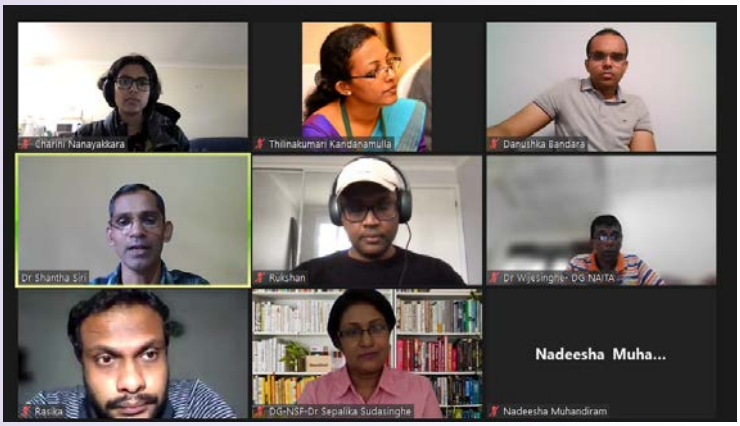
Currently, there are more than 1300 registrants at the NSF GDP from throughout the globe with a wide range of expertise from natural sciences, and humanities to emerging areas such as Data Science, AI, Robotics, IoT etc. The highest number of registrants is from Australia followed by the USA, Canada, Europe and Japan. Capacity building, establishment of research and collaborative partnerships (i.e. Five sustainable partnerships were established in 2022 with the direct intervention of NSF), joint publications and editorial input, sharing of cutting-edge know-how and assistance for curricular development are some of the recent activities facilitated by the resource pool in the NSF GDP. The back-end maintenance of the GDP is done by the NSF with technical input through collaborative assistance from the Sri Lanka Association for Software Services Companies (SLASSCOM). More partnerships are to be emerged having scientific, social and economic impact.

Capacity building for STI development

Facilitate training of personnel in the science, technology and innovation sector of Sri Lanka with special attention to emerging fields addressing national priorities

A young surgeon from Colombo South Teaching Hospital was trained on cutting-edge technology on paediatric liver transplant at the National Center for Child Health and Development (NCCHD) in Tokyo, Japan. Around 500 personnel including Rubber Development Officers, field staff of rubber plantation companies and owners and tappers of the small holder sector were trained. Capacity building of 12 Vocational Trainees was done on Data Science. Eleven researchers were trained. Three new initiatives to implement new know-how were acquired at training.

Linking the Global Talent Pool with Vocational Training and Skill Development (TVET) sector to enhance performance



NSF partnered with National Apprentice and Training Authority (NAITA), to enhance the performance of technical and vocational education and training on emerging fields such as data science addressing the emerging opportunities in the global labour market. NSF conducted the first brainstorming session for NAITA with the data science expatriates on 22nd July, 2022 with a view to explore opportunities for introducing a training programme on Data Science. Dr Rukshan Batuwita, Data Scientist, Google Inc., Australia, Dr Rasika Rajapaksha, Postdoctoral fellow, University of Wyoming, USA & Senior Lecturer, Faculty of Computing & Technology, University of Kelaniya, Dr M. A. Danushka Bandara, Assistant Professor, Fairfield University, USA and Dr Charini Vimansha, Senior Research Officer, the Australian National University attended the session as data science experts. The experts highlighted areas to be focused on training and skills development for preparing trainees as future data scientists. The event paved the way for introducing a training programme on data science addressing the emerging opportunities. Follow up actions were being underway to transform the objectives into reality.

Empowering youth with cutting-edge knowledge

A knowledge transfer programme on IoT: Insights on empowering industry, future trends, opportunities and challenges

The NSF partnered with the Institute of Engineering Technology (IET), Katunayake with the objective of empowering trainees including the final year students with cutting-edge knowledge and capacity building in emerging technologies addressing the IET need and harnessing expatriates of NSF digital platform. In parallel, the NSF conducted a knowledge transfer programme on IoT on 29th July, 2022 aimed at final-year students of IET, Katunayake. Eng. Wasantha Perera, Telecommunications and 5G Wireless Engineering Consultant, Senior Network Solutions Engineer, Team Lead, Program Manager, Qualcomm International, Australia was the resource person at this programme. He highlighted a wider spectrum of applications of IoT from basics to high-end industry applications to achieve a digital transformation based efficient IoT ecosystem.

The event was fruitful and paved the way for brainstorming and capacity building of final year students at IET especially, those who were engaged with final year projects on IoT, to carry out their projects successfully. As a follow up step, IET is interested in introducing a new course on IoT in future and NSF will make further facilitations to achieve their objectives.

Capacity building in data science by tapping the global talent pool

Data science is one of the emerging and demanding fields in the global sphere and the role of a data scientist has become the most sought-after profession due to the increase in data and its connected industries. While demand for data science professionals is at an all-time high, there is a substantial demand-supply imbalance due to a scarcity of qualified people. Addressing the above gap and with the objective of capacity building of lecturers/Instructors of Skills Development and Vocational Training Institutions in Sri Lanka, the NSF organized an online workshop on Data Science which was held on 22nd November, 2022 with the participation of two expatriate resource persons and one from home namely Dr Rasika Rajapaksha, Postdoctoral fellow, University of Wyoming, USA & Senior Lecturer, Faculty of Computing & Technology, University of Kelaniya, Dr M. A. Danushka Bandara, Assistant Professor, Fairfield University, USA and Dr Charini Nanayakkara, Research Fellow, the Australian National University. The workshop covered key sub-topics namely what is data science, phenomena with respect to realworld data, data science applications for effective decision making, data preprocessing, descriptive analysis, insights from descriptive analysis, privacy and ethics of data handling, machine learning and their main algorithms along with live demonstrations. There were 70 beneficiaries who have the opportunity for furtherance in acquiring knowledge and skills to become Data Science experts with further guidance from resource persons and facilitation from NSF.

Overseas Special Training Programme (OSTP)

NSF landmark contribution to fast-track paediatric liver transplants in Sri Lanka with cutting-edge technology

There is a high annual requirement for pediatric liver transplants in Sri Lanka (101 referrals to the North Colombo Center for Liver Disease in 2021) whereas only 01 transplantation could be done with the available resources. Out of the demand, 10 surgeries had been done in India on personal expenditure, the cost ranging from LKR 8-20 Mn. Eight children have died while being in the waiting list. This number is relatively high. The lack of resources and exposure to carry out pediatric liver transplantation in the country is an area that needs attention. As such, there was a dire need to grasp the know-how and acquire skills in advanced surgery techniques by surgery teams in Sri Lanka to better cater to local pediatric liver patients thus, infusing cutting-edge technology and fast-track pediatric liver transplantation that helps save many lives of children.

Whole liver graft is not suitable for pediatric patients due to the size mismatch which has been addressed worldwide by Living Donor Liver Transplantation (LDLT), Split Liver Transplantation, and Reduction Techniques. The NSF offered Dr Buddhika Uragoda, Acting Consultant/ Gastroenterological and Hepatobiliary Surgeon of the Colombo South Teaching Hospital, Kalubowila a Training Scholarship of one month duration under the 'Overseas Special Training Programme (OSTP) to get hands-on experience in split liver transplantation at the National Center for Child Health and Development (NCCHD) in Tokyo, Japan which carries the largest pediatric liver transplantation program in the world.

As a result of this training and acquired advanced surgery techniques, the number of pediatric liver transplants has increased to 08 in 2022. Also, due to the new surgery techniques applied, the postoperative recovery has been fast, leading to a reduced number of post-operative stays by patients at the hospital and a saving of money on post-operative care. Also, the trainee had introduced a new surgery technique learnt at the training for an adult liver transplantation to save a life. He has transferred the know-how gained through the training to his collaborating surgery teams in

the Colombo South Teaching Hospital and the National Hospital of Sri Lanka and has been able to establish links between liver transplantation surgery and anaesthesia teams of both countries. Dr Uragoda has been donated a surgical loupe by the Japanese surgery team, which he currently uses for magnification for Whipple procedure at the Colombo South teaching hospital. Through the links established with Prof. Mureo Kasara, Director of the Organ Transplantation Center and the Executive Director of NCCHD, Japan (his overseas supervisor), Dr Uragoda had been able to get his participation as an online speaker at the 2022 Annual sessions of the Sri Lanka Society of Gastroenterology to conduct a lecture on 'Selecting a pediatric patient for liver transplantation'.

Networking with International STI Organizations (Focal Points)

International Centre for Genetic Engineering and Biotechnology (ICGEB) - Collaborative Research Programme (CRP)

The ICGEB provides funding opportunities annually through its collaborative research programme which is dedicated to fostering projects addressing the demand side of the STI sector having relevance to the host country and of regional interest among member countries. NSF being the focal point of ICGEB, made wider publicity regarding call for applications and received 26 proposals in 2022. After thorough evaluation of same five applications (two early career return grant applications and three standard research grant applications) were endorsed to the ICGEB addressing the high-priority R&D needs of the country. Successful applicants are to secure grants from the ICGEB.

Knowledge transfer session to enhance competitiveness and scientific merit of proposals addressing ICGEB-CRP

The NSF in collaboration with the ICGEB organized a successful knowledge sharing session on effective proposal writing on 22nd March 2022. The objective of the session was to make researchers, especially the early-career researchers aware of how to successfully pitch their research proposals to ICGEB collaborative research programme (CRP) 2022 call which provides financial support to carry out research addressing original scientific problems of relevance for the host country and of regional interests in the fields of basic sciences, human healthcare, industrial & agricultural biotechnology and bioenergy. Dr Vittorio Venturi, ICGEB Scientific Coordinator and Ms Tijana Delic, ICGEB Consultant, External Relations delivered information on the CRP Call and lessons learnt. CRP guidelines and evaluation criteria in preparing a competitive proposal were also addressed. The presentations were highly informative for a new researcher in the field to come up with a well-structured and competitive CRP proposal. Prof. Shiroma M. Hadunneti, Prof. of Immunology, Institute of Biochemistry, Molecular Biology and Biotechnology (IBMBB), University of Colombo, a past ICGEB-CRP grantee shared her experience with ICGEB from the point of getting the grant towards its completion.

ICGEB Meetings and Courses Programme

NSF being the focal point of ICGEB, made wider publicity pertaining to the ICGEB Meetings and Courses Programme, call for applications 2022. Seven proposals were received under this call, same were evaluated and endorsed to the ICGEB. ICGEB has awarded a grant worth of Euro 11,000 (Rs. 4 Mn) to Prof. Jayanthe Rajapakse, University of Peradeniya to conduct an international workshop on Genomic Approaches in Understanding Vector Borne Parasites in Subtropical Countries.

Strengthening the linkages with the Global Research Council (GRC)

The Global Research Council (GRC) is a virtual organization, comprised of the heads of public science and engineering funding agencies from around the world, dedicated to promote the sharing of data and best practices for high-quality collaboration among funding agencies worldwide. Regional

meetings of the GRC provide a platform for the participating agencies and a wide array of stakeholders related to the respective regional research landscapes to provide input on pertinent matters. The output of the GRC regional meetings are fed in to the Annual meeting in the following year to be considered in the formulation of global standards and best practices on mutual agreement. The Asia Pacific Regional Meeting of the GRC - 2022 was held on 21-22 November at the Novotel Bangkok at Siam Square, Bangkok, Thailand in a hybrid mode with the participation of around 171 participants (104 onsite participants and 67 online participants) representing 17 countries. Coorganizers of the event were Thailand Science Research and Innovation (TSRI), National Research Council of Thailand (NRCT) and the Program Management Unit for Human Resources & Institutional Development, Research and Innovation (PMU-B) of the Ministry of Higher Education, Science, Research and Innovation, Japan Science and Technology Agency (JST) and the Japan Society for the Promotion of Science (JSPS).

Participants of the Asia Pacific Regional Meeting of the GRC – 2022

Several sessions related to the key discussion topics, i.e. 'Role of Global Research Council and Funding agencies in Tackling Climate Change' and 'Impact Oriented Reward & Recognition Mechanism for Researchers' and other thematic areas such as Responsible Research Assessment, Gender & Equality, Diversity and Inclusion (EDI), Trans-disciplinary Research and Multilateral Collaboration were held during these two days with the contribution of 27 speakers from throughout the world. Eng. Mahesh Dissanayake (Head/Research Division of NSF) and Ms Thilinakumari Kandanamulla (Scientific Officer, International Affairs Division of NSF and an Asia Pacific Regional Representative of the Gender Working Group of the GRC) attended this meeting representing Sri Lanka and the NSF with a travel sponsorship offered by the JST under the Memorandum of Cooperation (MoC) existing between both institutes. At this meeting, Eng. Dissanayake delivered a presentation on the best practices of Responsible Research Assessment by the NSF Sri Lanka and Ms Thilinakumari chaired the session of the GRC Gender Working Group. NSF was able to set its mark at this meeting gaining regional prominence through its engagement with the GRC. The views and best practices shared by the delegates were well taken to be incorporated in the meeting output.

Strengthening bilateral scientific cooperation through Science Diplomacy

Cuba has earned international repute for its unwavering commitment to promoting global solidarity and vaccine internationalism. It has contributed to improving healthcare systems in the world and has provided COVID-19 vaccines to several developing countries when some developed countries adhered to vaccine nationalism. Thus, Cuba has emerged as a paragon of medical humanitarianism in the world. NSF had embarked upon a capacity-building

Participants of the Meeting with H. E. the Cuban Ambassador

programme aimed at manufacturing biopharmaceuticals and vaccines in Sri Lanka facilitated by a group of high-profile Sri Lankan scientists, technologists and professionals at home and abroad. The global digital platform constructed by the NSF enabled the harnessing of top-flight Sri Lankan expatriates for this purpose.

At the invitation of Prof. Ranjith Senaratne, Chairman, NSF, His Excellency Andres Marcelo Gonzales Garrido, Ambassador for Cuba, visited the NSF on the 20th April 2022 and held a discussion, focusing on capacity building for producing biologics and vaccines in Sri Lanka. This meeting was attended by Dr Palitha Abeykoon of the WHO, Prof. Ranjith Senaratne, Chairman, Dr Sepalika Sudasinghe, Director General, Dr Thamara Dias, Additional Director and other Senior Officers of the NSF.

MAB programme

Facilitating sustainable management of Biosphere Reserves

The 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 which has continued to evolve since 1974 in keeping with global conservation and societal needs. Designing of an e-publication on ecosystem services of Kanneliya-Dediyagala-Nakiyadeniya (KDN) Biosphere Reserve (BR) was in progress. The publication highlights the splendour of uniqueness of the biota of KDN while providing information on the journey to becoming an international BR, zonation, its landscape, history and its sustainable partnership. Prof. Mayuri R. Wijesinghe, University of Colombo (member of the National MAB Committee) is the author of the publication.

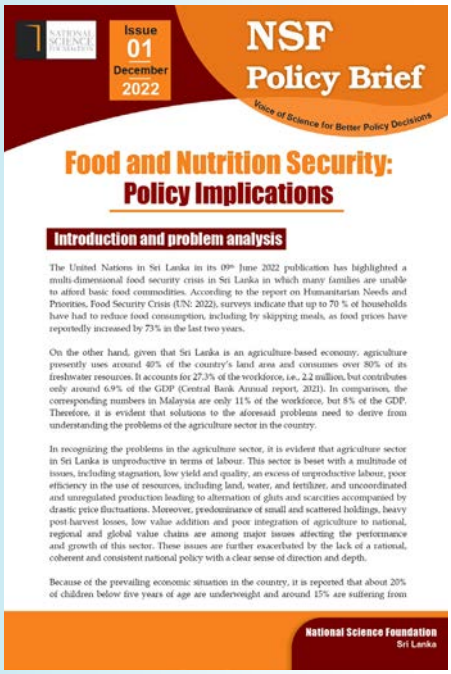
Facilitating implementation of the preparatory work required for the periodic review in 2023

The status of UNESCO-designated biosphere reserves of Sri Lanka has to be reviewed every ten years in accordance with Article 9 of the UNESCO Statutory Framework for the World Network of Biosphere Reserves (WNBR) and a report on the same is to be submitted to UNESCO secretariat. The report will be considered by the Advisory Committee for Biosphere Reserves for recommendation to International Co-ordinating Council (ICC). The periodic review provides an opportunity to revisit the zonation system, assess its relevance, objectives and means of management policies, issues and problems in implementing same thereby improving the quality of the biosphere reserves and their functioning as sites for testing and demonstrating approaches for sustainable development. The National Science Foundation successfully facilitated the periodic review of Sinharaja, Hurulu, KDN and Bundala BRs in 2014 and ICC endorsed the recommendations of the International Advisory Committee for Biosphere Reserves. The next periodic review is to be carried out in 2023. NSF has identified the pre-requisite preparatory activities for the periodic review in collaboration with the National MAB Committee and conveyed to the relevant custodian Departments (Forest Department and Department of Wildlife Conservation) to take actions to implement the preparatory activities.

NSF Mandate d) Science & Technology Policy Research

NSF Policy Briefs

Policy brief on Food Security



The United Nations in Sri Lanka highlights the food security crisis in Sri Lanka. Although Sri Lanka has an agriculture-based economy, it contributes only around 6% of the GDP. Therefore, the agriculture sector needs to be revisited in mitigating this issue. Recognizing the timely relevance of this issue, NSF has initiated the preparation of a policy brief on food security in order to identify the policy options to deal with it, and some recommendations on the best option. This document is being prepared aimed at government policymakers and others who are interested in formulating or influencing policy.

A Policy Brief on 'Food and Nutrition Security: Policy Implication' was published and disseminated to the relevant stakeholders to be considered when formulating policies and implementing actions related to this issue. Short- and long-term recommendations were given to ensure food security in Sri Lanka. Some of the recommendations are as follows.

Short-term recommendations

- Introducing a local food guide pyramid enriched with locally available super foods and preparing 'My plate' embedding the above concept.
- Promote Agro-industry with state-of-the-art technologies together with ICT applications.
- Enhance direct marketing by establishing partnerships between producers and buyers.
- Optimize the use of inland water bodies for fish production.
- Introduction of postharvest technology to produce processed vegetables, fruits, and fish products.

Long-term recommendations

- Setting up of economic centers in each agriculturally important district for the purchase and distribution of agricultural products mainly within the district.
- Making available expensive limited inputs, e.g., chemical fertilizers, pesticides, weedicides, fuel for machinery etc. on a priority basis.
- Facilitate the nutraceutical industry in the country.
- Embed circular economy concepts into the food and agriculture system.

Revisiting the National Biotechnology Policy

While recognizing the importance of having up to date Policy in the field of Biotechnology, which is one of the rapidly expanding technologies, the NSF Sub Committee on Biotechnology which comes under the NSF Working Committee on Science and Technology Policy, initiated reviewing the current National Biotechnology Policy which was prepared by the NSF in collaboration with the National Science and Technology Commission (NASTEC) in 2009.

As the first step of the review process, the policy was reviewed by the experts related to biotechnology in the subject areas of health, agriculture, industry, environment and energy. The reviewers presented their comments at the presentation session held on 21st December 2022 at the NSF with the presence of experts in the field. The comments and recommendations received for the existing policy will be submitted later to the National Science and Technology Commission of Sri Lanka (NASTEC) after the subsequent stakeholder consultation meeting planned, for further actions.

Studies related to the Fourth Industrial Revolution (4IR)

The fourth industrial revolution is a combination of advances in artificial intelligence (AI), advanced robotics, the Internet of Things (IoT), 3D printing, genetic engineering, quantum computing, and related technologies. These technologies which characterize the 4IR are causing this transformation in every pace of life. With this prelude, the NSF organized a discourse on "Current status and future trends of application of technologies related to the Fourth Industrial Revolution in Sri Lanka" with the NSF sub-committee on 4IR. Objectives of this discourse were to identify the current status of technologies of 4IR that are being used in Sri Lanka, the challenges faced, measures to overcome them and the level of government intervention. An interactive discussion was taken place in order to share the experiences of the participants and their thoughts with others. Private institutes engaging in this field, government officials and researchers participated physically and virtually.

Some recommendations to the NSF as well as to the government were put forwarded.

Recommendations to the NSF

- NSF can come up with some guidelines or policy briefs which could give recommendations to the Government to facilitate those cutting-edge technologies/ industries through policies and regulations.
- Establish partnerships with the researchers and technology providers.
- Make available data of the Research Grants and other publications in a processible manner to be used by researchers in a form of a one stop data portal for coding and modeling.

Recommendations to the Government

- Availability of competent and skillful human resources to create smart AI solutions from available software platforms.
- Introducing AI education for every stratum in the education system to enhance AI literacy in future workforce.
- De/regulating present regulations enabling a conducive environment to use these technologies in the field.
- The government and private sector are to work collaboratively to initiate start-ups and their branding in the world market.
- Inculcate a culture in Sri Lankans' minds to value our local products.

NSF Mandate e) Science Popularization

International Competitions

The National Science Foundation as its mandate has been focusing on improving public awareness on Science Technology and Innovation to create a Scientifically literate society and promote science education through STEAM based approach. Accordingly, the Science Communication and Outreach Reach Division (SCOD) of the NSF is continued to work achieve the set targets as the indicated below during 2022:

The 2nd International Contest of Creative Popular Science Video Works themed on "Promoting Public Science Literacy" was held on 2022 in China, guided by the China Research Institute for Science Popularization and sponsored by the Secretariat of the World Organization for Science Literacy (WOSL) (Preparatory). The National Science Foundation (NSF), Sri Lanka being the focal point for coordination of the participants from the country, have directed 20 Sri Lankan contestants to participate in this contest. The organizers reported that they have received more than 10,000 applications from 19 countries and regions, and the submissions have gone through multi-round reviews by experts from several countries. Based on scientific accuracy, production quality, and effectiveness of communication, etc. the best 50 videos have been selected (5 first prize winners, 10 second prize winners and 35 third prize winners). The contestants led by the NSF had secured 8 winning places in this competition as shown in *Table 07.*

Table 07: List of award winners

Name	Topic presented	Award
P. A. Thewmali Piyadasa, Sirimavo Bandaranaike Vidyalaya, Colombo 07	Land Protection and Utilization	The Second Prize
Y.S. Shanilka Ariyarathne, Uva Wellassa University	Brain Science: The Illusion of Free Will	The Third Prize
Binuka Methvin, Nethmitha Jayasinghe, Sanula Nimdinu, Disara Semika, Ovindu Lochana, Minuka Nethsan, Bandaranayake College, Gampaha	Artificial Intelligence	The Third Prize
Pathberiya Appuhamilage Thewnitha Piyadasa, Nalanda College, Colombo 10	Artificial Intelligence	The Third Prize
K. Ninesh Christon Fernando, St. Joseph Vaz College, Wennappuwa	Cyberspace Security and Network Personal Security)	The Third Prize
Dinithi Wijegunawardana	Life and Health	The Third Prize
Sharukeshi Gnanachandran, Methodist College, Colombo 03	Carbon Peak, Carbon Neutrality and Carbon Footprint	The Third Prize
Dilini Tharangi	Development of Suitable Planting Mechanism for Elephant Forages in Sri Lanka	The Third Prize

For detailed information, please see the link: *https://zhuanlan.zhihu.com/p/591988763*

Establishment of Science Society Network

To take science to the community, effectively and efficiently the NSF has been establishing a Science Society network covering different segments of the community especially the school community since 2005. Accordingly, at the end of 2022, the NSF registered 1,105 School Science Societies (SSS) and 55 University Science Societies (USS). The initiative was also has been taken up with "Vidatha Centre" to establish community-based science societies at village level. Further, discussions were also initiated with these youth councils to establish Youth Science Societies in the country. *Figure 32* shows the increse in the number of schools registered with the NSF School Science Society Network from 2005-2022.

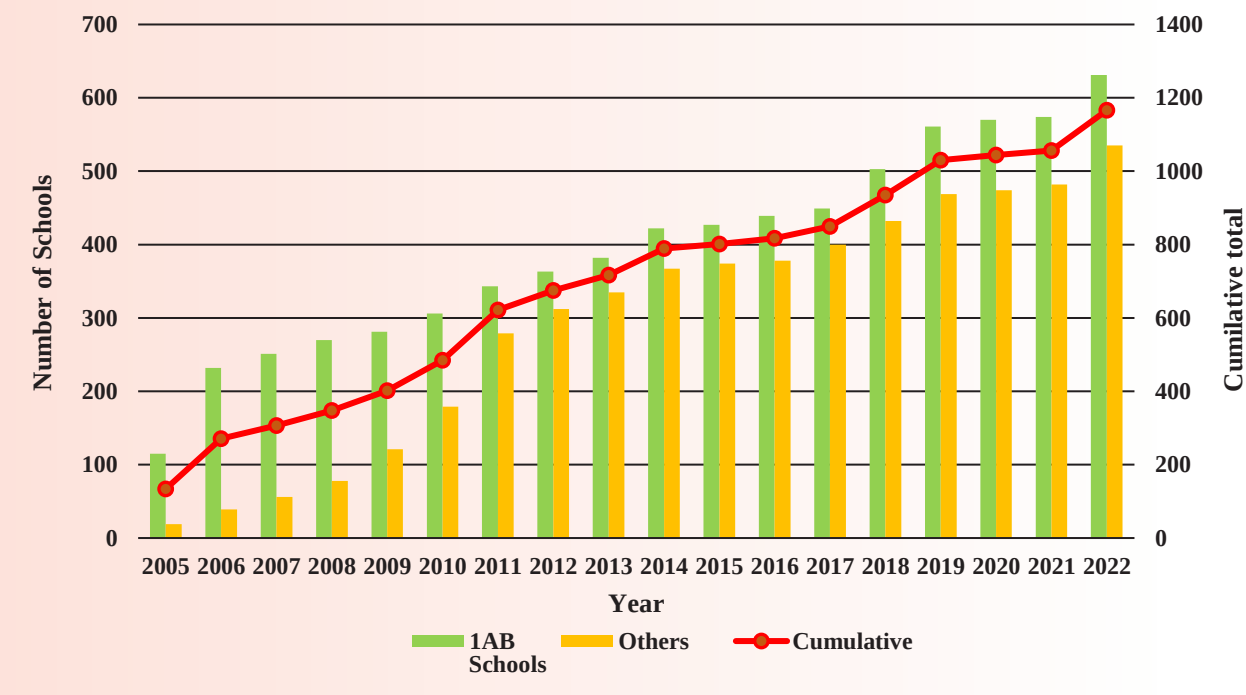


Figure 32: The number of schools registered to NSF School Science Society Network 2005-2022

Science Popularization through publications

Vidurava Science Magazine

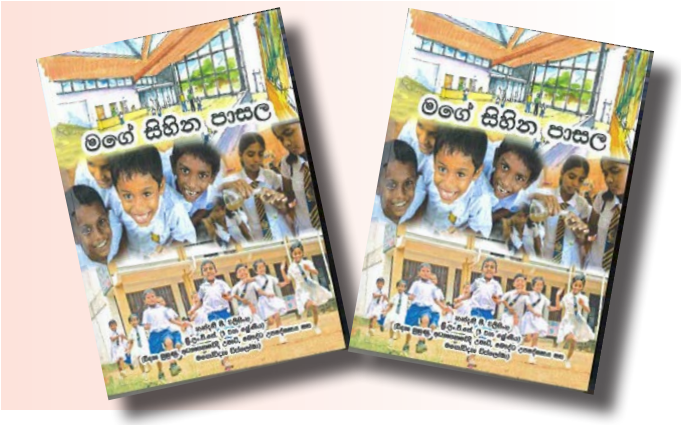
The "Vidurava" Science Magazine, which has been published as a Science Bulletin since 1978 is one of the oldest Science Magazines in Sri Lanka. Four issues of the Magazine in all three languages (Sinhala, Tamil and English) are published quarterly on selected theme of national or of global importance. Accordingly, in 2022 following issues were published:

1. Safer foods: better health
2. Living microbes: an underutilized national wealth
3. Multidimensional roles of microorganisms
4. Science Behind the traditional agriculture

Vidurava 11,000 printed copies were freely distributed to school libraries,Vidatha centers, university libraries and public libraries during 2022. The e-version is made available online for wider readership in the NSF official website *www.nsf.gov.lk*

Publication of Books

The NSF publication grant scheme was established to promote local authors to write scientific content addressing the general public. Further, it is also aimed at increasing locally authored scientific materials. Out of four applications recevied for this scheme in 2022, support was granted to publish the book titled "Mage Sihina Pasala" (My Dream School).



Promotion of Science education with STEAM approach

The National Science Foundation conducted various programmes to promote science education and inculcate research culture among school community jointly with the Science Branch of the Ministry of Education. The programmes which were conducted during 2022 is indicated as follows:

Creating research culture among School community

Science Research Project Competition (SRPC)

The School Science Research Competition (SRPC) was initiated in 2008 to create research culture among school community. This programme consists of two main components as mentioned below:

1. Training programmes for teachers on basic concepts and steps in scientific research
2. Training programmes for students to give hands-on experience to conduct a research project of their interest.

Training programme for teachers on basic concepts and steps in scientific research

A series of teacher training workshops on conceptualization of scientific research, proposal writing, data analysis and scientific writing has been initiated in 2022. In 2022 six teacher training workshops has been conducted as indicated in *Table 08*.

Table 08: Teacher training workshops

Date	Venue	Number of teachers trained
15th March 2022	President College, Embilipitiya	200
16th March 2022	Higgaswaththa Primary School Kuruwita	100
22nd March 2022	Education Development Center, Atulugama	150
23rd March 2022	Kegalu Balika Maha Vidyala, Kegalle	100
16th June 2022	Siyane National College of Education	167
21st Dec 2022	Teacher training centre – Galle	145
Total number of teachers trained		**862**

Accordingly, 862 teachers were trained during 2022. The pre and post assessment analysis showed that 87% of teachers who participated in the training had a very low knowledge and understanding on scientific research. However, this was shifted more towards the good and very good category (93%) after receiving the activity-based training. It was noted that 94% of teachers were not confident enough to guide their students to conduct research on their own before the training. However, after the training program their confidence level has shifted to 99% showing a significant impact of the training provided *(Figure 33)*.

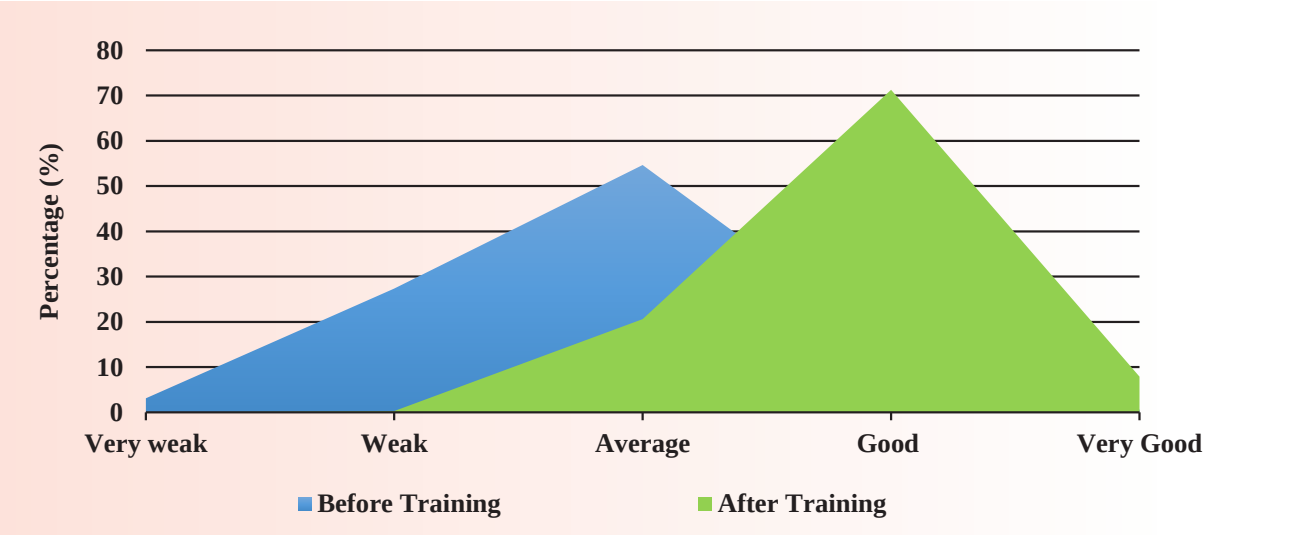


Figure 33: Teachers' knowledge and understanding on conducting scientific research

School Science Research Projects Competitions and Training programme for Students

The Science Research Project Competition (SRPC) started in 2008, with a view to give students a hands-on experience to conduct a research project of their own interest under the supervision of a Senior Scientist appointed by the NSF, representing a University or a Research Institution in the country. The project period is 5-6 months. To participate in the programme students (individual or team up to 03 students) must prepare a research project proposal. The proposals received are screened and selected to participate in the programme by the NSF. The NSF appoints a suitable supervisor to mentor and guide students to refine their proposals and conduct research, prepare presentations, abstracts, and report. The applicants progressed up to 2nd progress review meetings are eligible to participate in the competition. SRPC 2022/23 was initiated in June and 93 projects out of 100 projects selected to participate in the programme were successfully completed up to the first progress review conducted in January 2023. The 10 best national winners of the SRPC 2022 were felicitated at the National Science Day programme held on 10th November 2022 in the Auditorium of the Ministry of Education. The list of the winners felicitated is indicated in *Table 09*.

Table 09: Winners of Science Research Project Competition (SRPC)

No	Students	School	Title	Teacher in charge	Principal Supervisor
1	AM Udula Methsara Abeysinghe	D.S. Senanayake College, Colombo 07	Cyprinidae family fish diversity in Diyagama Ela – South West ichthyological Zone of Sri Lanka.	Ms W.K.N.J. Amarasinghe	Dr Dewanmini Halwathura Department of Zoology and Environment Science, Faculty of Science, University of Colombo
2	M. Sahan Clement Shavinda Fernando	St Joseph Vaz College, Wennappuwa	Investigation of anti-cancer activity of bioactive compounds present on plants in Sri Lanka for estradiol synthesis pathway associated with breast cancer via in-silico approach	Ms B.L.C. Lalani Balasuriya	Prof. R Senthilnithy Department of Chemistry, Faculty of Natural Sciences, Open University of Sri Lanka
3	K.A Isuru Chamara Lakshan Kularathna M. Ashan Sankalpa Weerasuriya S.A Kavindu Anuradha Thilakarathna	Ka/ Dehi/ Walagamba M.V, Galapitamada	Conversion of a two-stroke petrol engine to operate using a mixture of bio gas and petrol	Ms W.A.M. Sasanka Dunumala	Dr Indrani Kularathne Applied Mechanics Lab, Department of Mechanical Engineering, Faculty of Engineering,University of Peradeniya
4	Siluni Sihansa De Silva	Musaeus College, Colombo 07	Investigating the effectiveness of various storage settings to reduce the microbial growth on toothbrushes	Ms M.D. Lochana Mihirani	Dr. Thushari Dissanayake Department of Microbiology, Faculty of Medical Sciences, University of Sri Jayawardenapura
5	A. Y. B. Weerakoon	Dharmaraja College, Kandy	Evalution of field level efficacy of *M. micrantha* solvent extracts against aphids in brinjal crop and preliminary study for commercialization	Mrs W. M. T. S. Wijesundara	Dr Wikum Jayasinghe Department of Agriculture Biology, Faculty of Agriculture, University of Peradeniya
6	M.W. Ayesha Nikethanie H.R.Navodya Divyanjali Bandara Kavinsa Dewmini Wickramanayake	Lihiniyawa Kanishta Viidyalaya , Lihiniyawa	A preliminary study on floral sap yield determination of naturally grown Kithul palms	Ms N.K. Weerasekera	Prof. Lanka Ranawaka, Department of Agricultural Biology, Faculty of Agriculture, University of Ruhuna
7	P.G. Kavindu Sandeepa P.B. Thushani Kaushalya B.M. Manisha Gimhani	Peramduwa Vidyala, Kanthale	Qualitative analysis of thermal comfort in a dry zone school classroom	Mr Sarath Dasanayake	Eng. I.P.T.S. Wickramasooriya. Faculty of Engineering Technology, Department of Mechanical Engineering, Open university of Sri Lanka

8	Medini Thrishala Thudahewage	St. Pauls Girls School, Milagiriya	Study the Production of ecofriendly degradable film from extract of *Pontedeia Crassipes* pure powder with gelatin mixed	Mr D.B. Nayana Kumara	Dr T.M. Sampath U. Gunathilake Department of Polymer Science, Faculty of Applied Sciences, University of Sri Jayewardenepura
9	M.R. Mohamed Baheej Al Barrah	T/Kinniya Central College, Kinniya	Problems associated with sand mining in Upparu delta region of Kinniya	Mr M.M.A. Abrar	Dr V. Anavarathen Unit of Siddha Medicine, Faculty of Applied Sciences, Trincomalee Campus, Eastern University of Sri Lanka
10	Nadeeja Prathibhana	Thurstan College, Colombo 07	Evalution of Antidiabetic Activity of Flower of Ranawara (*Cassia auriculata L.*) in high glucose induced Zebrafish embryos	Ms Upeksha Abeysekara	Dr Chanika Jayasinghe Department of Zoology, Faculty of Natural Sciences, Open University of Sri Lanka

Creating environment sensitive nature loving future generation

Kid naturalist programme

The Kids Naturalist programme is another programme conducted by the NSF since 2020 targeting students of grade 1-6. The main objective of the programme is to make student to observe the nature they live in following scientific methodologies aiming to create environment sensitive student population that learn and practice science and scientific concepts in their day-to-day life. The students who participate the progrmme has to prepare a nature journal based on their observations carried out in a period of 6-weeks. The submitted nature journals are evaluated by a subject specialist panel appointed by the NSF and the selected best projects will be felicitated at the NSF awarding ceremony. Accordingly, the programme conducted in 2022 received 1,265 nature Journals. The selected best 10 nature journals form each grade (grade 1 to 6 total 60 best nature journals) felicitated at the Science Day programme held in 2022, are indicated in *Table 10*.

Table 10: The best performers of the Kid Naturalist Programme 2022

Category: Grade 1		
	Name of the winner	**School**
1	G Praharsha Kaushan Fonseka	Kingswood College, Kandy
2	Rajkumar Sanjana	J/Holy Family Convent National School, Jaffna
3	H B Ikitha Theshala Devapriya	Royal College, Colombo 07
4	A H Sanuji Thilanya Wijesinghe	NWP/Giri /Rathanalankara M.V , Alawwa
5	J T Senya Nethlini Jayabahu	St Joseph's Balika Maha Vidyalaya , Kegalle
6	W A Kaushalya Chathurya Weerasooriya	NWP/Giri /Rathanalankara M.V, Alawwa
7	G P G Pahandi Adithya Thimali Nawarathna	K/Sujatha Girls' National School , Galagedara
8	Nadil Methmika Gamage	NWP/Giri /Rathanalankara M.V , Alawwa
9	T Leesa	J/Holy Family Convent National School, Jaffna
10	K H Lometh Dewthisa Bandara	NWP/Giri /Rathanalankara M.V ,Alawwa

Category: Grade 2		
	Name of the winner	**School**
1	Laurendi Wilwalaarachchi	Musaeus College, Colombo 07
2	M A Fathima Ilmiya	Ak/Ayesha Muslim Ladies College, Akkaraipattu
3	Okitha Thanujitha Vidana Gamage	Dharmaraja College, Kandy
4	Kulani Vihansa Kandage	Musaeus College, Colombo 07
5	H M Hansani Nimeshika Herath	K/Sujatha Girls' National School, Galagedara
6	P K Sasmi Dinara Sithmini	Bishop's College, Colombo 03
7	P W Shalani Nuwangana Withanage	NWP/Giri/Rathanalankara M.V, Alawwa
8	Siduhath Priyadarshana	NWP/Giri /Rathanalankara M.V, Alawwa
9	V A Themiya Ranumitha Samarawickrama	Bright International School, Kandy
10	B V Mihin Methunija Bandara	Seethawaka Centarl College, Avissawella
Category: Grade 3		
	Name of the winner	**School**
1	Thenuli Pahanya Shenari liyanage	K/Sujatha Girls' National School, Galagedara
2	R G Oshadha Sithum Premathilaka	Delta Gemunupura Maha Viduhala, Pussellawa.
3	H D Nulan Neyjitha Heiyanthuduwa	Highlands College, Maharagama
4	K A Indusha Uvindi Karunathilaka	NWP/Giri /Rathanalankara M.V.,Alawwa
5	M G Uwahas Chithira Bandara	Mahanama College ,Kandy
6	Y M Sethmi Niwandhana Kumari Wijewardhana	K/Sujatha Girls' National School -Galagedara
7	Pulasi Gihainya Ratnayake	Musaeus College, Colombo 07
8	Udev Damhiru Palliyage	Dharmaraja College, Kandy
9	Logeswaran Lakshaan	S.Thomas' College, Bandarawela.
10	G I Aeshan Kavindya Fonseka	Kingswood Collage, Kandy
Category: Grade 4		
	Name of the winner	**School**
1	Kejaaneha Kumaran	Chundikuli Girls' Collage, Jaffna
2	Senuli Rashwitha Menon	Mahamaya Girls' College, Kandy
3	R L Kavinu Bometh Dayasena	Seethawaka Centarl College, Avissawella
4	Raviduni Yathindra Somarathna	Girls' High School, Kandy
5	K K V Sandini Gayashi Kariyawasam	K/Sujatha Girls' National School, Galagedara
6	Dinula Dissanayaka	A/Galenbindunuwewa Model Primary School, Galenbindunuwewa
7	W R D M O M B Wickramasinghe	Dharmaraja College, Kandy
8	N R Chamathni Jananya Bandara	St Joseph's Balika Maha Vidyalaya, Kegalle
9	Hasal Dissanayake	Delta Gemunupura Maha Viduhala , Pussellawa.
10	Advith N Tourkine Panawala	Carey College, Colombo 10
Category: Grade 5		
	Name of the winner	**School**
1	Izmah Riyas	Kg/Mw/Nooraniya Muslim Maha Vidyalaya, Uyanwatta, Dewanagala.
2	Batuwitage Dulansa Saseni	Ch/Nath/Holy Family Convent, Marawila
3	W M K G Vishmi Gayesha Wijerathna	K/Sujatha Girls' National School, Galagedara
4	M H B Themindi Senuri Bandara	Daladagama Primary School, Daladagama
5	Sanjana Vaseekaran	Chundikuli Girls' Collage, Jaffna
6	P M Sandali Amaya Ekanayaka	K/Sujatha Girls' National School, Galagedara
7	N A G.Kaushika Lalithadithya Ekanayake	Dharmaraja College, Kandy
8	V A Thejana Mandini Samarawickrama	Vision International School, Kandy
9	Minudi Methsandi Melewwe Thanthri	G/ Southlands College, Galle
10	Aksharaa Senthooran	Chundikuli Girls' Collage, Jaffna

Category: Grade 6		
	Name of the winner	**School**
1	Anugi Amasha Niklesha	Wp/Ho/Janadhipathi Vidyalaya, Avissawella
2	W G N I Prabashwara	Halambagala Maha Vidyalaya, Nikawaratiya
3	R D P D Jayaweera	Ku / Perakumpura National School, Solepura
4	R D Shehara Nethmi	Ke/Dehi/Basnagala Maha Vidyalaya, Basnagala
5	D M Yesith Senvidu Bandara Daundasekara	Ranabima Royal College, Gannoruwa-Peradeniya
R	Hiranga Bandara Suraweera	Trinity College, Kandy
7	M M Shaima	Ak/Ayesha Muslim Ladies College, Akkaraipattu
8	Aathavan Anun	BT/KK/Chenkalady Vivekananda Vidyalayam , Chenkalady
9	T G Rakith Saleesha Keshara Aberathna	Ranabima Royal College, Gannoruwa-Peradeniya
10	P Kabistan	Jaffna College, Vaddukoddai

The training programme for primary teachers on nature observation

A series of training lectures were organized targeting primary and grade six science teachers to give correct guidance to coach their students to observe nature and keep records in their nature journals. Accordingly, the following lectures were conducted in 2022, with the participation of 1200 teachers.

Supporting infrastructure development and science popularization programme in schools

The NSF has been operating a Science Education and Popularization Programme (SEPP) grant scheme to develop laboratory and special science education facilities in schools and to facilitate programmes conducted by schools related to science popularization. Accordingly, NSF visited St Mary's College, Kegalle to evaluate the progress of the Astronomical Training Center supported by the NSF. Further, a school grant application was evaluated and accepted for support in 2022. The science popularization programme on "Star Quest 2022" organized by the Astronomical Society of the University of Colombo was also supported through the SEPP grant Scheme in 2022.

Taking Science and Technology to village level for improvement in civic science literacy and socio-economic wellbeing of the people

In keeping with the national policy, the NSF has accorded high priority to strengthen local industries in Sri Lanka. The NSF had discussions with the State Ministry of Rattan, Brass, Pottery, Furniture and Rural Industrial Promotion in Sri Lanka to identify high-priority interventions that could potentially promote exports in the short- and medium-term time horizons. Further, NSF made plans to collaborate with the Ministry in order to make effective use of over 275 Vidatha Resource Centers established across the country to enhance rural industries and science literacy among the rural folk.

NSF special school project with STEAM approach

The Science Communication and Outreach Division (SCOD) of the NSF initiated a special project to promote science education through STEAM approach in selected 50 schools jointly with the Science Branch of the Ministry of Education and the CSR Team of the Commercial Bank of Ceylon PLC. An MoU was singed between the NSF and Commercial Bank to facilitate the financial assistance to carry out the project in 2022. A pre planning and discussion was carried out in later part of the year 2022 with the selected 50 schools. Preplanning was made to conduct a pilot study in schools mentioned below.

1. Dudley Senanayake Vidyalaya, Narahenpita, Colombo 05
2. Anuruddha Balika Vidyalaya, Dematagoda, Colombo 09
3. Rajasinghe Maha Vidyalaya, Maligawatte, Colombo 09
4. Ave Maria Vidyalaya, Mattakkuliya, Colombo 15
5. Wijayaba Maha Vidyalaya, Stace Road, Colombo 14

Celebration of National Science Day 2022

The National Science Day ceremony was held as a hybrid event on 10th November 2022 in the Auditorium of the Ministry of Education with the participation of Dr Susil Premajayantha, the Hon. Minister of Education, as the Chief Guest. This event was organized parallel to the World Science Day for Peace and Development, declared by UNESCO. The event was organized jointly by the Science Communication and Outreach Division of the National Science Foundation (NSF) and the Ministry of Education, Sri Lanka, under the theme of "Science for Sustainable Future, Global Trends with Local Blend". The aim was to popularize science among different segments of the community specifically targeting the school community. Around 1500 participants including the awards winners of the NSF Science Research Project Competition (SRPC) 2020/21, NSF Kids Naturalist Programme 2022, parents, teachers, students, and scientists were participated the event online via Zoom, YouTtube and inhouse. Two special NSF life-time awards were conferred to Mr Asoka De Silva and Mr Thusitha Malalasekara acknowledging their outstanding and longtime contribution to popularize science among citizens of Sri Lanka. The teachers who have made outstanding contributions in science popularization among the school community were also recognized at this event. The School Science Society of Thurstan College, Colombo 07 won the 3-star certificate while BT/PD/Paddiruppu MMV, Kaluwanchikudy received the 4-star certificate. Harishchandra National School, Negombo won the 5-star award 2022.

The 50th issue of the Journal of the National Science Foundation (JNSF) and 'Science e-news' website were also launched at this event.

Presentation of the 5-star Award by the Hon. Minister of Education - Dr Susil Premajayantha to Harishchandra National School, Negombo, accompanied by the Chairman and the Director General of NSF.

Media and Event Management (MEM)

The Media and Event Management Division was established initially as the Media and Event Management Unit on 3rd January 2022 as per the Board decision taken at the Board Meeting held on 29th December 2021. It was renamed as the Media and Event Management Division with effect from 9th April 2022, by the Board at its meeting held on 9th April 2022.

The following activities were performed by the MEMD during the year under review.

NSF Working Committee on Media

The NSF Working Committee on Media consisting of relevant experts (internal and external) was appointed by the Board of Management to support as an advisory Committee to the activities organized by the Division.

Popularization of worthy S&T outputs from NSF initiated science programmes via print and electronic media for the benefit of the people.

Organizing of Media briefings

A Media briefing for the print and electronic media on the launch of the NSF Global Digital Platform was arranged at the Department of Government Information auditorium on 17 February 2022. The Chairman and the Head, IAD participated at the Media briefing representing the NSF.

Oraganizing Media Coverages

Media coverages were arranged for the following NSF activities.

i. Launch of the NSF Global Digital Platform held at BMICH on 21 February 2022 with the participation of then Prime Minister, Hon. Mahinda Rajapaksha as the chief guest.
ii. Launch of National Instrument Database held at Ministry of Education on 14 September 2022 with the participation of Hon. Dr Susil Premajayantha, Minister of Education as the Chief Guest.
iii. National Science Day programme held at the Ministry of Education on 10 November 2022 with patronage of Hon. Dr Susil Premajayantha, Minister of Education.

Published Newspaper Articles

The following articles were published in the newspapers.

i. Launch of the NSF Global Digital Platform – published in Dinamina (on 14 March 2022).
ii. Appointment of a new Director General to NSF - published in Silumina (on 10 April 2022) and Dinamina (on 11 April 2022).
iii. Visit of the Cuban Ambassador to NSF – published in Dinamina (on 10 May 2022).

Publicity Via Radio

Broadcasted the following three news items on the following specific activities via news bulleting of the SLBC including two voice cuts of the Chairman, NSF.

i. Launch of the NSF Global Digital Platform held at BMICH on 21 February 2022.
ii. Launch of National Instrument Database held at Ministry of Education on 14 September 2022.
iii. National Science Day programme held at the Ministry of Education on 10 November 2022.

Web updates

i. Launch of the National Instrument Database (14 September 2022)
ii. Chairman's speech at the National Science Day Programme (10 November 2022).

Event Organization

Overall coordination of organizing the event on Launch of National Instrument Database at the Auditorium II of the Ministry of Education was done by the MEM Division in collaboration with mainly the Research Division (RD) and the National Science Library and Resource Centre (NSLRC) This event was held as a hybrid programme under the patronage of Hon. Dr Susil Premajayantha, Minister of Education.

TV Science Magazine

The IQ (Intelligence Quotient), EQ (Emotional Quotient) and CQ (Cultural Quotient) of Sri Lankans are second to none in the world. But economically, Sri Lanka is a poor country. Therefore, it is essential to ignite people's minds, especially the younger generations, to develop an innovative nation to conquer the world and hence there is a pressing need to introduce a novel and innovative TV programme.

Therefore, based on a series of meetings between the NSF and Charana TV, a TV channel functioning as a Peo TV under Sri Lanka Telecom, approval of the Board of Management was obtained to a Concept Note on a TV Science programme prepared by the MEMD to produce a series of TV Science Programmes in a magazine format with the following objectives.

- To introduce a novel and innovative TV programme jointly with Charana TV aimed at building a creative and innovative nation which is crucially important to make Sri Lanka a developed nation and to arouse the curiosity and interest of our children for S&T and to ignite their scientific and entrepreneurial passion and discharge their creative energy for the benefit of themselves and the country.
- To popularize science amongst the people of the country.
- To provide exposure and a platform to Sri Lankan expatriate scientists and technologists working in world-renowned universities and institutions such as NASA, Boeing, Rolls Royce, Facebook, Google, Microsoft, and Apple to share their knowledge and experiences with the nation and policy makers to develop the country.
- To make people aware of innovative features of our ancient historical creations such as Sigiriya (the way of supplying water to the top of the rock etc.), ancient hydraulic system, building of large stupas, stone creations such as sculptures, ancient medicine, etc.

The NSF Working Committee on Media participated at the meetings in an advisory capacity. With the support of the Board approved Concept Note prepared by the NSF, Charana TV prepared a proposal (their concept and production cost) for the TV Science Magazine including seven segments which was apporved by the Board of Manangement.

NSF wrote to 11 banks and 25 companies requesting them to be partners of the TV Science Magazine by contributing to the production cost.

STEM through social media – short video clips on science messages

At present, energy crisis in terms of fuel, gas and electricity, food crisis due to less extent under crop cultivation due to fertilizer and fuel issues, and crisis on availability of essential medicine have become vital to the life of Sri Lankan citizens. As a national organization, it is our sole responsibility to help the country in this situation. Making the people aware with authentic scientific information will help them to take informed decisions in their day-to-day activities which minimize the burden they face during this difficult period. Social media at present which has become more popular among

the Sri Lankan citizens can be used easily therefore, to take these STEM messages to the people.

Hence, the approval of the Board was obtained to a Concept Note on "STEM through social media" to produce a series of short video clips and share through social media (You Tube & Face Book) with the following objectives,

- To make people aware of the scientific approach of solving day-to-day problems of the people and improve their ability of taking informed decisions to solve the issues faced by them.
- To empower people to Integration of knowledge gain on STEM to solve their day-to- day problems.

Procurement procedre was started to select a suitable production house to produce video clips 10 nos in Sinhala and same number in Tamil (dubbed) version.

Objective Science Reporting Programme

Science reporting in Sri Lanka is not in a prominent place and media organizations provides less space and interest in publishing science news through their print and electronic media channels. It is experienced that many incorrect information based on science passed through some media channels to the public. It is observed that objective science reporting has also been ignored by many media organizations. Therefore, the NSF took initiative to start a programme with the intention of minimizing the error reporting on science by media.

The approval of the Board was obtained to a Concept Note on "Objective Science Reporting" prepared by the MEM Division with the following objectives.

- To train and build the capacity of science journalists to take science to the general public, policy makers, and other government officials.
- To strengthen skills and attitudes of media personnel and management of media organizations on objective science reporting.
- To ensure receiving of authentic facts and information on scientific developments to the people.

The way forward to the programme was prepared by a committee appointed by the Board of Management.

Zero Budget Project on Promoting Reading Space

Many people visit various organizations such as hospitals, ministries, government departments etc. to obtain services they require. Valuable time is wasted mostly, until their turn comes. Reading corners, coffee tables, publication desks, etc. are usually available in those organizations and if it is possible to strengthen those with scientific publications, it will be an encouraging step to inspire the said people to read science publications.

The approval of the Board was obtained to implement a zero-budget project to distribute excess stock of NSF publications remaining at NSF to relevant end users with the following objectives.

- To create opportunities for people to utilize their time more effectively with books.
- To contribute to the popularization of science through printed materials.
- To clear the excess stock of NSF publications.

Acquisition of capital assets, maintenance and system administration

Human Resources Development

Talent Management Programme

Talent management is a constant process that involves attracting and retaining high-quality employees, developing their skills, and continuously motivating them to improve their performance. The primary purpose of talent management is to create a motivated workforce who will stay in the organization in the long run. Talent management naturally encompasses many of the responsibilities of human resources. In this regard NSF has a talent management strategy in place to gain optimal results from the employees, through the following activities: Use Employee Training Tools. (Inhouse training/ attending for knowledge sharing activities of other organizations/ etc.), standardize Talent Review and Onboarding Processes, Track and Measure Performance. (i.e., performance appraisal), Give Feedback and Reviews, Recognize and Reward Top Performers, Increase Employee Motivation, Provide Career Development Paths. The training programmes conducted in 2022 to fulfill the above activities, are mentioned in detail in *Annex 06*.

Maintaining the IT Infrastructure

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

Printing Support

The Printing Unit was continuously engaged with the printing activities fulfilling the printing requirements of internal customers with available resources. The following work was completed with quality outputs, in order to attract stakeholders towards printed new scientific information. Twelve (12) different types of publications were printed during the period under review. The details are given in *Table 11.*

Table 11: Variety of Material Printed

Publication	Quantity
JNSF	
Journal of NSF Special Issue 50th Anniversary	120
Vidurava	
Vidurava April-June 2020 (English)	1100
Vidurava April-June 2020 (Tamil)	500
Vidurava July-Sep 2020 (English)	1500
Vidurava July-Sep 2020 (Sinhala)	2000
Vidurava Oct-Dec 2020 (Sinhala)	2000
Vidurava Jan-March 2021 (Sinhala)	2000
Vidurava Jan-March 2021 (English)	250
Vidurava April-June 2022 (English)	500
Other	
Annual Report 2020	02
NSF Letter Heads	1560
Letter Heads-Chairman/NSF	400

In addition, the Printing Unit covered and facilitated all the other printing requirements of the NSF by attending to nineteen (19) other print jobs & eight (08) binding jobs during the year 2022.

Audit Committee Report

The Board of Management of the NSF (BoM/NSF) appointed three non-executive Board members including a Treasury Representative to serve in the Audit & Management Committee (AMC) at its meeting held on 27th February 2020, as per the directives given by the PED 55 circular. These members were being continued with their service, for the year 2022 too, following the Guidelines on corporate governance for state owned enterprises. However, Ms. Harshani Anuruddha was nominated in the place of Mrs. Ruzniya Abdeen with effect from 9th May 2022. A representative from the National Audit Office and the Chief Internal Auditor of the Ministry were invited to serve as an observer to the committee.

Accordingly, the following members were serving during the year.

- Mrs. Ruzniya Abdeen (Chairperson & Treasury Representative to the BoM/NSF)- January to April 2022
- Ms. Harshani Anuruddha (Chairperson & Treasury Representative to the BoM/NSF) - From May 2022
- Prof M M. Pathmalal (Member of the BoM/NSF)
- Prof. Nimal Nawarathne (Member of the BoM/NSF) - From October 2021
- Ms. H. D. Anuruddhika (Chief Internal Auditor/State Ministry of Skills Development, Vocational Education, Research & Innovations)
- Ms. W.P.L.S.R. Perera (Representative of the Nation Audit Office)

The committee met on 31st May and 03rd November 2022 for the year. Mrs. Harshani Anuruddha served as the Chairperson of the AMC for both meetings as the treasury representative to the Board of Management of the NSF. The Committee reported its recommendations to the Board of Management soon after, with the minutes of the meeting and the Internal Auditor of the NSF conveyed the recommendations of the AMC to the Heads of the Divisions to take appropriate action for smooth functioning. Progress reports on the actions taken were also reported to the following AMC meetings.

The Committee drew special attention to the following recommendations of the AMC.

- Follow-ups on the National Audit Office queries until completion and avoid repetitions.
- Follow-ups on the statutory requirements of the NSF throughout the year.
- Review of activities of the NSF and making recommendations on corrective and preventive actions.
- Review internal audit observations and external audit reports, management letters and recommendations on these and help the Board to take remedial action.
- Review and provide directives for the internal audit activities.

Future Projection Report

Programme	Measures	
	Short-term	Medium-term
1. Be the premier organization for research funding, grant administration & management and S&T capacity building addressing national priorities	• Drive, promote and support Research, Development and Innovation initiatives aligning with the national research needs to encourage bottom-up research ideas and sustain a healthy research ecosystem • Recognize research excellence and talent of researchers & supervisors to motivate and inspire for effective engagement in research, development and innovations	• Initiate, facilitate and support mission oriented collaborative research of trans-disciplinary/ multi-disciplinary approach research projects to address national high priority concerns, complex challenges and value addition, utilization & conservation of natural resources • Promote and support R&D of local industries R&D activities strengthening local enterprises through public-private partnerships • Facilitate progressive enhancement of R&D capacities to build up a critical mass of top research talent
2. Lead in facilitating technology development, technology transfer, R&D commercialization, intellectual property protection & exploitation	• Facilitate development of potential technologies, start-ups, licensing and technology transfers & diffusions with institutionalized mechanisms, towards sustainable development • Recognize national S&T achievements of scientists, engineers, technologists and entrepreneurs who have made outstanding contribution towards the economic and social development through application of STI in Sri Lanka	• Strengthen the support service for intellectual property (IP) protection & management and commercial exploitation
3. Be the center of excellence for the collection, analysis, interpretation and dissemination of STI information whilst using modern ICT platforms	• Establish the National Digital Library Consortium providing access to high quality, peer-reviewed journals, databases, articles and e-Books across a wide range of disciplines among Universities, R&D and Higher Education Institutions • Produce and publish STI information and recommendations with expanded scale and scope • Provide evidence-based policy recommendations addressing a socioeconomic issue of national priority	• Strengthen National Science Library and Resource Centre (NSLRC) to be the hub for online dissemination of local and international literature and related services • Continue to publish Journal of National Science Foundation and Sri Lanka Journal of Social Sciences and achieve impact factor 1.2 and SLJSS as an indexed journal in Social Science Citation index
4. Be the leader in popularizing STI amongst school community and public to improve science literacy and promoting science education	• Continue to implement "Science for all" initiatives using multitude of mechanisms • Continue to promote and strengthen science education with STEAM approach	Increasing civic science literacy and facilitate to develop next generation of STEAM leaders
5. Be the key gateway in promoting global partnerships and harnessing foreign funding for STI development.	• Increase foreign funding received for capacity building and cutting-edge collaborative research • Increase globally engaged STI personnel in Sri Lanka through NSF facilitated partnerships	• Increase impactful fruitful global partnerships for progressive advancement of science technology and innovation
6. Nurture a creative team of well accomplished, skilled and contented staff to meet the conditions of a science driven, people centric learning organization	• Develop technical capability of scientific staff to carry out functions with consultative assistance from external parties • Make staff competent, skilled and accountable, empowered, motivated and satisfied through need-based staff development at all times	• Enhance social capital, achieve cordiality and promote cohesion among all staff through social interaction activities • Attract and retain qualified staff to occupy over 98% staff positions at all time

Financial Review

Financial highlights of the preceding 10 years (2012-2021)

The NSF keeps records of all financial performance and reviews such records frequently (by the Finance Division and Internal and External Auditors). Areas of priority, to be invested in the following year, will be decided on the current year's financial record as well as preceding years' records. Thereby assurance is given that the most suitable and nationally important areas of Science Technology & Innovation will be funded.

The financial highlights of the preceding 10 years are given in *Table 12*.

Table 12: Financial Highlights of the Preceding 10 Years (2012-2021)

Year	Financial Details (in Rs. Million)		
	Allocation	Funds Received	Expenditure
2012	283	157.4	168.3
2013	250	135	140
2014	260	223	211
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	59	59	82.07
2021	210	157.06	43.9

Figure 34 shows the financial status of the last 10 years, as the percentage between allocation and received funds and the percentage between received funds and expenditure.

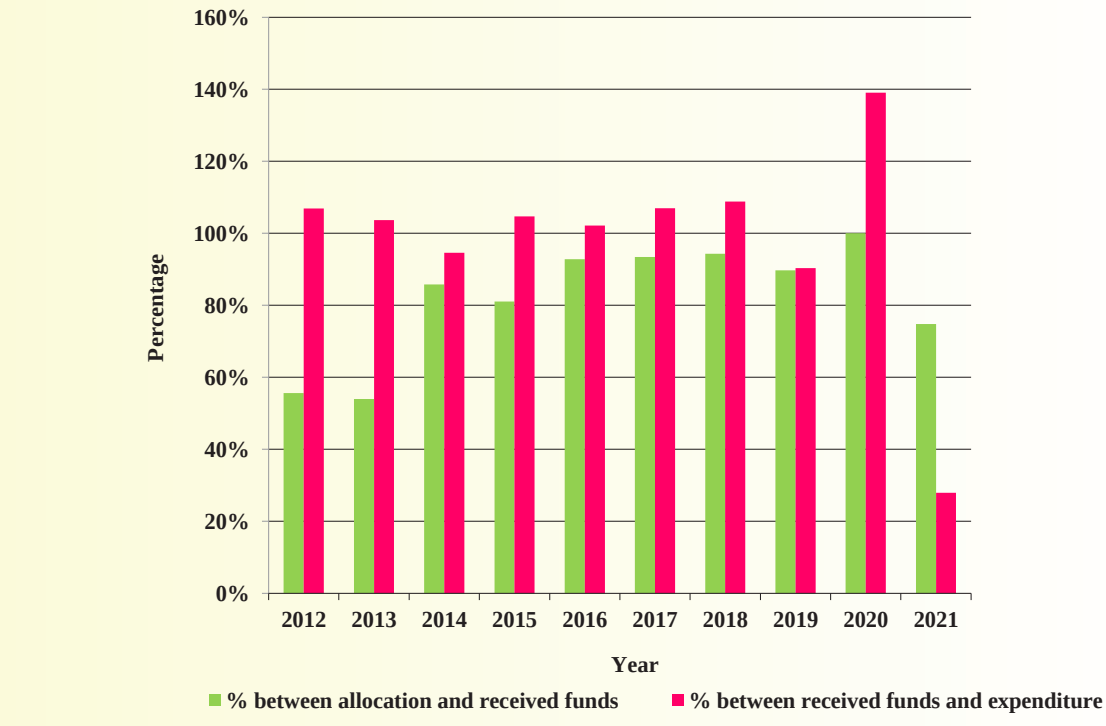


Figure 34: Financial Status of last 10 Years (in Percentage)

Observation of the accounting officer on performance 2022

Observation of the accounting officer on performance 2022 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 2022 were Rs. 165 million and Rs. 50 million, respectively. Department of Treasury Operations released Rs. 141 million for "Recurrent" expenditure and Rs. 16 million for "Capital" expenditure in installments and NSF collected Rs. 10.8 million as balances remaining in the completed grants during the year. The details of expenditure are given in *Table 13* & *14*.

Table 13: Recurrent and Capital expenditure in 2021

Description	Rs.' 000	
Recurrent Expenditure	Estimate	Expenditure
Personal Emoluments	121,000	112,909
Other Recurrent	44,000	31,258
Total Recurrent Expenditure	**165,000**	**144,167**
Capital Expenditure	**50,000**	**43,900**

The details of Capital Expenditure for 2022 is given in *Table 14.*

Table 14: Details of Capital expenditure in 2022

Mandate	Description	Expenditure - 2022 (Rs.'000)
Mandate - 01	Promoting Research and Development	24,309
Mandate - 02	S & T Information Dissemination	4,632
Mandate - 03	S & T Capacity Building	6,177
Mandate - 04	Science & Technology Policy Research	1,652
Mandate - 05	Science Popularization	4,119
Mandate - 06	Acquisition of Capital Assets, Maintenance and System Administration	3,011
Total Capital Expenditure		**43,900**

NATIONAL SCIENCE FOUNDATION
STATEMENT OF FINANCIAL POSITION
As at 31st December 2022.

As at 31.12.2021		Notes	Rs.	Rs.
	Assets			
	Current Assets			
28,475,552.01	Cash & Cash Equivalents	**21**	9,982,539.00	
6,028,668.52	Receivables	**22**	7,350,859.91	
2,524,786.09	Stocks	**23**	1,181,242.97	
1,529,325.94	Pre Payments - **(Schedule - 08)**		2,049,185.57	
93,650.00	Other Current Assets	**24**	93,650.00	
38,651,982.56	Total Current Assets			20,657,477.45
	Non-Current Assets			
8,743,598.00	Receivables	**22**	9,914,532.00	
1,268,447,090.38	Property,plant & Equipment	**25**	1,252,333,560.21	
3,379,826.46	Intangible Assets	**26**	4,203,449.88	
883,002,124.00	Investments	**27**	883,002,124.00	
2,163,572,638.84	Total Non-current Assets			2,149,453,666.09
2,202,224,621.40	**Total Assets**			2,170,111,143.54
	Liabilities			
	Current Liabilities			
7,545,192.31	Accrued Expenses	**28**	7,760,037.00	
4,206,054.22	Creditors	**29**	2,951,949.60	
11,751,246.53				10,711,986.60
	Non-Current Liabilities			
41,389,595.00	Provision for Retiring Gratuity	**30**	43,532,122.50	
55,385,154.44	Deffered Revenue	**31**	49,679,397.69	
96,774,749.44				93,211,520.19
108,525,995.97	**Total Liabilities**			103,923,506.79
2,093,698,625.43	**Net Assest**			**2,066,187,636.75**
	Equity and Reserves			
	Accumulated Fund			
(26,296,276.41)	NSF Fund		(27,981,008.94)	
(12,722,038.18)	Add: Excess of Expenditure over Income		(38,548,294.33)	
(39,018,314.59)	**Total Accumulated Funds**			(66,529,303.27)
1,249,216,114.91	Revaluvation Reserve			1,249,216,114.91
883,002,124.00	Government Grant			883,002,124.00
498,701.11	NSF Development Fund	**32**		498,701.11
2,093,698,625.43	**Total Equity**			**2,066,187,636.75**

for Head Administration & Finance

NATIONAL SCIENCE FOUNDATION

Accountant
NATIONAL SCIENCE FOUNDATION
47/5, Maitland Place,
Colombo 7,
Sri Lanka.

The Accounting policies and Notes on pages 06 to 37 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
National Science Foundation
47/5, Maitland Place
Colombo 07
Sri Lanka

Chairman

Director General

Director General
NATIONAL SCIENCE FOUNDATION

Board Member

NATIONAL SCIENCE FOUNDATION
STATEMENT OF FINANCIAL PERFORMANCE
For the year ended 31st December 2022.

As at 31.12.2021		Rs.	Rs.	Rs.
	Grants from Treasury			
61,672,900.00	Capital			16,000,000.00
132,100,000.00	Recurrent			141,060,000.00
193,772,900.00				157,060,000.00
	Income for the year			
715,082.71	Interest received	703,790.34		
15,150.00	Sundry Income	45,320.25		
21,100.00	Sale of Publications - **(Note 19.1)**	75,900.00		
3,417.00	Photocopy receipts	2,472.00		
172,791.54	Publications Charges Received - JNSF	710,812.18		
456,091.15	NSLRC Income	373,900.00		
75,000.00	Income from Workshops	106,000.00		
-	Profit/(Loss) Disposal of Fixed Assets	159,080.00		
1,458,632.40			2,177,274.77	
	Other			
-	Payables Writeback	-		
9,069,451.13	Deffered Income (Assets)	7,956,449.55		
3,368,581.93	Deffered Income (Publications)	2,572,118.01		
-	Income form Projects	586,359.00		
12,438,033.06			11,114,926.56	
13,896,665.46				13,292,201.33
207,669,565.46				170,352,201.33
	Less; Expenditure for the year			
	Recurrent Expenditure			
	Office Expenditure			
708,600.00	Traveling & Allowances for Board Members	649,500.00		
34,266.00	Refreshments for meetings	86,236.85		
2,055,248.93	Cost of Sales - Publications **(Note 19.2)**	3,460,180.85		
2,798,114.93			4,195,917.70	
	Staff Emoluments			
82,503,671.80	Salaries & Allowances	87,290,970.75		
11,598,577.14	Employees Provident Fund	11,081,558.67		
2,319,715.43	Employees Trust Fund	2,217,313.43		
6,135,735.60	Transport & Fuel Allowances	9,429,551.65		
3,743,687.21	Provision for Retiring Gratuity	3,479,077.50		
1,956,670.60	Overtime	1,572,638.17		
11,547.06	Holiday Payment	-		
310,255.20	Uniforms	-		
108,579,860.04			115,071,110.17	
	Office Administration			
512,379.84	Travelling - Office	799,568.13		
901,927.19	Stationery & Consumables	216,030.57		
2,081,443.30	Electricity	2,609,235.26		
1,798,716.24	Telephone/ Fax	1,880,799.14		
38,500.00	Postal charges	37,050.00		
372,600.00	Audit fees - Auditor General's Department	375,000.00		
49,385.00	Bank charges	61,825.00		
215,932.00	Medical Expenses	183,545.74		
221,724.00	Advertising	-		
2,121,023.24	Fuel Expenses	2,881,661.81		
1,331,733.54	Maintenance of Motor Vehicles	2,273,166.11		
956,434.56	Maintenance of Office Equipment & Furniture	2,852,233.03		
437,600.00	Maintenance of Building	682,513.51		

		Rs.	Rs.	Rs.
-	Maintenance of Land	-		
649,535.75	Insurance	765,697.29		
266,234.68	Water Consumption charges	453,432.60		
1,597,705.00	Security Services	1,759,115.00		
17,329,438.17	Depreciation	16,222,222.97		
1,324,162.96	Amortisation of intangible assets	1,318,376.58		
57,500.00	Legal Fees	130,000.00		
379,447.62	Sundry Expenses	286,422.88		
1,711,647.63	Janitorial Services	1,858,463.90		
200,727.50	Translation charges	181,802.10		
775.00	Stamp duty	1,175.00		
-	Intangible Assets Written off	-		
15,000.00	Loss of Refundable Deposit	-		
-	Software Licence Renewal Charges	1,728,475.68		
-	Provision for Doubtful Debtors	6,000.00		
1,162,124.60	Stock of Magazines & Journals written off	94,550.80		
35,733,697.82			39,658,363.10	
	Others			
1,295.00	National Science Library & Resource Centre- **Note 19.3**	-		
322,813.14	Printing Division - **Note 19.4**	566,078.58		
5,107,668.69	Subscription for Internet Services	5,509,134.08		
5,431,776.83			6,075,212.66	
	Capital Expenditure			
45,464,509.15	NSF Mandate 01 - **Note 20.1**	24,309,046.55		
7,605,949.47	NSF Mandate 02 - **Note 20.2**	4,632,141.37		
2,571,550.53	NSF Mandate 03 - **Note 20.3**	6,176,717.09		
610,816.81	NSF Mandate 04 - **Note 20.4**	1,651,676.89		
9,021,706.20	NSF Mandate 05 - **Note 20.5**	4,119,231.77		
2,573,621.86	NSF Mandate 06 - **Note 20.6**	3,011,078.36		
67,848,154.02			43,899,892.03	
220,391,603.64				208,900,495.66
(12,722,038.18)	**Net Surplus/(Deficit) for the year**			**(38,548,294.33)**

NATIONAL SCIENCE FOUNDATION
Statement of Changes in Net Assets/Equity
for the year ended 31st December 2022

Summery

	Contributed Capital	Revaluation Reserve	Other Reserve	Other Funds	NSF Fund	Total Accu .Fund	Total
Balance as at 01.01.2022	-	1,249,216,114.91	883,002,124.00	498,701.11	(39,018,314.59)	(38,519,613.48)	2,093,698,625.43
Changes in accounting Policy	-	-	-	-	-	-	-
Prior year adjustments	-	-	-		11,037,305.65	11,037,305.65	11,037,305.65
Restated balance	-	1,249,216,114.91	-	498,701.11	(27,981,008.94)	(27,482,307.83)	2,104,735,931.08
Change in net asset/equity for 2022							
Revaluation Surplus	-	-	-	-	-	-	-
Investment adjustment	-	-	-	-	-	-	-
Grants From Treasury							
Capital	-	-	-	-	16,000,000.00	16,000,000.00	16,000,000.00
Recurrent	-	-	-	-	141,060,000.00	141,060,000.00	141,060,000.00
Other operations	-	-	-	-	13,292,201.33	13,292,201.33	13,292,201.33
Expenditure during the year							
Capital	-	-	-	-	(43,899,892.03)	(43,899,892.03)	(43,899,892.03)
Recurrent	-	-	-	-	(165,000,603.63)	(165,000,603.63)	(165,000,603.63)
Total recognised revenue and expences for the period	-	-	-	-	(38,548,294.33)	(38,548,294.33)	(38,548,294.33)
Balance as at 31st December 2022	**-**	**1,249,216,114.91**	**-**	**498,701.11**	**(66,529,303.27)**	**(66,030,602.16)**	**2,066,187,636.75**

NATIONAL SCIENCE FOUNDATION
STATEMENT OF CASH FLOW

	2022 Rs.		2021 Rs.	
Cash flows from operating Activities				
Net Surplus/(Deficit) for the year	(38,548,294.33)		(12,722,038.18)	
Add: NSF fund prior year adjustments	11,037,305.65		11,047,637.25	
	(27,510,988.68)		**(1,674,400.93)**	
Adjustments for				
Depreciation	16,222,222.97		17,329,438.17	
Amortisation of Intangible assets	1,318,376.58		1,324,162.96	
Gratuity paid during the year	(1,336,550.00)		(4,185,352.50)	
Provision for Gratuity	3,479,077.50		3,743,687.21	
Profit on Disposal of Fixed Assets	(159,080.00)		-	
Write off of Intangible Assets	-		-	
Provision for Doubtful Debtors	6,000.00		-	
Deffered Revenue	(7,956,449.55)		(9,069,451.13)	
Operating profit/(loss) before working capital changes	**(15,937,391.18)**		**7,468,083.78**	
Net (Increase)/Decrease in trade other receivables	(3,018,985.02)		3,132,720.90	
Net (Increase)/Decrease in inventories	1,343,543.12		(73,630.52)	
Net Increase/(Decrease) in trade payables	(1,039,259.93)		(319,169.79)	
Cash generated from operations	(2,714,701.83)		2,739,920.59	
Net Cash Flows from Operating Activities		**(18,652,093.01)**		**10,208,004.37**
Cash flows from Investing Activities				
Proceed of Disposal of Fixed Assets	159,080.00		-	
Purchase of assets	(2,250,692.80)		(477,940.74)	
Net Cash Flows from Investing Activities		**(2,091,612.80)**		**(477,940.74)**
Cash Flows from Financial Activities				
Contribution from Government	2,250,692.80		477,940.74	
Contribution from NSF Components	-		-	
Net Cash Flows from Financial Activities		**2,250,692.80**		**477,940.74**
Net Increase/(Decrease) in cash & cash equivalents		(18,493,013.01)		10,208,004.37
Cash & Cash Equivalent at beginning of the period		28,475,552.01		18,267,547.64
Cash & Cash Equivalent at end of the period		**9,982,539.00**		**28,475,552.01**
Cash & Cash Equivalents				
BOC - 0002323269		2,977,620.19		21,301,090.95
BOC - 0002323270		1,417,990.25		78,468.49
BOC - 0002322471		1,187,855.34		475,043.16
BOC Savings - 80771519		3,613,181.53		5,754,675.21
Special cash imprest		100,000.00		100,000.00
Petty cash		5,000.00		5,000.00
Cash & Cheques in hand		680,891.69		761,274.20
		9,982,539.00		**28,475,552.01**

NATIONAL SCIENCE FOUNDATION

Notes on Accounting Policies

For the Year Ended 31st December 2022

1. General

1.1 Reporting Entity

National Science Foundation has been incorporated under the Act No.11 of 1994, and located at No.47/5, Maitland Place, Colombo - 07 Sri Lanka. NSF is functioned under the Ministry of Education, Skills Development, Vocational Education, Research and Innovation Division.

1.2 Reporting Period

The financial period of the National science foundation represents from 01st January 2022 to 31st December 2022.

1.3 Approval of Financial Statements

The financial statements for the year ended 31 December 2022 were authorized for issue by the Board of Directors at the meeting held on 21st February 2023 at 4.00 pm at the NSF Board Room.

1.4 Principal activities and nature of operations

Accordingly, the National Science Foundation facilitates research, development, and innovation to create a knowledge economy. It also facilitates capacity building, infrastructure development, technology transfer, knowledge creation and sharing in all fields of science & technology to improve the quality of life of the people.

To Functions of the National Science foundation shall be

- ✓ To initiate, facilitate and support basic and applied scientific research by universities science and technology institutions and scientists.
- ✓ To strengthening scientific research potential, including research in the social science and science education programs.
- ✓ To developing the natural resources of Sri Lanka
- ✓ To training research personnel in science and technology
- ✓ To foster the interchange of scientific information among scientists in Sri Lanka and foreign countries
- ✓ To awards scholarships and fellowships for scientific study or scientific work at science and technology institutes.
- ✓ To awards Research Grants and Technology Grants
- ✓ To Popularization of Science

1.5 Responsibility for 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.

2. Summary of Significant Accounting Policies

2.1 Statement of compliance

The Financial Statements of the Institute have been prepared and presented in accordance with Sri Lanka Public Sector Accounting Standards (SLPSAS's) and presented in accordance with Sri Lanka Public Sector Accounting Standards SLPSAS 01 - Presentation of Financial Statements. However, Sri Lanka Accounting Standards have also been used in the areas where Public Sector Accounting Standards are not available. These Financial Statements comprise the statement of Financial Position, Statement of Financial Performance, Statement of Cash flows, Changes in equity and Notes to the Financial Statements.

2.2 Basis of preparations

The financial statements of the National Science Foundation have been prepared on an accrual basis and under the historical cost convention and apply consistently. No adjustments have been made for inflation factors affecting to the FSs except for the PPE measured at fair value.

2.3 Comparative Information

The Accounting Policies applied by the Institute are, unless otherwise stated, consistent with those used in the previous year. Previous year figures and phrases have been rearranged wherever necessary to conform to the current year presentation.

2.4 Presentation of functional currency

The financial statements of the Institute are presented in Sri Lankan Rupees (LKR), which is the primary economic environment in which the Institute operates.

2.5 Going Concern

The Management has assessed its ability to continue as a going concern and is satisfied that it has the resources to continue in business for the foreseeable future. Furthermore, the Management is not aware of any material uncertainties that may cast significant doubt upon the Institute's ability to continue as a going concern. Therefore, the Financial Statements of the Institute continue to be prepared on a going concern basis.

3. Property Plant & Equipment

The National science foundation Property Plant & Equipment (PPE) includes Land, Buildings, Office Equipment & Furniture, Library Books, Motor Vehicles, Accessories & Miscellaneous, Documentation Equipment.

3.1 Basis of recognition

Property, Plant and Equipment are recognised if it is probable that future economic benefits associate with the item will flow to the entity and the cost of the item can be reliably measured.

3.2 Initial recognition

Property, Plant & Equipment are initially recognised at cost including the cost of purchase with any incidental expenses incurred in bringing the assets to its working conditions, for its intend use, Subsequent to initial Recognition, PPE are measured at cost less accumulated depreciation and accumulated impairment losses.

3.3 De-recognition

The carrying amount of an item of Property, plant & equipment is de-recognised on disposal; or when no future economic benefits are expected from its use or disposal. Gains and losses on de-recognition are recognised in income statement and gains are not classified as revenue. When re-valued assets are sold, any related amount included in the revaluation reserve is transferred to Retained Earnings.

3.4 Revaluation

After recognition as an asset, class of PPE whose fair value can be measured reliably have been carried at a revalued amount, being its fair value at the date of the revaluation less any subsequent accumulated depreciation and subsequent accumulated impairment losses. Land, Building (Including Container Office) and Motor Vehicles were revalued by the Department of Government Valuation in 2019 and charged revaluation surplus/deficit directly debit/credit to revaluation surplus, to the extent the asset value has increased/decreased.

3.5 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.

3.6 Intangible Assets

Computer software and License have been recognised as intangible assets when it is probable that future economic benefits that are attributable to the assets will flow the enterprise and the cost of the asset can be measured reliably. Intangible assets acquired are stated at cost less accumulated amortization and accumulated impairment losses.

Amortisation

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

Computer Software - 20%

3.7 Depreciable assets & Depreciation

Depreciation is recognised in the statement of Financial Performance on original cost or at revaluation 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 life. The estimated rates are as follows.

Assets Category	Rate
Building	5%
Office Equipment & Furniture	20%
Motor Vehicles	20%
Accessories & Miscellaneous	20%
Library Books	5%
Documentation Equipment	10%

4. 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 a debtor is created for the unutilised funds. project unutilised balance to be refunded to NSF. The funds transferred to the Institution are treated as expenditure at the end of the year.

5. Investment

The Ministry of Technology and Research oversees the Government's involvement of SLINTEC through the National Science Foundation (NSF). NSF investment in SLINTEC is Rs. 883,002,124/-.

6. 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 organizations 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 a year were written down to zero as per the decision of the Board of Management on 15th November 2010.

The value of books or 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.

7. Presentation of Grants related to assets and income

7.1 Grants related to assets

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

7.2 Grants related to income

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

8. Inventories

Inventories are measured at the lower of cost and net realisable value. The cost of inventories is based on the first-in-first-out (FIFO) principle, and includes expenditure incurred in acquiring the inventories and other costs incurred in bringing them to their existing location and condition.

Publication stocks are valued at the cost or selling price whichever is lower.

9. Receivables

Receivables includes Cash Advances, Staff Loan, Staff Debtors and Sundry debtors. NSF provides doubtful debts for debts which are outstanding for more than 3 years.

10. Cash and Cash Equivalents

In the Statement of Cash Flows of the Institute, cash and cash equivalents includes cash and cheques in hand, cash at bank, Petty Cash and Special petty Cash.

11. Employees Benefits

All employees are covered by EPF & ETF. An approved Medical Scheme is provided in addition to the normal Welfare facilities available. Retirement benefits to employees are provided according to the laid down statutory requirements. Institute contribution for provident fund and employees' Trust Fund is 15% and 3% respectively.

Gratuity

Retirement benefits to employees are provided according to the laid down statutory requirements. Gratuity provision is made according to the Gratuity Act No.12 of 1983.Provisions have been made in the accounts in respect of liability for retiring gratuity for the employees who have completed one year of Service. The funds required for payment of gratuity is given by Treasury when requires. Gratuity has been calculated based on Basic Salary and Cost of Living Allowance.

Gratuity Provision and Payment details as follows.

Gratuity Amount paid for the year	3,479,077.50
Gratuity Provision for the year	1,336,550.00

12. Provisions, contingent assets, and contingent liabilities

Provisions are made for all obligations existing as at the Balance Sheet date when it is probable that such an obligation will result in an outflow of resources and a reliable estimate can be made of the quantum of the outflow. There are no contingent assets or liabilities to be disclosed.

13. Revenue

Revenue is recognised to the extent that it is probable that the economic benefits will flow to the Institute, and the revenue and associated costs incurred or to be incurred can be reliably measured. Revenue is measured at the fair value of the consideration received or receivable, net of trade discounts. The following specific criteria are used for recognition of revenue:

13.1 Interest Income

Interest income is recognised as and when the interest accrues.

13.2 Sundry Income

Sundry income is recognised on an accrual basis.

13.3 Profit/(Loss) Disposal of property, plant, and equipment's

Net gain and loses from the disposal of Property, plant and equipment's and other non-current assets, are accounted for in the Statement of Financial Performance. Gain or Loss is calculated after deducting the carrying amount of such assets and the related selling expenses from the sales proceed.

13.4 NSLRC Income

NSLRC income includes Library Services, Winsis Packages and Database migrations. Revenue from rendering of the services is recognised in the accounting period in which the services are rendered or performed.

13.5 Sale of Publications

Sale proceeds of the Publications are recognised as an income at the point in time of dispatch or sale has occurred.

13.6 Income From Workshops

Income from workshops, conference is recognised at the point in time upon register and collect on the payment for the event.

13.7 Income From Projects

Income of the projects is recognised its administration cost given from relevant division.

13.8 Publication Author Charges

Author Charges income is recognised on an accrual basis.

13.9 Differed Income

Where the capital grant relates to an asset released from the General Treasury, when the recurrent related to an expense item, it is recognised as income over the period necessary to match the grant on a systematic basis to the cost that it is intended to compensate.

14. Expenditure and Presentation in Income Statements

Expenses are recognised in the income statement on the basis of a direct association between the cost incurred and the earning of the specific items of income where appropriate. All expenditure incurred in running of the Institute and depreciation of the property, plant & equipment has been charged against to income in calculating the surplus/(deficit) for the period

15. Statement of Cashflow

The cashflow statement has been prepared by using The Indirect Method in accordance with the SLPSAS 2 whereby gross cash receipts and gross cash payments of operating activities, finance activities and investing activities have been recognised.

16. Current Liabilities

Current Liabilities are stated at their book value.

17. Events after the reporting period

Since the Balance sheet date there have been no events which could materially affect the state of affairs of the Institute.

18. Funds Drawn from the Treasury during – 2022

	Budget Rs.	Received Rs.	
Capital Funds	50,000,000	16,000,000	**Note A**
Recurrent Funds	160,000,000	141,060,000	

Note A: Capital Funds Allocation to Relevant Mandates

- NSF Mandate – 01 25,957,000
- NSF Mandate – 02 6,578,000
- NSF Mandate – 03 6,200,000
- NSF Mandate – 04 3,000,000
- NSF Mandate – 05 5,250,000
- NSF Mandate – 06 3,015,000

18.1 Presentation of Budget

The approved budget of the Institute has been prepared for the year 2022. The budget of the Institute has been prepared as per action plan activities. Statement of comparison of budget and actual amounts are shown in separate annexure on page no 20 to 22 in Financial Statements 2022.

NATIONAL SCIENCE FOUNDATION
Notes on Accounts
For the Year Ended 31st December 2022

Note No 19

19.1	**Sale of Publications**		**2022**	**2021**
			Rs.	**Rs.**
	Sales Proceed of Publications	**Note - A**	75,900.00	21,100.00
			75,900.00	**21,100.00**

	Note - A Sales Proceed of Publications		
1	Sri Lanka Journal of Social Sciences	800.00	200.00
2	Sri Lanka Journal of Social Sciences Vol No. 42	-	200.00
3	Sri Lanka Journal of Social Sciences Vol No. 43	400.00	800.00
4	Sri Lanka Journal of Social Sciences Vol No. 44	200.00	-
5	Other Publications	4,500.00	-
6	Natural Resources of Sri Lanka	18,000.00	-
7	Vidurava - Old	4,000.00	900.00
8	Journal of National Science Foundation Vol No. 48	2,000.00	4,000.00
9	Covid - 19	45,000.00	15,000.00
10	Vidurava Vol. 37-2 (E)	200.00	-
11	Vidurava Vol. 37-2 (S)	200.00	-
12	Vidurava Vol. 37-4 (E)	200.00	-
13	Vidurava Vol. 37-4 (S)	400.00	-
		75,900.00	**21,100.00**

19.2	**Cost of Sales - Publications**	**2022**	**2021**
		Rs.	Rs.
	Opening Stock as at 01.01.2022	1,341,493.36	1,190,284.96
	Add		
	New Publications Cost	2,572,118.01	3,368,581.93
		3,913,611.37	4,558,866.89
	Less		
	Publication Stock Written off	(94,550.80)	(1,162,124.60)
	Closing Stock as at 31.12.2022	(358,879.72)	(1,341,493.36)
		3,460,180.85	**2,055,248.93**

19.3	**National Science Library & Resource Centre**	**2022**	**2021**
		Rs.	Rs.
1	Maintenance & Repairs	-	-
2	Consumables	-	1,295.00
		-	**1,295.00**

19.4	**Printing Unit**	**2022**	**2021**
		Rs.	Rs.
1	Consumables & Chemicals	369,056.90	379,987.61
2	Paper & Boards	95,089.14	(57,174.47)
3	Maintenance & Repairs	101,932.54	-
		566,078.58	**322,813.14**

NATIONAL SCIENCE FOUNDATION
Notes on Accounts
For the Year Ended 31st December 2022

Note No 20

20.1 NSF Mandate 01
Promoting Research and Development

		2022	2021
		Rs.	Rs.
1	Research Division	22,449,920.80	36,049,203.90
2	Technology Division	16,125.75	5,995,105.25
3	Research Scholarship & Fellowships	1,843,000.00	3,420,200.00
		24,309,046.55	**45,464,509.15**

20.2 NSF Mandate 02
S & T Information Dissemination

		2022	2021
		Rs.	Rs.
	National Library and Resource Center		
1	SLJOL Databse	2,043,520.68	4,417,690.95
2	Library Books	72,720.80	6,423.75
3	National Digitization	158,166.65	154,336.42
4	Seminars & Workshops	-	-
5	Subscriptions & Periodicals	94,620.00	616,860.00
6	Honararium for Committee Meetings	-	-
7	National Repository S & T	-	-
		2,369,028.13	5,195,311.12
	Journal Publication Unit		
1	Journal of National Science Foundation - (JNSF)	1,859,157.52	1,579,282.80
2	Sri Lanka Journal of Social Sciences - (SLJSS)	403,955.72	831,355.55
		2,263,113.24	2,410,638.35
		4,632,141.37	**7,605,949.47**

20.3 NSF Mandate 03
S & T Capacity Building

		2022	2021
		Rs.	Rs.
	International Affairs Division		
1	International Contacts - Travel Grants	-	-
2	International Contacts - OSTP	2,731,970.00	-
3	International Contacts - IPSAT	-	-
4	International Affairs Division	678,711.88	2,080.00
5	Subscription to International Scientific Organizations	2,015,984.25	944,488.53
		5,426,666.13	946,568.53
	Science & Technology Policy Research Division		
1	Subscription to International Scientific Organizations	250,050.96	242,964.00
		250,050.96	242,964.00
	Journal Publication Unit		
1	Journal of National Science Foundation - (JNSF)	500,000.00	1,382,018.00
		500,000.00	1,382,018.00
		6,176,717.09	**2,571,550.53**

20.4 NSF Mandate 04

Science & Technology Policy Research

		2022	2021
		Rs.	Rs.
1	Science & Technology Policy Research Division	1,559,676.89	610,816.81
2	International Affairs Division	92,000.00	-
		1,651,676.89	**610,816.81**

20.5 NSF Mandate 05

Science Popularization

		2022	2021
		Rs.	Rs.
1	Science Communication Outreach Division - SCOD	4,058,195.48	9,021,706.20
2	Media Division	61,036.29	-
		4,119,231.77	**9,021,706.20**

20.6 NSF Mandate 06

Acquisition of Capital Assets, Maintenance and System Administration

			2022	2021
			Rs.	Rs.
	Administration & IT			
1	Office Equipment & Furniture		6,372.00	-
2	Building		-	-
3	Motor Vehicles		-	22,000.00
4	Information Technology		2,427,622.87	2,370,576.86
5	Land & Improvements		-	-
6	Accessories & Miscellaneous		7,400.00	10,945.00
7	Staff Development	Local	569,683.49	170,100.00
		Foreign	-	-
			3,011,078.36	**2,573,621.86**

NATIONAL SCIENCE FOUNDATION
Notes on Accounts
For the Year Ended 31st December 2022

	Note No 21 - Cash and Cash Equivalents			2022	2021
				Rs.	Rs.
	Bank Accounts				
1	BOC Current A/c	0002323269	**Note - A**	2,977,620.19	21,301,090.95
2	BOC Current A/c	0002323270		1,417,990.25	78,468.49
3	BOC Current A/c	0002322471		1,187,855.34	475,043.16
4	BOC Savings A/c	80771519		3,613,181.53	5,754,675.21
5	Special cash imprest			100,000.00	100,000.00
6	Petty cash			5,000.00	5,000.00
7	Cash & Cheques in hand			680,891.69	761,274.20
				9,982,539.00	**28,475,552.01**

	Note A : Capital Cash Balance as at 31.12.2022		
	Treasury Funds - Capital	25,670.59	17,095,036.73
	Covid - 19	823,540.00	922,500.00
	Biosafety Project	-	1,672,266.11
	Cinemon Project	2,045,054.75	1,575,433.26
	NSF Kid Naturalist Project - 2021	83,354.85	35,854.85
		2,977,620.19	**21,301,090.95**

	Note No 22 - Receivables			
	Cash Advances & Advance payments			
1	Miscellaneous		-	-
2	**Loans to Staff**			
	i. Distress loan - 01	**Schedule - 1**	1,867,273.00	1,870,345.00
	ii. Distress loan - 02	**Schedule - 2**	12,175,703.00	11,009,959.00
	iii. Combined loan	**Schedule - 3**	-	-
3	Festival Advance	**Schedule - 4**	31,250.00	30,000.00
4	Staff Debtors	**Schedule - 5**	34,571.53	-
5	Sundry Debtors	**Schedule - 6**	3,162,594.38	1,861,962.52
	Less: Provision for Doubtful Debt		(6,000.00)	-
			17,265,391.91	**14,772,266.52**

Note 15.1 - Receivable Analysis	Amount	Settlements With in one Year	Settlements After one year
Distress Loan - 01	1,867,273.00	548,887.00	1,318,386.00
Distress Loan - 02	12,175,703.00	3,579,557.00	8,596,146.00
Other Receivables	3,222,415.91	3,222,415.91	-
	17,265,391.91	**7,350,859.91**	**9,914,532.00**

	Note No 23 - Stocks			
1	Stationery and Consumables	**Schedule - 7**	822,363.25	1,183,292.73
2	Publications	**Schedule - 7**	358,879.72	1,341,493.36
			1,181,242.97	**2,524,786.09**

	Note No 24 - Other Current Assets			
1	Refundable Deposits	**Schedule - 8**	93,650.00	93,650.00
			93,650.00	**93,650.00**

NATIONAL SCIENCE FOUNDATION

Property Plant and Equipment — **Note No 25**

As at 31st December 2022

Description	Balance as at 01.01.2022 (Rs.)	Additions	Disposals	Balance as at 31.12.2022 (Rs.)
Assets - (Cost & Revaluation)				
Land	1,134,314,859.19	-	-	1,134,314,859.19
Building	124,647,001.40	-	-	124,647,001.40
Office Equipment & Furniture	110,481,799.17	28,572.00	9,572,913.39	100,937,457.78
Motor Vehicles	25,320,000.00	-	-	25,320,000.00
Accessories & Miscellaneous	1,448,801.55	7,400.00	27,243.00	1,428,958.55
Library Books	5,696,107.02	72,720.80	-	5,768,827.82
Documentation Equipment	15,945,261.85	-	162,140.00	15,783,121.85
	1,417,853,830.18	108,692.80	9,762,296.39	1,408,200,226.59
Accumulated Depreciation				
Building	15,275,722.41	6,232,350.07	-	21,508,072.48
Office Equipment & Furniture	102,229,213.28	4,706,775.41	9,572,913.39	97,363,075.30
Motor Vehicles	10,123,387.40	5,064,400.00	-	15,187,787.40
Accessories & Miscellaneous	1,388,424.30	28,957.81	27,243.00	1,390,139.11
Library Books	4,444,730.56	189,739.68	-	4,634,470.24
Documentation Equipment	15,945,261.85	-	162,140.00	15,783,121.85
	149,406,739.80	16,222,222.97	9,762,296.39	155,866,666.38
Net Value	**1,268,447,090.38**			**1,252,333,560.21**

Note No 26 - Intangible Assets

	2022	2021
Cost	Rs.	Rs.
Balance at the beginning of the year	6,763,571.54	6,566,199.55
Additions	2,142,000.00	197,371.99
Transfers/Disposals	-	-
Balance as at the end of the year	**8,905,571.54**	**6,763,571.54**
Accumulated amortisation		
Balance at the beginning of the year	3,383,745.08	2,059,582.12
Charge for the year	1,318,376.58	1,324,162.96
Transfers/Disposals	-	-
Balance as at the end of the year	**4,702,121.66**	**3,383,745.08**
Carrying amount as at the end of the year	**4,203,449.88**	**3,379,826.46**

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

NATIONAL SCIENCE FOUNDATION

Notes on Accounts

For the Year Ended 31st December 2022

			2022	2021
			Rs.	Rs.
	Note No 27 - Investments			
1	SLINTEC	**Note - B**	883,002,124.00	883,002,124.00
			883,002,124.00	**883,002,124.00**
	Note - B : Investments Breakup			
		No of Shares		
	Ordinary Shares	43,680,786	394,036,527.00	394,036,527.00
	Preference Shares	51,792,386	488,965,597.00	488,965,597.00
			883,002,124.00	**883,002,124.00**
	Note No 28 - Accrued Expenses			
1	Accrued Expenses	**Schedule - 9**	7,760,037.00	7,545,192.31
			7,760,037.00	**7,545,192.31**
	Note No 29 - Creditors			
	Creditors amounting to Rs.2,951,949.60 represents monies held by NSF as given below,			
1	NSF Kid Naturalist Project - 2021		83,354.85	35,854.85
2	Covid - 19		823,540.00	922,500.00
3	Cinemon Project		2,045,054.75	1,575,433.26
4	Biosafety Project		-	1,672,266.11
			2,951,949.60	**4,206,054.22**
	Note No 30 - Provision for Retiring Gratuity			
	Balance as at 01.01.2022		41,389,595.00	41,831,260.29
	(+) Provision for the year		3,479,077.50	3,743,687.21
			44,868,672.50	45,574,947.50
	(-) Paid during the year		(1,336,550.00)	(4,185,352.50)
	Balance as at 31.12.2022		**43,532,122.50**	**41,389,595.00**
	Note No 31 - Deffrede Revenue			
1	Deffred Revenue - Assets	**Note - C**	49,679,397.69	55,385,154.44
			49,679,397.69	**55,385,154.44**
	Note C : Deffered Revenue - Assets			
	Balance as at 01.01.2022		55,385,154.44	63,976,664.83
	(+) Assets Capitalized		2,250,692.80	477,940.74
			57,635,847.24	64,454,605.57
	(-) Depreciation Deffered		(7,956,449.55)	(9,069,451.13)
	Balance as at 31.12.2022		**49,679,397.69**	**55,385,154.44**
	Note No 32 - NSF Development Fund			
1	NSF Component		338,966.31	338,966.31
2	Staff Component		159,734.80	159,734.80
			498,701.11	**498,701.11**

NATIONAL SCIENCE FOUNDATION

Budget & Actual Expenditure 2022

Capital Expenditure

Rs.000'

Description	*Estimate 2022*	*Revised Estimate 2022*	*Actual Expenditure*	*Surplus/(Vareinces)*
NSF Mandate - 01	25,957	25,957	24,309	1,648
NSF Mandate - 02	6,984	6,578	4,632	1,946
NSF Mandate - 03	5,300	6,200	6,177	23
NSF Mandate - 04	3,679	3,000	1,652	1,348
NSF Mandate - 05	5,250	5,250	4,119	1,131
NSF Mandate - 06	2,830	3,015	3,011	4
Accruals	-	-	1,666	(1,666)
Total	**50,000**	**50,000**	**45,566**	**4,434**

Recurrent Expenditure

Rs.000'

Description	*Estimate 2022*	*Revised Estimate 2022*	*Actual Expenditure*	*Surplus/(Vareinces)*
Personal Emoluments	125,000	125,000	112,929	12,071
Travelling Expenses	1,200	1,000	800	200
Supplies	4,350	4,250	3,098	1,152
Maintenance Expenditure	3,325	6,400	5,808	592
Contractual Services	12,850	10,750	9,364	1,386
Others	13,275	12,600	9,759	2,841
Accruals	-	-	2,410	(2,410)
Total	**160,000**	**160,000**	**144,167**	**15,833**

NATIONAL SCIENCE FOUNDATION

Budget & Actual Expenditure 2022

Rs.000'

Description	*Estimate 2022*	*Revised Estimate 2022*	*Actual Expenditure*	*Surplus/(Variences)*
Staff Emoluments				
Salaries & Allowances	97,819	94,910	87,291	7,619
Employees Provident Fund	14,183	14,183	11,082	3,101
Employees Trust Fund	2,837	2,837	2,217	620
Payment for unutilized leave	-	-	-	-
Fuel & Transport Allowance	7,341	9,500	9,430	70
Retiring Gratuity	600	1,350	1,337	13
Overtime	2,100	2,100	1,573	527
Holiday Payment	120	120	-	120
	125,000	**125,000**	**112,929**	**12,071**
Traveling				
Office Traveling	1,200	1,000	800	200
	1,200	**1,000**	**800**	**200**
Supplies				
Uniforms	350	350	-	350
Stationary & Consumables	1,500	1,000	216	784
Fuel & Lubricants	2,500	2,900	2,882	18
	4,350	**4,250**	**3,098**	**1,152**
Maintenance				
Maintenance of Motor vehicle	1,800	2,500	2,273	227
Maintenance of Office Equipments	925	3,000	2,852	148
Maintenance of Building	500	800	683	117
Maintenance of Land	100	100	-	100
	3,325	**6,400**	**5,808**	**592**
Services				
Electricity	1,980	2,700	2,609	91
Postage	1,000	500	37	463
Telephone/ Fax	4,500	2,200	1,881	319
Insurance Charges - Vehicles & Building	850	850	766	84
Water consumption	750	750	453	297
Security Services	1,850	1,850	1,759	91
Janitorial Services	1,920	1,900	1,858	42
Leasing	-	-	-	-
	12,850	**10,750**	**9,364**	**1,386**

Rs.000'

Description	*Estimate 2022*	*Revised Estimate 2022*	*Actual Expenditure*	*Surplus/(Variences)*
Other Recurrent				
Advertising	750	750	-	750
Allowances to Board members Audit Committee & Travelling	950	950	650	301
Audit fees - Auditor General's Dept.	500	500	375	125
Bank charges	100	100	62	38
Entertainment	-	-	-	-
Legal fees	125	130	130	-
Medical scheme	250	250	184	66
Refreshments for committee meetings	300	300	86	214
Library & Resources Centre	-	-	-	-
Printing unit	900	900	566	334
Stamp duty	20	20	1	19
Sundry Expenses	500	500	286	214
Translation charges	180	200	182	18
Internet membership fees	5,360	6,000	5,509	491
Subscription for Software Licence Renewal	3,340	2,000	1,728	272
	13,275	**12,600**	**9,759**	**2,841**
Total	**160,000**	**160,000**	**141,757**	**18,243**
Provision & other				
Gratuity Provision	-	-	3,479	-
Depreciation	-	-	16,222	-
Amortitation of Intangible Assets	-	-	1,318	-
Intangible Assets Written off	-	-	-	-
Loss of Refundable Deposit	-	-	-	-
Stock Stationery & Consumables Written off	-	-	-	-
Stock Magazines & Journals Written off	-	-	95	-
Cost of Sales - Publications	-	-	3,460	-
Total Other Recurrent	**-**	**-**	**24,574**	**-**
Total	**160,000**	**160,000**	**166,331**	**-**

Loan Balance as at 31.12.2022

Schedule - 1

Distress Loan - 01		Rs.	Rs.
1	Mrs.D.M.R. Ippalawatte	49,120.00	
2	Mr.K.G.J Karunasena	48,222.00	
3	Mrs.Dilani Jayaweera	94,505.00	
4	Mrs.J.A.C.H Samarasinghe	61,614.00	
5	Mrs.S.V.P.M.Rukshani	12,192.00	
6	Mr.S.N.P.K Sapumohotti	50,596.00	
7	Dr.H.I Sandanayaka	52,417.00	
8	Mr.Chandrasiri Perera	190,410.00	
9	Mr.T.D.K.Gunasekara Zoysa	47,784.00	
10	Mrs.J.A.C.G.Samarasinghe	146,268.00	
11	Mrs.H.K.C Priyadarshanie	57,736.00	
12	Mr.Umeka Samaranayake	199,968.00	
13	Mr.E.M.D.C.B Ekanayaka	32,536.00	
14	Mrs.R.M.M Jayajeewani	23,898.00	
15	Mrs.B.V.I.D Wimalarathna	51,156.00	
16	Mrs.D.M.W Sadari Dematagolla	85,932.00	
17	Mrs.Dilushi Munasingha	36,180.00	
18	Mrs.Nisansala Hansamali	200,042.00	
19	Mr.Ranil Kumara de Silva	72,806.00	
20	Mrs.J.K Harsha Shamini	45,924.00	
21	Mohomad Rihas	46,414.00	
22	Mr.Malith Dananjaya	54,324.00	
23	Mrs.K.W.D.Madushani	33,600.00	
24	Mrs.A.H.D.R Monali	113,893.00	
25	Mr.M.A.R Bandara	59,736.00	
			1,867,273.00

Distress Loan - 02 *Schedule - 2*

1	Mrs.H.A.Kanthi	62,490.00
2	Miss.N.Paranavidana	45,826.00
3	Mrs.V.R.Priyanganie	237,462.00
4	Mrs.N.S.Liyanage	237,462.00
5	Mrs.N.S.S Silva	87,195.00
6	Mr.Saman Sujeewa	229,130.00
7	Mrs.R.K.D.U Medhavi	229,130.00
8	Mrs.Monika Wijayamanne	233,296.00
9	Mr.K.A.D.P.N. Nanayakkara	183,304.00
10	Mr.B.S.Cooray	237,462.00
11	Mr.H.P.L Caldera	24,996.00
12	Mrs.D.M.R. Ippalawatte	117,520.00
13	Mrs.Hemamali Priyadarshani	237,462.00
14	Mrs..A.J.N. Silva	212,466.00
15	Mrs.D.M.N Prishanthi	229,130.00
16	Mrs.I.C.Ramani	233,296.00
17	Mr.K.G.J Karunasena	147,533.00
18	Mrs.W.A.D.A Perera	133,312.00
19	Mrs.D.N.Wickramarachchi	54,158.00
20	Ms.K.N.R.H.D.Mahapitiya	87,486.00
21	Mrs.Dilani Jayaweera	76,301.00
22	Mrs.J.A.C.H Samarasinghe	25,872.00
23	Mrs.M.A.R.L Millavithana	54,158.00
24	Mrs.S.V.P.M.Rukshani	187,776.00
25	Mr.S.N.P.K Sapumohotti	166,036.00
26	Mrs.Dilrukshi Ekanayake	45,826.00
27	Dr.H.I Sandanayaka	168,381.00
28	Mr.Chandrasiri Perera	38,665.00
29	Mrs.B.T.Wickramasingha	41,660.00
30	Mrs.Mahesha Nadugala	224,964.00
31	Mr.T.D.K.Gunasekara Zoysa	135,520.00
32	Mrs.R.A.A.R Ranathunga	54,158.00
33	Mrs.Maduka Senarathna	45,826.00
34	Mr.P.D Gunamuditha	133,312.00
35	Mr.W.P.S.Sammani Weerasingha	229,130.00
36	Mr.K.K.Yohan Chandeera	229,130.00
37	Mrs.Chani M De Silva	241,628.00
38	Mrs.Kanchana Sewwandhi	233,296.00
39	Mrs.J.A.C.G.Samarasinghe	66,198.00
40	Mrs.H.K.C Priyadarshanie	175,504.00

41	Mr.E.M.D.C.B Ekanayaka	24,015.00
42	Mrs.Pushpa Ellapallage	229,130.00
43	Mrs.Priyanka Bamunendra	233,296.00
44	Mrs.A.N.L Perera	241,628.00
45	Mrs.B.V.I.D Wimalarathna	152,978.00
46	Mr.Janaka Perera	90,838.00
47	Mr.Asanga Indrajith Ahangama	204,134.00
48	Mrs.Saroja Udayangani	62,176.00
49	Mrs.D.M.W Sadari Dematagolla	5,698.00
50	Mrs.Dilushi Munasinghe	76,302.00
51	Mrs.Nisansala Hansamali	41,586.00
52	Mr.S.C.S Fernando	237,462.00
53	Mr.W.A.B Fernando	241,628.00
54	Mrs.P.H.Hasni	83,320.00
55	Mrs.M.Shamila	38,460.00
56	Mr.Ranil Kumara de Silva	172,988.00
57	Mr.Pujitha Hewawasam	62,490.00
58	Mrs.M.N Thasneem	216,632.00
59	Mrs.Sarani Meneripitiya	220,798.00
60	Mrs.J.K Harsha Shamini	133,214.00
61	Mrs.W.A.H Vinoli Chandi	233,296.00
62	Mr.Sandun Fernando	241,628.00
63	Mrs.G.G.K.P.Sumudu Kumari	241,628.00
64	Mr.Manuja Karunarathna	83,320.00
65	Mrs.S.Warnasooriya	237,462.00
66	Mrs.N Muhandiram	79,154.00
67	Mrs.K.N.Samanthi	66,656.00
68	Dr.K.B.Hasanthi	66,656.00
69	Mr.Dushantha Pushpakumara	195,802.00
70	Mohomad Rihas	145,222.00
71	Mr.Malith Dananjaya	170,640.00
72	Mrs.K.W.D.Madushani	33,056.00
73	Mr.Nuwan Nishantha	166,640.00
74	Mr.Amila Saman Fernando	237,462.00
75	Mrs.N.M.Wickramsingha	212,466.00
76	Mrs.C.N.G Moragoda	212,466.00
77	Mrs.A.H.D.R Monali	136,107.00
78	Mr.G.D.N.Ranjan	229,130.00
79	Mrs.Chamathka Dias	141,644.00
80	Mr.P.J.M.C Perera	132,000.00
81	Mr.M.A.R.Bandara	177,726.00
82	Mr.R.D.S.D Wijesundara	133,312.00
		12,175,703.00

Schedule - 3

Combined Loan as at 31.12.2022

		Rs.	Rs.
1	Not Available	-	
			-

Schedule - 4

Festival Advance Balances as at 31.12.2022

	Name	Rs.
1	Mr.K.A.D.P.N. Nanayakkara	10,000.00
2	Mr.S.C.S Fernando	10,000.00
3	Mr.Jude Malan	10,000.00
4	Mohommad Rihaz	1,250.00
	Total	**31,250.00**

Schedule - 5

Staff Debtors Schedule

1	Mr.K.D.P.N Nanayakkara	10,930.63
2	Mr.C.A.B Wickramasinghe	13,996.44
3	Mrs.K.S Haputhanthrige	4,934.98
4	Mrs.P.Nisansala Hansamali	2,100.46
5	Mr.P.S.D Fernando	2,609.02
		34,571.53

Schedule - 6

Sundry Debtors Schedule

Sundry Debtors Balances as at 31/12/2022

Date	V.No	Grant No.	Grantee	Amount Rs. cts.
28-11-2019	JV - 491		Ministry of Science & Technology - Election Duty	6,000.00
31-12-2022	JV - 230		Mr.Saman Sujeewa Ippalawatta	46,750.00
31-12-2022	JV - 230		Mr.T.Danushka Kumara	35,000.00
31-12-2022	JV - 230		Mr.K.Malith Dananjaya Silva	22,000.00
31-12-2022	JV - 255	Invoice No - 5294	Assistant Director Department of Wildlife Conservation No.811/A, Jayanthipura Road Battaramulla	75,000.00

31-12-2022	JV - 255	Invoice No - 5309	Chief Librarian Colombo Public Library No.15 Sir Marcus Fernando Mawatha Colombo	15,000.00
31-12-2022	JV - 255	Invoice No - 5311	President Secretarial Gall Face	75,000.00
31-12-2022	JV - 263	RG/2017/EA & ICT/02	Prof.R.U Halwatura Dept. of Civil Engineering Faculty of Engineering University of Moratuwa	173,353.53
31-12-2022	JV - 263	TG/2017/Tech-D/06	Prof.Jasundara Bandara National Institute of Fundamental Studies Hantana Road Kandy	710,211.15
31-12-2022	JV - 263	TG/2020/Covid/HS/01	Prof.R.M.G Rajapaksha Dept. of Chemistry Faculty of Science University of Peradeniya	42,088.35
31-12-2022	JV - 263	RG/2019/AG/01	Dr.Anupama P Halmillawewa Dept. of Microbiology Faculty of Science University of Kelaniaya	133,196.56
31-12-2022	JV - 263	RG/2019/BS/02	Dr.W.M.D.G.B Wijayaratne Dept. of Microbiology Faculty of Medicine University of Ruhuna	110,592.99
31-12-2022	JV - 263	RG/2019/EA & ICT/01	Dr.(Mrs) S.H.P Gunawardena Dept. of Chemical & Process Engineering Faculty of Engineering University of Moratuwa	911,790.00
31-12-2022	JV - 263	RG/2019/BT/02	Dr.Thusitha Wickramasunghe Dept. of Biochemistry & Clinical Chemistry Faculty of Medicine University of Kelaniaya	806,611.80
				3,162,594.38

Schedule - 7

	Stocks	Rs.	Rs.
1	**Stationary & Consumables**		
	Stores	363,843.60	
	Printing	458,519.65	**822,363.25**
2	**Publications**		
	Coral Reef Posters	80.00	
	Horton Plains Vedio Cassettes	8,043.75	
	Covid - 19	330,000.00	
	Natural Resources of Sri Lanka	12,577.15	
	Vidurawa 37-2 (Tamil)	800.00	
	Vidurawa 37-3 (English)	269.84	
	Vidurawa 37-3 (Sinhala)	262.10	
	Vidurawa 37-4 (Sinhala)	246.88	
	Vidurawa 38-1 (English)	400.00	
	Vidurawa 38-1 (Sinhala)	4,800.00	
	Vidurawa 39-2 (English)	800.00	
	Journal of National Science Foundation Vol No. 50	600.00	**358,879.72**
	Total		**1,181,242.97**

Schedule - 8

Prepayments

		Rs.
1	Insuarance	289,747.21
2	Maintenance of Building	324,324.00
3	Maintenance of Office Equipments	1,366,734.45
4	Postage	58,438.00
5	Maintenance & Repair - Printing	9,941.91
		2,049,185.57

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	Laugh Holdings	8,200.00
		93,650.00

Schedule - 9

Accrued Charges

	Recurrent		
1	Audit Fees	747,600.00	
2	Electricity	242,829.23	
3	Water Consumption charges	30,822.15	
4	Stationeries & Consumables	12,000.00	
5	Security Services	149,730.00	
6	Janitorial Services	162,196.00	
7	Fuel Expenses	882,326.91	
8	Telephone	44,604.17	
9	Medical Expenses	31,354.00	
10	Sundry Expenses	5,250.00	
11	Travelling - Office	1,440.00	
12	Overtime	132,233.40	
13	Subscription for Internet Charges	494,092.72	
14	Mobile Internet	10,935.75	
15	Cons. & Chemicals - Printing	14,500.00	
16	Maintenance of Motor Vehicles	400.00	
17	Maintenance of Office Equipments	279,944.74	3,242,259.07
	Capital		
1	Research Division	31,000.00	
2	Database	2,043,520.68	
3	International Affairs Division	2,016,334.25	
4	Staff Training - Local	10,000.00	
5	Journal of National Science Foundation - (JNSF)	76,400.00	
6	Sri Lanka Journal of Social Sciences - (SLJSS)	2,500.00	
7	Science Communication Outreach Division	338,023.00	4,517,777.93
	Total		**7,760,037.00**

NATIONAL SCIENCE FOUNDATION
Notes to Financial Statements

Note A
Capital Expenditure

From 2017 onwards expenditure reported according to the activities mandate by the science and technology Development act no 11 of 1994, and According to New Action Plan from 2021 onwards

Note B
Publications

As per the Audit Observation 2021 Publication Sales Income and Publication Cost of Sales has been shows seperately. Please refer Income Statement

NATIONAL SCIENCE FOUNDATION
Reconciliation of Financial Position

	Note	Audited Balance as at 31 December 2021	Adjustments	Adjusted Balance as at 31 December 2021
ASSETS				
Current Assets				
Cash & Cash Equivalents		28,475,552		28,475,552
Receivables		6,028,669		6,028,669
Stocks		2,524,786		2,524,786
Pre Payments		1,529,326		1,529,326
Other Current Assets		93,650		93,650
Total Current Assets		38,651,983	-	38,651,983
Non-Current Assets				
Receivables		8,743,598		8,743,598
Property,plant & Equipments		1,268,447,090		1,268,447,090
Intangible Assets		3,379,826		3,379,826
Investments		883,002,124		883,002,124
Total Non-current Assets		2,163,572,639	-	2,163,572,639
Total Assets		2,202,224,621	-	2,202,224,621
Liabilities				
Current Liabilities				
Accrued Charges		7,545,192		7,545,192
Creditors		4,206,054		4,206,054
		11,751,247	-	11,751,247
Non-Current Liabilities				
Provision for Retiring Gratuity		41,389,595		41,389,595
Deffered Revenue		55,385,154		55,385,154
		96,774,749	-	96,774,749
Total Liabilities		108,525,996	-	108,525,996
Net Assets		**2,093,698,625**	**-**	**2,093,698,625**
Equity and Reserves				
Accumulated Funds				
NSF Fund		(39,018,315)		(39,018,315)
Revaluvation Reserve		1,249,216,115		1,249,216,115
Government Grant		883,002,124		883,002,124
NSF Development Fund		498,701		498,701
Total Equity		**2,093,698,625**	**-**	**2,093,698,625**

NATIONAL SCIENCE FOUNDATION

Reconciliation of Financial Performance

	Year ended 31 December 2021				
	Audited Balance 2021		Adjustments	Adjusted Balance 2021	
Revenue					
Government Grant	193,772,900			193,772,900	
Other Income				-	
Interest received	715,083			715,083	
Sundry Income	15,150			15,150	
Sale of Publications	(2,034,149)		2,055,249	21,100	
Photocopy receipts	3,417			3,417	
Publication Charges Received - JNSF	172,792			172,792	
NSLRC Income	456,091			456,091	
Income from Workshops	75,000			75,000	
Profit/(Loss) Sale of Fixed Assets	-			-	
Other	-			-	
Differed Income - Publications	3,368,582		-	3,368,582	
Differed Income - Assets	9,069,451			9,069,451	
		205,614,317			207,669,565
Expenditure					
Office Expenditure					
Traveling & Allowances for Board Members	708,600			708,600	
Refreshments for meetings	34,266			34,266	
Cost of Sales - Publications	-	742,866	2,055,249	2,055,249	2,798,115
Staff Emoluments					
Salaries & Allowances	82,503,672			82,503,672	
Employees Provident Fund	11,598,577			11,598,577	
Employees Trust Fund	2,319,715			2,319,715	
Transport & Fuel Allowance	6,135,736			6,135,736	
Provision for Retiring Gratuity	3,743,687			3,743,687	
Overtime	1,956,671			1,956,671	
Holiday Payment	11,547			11,547	
Uniforms	310,255			310,255	
		108,579,860			108,579,860
Office Administration					
Travelling - Office	512,380			512,380	
Stationary & Consumables	901,927			901,927	
Electricity	2,081,443			2,081,443	
Telephone/ Fax	1,798,716			1,798,716	
Postal charges	38,500			38,500	
Audit fees - Auditor General's Dept.	372,600			372,600	
Bank charges	49,385			49,385	
Medical Expenses	215,932			215,932	
Advertising	221,724			221,724	
Fuel Expenses	2,121,023			2,121,023	
Maintenance of Motor Vehicles	1,331,734			1,331,734	
Maintenance of Office Equipment & Furniture	956,435			956,435	
Maintenance of Building	437,600			437,600	
Maintenance of Land	-			-	
Insurance	649,536			649,536	
Water Consumption charges	266,235			266,235	
Security Services	1,597,705			1,597,705	
Depreciation	17,329,438			17,329,438	

Amortisation of intangible assets	1,324,163			1,324,163	
Legal Fees	57,500			57,500	
Sundry Expenses	379,448			379,448	
Janitorial Services	1,711,648			1,711,648	
Translation charges	200,728			200,728	
Stamp duty	775			775	
Loss of Refundable Deposit	15,000			15,000	
Stock of Stationery & Consumables written off	-			-	
Stock of Magazines & Journals written off	1,162,125	35,733,698		1,162,125	35,733,698
Others					
National Science Library & Resource Centre	1,295			1,295	
Printing Division	322,813			322,813	
Subscription for Internet Services	5,107,669	5,431,777		5,107,669	5,431,777
Capital Expenditure					
NSF Mandate - 01	45,464,509			45,464,509	
NSF Mandate - 02	7,605,949			7,605,949	
NSF Mandate - 03	2,571,551			2,571,551	
NSF Mandate - 04	610,817			610,817	
NSF Mandate - 05	9,021,706			9,021,706	
NSF Mandate - 06	2,573,622			2,573,622	
		67,848,154			67,848,154
Excess of Income over expenditure		**(12,722,038)**			**(12,722,038)**

Reconciliation of Statement of Cash Flow Rs'000

	Audited Balance 2021		Adjustments	Adjusted Balance 2021	
Cash flows from operating Activities					
Net excess of expenditure over income	(12,722)			(12,722)	
Add; NSF fund prior year adjustments	11,048			11,048	
	(1,674)			**(1,674)**	
Adjustments for					
Depreciation	17,329			17,329	
Amortisation of Intangible assets	1,324			1,324	
Gratuity paid during the year	(4,185)			(4,185)	
Provision for Gratuity	3,743			3,743	
Disposal of Fixed Assets	-			-	
Writtenoff of Intangible Assets	-			-	
Revaluation Reserve of Disposal Vehicles	-			-	
Deffered Revenue	(9,069)			(9,069)	
Debtor Written off	-			-	
Operating profit/loss before working capital chan	**7,468**			**7,468**	
Net increase/decrease in trade other receivables	3,132			3,132	
Net increase/decrease in inventories	(73)			(73)	
Net decrease/increase in trade payables	(319)			(319)	
Cash generated from operations	2,740			2,740	
Net cash from operating activities		**10,208**			**10,208**
Cash flows from Investing Activities					
Proceed of Disposal of Fixed Assets	-			-	
Purchase of assets	(478)			(478)	
Proceeds from sale of books	-			-	
Net cash used in investing activities		**(478)**			**(478)**
Cash Flows from Financial Activities					
Contribution from Government	478			478	
Contribution from NSF Component	-			-	
		478			**478**
Net cash from financing activities		10,208			10,208
Cash & cash equivalent at beginning period		18,267			18,267
Cash & cash equivalent at end of period		**28,475**			**28,475**

NATIONAL SCIENCE FOUNDATION
Assets Additions During the Year 2022

Asset No	Voucher No	Date of Purchase	Supplier	Classification	No. of Items	Value	Location
Office Equipments							
2022/OE/com/IT/01	J/25	2022.02.09	Techzone (pvt) Ltd	UPS - 650VF	1	6,700.00	IT Unit - Mr Madhawa
2022/OE/Admin/02	O/195, J/53	2022.03.03	Metro Electricals	Exhaust Fan 12"	1	6,372.00	Administration
2022/OE/com/DO/03	G 385	2022.06.23	Winsoft Technologies	UPS Prolink	1	15,500.00	DG Office
Miscellanious and Accessories							
2022/Mis/DO/01	J/63	2022.04.01	Sam Trade Centre	Taiko J/Kettle	1	3,750.00	DG Office
2022/Mis/CHO/02	J/56	2022.02.22	S.S.K Computers (pvt) Ltd	Kingston 32GB Pen Drive	1	2,300.00	Chairman Office
2022/Mis/DO/03	J/64	2022.03.17	Jayamanne Electrical	Wireless Bell	1	1,350.00	DG Office
Intangible Assets							
2022/IA/IT/01	G/468	2022.06.30	Sanje (pvt) Ltd	Microsoft office Academinc Version License	60	2,142,000.00	IT Unit - Mr Madhawa

Auditor General's Report

ජාතික විගණන කාර්යාලය
தேசிய கணக்காய்வு அலுவலகம்
NATIONAL AUDIT OFFICE

මගේ අංකය
எனது இல.
My No.

ඔබේ අංකය
உமது இல.
Your No.

දිනය
திகதி
Date

Chairman
National Science Foundation

31st May 2023

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 2022* in terms of Section 12 of the National Audit Act, No. 19 of 2018.

1. Financial Statements

1.1 Qualified Opinion

The audit of the financial statements of the National Science Foundation for the year ended 31 December 2022 comprising the statement of financial position as at 31 December 2022 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, except for the effects of the matters described in the basis for Qualified Opinion section of my report, the accompanying financial statements give a true and fair view of the financial position of the Foundation as at 31 ***December 2022,*** 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 Qualified Opinion

a. Even though full depreciation has been completed in accordance with paragraph 65 of Sri Lanka Public Sector Accounting Standard No. 07, the assets worth of Rs. 94,525,117 which are still being used have not been disclosed in the financial statements. As well as in accordance with Sri Lanka Public Sector Accounting Standard No. 03, effective life of these assets has not been reviewed and incorporated in the accounting statements.

අංක 306/72, පොල්දූව පාර, බත්තරමුල්ල. ශ්‍රී ලංකාව
இல. 306/72, பொல்துவ வீதி, பத்தரமுல்லை, இலங்கை.
No. 306/72, Polduwa Road, Battaramulla, Sri Lanka.
+94 11 2 88 70 28 - 34
+94 11 2 88 72 23
ag@auditorgeneral.gov.lk
www.naosl.gov.lk

b. According to paragraph 07 of Sri Lanka Public Sector Accounting Standard No. 01, the surplus of the year was reduced by Rs. 428,819 due to the expenditure of future years in the renewal of licenses of 03 types of software is accounted as reviewed year expenditure.

c. According to paragraph 35 of Sri Lanka Public Sector Accounting Standard No. 9, the foundation uses the 'first in – first out' (FIFO) method to value the cost of inventories and disclosed under the accounting policies. But there were instances where stores have been deviated from this method when issuing stocks. As a result of that, the publication cost of the reviewed year which was the value of Rs.2,662,612 have been identified as Rs. 2,572,118. Accordingly, the cost of publications had been recorded less by Rs.90,494.

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 qualified opinion.

1.3 Other information included in the Foundation's 2022 Annual Report.

The other information comprises the information included in the Foundation's 2022 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 2022 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, except for the effects of the matters described in the basis for Qualified Opinion section of my report.

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 (i) (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, except observations mention below.

Reference to law/direction

Section 4 of Public Enterprises Circular PED 1/2015 dated 25th May 2015.

Observation

Even though the higher management should have ensured that there are adequate control systems and methods for controlling and maintaining the pool vehicles and taking care of the cost, group transport facilities should have been provided, but on the contrary, Rs.826,044 was paid for group transport in the year under review.

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

a. An action has not been taken to settle the creditor balances totalling of Rs. Rs.2,868,595 which include Rs.2,045,055 over 5 years and Rs.823,540 over 2 years.

b. Even though appointment letters had issued to two officers of the foundation to the post of Accounts Officer on July 21, 2014 based on the incorrect decision made in the administrative procedure, later on the two appointment had been cancelled. As per the final judgement given by the Colombo Arbitrator's Division and Labour Court upon on a complaint made by the relevant party, the Foundation had agreed to give the said appointments to the two officers. As it was agreed, the legal fees of Rs. 130,000 incurred for that had become an idle expense.

W.P.C. Wickramaratne
Auditor General

NSF feedback on the Auditor General's Report

The Auditor General,

National Audit Office,

No. 306/72, Polduwa Road,

Battaramulla,

2023.05.23

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 2022 in terms of Section 12 of the National Audit Act, No. 19 of 2018.

1.2.1 Accounting Deficiencies

(a) As per Sri Lanka Public Sector Accounting Standard No. 07 worth of assets Rs.94,525,117 which are fully depreciated as at 31/12/2021 and still in use has been identified in Audit. A review of the effective lifetime of these assets is already underway and following drawbacks have been identified.

- Assets which are in the asset register cannot be identified physically.
- Deletion of the number assigned to the asset.
- When replacing and adding part to the assets such as computers, the value of such added and removed part has not documented properly.
- Inability to identify the book value of the existing computers when purchasing and current value of the computer after replacement.

Resolving these drawbacks along with physical identification of assets and review effective lifetime of the assets which are fully depreciated, will be completed during this year.

Also, arrangements will be made to include the related adjustments in financial statements in 2023. An action plan for that and a report on the progress made so far will be submitted to the next Audit and Management Committee.

(b)

Software	Relevant Period	Cost incurred	Applicable Cost for the year	Over-expenditure
Adobe	2022.06.01 - 2023.01.29 8 months	1,119,309.00	986,819.36	132,489.64
Antivirus	2022.03.01 - 2023.02.28	255,150.00	213,906.58	41,243.42
Zoom (2) Pro-License	2022.09.01 - 2023.09.20	354,016.68	98,930.69	255,085.99
			444,314.00	428,819.05
			Difference	15,494.95

While agreed with the item (a) of the audit report and subscribe period of the software, incurred expenditure and over expenditure shall be as above. Accordingly, the over-calculated amount is Rs. 428,819.05

The error mentioned in the audit report has been corrected by Journal Voucher No. 99 (J/99) and we will ensure that there is no such lapse in the future.

The relevant correction to the above has been made by Journal Entry No.99 on 22/5/2023 and arrangements will be made to avoid such omissions in the future.

(c) Agree with the audit observation. In practice, the first-in-first-out method (FIFO) has been followed in issuing stocks, but there are several cases where they deviate from that method in accounting, that is, in entering the ledger, and they are being corrected.

2.2.2 Reference to law/direction

(a) According to the No.373 (3) Financial Regulation of Democratic Socialist Republic of Sri Lanka balance of the imprest had not been settled as on 31st December and expenses have been reimbursed and the balance has been carried forward.

However, as indicated by the audit, from the year 2023, the imprest taken as per the F.R. 373 (1) balances will be settled on 31st December from the year 2023.

(b) During the period of fuel crisis, the office was open 03 days per week and transport facilities provided to purchase goods were limited. There were additional holidays from 9th to 17th April. Due to these reasons delays have occurred.

However, relevant officers have been informed to settle the cash advance immediately after the completion of the job.

(c) As given in F.R.1646, original copies of running charts and monthly summaries in General Form 268 have not been submitted to the Auditor General up to now. Action will be taken to submit the necessary documents to the Auditor General from May 2023.

(d) Since the officer who prepared the annual report for several years retires this year, the preparation of the 2022 annual report was assigned to another officer. A draft of the annual report could not be submitted to the Auditor General's Department with the financial statements as the officer was unable to prepare the draft within the stipulated time. However, the draft report was prepared and submitted for the approval of the Board of Management on 16.05.2022 and a copy of the same was given to the Audit General's Department on 19.05.2023. Arrangements will be made to submit the draft annual report with financial statements from next year onwards

2.3 Other matters

(a) **Rs. 2,045,055 -** This creditor balance must be settled to the Ministry of Primary Industries, which provided financial allocation for the cinnamon project.

Out of five research projects, four project reports have been submitted to the above Ministry related to this project. As the final financial statement to be received by one grant, once it is received, the balance money will be settled after reconciliation of the expenses done by both institutions.

Rs.843,540 - This balance is a donation for Covid 19 research and as soon as the final expense report is received, the remaining amount will be settled or used for another project of the institution.

(b) A separate building has not been constructed to sale the publications of the institute, and only one room in the canteen building has been reserved for this purpose. The work has been delayed due to the lack of funds to purchase furniture (tables, chairs, shelves, display racks, etc.) for the place. Once the funds are received to purchase furniture, selling publications will be started in this place.

As publications are not currently sold in this place, it has been used to store books that are removed from the NSF library. These books will be kept this place until they are given to other libraries

(c) As stated herein, the amount of Rs.133,197/- has been recovered on 09.05.2023 through Receipt No. 31485. Rs. 75,000/- the relevant works have not yet been completed and it will be completed before 30.06.2023 and the relevant amount will be recovered.

Remaining Rs. 6,000/- has been shown as provision for bad debt in the financial statement as it was informed that it cannot be paid by the letter dated 04.05.2022. Accordingly, the amount will be written off as bad debt in the accounting year 2023.

(d) As per section 4 of the Public Enterprises Department Circular no. PED 1/2015 issued for the purpose of providing group transport facilities, it does not mention anything about the use of taxis. Further, at the time of decision taken for providing transport facilities, the possibility of using taxis was discussed with the officials of the Ministry of Finance and the allocation were also made annually upon their agreement. Before fuel crisis arrised in the country, taxis were used to provide group transport facilities to the entitled Officers. In cases where taxis could not be obtained, the relevant officers were informed to hire a vehicle and reimbursed the rent. Also, during that period, taxis have been used only when there are no pool vehicles and attention has been focused on the control and maintenance of reserve vehicles and the cost.

The use of taxis for group transportation was completely stopped from middle of the year 2022 and providing of group transport was also reduced to 02 days a week.

(e) Attempts have been made since 2014 to resolve the issue of accounting officers internally, but it was not successful. Due to this reason, the investigation of the complaint filed in the District Labor Office began. Since there was no suitable officer to represent the Institute in this case, and the services of a lawyer were obtained upon the approval of the Board of Management. Legal fees of Rs.130,000/- were paid for that. The complaint has been investigated and the approval of the Board of Management has been sought to implement the decision given by the Arbitrator.

(e) JNSF, (Journal of the National Science Foundation) and SLJSS, two indexed journals published by the institute has discontinued the printing of issues from July 2021. The distribution of the previously printed copies has started, and more than 1000 journals have been distributed.

Vidurava Science Magazine is freely distributed to the Schools, Universities, Vidatha Centers, Zonal Science Coordinators, Provincial Science Coordinators, and Piriwena schools. Few copies have been kept in stores to be distributed to the Science Societies who are newly registering with NSF, and to give as a gift pack for the school students and also to use for exhibitions.

Chairman

National Science Foundation

Annexures

Principal Staff - As at 31st December, 2022

Annex 1

Chairman

Prof. Ranjith Senaratne
PhD (Vienna), PhD (Durham) h.c.

Director General

Dr S R S N Sudasinghe *PhD (Dev. Admin.), MA (Economics), PGD (Economic Dev.), BA*	Director General w.e.f. 14.03.2022
Mr. K Ravindra Pathmapriya Acting Director General appointed by the Ministry	Up to 11.03.2022

Additional Director

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

Research Division (RD)

Eng. T M R Dissanayake, *B.Sc. Engineering (Production Eng.), M.Sc. in Processing & Food Engineering*	Principal Scientific Officer & Head
Ms. W L C Dasanayake, *B.Sc. Agric. (Hons.) (Peradeniya),* M.Sc. (Peradeniya), *M.Sc. (Japan), M.Eng. (Germany)*	Senior Scientific Officer
Dr L M N S Nadugala, *B.Sc. Agric. (Hons.) (Peradeniya), M.Sc. (Asian Institute of Technology). PhD (Sir John Kothalawala Uni.)*	Senior Scientific Officer
Ms. H D N Jayaweera, *B.Sc. (Hons.) (Sri Jayewardenepura)*	Scientific Officer
Dr H I Sandanayake, *BVSc. (Peradeniya), M.Sc. (London)*	Scientific Officer
Ms. G G K P S Kumari, *B.Sc. Special in Agric. (Peradeniya) MPhil in Agricultural Engineering (Peradeniya)*	Scientific Officer
Eng. Sureshinie Warnasooriya, *B.Sc. Special Eng. (Moratuwa), M.Sc. (Moratuwa)*	Scientific Officer
Ms. M Weerasooriyagedara, *B.Sc. Special (Uva Wellassa), M.Sc. (Peradeniya)*	Scientific Officer up to 20.04.2022

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

Ms. G R P I Abeysiri, *B.Sc. Agric. Special (Wayamba) M.Sc. Crop Science (Peradeniya)*	Scientific Officer
Mr. P G I P Ariyadasa, *B.Sc. Agric. (Hons.) (Peradeniya), M.Sc. Financial Economics (Colombo)*	Scientific Officer up to 18.02.2022

International Affairs Division (IAD)

Dr J G Shantha Siri, *B.Sc. (Hons) (Colombo), M.Sc. (Kelaniya), PhD (Wayamba)*	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 Development and Innovation Division (TDID)

Eng. T M R Dissanayake, *B.Sc. Engineering (Production Eng.) , M.Sc. in Processing & Food Engineering*	Principal Scientific Officer & Head (Covering)
Ms. Sarani K Meneripitiya, *B.Sc. Special (Hons.) (Kelaniya)*	Scientific Officer

Science Communication & Outreach Division (SCOD)

Dr P R M P Dilrukshi, *B.Sc. Special (Hons.) (Peradeniya), PhD (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 up to 25.08.2022
Ms. H M A J Herath, *B.Sc. Special, Food Science & Nutrition (Wayamba)*	Scientific Officer

Journal Publication Division (JPD)

Ms. D N Wickramarachchi, *B.Sc. (Hons.) (The Open University), M.Sc. (Sri Jayewardenepura)*	Principal Scientific Officer & Head
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
Ms. S Samarasekera, *B.Sc. Special (Hons.) (Sri Jayewardenepura) B.Sc. (Economic & Mgt.) (Uni. of London)*	Scientific Officer

Media & Event Management Division (MEMD)

Mr. K G J Karunasena, *B.Sc. Agric. (Hons.) (Peradeniya), MPhil. Agric. (Peradeniya)*	Principal Scientific Officer

National Science Library and Resource Centre (NSLRC)

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

Director General's Office

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

Additional Director's Office

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

Administration Division

Mr. S N P K Sapumohotti, *B.Sc. (Peradeniya), MPM (SLIDA)*	Senior Administrative Officer
Ms. B T Wickremasinghe, *B.Sc. (Sri Jayewardenepura)*	Procurement & Transport Officer
Mr. Saman Sujeewa Ipalawatte, *Postgraduate Diploma in HRM, Masters of Business Studies*	Human Resource Development Officer

Finance Division

Ms. E M P Bamunendra, *B.Com. (Sri Jayewardenepura), Master of Professional Accounting, Licentiate Certificate of ICASL*	Accountant

Printing Unit

Mr. S M A W Anuruddha, *B.Sc. (Hons.) (Colombo), M.Sc. (Colombo)*	Principal Scientific Officer & Printing Officer (Covering)

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 Fernado, *B.Sc. (Networking) (Wolverhampton)*	Network Administrator

Retired during year 2022

Mr. M D Vajira	Driver	Retired on 28.09.2022

Resigned During year 2022

Dr P V S Panawala	Scientific Officer	From 01.01.2022
Ms. Viraji Yasapalitha	Management Assistant	From 31.01.2022
Mr. P G I P Ariyadasa	Scientific Officer	From 18.02.2022
Ms. Madara Weerasooriyagedara	Scientific Officer	From 20.04.2022
Mr. W A D Lakshan	Scientific Officer	From 25.08.2022

Ongoing Grants in 2022

Annex 2

R&D Grants

Competitive Research Grants

Agriculture & Food Science

No.	Grant No.	Grantee(s)/Institute	Project Title/Duration	Total Allocation (Rs.)
1.	**RG/2016/AG/01**	**Dr T H P S Fernando** **Dr K V S Kudaligama** **Mr M K R Silva** **Dr P Senevirathne** Rubber Research Institute Agalawatta	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**	**Dr K V V S Kudaligama** **Dr (Ms) T H P S Fernando** **Dr V H L Rodrigo** **Dr P Senevirathne** Rubber Research Institute **Prof. K M E P Fernando** Department of Botany University of Sri Jayewardenepura	Development of in-country ethephon formulations to promote low-cost harvesting systems for rubber plantations in Sri Lanka **03 Years**	**2,895,000/-**
3.	**RG/2019/AG/01**	**Dr Anupama P. Halmillawewa** Department of Microbiology Faculty of Science University of Kelaniya	Bacteriophage-mediated biocontrol of soft rot in carrots (*Dacus carota*) caused by *Pectobacterium spp*. in Sri Lanka **02 Years**	**2,155,258/-**
4.	**RG/2019/AG/02**	**Prof. Kapila Seneviratne** 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 in vivo and in vitro study **03 Years**	**4,949,000/-**
5.	**RG/ Covid/2020AG/01**	**Dr N.P. Vidanapathirana** Institute for Agro-Technology and Rural Sciences University of Colombo Weligatta New Town Hambantota **Prof. S Subasinghe** Department of Crop Sciences Faculty of Agriculture University of Ruhuna **Mr H. Rohanadheera** Inst. for Agro-Technology and Rural Sciences University of Colombo Weligatta New Town Hambantota	Development of *in-vitro* protocol for mass production of micro rhizomes of Turmeric (*Curcuma longa L.*) **01 Year**	**1,586,416/-**

6.	**RG/Covid/2020/ AG/02**	**Dr S.J. Arasakesary** Regional Agriculture Research and Development Centre Department of Agriculture Kilinochchi	A research study to identify suitable locationfor onion production promotion through true seeds in the potential areas of north province of Sri Lanka	**1,229,000/-**
7.	**RG/GAPF/2021/ AG/01**	**Dr LJPAP Jayasooriya** **Dr DA Satharasinghe** Department of Basic Veterinary Sciences Faculty of Veterinary Medicine & Animal Sciences **Prof. TM Madujith** Department of Food Science Faculty of Agriculture University of Peradeniya **Prof. Gammika Prathapasinghe** Department of Livestock and Avian Sciences Wayamba University of Sri Lanka	Value addition to chicken egg with enrichment egg yolk lipids with natural Conjugated Linoleci Acid (CLA) having anti-cancer actions & subsequent commercialization of the value-added product. **01 year 03 months**	**1,670,000/-**
8.	**RG/2021/AG/02**	**Prof. M. Vithanage** Ecosphere Resilience Research Centre **Dr A.U. Rajapaksha** Office of the Dean Faculty of Applied Sciences University of Sri Jayawardenapura **Prof. C.V.L. Jayasinghe** Department of Food Science & Technology **Dr P.U.S. Peiris** Biostatistics & Agronomy Unit Faculty of Livestock Fisheries & Nutrition Wayamba University of Sri Lanka	Synthesis of organo-mineral enriched biochar as fertilizer and nemato -repellent to enhance soil nutrient cycling, yield and quality of organic export root crops ginger and turmeric **03 years**	**3,180,000/-**
9	**RG/2021/AG/03**	**Dr W.A.U. Vitharana** Department of Soil Science Faculty of Agriculture University of Peradeniya **Mr R.A.C.J. Perera** Field Crops Research and Development Institute Mahailluppallama	Mapping of salinity development in paddy grown soils using proximal and remote sending based techniques **03 years**	**4,086,680/-**
10.	**RG/2021/AG/04**	**Dr B.R. Fernando** Department of Veterinary Public Health and Pharmacology Faculty of Veterinary Medicine and Animal Science University of Peradeniya **Dr S.S.P. Silva** Department of Animal Production & Health Peradeniya	Profiling of risks associated with veterinary drug residues in animal feed and food of animal origin to ensure consumer safety. **02 years**	**3,750,00/-**

Basic Sciences

No.	Grant No.	Grantee(s)/Institute	Project Title/Duration	Total Allocation (Rs.)
1.	**RG/2017/ BS/03**	**Prof. R M G Rajapakse** Department of Chemistry Faculty of Science **Prof. R P V J Rajapakse** Department of Veterinary Pathobiology Faculty of Veterinary Medicine & Animal Science **Dr H.M.T.U. Herath** Department of Medical Laboratory Science Faculty of Allied Health Sciences University of Peradeniya	In vitro 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 **3 years**	**3,420,000/-**
2.	**RG/2017/ BS/06**	**Prof. U.L.B. Jayasinghe** **Prof. N.S. Kumar** National Institute of Fundamental Studies	Chemistry and bioactivity of endophytic fungi from four popular condiment plants Curcuma longa, Myristica fragrans, Syzygium aromaticum and Zingiber officinale used in indigenous system of medicine in Sri Lanka: Possible applications in health and agriculture **3 years**	**3,086,300/-**
3.	**RG/2018/ BS/02**	**Prof. R. Senthilnithy** Department of Chemistry Faculty of Natural Sciences Open University of Sri Lanka	Computational studies on inhibition of epigenetic modifications of cancer codes **3 years**	**3,093,000/-**
4.	**RG/2018/ BS/03**	**Prof. G.R.A. Kumara** National Institute of Fundamental Studies (NIFS)	Development of highly efficient and environmentally stable perovskite solar cells and perovskite solar panels by industrially viable methods for power generation **3 years**	**5,257,000/-**
5.	**RG/2019/BS/01**	**Dr Gayan Bowatte** Dept. of Basic Sciences Faculty of Allied Health Sciences University of Peradeniya **Dr Sachith P. Abeysundara** Department of Statistics & Computer Science Faculty of Science University of Peradeniya **Prof Rohan Weerasooriya** National Institute of Fundamental Studies (NIFS)	Building a 3D air pollution model for the city of Kandy: a platform to evaluate health outcome **3 years**	**4,526,300/-**
6.	**RG/2019/BS/02**	**Dr W M D G B Wijayaratne** Department of Microbiology Faculty of Medicine University of Ruhuna	Evaluation of anti-Candida activity of selected medicinal plants in Sri Lanka against oral candidiasis in cancer patients **2.5 years**	**2,915,500/-**

7.	**ICRP/NSF-NSFC/2019/BS/01**	**Prof. Meththika Suharshini Vithanage** Office of the Dean Faculty of Applied Sciences University of Sri Jayewardenepura **Dr Dhammika Magana-Arachchi** National Institute of Fundamental Studies (NIFS) **Dr Rasika Pabodani Wanigatunge** Department of Botany Faculty of Science University of Kelaniya **Dr Anushka Upamali Rajapaksha** Faculty of Applied Sciences University of Sri Jayewardenepura	Enrichment mechanisms of CKDu-risk factors in groundwaters, their uptake pathways and potential remedies **3.5 years**	**19,209,155/-**
8.	**ICRP/NSF-NSFC/2019/BS/02**	**Prof. Rohana Chandrajith** **Dr N.H. Koralagedara** Department of Geology University of Peradeniya Peradeniya **Prof. S.K. Gunatilake** Department of Natural Resources Sabaragamuwa University of Sri Lanka	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 **3.5 years**	**15,285,580/-**
9.	**ICRP/NSF-NSFC/2019/BS/03**	**Prof. K B S N Jinadasa** Department of Civil Engineering University of Peradeniya **Dr S K Weragoda** National Water Supply and Drainage Board Katugastota **Prof. K G N Nanayakkara** Department of Civil Engineering University of Peradeniya **Dr H M A M C Herath** Department of Chemical Sciences Faculty of Applied Sciences Rajarata University of Sri Lanka	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 **3.5 years**	**17,005,280/-**
10.	**RG/2021/BS/01**	**Ms D.C.K.K. Dissanayake** Director of Life Sciences Sri Lanka Atomic Energy Board **Dr L.L.W.C. Yalegama** **Dr Dushan Kumaratunge** Coconut Research Institute **Ms Priyanga Ratnayake** Sri Lanka Atomic Energy Board	Design and development of a decision support system to reconfigure fruit and vegetable supply chain to enhance the food security **3 years**	**1,929,600/-**

Biotechnology

No.	Grant No.	Grantee(s)/Institute	Project Title/Duration	Total Allocation (Rs.)
1.	**RG/2019/BT/01**	**Prof. Rupika Rajakaruna** **Dr Piyumali Perera** Department of Zoology Faculty of Science University of Peradeniya	Tick borne spotted fever group rickettsioses in the Central Provinces: types of pathogens, vertebrate reservoirs host community composition and tick species involved in circulation and maintenance of pathogens **3 years**	**4,988,000/-**
2.	**RG/2019/BT/02**	**Dr Thusitha Wickramasinghe** Department of Biochemistry and Clinical chemistry Faculty of Medicine University of Kelaniya **Dr N. V. Chandrasekaran** Department of of Chemistry Faculty of Science University of Colombo **Dr K. M. N. Kumarasinghe** Department of Preclinical Science Faculty of Medicine General Sir John Kotelawela Defence University	Optimization of bead-based SELEX for selection of aptamers and evaluation of a novel real time PCR based approach for monitoring SELEX **2 years**	**1,497,000/-**

Engineering, Architecture & ICT

No	Grant No.	Grantee(s)/Institute	Project Title/Duration	Total Allocation (Rs.)
1.	**RG/2017/ EA&ICT/03**	**Prof. L. W. P. R. Udayanga** Department of Electronic and Telecommunication Engineering Faculty of Engineering University of Moratuwa **Dr Y. A. A. Kumarayapa** Department of Electronics Faculty of Applied Sciences Wayamba University of SL	Optical injection locking and characterization for direct modulation in optical communication **03 years**	**4,486,750/-**
2.	**NSF-PSF/ ICRP/2017/ EA&ICT/01**	**Dr K. Vignarooban** **Mr S. Senthuran** **Mr K. Prashanthan** 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/-**
3.	**NSF-PSF/ ICRP/2017/ EA&ICT/03**	**Dr N. Gunawardhana** **Dr B. S. Dassanayake** 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/-**

4.	**RG/2019/ EA&ICT/01**	**Prof. S. H. P. Gunawardena** **Dr S. A. D. T. Subasinghe** 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**	**3,415,500/-**
5.	**RG/2019/ EA&ICT/02**	**Dr M. A. Wijewardena** **Dr M. M. I. D. Manthilake** **Dr R. A. C. P. Ranasinghe** Dept. of Mechanical Engineering, Faculty of Engineering University of Moratuwa	Design, Development and Modeling of a Thermo-Acoustic generator for low grade heat recovery **03 years**	**3,380,350/-**
6.	**RG/2021/ EA&ICT/01**	**Prof. K. M. A. K. Kulatunga** **Dr U. S. S. Dharmapriya** Department of Manufacturing & Industrial Engineering Faculty of Engineering University of Peradeniya Peradeniya	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/-**
7.	**RG/GAPF/2021/EA & ICT/01**	**Prof. J. B. Ekanayake** Department of Electrical & Electronic Engineering Faculty of Engineering University of Peradeniya **Dr Akila Wijethunge** Department of Materials & Mechanical Technology Faculty of Technology University of Sri Jayewardenepura **Dr J V Wijayakulasooriya** Department of Electrical & Electronic Engineering Faculty of Engineering University of Peradeniya	An integrated application of the dynamic line rating, and the solar PV inverter control to enhance the rooftop solar PV integration in to distribution networks **2.5 years**	**2,475,000/-**

Environment & Biodiversity

No.	Grant No.	Grantee(s)/Institute	Project Title/Duration	Total Allocation (Rs.)
1.	**RG/2018/EB/01**	**Prof. Deepthi Yakandawala,** Department of Botany, Faculty of Science, University of Peradeniya **Dr Kapila Yakandawala**, 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 Elaeocarpaceae **3 years**	**5,552,492/-**

2.	**RG/GAPF/2021/ EB/01**	**Dr IRM Kottegoda** **Dr RCL De Silva** Industrial Technology Institute	Purification of Graphite of Sri Lanka as a high value addition **2 years**	**925,000/-**
3.	**RG/2017/EB/03**	**Prof. M. D. Amarasinghe** Department of Botany, Faculty of Science, University of Kelaniya **Dr R. M. C. S. Ratnayake,** Department of Botany, Faculty of Science, University of Peradeniya	Studies on ecology of *Typha angustifolia*, 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 **3 years**	**4,336,500/-**
4.	RG/GAPF/2021/ EB/02	**Prof. M.M. Pathmalal** Faculty of Graduate Studies University of Sri Jayewardenepura **Prof. SDM Chinthaka** Department of Chemistry Faculty of Applied Sciences University of Sri Jayawardenapura **Dr GY Liyanage** Faculty of Graduate Studies University of Sri Jayewardenepura	Scale up of the developed domestic water filter for removal of Geosmin, 2-MIB, cyanotoxinx and antibiotics in drinking water **1 year**	**2000,000/-**

Health Sciences

No	Grant No.	Grantee(s)/Institute	Project Title/Duration	Total Allocation (Rs.)
1.	**NSF -PSF /ICRP/2017/ HS/02**	**Prof. G. M. Kamal B. Gunaherath** **Dr K Hector Jayewardena** **Dr Chandani Ranasinghe** Department of Chemistry, Faculty of Natural Sciences, 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 **3 years**	**3,720,000/-**
2.	**RG/2019/HS/01**	**Dr. R. N. Mohamed Jalaldeen** 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 **1 year**	**1,000,000/-**
3.	**RG/2019/HS/02**	**Prof. S. Nobel Surendran** Department of Zoology, Faculty of Science, University of Jaffna	Dengue transmission intervention using lure-based adult suction traps and gravid *Aedes* traps (GAT): A cluster randomized trial approach in Jaffna municipal area **2 Years**	**4,165,000/-**

4.	**NSF-NSFC /ICRP/2019/ HS/02**	**Prof. Kamani Wanigasuriya** Department of Medicine, Faculty of Medical Sciences, University of Sri Jayewardenepura **Prof. P. P. Rasika Perera** 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 **3 Years**	**29,112,271/-**
5.	**RG/COVID/2020/HS/01**	**Prof. P. B. R. Dissanayake** Department of Civil Engineering, Faculty of Engineering, University of Peradeniya	Development of innovative shelter hospital buildings for infectious diseases **1 year**	**1,599,500/-**
6.	**RG/COVID/2020/HS/02**	**Dr Murugathas Thanihaichelvan** 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 **1 year**	**1,500,000/-**

Social Sciences

No	Grant No.	Grantee/Institute	Project Title/Duration	Total Allocation (Rs.)
1.	**RG/2019/SS/01**	**Dr S Wijeratne** Department of Geography Faculty of Humanities and Social Science University of Ruhuna Matara	Risk analysis of landslides in the Morawaka "Kanda" area in Matara district of Sri Lanka	**939,775/-**

National Thematic Research Programme on Climate Change and Natural Disasters

No	Grant No.	Grantee/Institute	Project Title/Duration	Total Allocation (Rs.)
1.	**NTRP/2017/CC&ND/TA-04/P-02/01**	**Prof. G. L. L. Pradeepa Silva** **Prof. D. K. N. G. Pushpakumara** **Prof. Jeevika Weerahewa** **Prof. Chandi Rajapakshe** **Prof. C. M. B. Dematawewa** **Dr Lalith Suriyagoda** **Dr U. Vitharana** **Prof. Terrene Madujith** **Dr K. S. Hemachandra** University of Peradeniya **Prof. Devaka Weerakone** University of Colombo **Dr J. Sinniah** University of Jaffna **Dr K. T. Premakantha** Forest Department **Mr. Ranga Pallewela** Janathakshan (GTE) Limited	Comparative Analysis of Climate-Resilient Biodiversity of Homegarden ecosystems in different Agro-ecological Regions of Sri Lanka **04 years**	**14,573,870/-**
2.	**NTRP/2017/CC&ND/TA-02/P-02/01**	**Prof. Jagath C. Edirisinghe** **Prof. Udith Jayasinghe** **Dr Keminda Herath** **Mr Chandana Jayathilake** Wayamba University of Sri Lanka **Dr Wasana Wijesuriya** **Ms Dhammika Balasooriya** Rubber Research Institute of Sri Lanka **Dr M. A. Wijeratne** Tea Research Institute **Dr Sanathanie Ranasinghe** Coconut Research Institute of Sri Lanka **Dr Shiromani Jayawardene** Department of Meteorology **Mr I. V. Kuruppu** Hector Kobbekaduwa Agrarian Research Institute	Assessment of Spatial Impacts of Climate Change on Geographic, Economic and Social Vulnerability on the Plantation Sector in Sri Lanka **04 years**	**8,674,000/-**
3.	**NTRP/2017/CC&ND/TA-05/P-01/01**	**Prof. P. N. Ranasinghe** University of Ruhuna **Prof. A. L. T. Hewawasam** University of Peradeniya **Dr C. H. E. R. Siriwardana** Geological survey and Mines Beureau **Dr Shiromani Jayawardene** Department of Meteorology	Understanding the long-term influence of Indian Ocean Warm Pool and Indian Ocean Dipole on the monsoon variability of Sri Lanka **04 years**	**11,732,977/-**

4 .	**NTRP/2017/CC&ND/TA-04/P-01/01**	**Prof. W. A. J. M. De Costa** **Dr K. W. L. K. Weerasinghe** University of Peradeniya **Dr Sampath Wahala** Sabaragamuwa University of Sri Lanka **Dr K. D. B. Ukuwela** **Dr W.M.G.A.S.T.B. Wijetunga** Rajarata University of Sri Lana **Dr H. I. U. Caldera** University of Colombo **Mr Anura Sathurusinghe** **Mr W D P Gomes** Department of Forest Conservation	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**	**19,618,138/-**
5 .	**NTRP/2017/CC&ND/TA-01/P-01/01**	**Prof. Indrika Rajapakshe** **Prof. Upendra Rajapakshe** University of Moratuwa **Prof. Saroj Jayasinghe** **Prof. Upul Sonnadara** **Dr Shreenika De Silva** **Dr Nishantha Perera** **Dr Sunethra Perera** University of Colombo **Dr Shiromani Jayawardene** Department of Meteorology	Assessment of vulnerabilities and challenges on Quality of Life (QoL) of national ageing population due to climate change risks **03 years**	**2,280,100/-**

Grants of the Research Programme on Health Science (RPHS)

No.	Grant No	Grantee & Affiliation	Project Title	Total Allocation (Rs)
1.	**RPHS/2016/DTM/01**	**Dr Prasad Katulan**da Diabetes Research Unit Department of Clinical Medicine Faculty of Medicine University of Colombo	Establishment of a center of excellence and a research hub on Diabetes and NCD epidemiology and a national research program on diabetes and non-communicable diseases epidemiology **03 years**	**40,000,000/-**
2.	**RPHS/2016/CKDu/03**	**Dr Sameera Gunawardena** Department of Forensic Medicine & Toxicology Faculty of Medicine University of Colombo	An exploratory study on environmental, genetic and dietary determinants of chronic kidney disease of uncertain aetiology based on postmortem tissue analysis **03 Years**	**35,089,000/-**
3.	**RPHS/2016/CKDu/04**	**Dr S H N P Gunawickrama** General Sir John Kotelawala Defence University Kandawala Estate Ratmalana	Immunomodulation associated with CKDu progression, of Sri Lanka **2 Years**	**4,567,000/-**

Technology Development Grants

No.	Title and Grant Number	PI and Affiliation	Total value of technology grant (Rs.)
1.	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**	**Mr Tilak Dharmarathna** Director General, Gem and Jewellery Research & Training Institute	**10,481,088.00/-**
2.	Fabrication of Low Cost Polyethylene Water Treatment Plant Capacity (150-250m^3/day) **TG/2017/Tech-D/05**	**Mr G.G.N. Gunawardhana** Individual	**7,394,957.50/-**
3.	Fabrication and Scaling up of a Industrial Reactor for the Purification of waste oil-water of the service stations **TG/2017/Tech-D/06**	**Prof. Jayasundera Bandara** Senior Research Professor Institute of Fundamental Studies	**8,323,000.00/-**
4.	Fabrication of Conical Screw Conveyor Mixer (branded as MSP) and Manufacturing of Cementious Modified Polymer Coating **TG/2017/Tech-D/07**	**Mr M. Susantha Priyadarshana** Individual	**1,532,475.00/-**
5.	Amelioration of acid sulphate conditions in paddy tracs of Nilwala ganga flood protection and drainage project area through manipulation of water table. A pilot study **TG/2018/Tech-D/01**	**Dr Nanda Senanayake** Individual	**4,919,600.00/-**
	Further Funding Grants – Newly Awarded		
1.	Efficient coconut de-husking machine for coconut industry - Easy coconut de-husker **TG/2021/Tech-D/01**	**Mr K.S.M. Bandara** Individual	**300,000.00/-**

Grants on COVID Research

No.	Title and Grant Number	PI and Affiliation	Total value of COVID grant (Rs.)
1.	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 **TD/2020/COVID/AG/01**	**Dr K.K.L.B. Adikaram** Lecturer, Computer Unit, Faculty of Agriculture, University of Ruhuna	**1,673,000.00/-**
2.	Biofertilizers for vegetable production through eco-friendly agriculture **TD/2020/COVID/AG/02**	**Prof. Ananda Kulasooriya** National Institute of Fundamental Studies	**800,000.00/-**
3.	Low cost particle filter analyzer **TD/2020/COVID/HS/01**	**Prof. Gamini Rajapaksha** Department of Chemistry, Faculty of Science, University of Peradeniya	**1,155,000.00/-**
4.	Lanka Agriculture Interoperability Framework (LAIF): A decision support service enhancement for Agri Food supply chain **TD/2021/COVID/AG/01**	**Prof. Prasad M. Jayaweera** Department of Computer Science, Faculty of Applied Sciences, University of Sri Jayewardenepura	**1,763,800.00/-**

Research Scholarships

No.	Scholarship No.	Scholar/Institute	Project Title/Duration	Total Allocation (Rs.)
1.	**NSF/SCH/2019/06**	**Ms Lakna L. Warnapura** Department of Transport & Logistics Management, Faculty of Engineering, University of Moratuwa	An integrated strategy for reviving rail freight in Sri Lanka **2 years + 1 year + 9 months**	**2,983,000/-**
2.	**NSF/SCH/2019/08**	**Ms. Sara Mariyam Abdulla** ITI, Malambe	In-silico and bio-assay based study on natural compounds isolated from Sri Lankan medicinal plants as drug leads for management of dyslipidemia **2 years**	**1,440,000/-**
3.	**NSF/SCH/2016/01**	**Dr Lalindra Sanjaya Kaththiriarachchi** Faculty of Graduate Studies, USJP	Cognitive functions and associated psychosocial determinants among peri-urban adolescents in Sri Lanka **4 years + 8 months ext. + 6 months ext.**	**3,836,217/-**
4.	**NSF/SCH/2018/11**	**Ms K. Prabodha M. Weerarathne** Postgraduate Institute of Science (PGIS), University of Peradeniya	Reconstructing the Prehistoric human diet using stable, palaeoproteomics and chemical analysis of human and faunal skeletal remains recovered from Pallemalala shell midden, Sri Lanka **3 years + 6 months ext.**	**2,551,300/-**
5.	**NSF/SCH/2019/09**	**Madushika Maduwanthi Kumari Galabadage** Postgraduate Institute of Science (PGIS), University of Peradeniya	Biochemical Assessment of quality of feeding resources and milk of cattle dependent on saltmarsh pastures of Mannar District, Sri Lanka **2 years**	**3,421,700/-**

Annex 3

Completed Grants in 2022

R&D Grants

Competitive Research Grants

Basic Sciences

No.	Grant No.	Grantee(s)/Institute	Project Title/Duration	Total Allocation (Rs.)
1.	**RG/2018/ BS/01**	**Dr Chamanei Sandamali Perera** Department of f Physics Faculty of Science University of Peradeniya	Synthesis of colloidal quantum dots for infra-red photo detection and solar cells 1 year	**885,000/-**
2.	**RG/2017/ BS/01**	**Prof. Veranja Karunathne** **Dr Dhanushi Welideniya** Sri Lanka Institute of Nanotechnology (SLINTEC)	Design and synthesis of novel pullulan and chitosan based nano-polyplexes for gene therapy 2 years	**1,682,099/-**
3.	**RG/2017/ BS/05**	**Dr M. T. Napagoda** Department of Biochemistry Faculty of Medicine University of Ruhuna	Development of effective sunscreen formulations from Sri Lankan medicinal plants 2.5 years	**4,490,656/-**

Biotechnology

No.	Grant No.	Grantee(s)/Institute	Project Title/Duration	Total Allocation (Rs.)
1.	**RG/2019/BT/03**	**Dr RN Attanayake** **Dr H M Herath** Department of Botany Faculty of Science University of Kelaniya	Genetic Dissection of polyethylene degradation ability of *Perennipora* sp. Isolated from decaying hard woods in Sri Lanka	**Rs 1595,000/-**

Engineering Sciences, Architecture & ICT

No	Grant No.	Grantee(s)/Institute	Project Title/Duration	Total Allocation (Rs.)
1.	**RG/2017/ EA&ICT/02**	**Prof. R U Halwatura** 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**	**Rs.4,471,015/-**
2.	**NSF-PSF/ICRP/ EA&ICT/02**	**Prof. L B D R P Wijesundera** **Prof. W P Siripala** **Dr K M D C Jayathilaka** **Dr W T M A P K Wanninayake** Department of Physics, University of Kelaniya	Optimization of donor acceptor materials for fabrication of efficient solar cells **02 Years**	**Rs.2,913,500/-**

3.	**NSF-PSF/ICRP/ EA&ICT/04**	**Prof. M A K L Dissanayake** **Dr G K R Senadeera** National Institute of Fundamental Studies, Hantana Road, Kandy	Development of carbon-based nanomaterial for counter electrodes in dye sensitized solar cells **03 Years**	**Rs.3,100,000/-**
4.	**RG/2018/ EA&ICT/01**	**Dr M P B Ekanayake** **Prof. G M R J Godaliyadda** **Prof. J B Ekanayake** 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**	**Rs.2,183,289/-**

Environment & Biodiversity

No.	Grant No.	Grantee(s)/Institute	Project Title/Duration	Total Allocation (Rs.)
1.	**RG/2014/EB/04**	**PI – Dr. Suyama Meegaskumbura** Department of Zoology, Faculty of Science, University of Peradeniya **CoI – Dr Madhava Meegaskumbura** Department of Zoology, Faculty of Science, University of Peradeniya	Systematics and phylogenetic relationships of Murine rodents in Sri Lanka 3 years	**3,521,100/-**

Health Sciences

No.	Grant No.	Grantee(s)/Institute	Project Title/Duration	Total Allocation (Rs.)
1.	**RG/2017/HS/04**	**Prof. Shaluka Francis Jayamanne** Department of Medicine, Faculty of Medicine, University of Kelaniya **Dr. Abdul Cader Mohamed Fahim** 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 **2 years**	**3,785,750/-**
2.	**NSF -PSF / ICRP/2017/HS/01**	**Dr. Dhammika N. Magana-Arachchi** National Institute of Fundamental Studies **Dr. Dushantha Madegedara** Teaching Hospital Kandy	Genetic characterization of drug resistant *Mycobacterium tuberculosis* isolation from Sri Lankan and Pakistani TB patients and identification of associated biomarkers **3 years**	**3,190,650/-**

Technology Grants

No.	Grant No. & Title	Grantee / Affiliation/ Contact details	Total Budget (Rs.)	Date of Completion	Project Output
1.	**TG/2016/Tech-D/05** Introduce Most Effective and Efficient Colour and Clarity Enhancement methods for Semi Precious Gem Minerals Found in Gem gravel Beds in Sri Lanka	**Mr Tilak Dharmarathna** Gem and Jewellery Research & Training Inst.	**8,975,088.00/-**	19/12/2022	This project aims to test the applicability of various types of colour and clarity enhancement methods, for non-gem quality minerals for value addition. Methods such as heat treatment, oiling, waxing, diffusion, coating, dying, bleaching, impregnation and glass filling were used to select the best suited method and to establish required infrastructure to adapt same for the value addition to non-gem quality gem minerals in Sri Lanka.

Grants of the Research Programme on Health Sciences (RPHS)

No.	Grant No.	Grantee(s)/Institute	Project Title/Duration	Total Allocation (Rs.)
1.	**RPHS/2016/DTM/01**	**Dr Prasad Katulanda** Diabetes Research Unit Department of Clinical Medicine Faculty of Medicine University of Colombo	Establishment of a center of excellence and a research hub on Diabetes and NCD epidemiology and a national research program on diabetes and non-communicable diseases epidemiology **2 years**	**15,000,000/-**
2.	**RPHS/2016/D 01**	**Dr. Hasitha Tissera** Epidemiology Unit, Ministry of Health 231, De Saram Place, Colomb 10	Innovative tools and strategies for surveillance and control of dengue: 2017- 2020 **03 Years**	**7,925,000/-**
3.	**RPHS/2016/D 02**	**Dr. Noble Surendran** Department of Zoology Faculty of Science University of Jaffna	Development of an early warning system, a risk map and a prediction model for dengue and establishment of roles of asymptomatic carriers and brackish water derived mosquitoes in dengue transmission in Jaffna district **03 Years**	**10,000,000/-**
4.	**RPHS/2016/D 03**	**Dr. Menaka Hapugoda** Molecular Medicine Unit Faculty of Medicine University of Kelaniya Ragama	Study of Risk factors affecting Transmission of Dengue in the District of Gampaha **03 Years**	**6,869,000/-**
5.	**RPHS/2016/D 04**	**Dr. Ajith de Silva Nagahawatta** Department of Microbiology Faculty of Medicine University of Ruhuna Karapitiya Galle	Developing an effective epidemiological surveillance system for dengue in Southern Province of Sri Lanka. **03 Years**	**8,452,000/-**

6.	**RPHS/2016/D 05**	**Dr. S.S.N. Perera** Research & Development Centre for Mathematical Modelling Department of Mathematics University of Colombo	Proactive Dengue Management System (ProDMS) **03 Years**	**13,720,000/-**
7.	**RPHS/2016/D 06**	**Prof. Neelika Malavige** Centre for Dengue Research Faculty of Medical Sciences University of Sri Jayewardenapura	Identification of the true burden and associated complications of dengue and related viral infections in Sri Lanka and finding long lasting solutions, through in depth understanding of the pathogenesis for development of therapeutic targets. **03 years**	**24,435,000/-**
8.	**RPHS/2016/C 02**	**Prof. VajiraDissanayake** Human Genetics Unit Faculty of Medicine Kynsey Road University of Colombo	Strengthening the Cancer Information Systems in the Ministry of Health [Hospital Information System (HIS); electronic Morbidity and Mortality System (eIMMR); National Cancer Registry (NCR)] 03 Years	**8,000,000/-**
9.	**RPHS/2016/C 03**	**Prof. VajiraDissanayake,** Human Genetics Unit Faculty of Medicine Kynsey Road University of Colombo	Sri Lankan Inherited Cancer Biobank (SLIBB) & Sri Lankan Inherited Cancer Genetic Variation Database (SLICGVDb) 03 Years	**7,700,000/-**
10.	**RPHS/2016/C 04**	**Dr. HemaliGoonasekera** Human Genetics Unit Faculty of Medicine Kynsey Road University of Colombo	Biomarker Discovery in Haematology – Myelodysplastic Syndromes 02 years	**5,000,000/-**
11.	**RPHS/2016/C 07**	**Prof. Kamani H.Tennekoon** Inst. Of Biochemistry, Molecular Biology and Biotechnology (IBMBB) University of Colombo	Identification of new cancer biomarkers and validating existing biomarkers for the Sri Lankan setting and identification and development of anti cancer compound libraries 03 Years	**20,680,000/-**
12.	**RPHS/2016/CKDu 01**	**Dr. ErangaWijewickrama** Department of Clinical Medicine Faculty of Medicine University of Colombo	Nationwide surveillance, quantify burden of NCDs, development of case definition and biomarkers for CKDulibraries 03 Years	**8,172,000/-**

Research Scholarships

No.	Grant No. & Duration	Scholar and Institution	Supervisor/s	Title	Postgraduate Degree obtained
1.	**NSF/SCH/2018/02** 3 years + 6 months ext.	**Ms V. Umayangana Godakanda** Department of Chemistry, Faculty of Science, University of Colombo	Prof. K. M. Nalin de Silva Dr Rohini M. de Silva	Smart fabrics for healthcare	PhD
2.	**NSF/SCH/2017/11** 3 years	**Ms. S. Arudchutha** Department of of Computer Engineering, Faculty of Engineering, University of Peradeniya	Dr R. G. Ragel Dr I. B. Nawinne	Hardware accelerated coherence aware cache design space exploration in MPSoCs	MPhil.
3.	**NSF/SCH/2019/04** 3 years	**Ms R. W. M. G. Kumari Kapukotuwa** Postgraduate Institute of Science (PGIS), University of Peradeniya	Mrs. Krishni Chanika Weerakoon Prof. Rupika S. Rajakaruna Prof. Charmalie L. Abayasekara	Effect of physicochemical properties and faecal indicator bacteria on the distribution, diversity and abundance of freshwater fishes in Rawan Oya, a tributary of the Mahaweli River in Kandy District	MPhil.

Summary of Research Grants - 2022

Annex 4

		Agriculture & Food Science	Basic Sciences	Biotechnology	Environment & Biodiversity	Engineering, Architecture & ICT	Health Sciences	Social Sciences	Climate Change and Natural Disasters	Research Programme on Health Sciences	Total
1.	Total no. of ongoing grants as at 31.12.2022	10	10	02	04	07	06	01	05	03	**48**
2.	Grants awarded	-	-	-	-	-	-	-	-	-	**-**
3.	Grants completed	-	03	01	01	04	02	-	-	13	**24**
4.	Grants withdrawn	-	-	-	-	-	-	-	-	-	**-**
5.	Grants terminated	-	-	-	-	-	-	-	-	-	**-**
6.	RSs appointed/to be appointed	02	01	01	02	01	-	-	-	-	**07**
7.	RSs registered for postgraduate degree/ to be registered for postgraduate degree	02	-	-	02	01	01	-	-	-	**06**
8.	TAs appointed/to be appointed	02	-	-	-	-	-	-	-	-	**02**
9.	PG degrees completed										
	PhD	-	-	01	01	02	-	-	-	06	**10**
	MPhil	-	03	01	01	-	02	-	-	01	**08**
	MSc	-	-	-	-	01	-	-	-	-	**01**
	MD	-	-	-	-	-	-	-	-	-	**-**
10.											
	SCIE indexed publications	01	11	02	-	02	05	-	-	05	**26**
	Refereed journal publications (Non-SCIE indexed)	-	03	-	-	-	-	-		01	**04**
	Communications	02	19	03	14	-	08	-	04	06	**56**
11.	Patents arising from grants	-	-	-	-	-	03	-	-	-	**03**
	Patents filed from grants	-	-	02	-	-	-	-	-	01	**03**

Annex 5

Support Scheme for Supervision of Research Degrees (SUSRED) Awards 2020 / 2021

- PhD -

No	Names and affiliations of Supervisory Team	Title of the thesis	Student & awarding University
1.	**Prof. V. P. S. Perera** Department of Physics The Open University of Sri Lanka Nawala	Fabrication of bio-batteries using piths of plants as electrolytic media	**Dr C. N. Nupearachchi** The Open University of Sri Lanka
2.	**Prof. Manjula M. Weerasekera** **Prof. S. S. N. Fernando** **Prof. T. D. C. P. Gunasekara** Department of Microbiology Faculty of Medical Sciences University of Sri Jayewardenepura	Analysis of oral candida species, genotypes and up regulation of azole resistant genes in patients with diabetes	**Dr M. K. A. Sampath** University of Sri Jayewardenepura
3.	**Prof. S. S. N. Fernando** **Prof. T. D. C. P. Gunasekara** Department of Microbiology Faculty of Medical Sciences **Prof. P. M. Jayaweera** Department of Chemistry Faculty of Applied Sciences University of Sri Jayewardenepura	Biological synthesis, characterization and antimicrobial properties of silver and titanium dioxide nanoparticles	**Dr M. M. K. Peiris** University of Sri Jayewardenepura
4.	**Prof. Manjula M. Weerasekera** **Prof. S. S. N. Fernando** **Prof. T. D. C. P. Gunasekara** Department of Microbiology Faculty of Medical Sciences University of Sri Jayewardenepura	Biofilm architecture and molecular profiling of microbiota of diabetic chronic wound infections	**Dr K. A. A. Dilhari** University of Sri Jayewardenepura
5.	**Prof. Ranjana U. K. Piyadasa** Department of Environmental Technology Faculty of Technology University of Colombo	Developing a land use optimization model for enhancing the land productivity of saline water affected area: Bentota in Sri Lanka	**Dr T. K. G. P. Ranasinghe** University of Colombo
6.	**Prof. Vajira H. W. Dissanayake** Department of Anatomy **Dr T N Samaranayake** Department of Parasitology Faculty of Medicine University of Colombo	Molecular genetic determinants of sporadic breast cancer in Sri Lankan postmenopausal women	**Dr U. N. D. Sirisena** University of Colombo
7.	**Dr Ranga S. Jayakody** Department of Chemistry **Prof. Laleen Karunanayake** Faculty of Applied Sciences University of Sri Jayewardenepura	Computational study on the molecular behaviour of hard segments of MDI based polyurethane	**Dr B. S. W. Karunarathna** University of Sri Jayewardenepura
8.	**Prof. S. S. N. Perera** Department of Mathematics Faculty of Science **Prof. Saroj Jayasinghe** Department of Medicine Faculty of Medicine University of Colombo	Mathematical modeling for dynamics of dengue virus - A systems approach	**Dr S. D. Perera** University of Colombo

9.	**Dr D. C. T. Dissanayake** Department of Zoology **Prof. Indira Wickramasinghe** Department of Food Science and Technology Faculty of Applied Sciences University of Sri Jayewardenepura **Prof. D. V. P. Prasada** Department of Agricultural Economics and Business Management Faculty of Agriculture University of Peradeniya **Dr M. D. S. T. de Croos** Department of Aquaculture and Fisheries Faculty of Livestock, Fisheries and Nutrition Wayamba University of Sri Lanka	Management of sea cucumber fishery in Sri Lanka, sustainable utilization and value addition	**Dr G. Nishanthan** University of Sri Jayewardenepura
10.	**Prof. N. A. K. P. J. Seneviratne** **Prof. Nimanthi Jayathilaka** Department of Chemistry Faculty of Science University of Kelaniya	Identification and quantification of previously unexplored chemical and nutritional information about coconut cake	**Dr M. G. A. N. Karunasiri** University of Kelaniya
11.	**Prof. Guwani Liyanage** Department of Paediatrics **Prof. Usha Hettiarachchi** Department of Biochemistry **Prof. S. Prathapan** Department of Community Medicine **Dr K. C. D. P. Silva** Department of Obstetrics & Gynaecology **Prof. D. P. S. Gunasekara** Department of Paediatrics Faculty of Medical Sciences University of Sri Jayewardenepura	Investigating the effect of maternal vitamin D levels on infant vitamin D levels and determining the cut-off values for hypovitaminosis D among pregnant mothers in Colombo District	**Dr A. Kaneshapillai** University of Sri Jayewardenepura
12.	**Prof. C. N. Wijeyaratne** Department of Obstetrics and Gynaecology **Prof. W. S. S. Wijesundera** Department of Biochemistry & Molecular Biology Faculty of Medicine **Prof. N. V. Chandrasekharan** Department of Chemistry Faculty of Science University of Colombo	Genotyping Sri Lankan women with polycystic ovary syndrome (PCOS): towards a novel screening tool	**Dr U. Branavan** University of Colombo
13.	**Prof. Chamari M. Hettiarachchi** Department of Chemistry Faculty of Science University of Colombo **Dr H. A. C. C. Perera** Department of Zoology and Environmental Management Faculty of Science University of Kelaniya	Molecular identification, study of biology and stock structure of three common neritic tuna species found in Sri Lankan waters	**Dr D. R. Herath** University of Colombo

14.	**Prof. Preethi V. Udagama** Department of Zoology and Environment Sciences Faculty of Science **Prof. Sumedha Wijeratne** Department of Obstetrics and Gynaecology **Prof. Preethi Soysa** Department of Biochemistry and Molecular Biology Faculty of Medicine University of Colombo	Proliferative, differentiation and toxicological effects of selected herbal preparations on in-house established human mesenchymal and haematopoietic stem cell lines	**Dr A. V. L. K. Udalamaththa** University of Colombo
15.	**Prof. W. Abeyewickreme** Department of Para-Clinical Sciences Faculty of Medicine Sir John Kotelawala Defense University **Prof. Nayana Gunathilaka** Department of Parasitology Faculty of Medicine University of Kelaniya **Prof. M. C. M. Iqbal** National Institute of Fundamental Studies **Prof. U. S. Amarasinghe** **Prof. M. M. M. Najim** Department of Zoology and Environmental Management Faculty of Science University of Kelaniya	Establishment of a Geographic Information System (GIS) based mathematical model for prediction of dengue epidemics within Colombo and Kandy Districts of Sri Lanka	**Dr N. W. B. A. L. Udayanga** University of Kelaniya
16.	**Prof. Sudantha Liyanage** **Dr Asitha Tharanga Cooray** Department of Chemistry Faculty of Applied Sciences University of Sri Jayewardenepura	Biogeochemical cycling of nutrients and selected metal ions in the Padaviya reservoir	**Dr C. Siriwardhana** University of Sri Jayewardenepura
17.	**Prof. Pradeepa C. G. Bandaranayake** Agricultural Biotechnology Centre **Prof. W. A. P. Weerakkody** Department of Crop Science Faculty of Agriculture University of Peradeniya	Molecular and biochemical analysis of Sri Lankan Pomegranate *(Punica granatum* L.*)* at different maturity stages and grown under different environmental conditions	**Dr S. R. M. R. Attanayake** University of Peradeniya
18.	**Prof. Indira Wickramasinghe** **Dr Isuru Wijesekara** Department of Food Science & Technology Faculty of Applied Sciences University of Sri Jayewardenepura	Development of functional foods and other value-added products from selected *Sargassum* sp. (Phaeophyta) available in Sri Lanka	**Dr G. I. P. Silva** University of Sri Jayewardenepura
19.	**Prof. S. B. Navaratne** Department of Food Science & Technology **Prof. L. D. C. Peiris** Department of Zoology **Dr H. H. Munasinghe** Department of Botany Faculty of Applied Sciences University of Sri Jayewardenepura	Determination of antimicrobial activities of *Acmella oleracea* L. plant extracts in controlling microbes on food contact surfaces and its mechanism of action	**Dr T. G. G. Uthpala** University of Sri Jayewardenepura
20.	**Prof. M. A. Jagath Wansapala** Department of Food Science & Technology Faculty of Applied Sciences University of Sri Jayewardenepura	Formulation of a natural and nutritious flavor enhancer with having umami taste to replace monosodium glutamate	**Dr K. N. Wijayasekara** University of Sri Jayewardenepura

21.	**Prof. S. B. Navaratne** **Prof. Indira Wickramasinghe** Department of Food Science & Technology Faculty of Applied Sciences University of Sri Jayewardenepura	Incorporation of antioxidants from blue and purple coloured fruit sources with edible grade natural bonding materials for food industry	**Dr I. G. G. Kasunmala** University of Sri Jayewardenepura
22.	**Prof. S. B. Navaratne** Department of Food Science and Technology Faculty of Applied Sciences University of Sri Jayewardenepura **Prof. C. M. Navaratne** Department of Agricultural Engineering Faculty of Agriculture University of Ruhuna	Development of a fermentation chamber to improve porous crumb structure of rice-based leavened food products prepared from composite flour	**Dr A. R. M. H. A. Rathnayake** University of Sri Jayewardenepura
23.	**Prof. Chandima Deepani Dangalle** Department of Zoology and Environment Sciences Faculty of Science University of Colombo **Mr Yashas Mallawarachchi** Faculty of Computing, Sri Lanka Institute of Information Technology	Diversity, distribution and habitat types of the arboreal tiger beetles (Cicindelinae, Collyridini) of Sri Lanka: a machine learning approach for automated species identification	**Dr S. H. P. D. L. Abeywardhana** University of Colombo
24.	**Prof. T. D. C. P. Gunasekara** **Prof. M. M. Weerasekera** **Prof. S. S. N. Fernando** Department of Microbiology **Dr M. G. C. P. Marasinghe** Department of Medicine **Prof. C. D. Gamage** Department of Microbiology Faculty of Medical Sciences University of Sri Jayewardenepura	Comparison of biomarkers between patients with complicated and non-complicated leptospirosis	**Dr G. G. T. Nisansala** University of Sri Jayewardenepura
25.	**Prof. L. D. Amarasinghe** Department of Zoology & Environmental Management Faculty of Science **Prof. P. A. D. H. N. Gunathilaka** Department of Parasitology Faculty of Medicine University of Kelaniya **Dr W. W. P. Rodrigo** Department of Zoology Faculty of Natural Sciences The Open University of Sri Lanka	Diversity of microbiota in mosquito breeding habitats in selected districts in Sri Lanka and screening of bacteria in the midgut of dengue transmitting vectors	**Dr H. A. K. Ranasinghe** University of Kelaniya
26.	**Dr A. P. Attanayake** Department of Biochemistry **Prof. T. P. Weerarathna** Department of Medicine **Prof. K. A. P. W. Jayatilaka** Department of Biochemistry Faculty of Medicine University of Ruhuna **Dr J. M. S. Jayasinghe** Department of Chemistry Faculty of Science University of Peradeniya	Double blind placebo controlled randomized clinical trial of *Coccinia grandis* (L.) Voight herbal capsule in newly diagnosed type 2 diabetes mellitus patients and bioactivity guided isolation of antidiabetic compounds	**Dr K. G. P. Wasana** University of Ruhuna

27.	**Prof. M. A. K. Lakshman Dissanayake** National Institute of Fundamental Studies **Prof. G. K. R. Senadeera** Department of Physics Faculty of Natural Sciences Open University of Sri Lanka	Synthesis and characterization of cadmium sulphide and lead sulphide semiconductor quantum dots and their applications in solar cells and infrared detectors	**Dr T. Jaseetharan** University of Peradeniya
28.	**Prof. R. A. U. J. Marapana** Department of Food Science and Technology Faculty of Applied Sciences University of Sri Jayewardenepura	Effects of induce ripening agents on bioaccessibility and bioavailability of selected nutrients and functional compounds in Ambul banana (*Musa acuminata*, AAB)	**Dr S. D. T. Maduwanthi** University of Sri Jayewardenepura
29.	**Dr C. Mahesh Edirisinghe** Department of Physics Faculty of Science University of Colombo	Mapping spatial and temporal distribution of lightning activities over Sri Lanka using satellite data to explore lightning risk by GIS and remote sensing	**Dr U. G. D. Maduranga** University of Colombo
30.	**Prof. Gaya R. Ranawaka** Department of Zoology Faculty of Natural Sciences The Open University of Sri Lanka **Dr Gayani H. Galhena** Department of Zoology Faculty of Science University of Colombo	X-chromosome markers for forensic genetics in Si Lanka: development, validation and application of a novel 16 X-STR multiplex assay for the Sri Lankans	**Dr K. L. N. S. Perera** The Open University of Sri Lanka
31.	**Prof. Nayana Gunathilaka** **Prof. N. K. Gunawardena** Department of Parasitology Faculty of Medicine University of Kelaniya **Dr W. W. P. Rodrigo** Department of Zoology Faculty of Natural Sciences The Open University of Sri Lanka	Bionomics and systematics of leishmaniasis vector sand flies (Diptera: Psychodidae) and the incidence of leishmaniasis in Kurunegala district, Sri Lanka	**Dr A. C. T. Wijerathna** University of Kelaniya
32.	**Dr M. A. Y. L. Nadeesha** **Prof. D. S. M. De Silva** **Prof. Bimali Jayawardena** Department of Chemistry Faculty of Science University of Kelaniya	Systematic study of chemical factors affecting Chronic Kidney Disease of unknown etiology (CKDu) in Sri Lanka and investigation on economical remedies for removal of some causative pollutants in water	**Dr T. D. Fernando** University of Kelaniya

- MPhil -

No	Names and affiliations of Supervisory Team	Title of the thesis	Student & University
1.	**Dr J. M. Susanthi Jayasinghe Manike** **Prof. Veranja Karunaratne** Department of Chemistry Faculty of Science University of Peradeniya **Dr A. P. Attanayake** Department of Biochemistry Faculty of Medicine University of Ruhuna	*In vitro* antioxidant, *in vivo* antihyperglycaemic and antihyperlipideamic activities of combined plant extract used in traditional medicine	**Ms D. S. N. K. Liyanagamage** University of Peradeniya
2.	**Dr Dilru R. Ratnaweera** University of Sri Jayewardenepura MAS Innovation Pvt. Ltd **Prof. Nilwala Kottegoda** Department of Chemistry Faculty of Applied Sciences **Prof. Manjula M. Weerasekera** Department of Microbiology Faculty of Medical Sciences University of Sri Jayewardenepura	A novel 3-D printed superamphiphobic nano-coating for silicon material as a potential anti-biofilm forming surface	**Ms G D B Gayani** University of Sri Jayewardenepura
3.	**Dr Chamira U. S. Edussooriya** Department of Electronic and Telecommunication Engineering University of Moratuwa	Four-dimensional sparse filters for near real-time light field processing	**Ms I. W. A. S. U. Premaratne** University of Moratuwa
4.	**Prof. U. L. B. Jayasinghe** National Institute of Fundamental Studies, Kandy **Dr N. R. Amarasinghe** Department of Pharmacy Faculty of Allied Health Science University of Peradeniya	Investigation of acetylcholinesterase inhibitory activity of selected Sri Lankan grown spices as potential therapeutic agents for Alzheimer's disease	**Ms S. Sambavathas** University of Peradeniya
5.	**Prof. Disna Ratnasekera** Department of Agricultural Biology Faculty of Agriculture University of Ruhuna **Prof. Buddhi Marambe** Department of Crop Science Faculty of Agriculture University of Peradeniya	Evaluation of germplasms of *Oryza nivara* and *Oryza rufipogon* populations from different geographical areas of Sri Lanka	**Mr P. S. Sandamal** University of Ruhuna
6.	**Prof. D. A. L. Leelamanie** Department of Soil Science, **Prof. S. Subasinghe** Department of Crop Science Faculty of Agriculture **Dr P. K. S. C. Jayasinghe** Department of ICT Faculty of Technology University of Ruhuna	Onsite soil water repellency and its implications on hydrological regimes of pine and eucalyptus plantation forests in upcountry intermediate zone	**Mr H. I. G. S. Piyaruwan**
7.	**Prof. Chandika Damesh Gamage** Department of Microbiology Faculty of Medicine University of Peradeniya **Dr Nishantha Nanayakkara** Nephrology and Transplant Unit National Hospital Kandy	Exposure to hantavirus infection in a selected cohort of chronic kidney disease with unknown aetiology (CKDu) patients and non-CKDu individuals in selected CKDu affected areas of Sri Lanka	**Ms S. Y. D. Sarathkumara** University of Peradeniya

8.	**Prof. Nimanthi Jayathilaka** **Prof. N. A. K. P. J. Seneviratne** Department of Chemistry Faculty of Science University of Kelaniya	Evaluating the expression changes of non-coding RNA in dengue hemorrhagic fever	**Ms H. P. H. Hapugaswatte** University of Kelaniya
9.	**Prof. Theshini Perera** Department of Chemistry Faculty of Applied Sciences University of Sri Jayewardenepura	Synthesis and characterization of sulfonamide complexes of rhenium towards fluorescent imaging	**Ms M. A. T. Darshani** University of Sri Jayewardenepura
10.	**Dr A. U. Bandaranayake** Department of Computer Engineering Faculty of Engineering **Prof. P. C. G. Bandaranayake** Agricultural Biotechnology Centre Faculty of Agriculture University of Peradeniya	Data efficient d*e novo* assembly with Trinity	**Ms D. N. U. Naranpanawa** University of Peradeniya
11.	**Prof. R. M. U. S. K. Rathnayake** Sabaragamuwa University of Sri Lanka **Ms J. W. A. Sajiwanie** Department of Food Science & Technology Faculty of Applied Sciences Sabaragamuwa University of Sri Lanka	Potential application of fruit peel powders as texture modifiers and functional ingredients in fat and sugar free probiotic set yoghurts	**Ms P. G. I. Dias** Sabaragamuwa University of Sri Lanka
12.	**Prof. Chayanika Padumadasa** **Prof. Emeritus A. M. Abeysekera** Department of Chemistry Faculty of Applied Sciences **Prof. Bimalka Seneviratne** Department of Pathology Faculty of Medical Sciences University of Sri Jayewardenepura **Dr M. G. Thammitiyagodage** Medical Research institute **Prof. Sanjeewa Padumadasa** Department of Obstetrics and Gynaecology Faculty of Medicine University of Kelaniya	Chemical and biological studies of the inflorescence of *Cocos nucifera* L., used in Ayurveda for the treatment of menorrhagia	**Ms E. A. C. Priyadarshani** University of Sri Jayewardenepura
13.	**Prof. P. H. K. I. Shalindra Ranasinghe** Department of Parasitology Faculty of Medical Sciences University of Sri Jayewardenepura **Prof. Aresha Manamperi** Molecular Medicine Unit Faculty of Medicine University of Kelaniya **Prof. Renu Wickremasinghe** Department of Parasitology Faculty of Medical Sciences University of Sri Jayewardenepura **Prof. N. R. de Silva** Vice Chancellor University of Kelaniya	Comparison of recombinase polymerase amplification assay based mobile suitcase laboratory as a point of need test with existing parasitological diagnostic methods to diagnose cutaneous leishmaniasis in Sri Lanka	**Dr G. P. S. Gunaratna** University of Sri Jayewardenepura
14.	**Prof. G. A. K. S. Perera** **Prof. K. P. Vidanapathirana** Department of Electronics Faculty of Applied Sciences Wayamba University of Sri Lanka	Study on ionic liquid-based gel polymer electrolytes and their applications in energy storage devices	**Ms K. W. Prasadini** Wayamba University of Sri Lanka

15.	**Prof. E. P. S. K. Ediriweera** Department of Science & Technology Faculty of Applied Sciences Uva Wellassa University **Prof. B. M. P. Singhakumara** Department of Forestry and Environmental Science Faculty of Applied Science University of Sri Jayewardenepura	Long-term study on vegetation structure and above-ground carbon dynamics in a lowland rainforest of Sri Lanka	**Mr C. S. H. Bandara** Uva Wellassa University
16.	**Prof. E. P. S. K. Ediriweera** Department of Science & Technology Faculty of Applied Sciences Uva Wellassa University **Prof. G. A. D. Perera** Department of Botany Faculty of Science University of Peradeniya	Canopy dieback and regeneration potentials in the tropical montane cloud forest of Horton Plains National Park	**Mr P. H. T. Lakkana** Uva Wellassa University
17.	**Dr D. T. Abeysinghe** **Dr D. D. D. H. Alwis** Department of Chemistry Faculty of Natural Sciences The Open University of Sri Lanka **Prof. U. G. Chandrika** Department of Biochemistry Faculty of Medical Sciences University of Sri Jayewardenepura	Absorption of selected pesticide residues during cooking by curry leaves available in Sri Lanka and its impact on the carotenoid compositional variation in curry leaves	**Mr K. A. H. Kumara** The Open University of Sri Lanka
18.	**Prof. Pamoda Bhasini Ratnaweera** Department of Science and Technology Faculty of Applied Sciences Uva Wellassa University **Prof. E. Dilip de Silva** Retired from: University of Colombo	Antibacterial drug leads and insecticidal agents from endophytic fungi of *Cyperus iria* in Sri Lanka	**Ms J. M. N. M. Jayasundara**
19.	**Prof. Suresh P. Benjamin** National Institute of Fundamental Studies Kandy **Prof. W. A. Inoka Karunaratne** Department of Zoology Faculty of Science University of Peradeniya	Molecular phylogeny and systematics of three jumping spider tribes (Araneae: Salticidae) of Sri Lanka	**Ms D. P. Bopearachchi** University of Peradeniya
20.	**Prof. M. A. K. Lakshman Dissanayake** National Institute of Fundamental Studies Kandy **Prof. G. K. R. Senadeera** Department of Physics Faculty of Natural Sciences The Open University of Sri Lanka	Efficiency enhancement in dye sensitized solar cells by nanostructurally modified photoanode, plasmonic effect and modifications to electrolyte and counter electrode	**Mr S. Senthuran** University of Peradeniya
21.	**Prof. Bimali Jayawardena** Department of Chemistry University of Kelaniya **Prof. Sagarika Kannangara** Department of Plant and Molecular Biology Faculty of Science **Dr Y. S. Wijayasinghe** Department of Biochemistry and Clinical Chemistry Faculty of Medicine University of Kelaniya	Biochemical assessment of *Cinnamomum zeylanicum* extracts and development of a readily soluble nutraceutical product for the treatment of type 2 diabetes	**Ms W. A. N. M. Wariyapperuma** University of Kelaniya

22.	**Dr Lidula Nilakshi Widanagama Arachchige** Department of Electrical Engineering Faculty of Engineering University of Moratuwa	Multi-resolution analysis based ANN architecture for fault detection in DC microgrids	**Mr D. K. J. S. Jayamaha** University of Moratuwa
23.	**Prof. R. R. Ratnayake** National Institute of Fundamental Studies **Prof. Charmalie Abayasekara** Department of Botany Faculty of Science University of Peradeniya	Microbial cellulases: The potential application in biofuel production, textile industry and agriculture	**Ms S. K. Jayasekara** University of Peradeniya
24.	**Prof. Ajith C. Herath** Department of Chemical Sciences Faculty of Applied Sciences Rajarata University of Sri Lanka **Prof. R. M. G. Rajapakse** Department of Chemistry Faculty of Science University of Peradeniya **Prof. Rohan Weerasooriya** National Institute of Fundamental Studies	Remediation of fluoride and nitrate rich drinking water with high hardness through electrocoagulation and electrodialysis	**Ms J. U. Halpegama** University of Peradeniya
25.	**Dr K. M. A. K. Kulatunga** Department of Manufacturing & Industrial Engineering Faculty of Engineering University of Peradeniya	Design and development of a decision support system for eco-design based on life cycle management	**S Kamalakannan** University of Peradeniya
26.	**Prof. J. C. P. H. Gamage** Department of civil Engineering Faculty of Engineering University of Moratuwa	Numerical modeling and experimental investigation on enhancing punching shear capacity using carbon fiber reinforced polymer on flat slabs	**Ms M. A. L. Silva** University of Moratuwa

Training and Capacity Building

Annex 6

Common training programmes

E P F No.	Name	Designation	Training programmes
403	Mr. P Don Gunamuditha	Office Aide	Improving Knowledge, Skills & Attitudes for PL Staff (15/11/2022)
529	Mr. M D P Perera	Office Aide	Improving Knowledge, Skills & Attitudes for PL Staff (15/11/2022)
530	Mr. B Mohomed Rihas	Office Aide	Improving Knowledge, Skills & Attitudes for PL Staff (15/11/2022)
531	Mr. K M D De Silva	Office Aide	Improving Knowledge, Skills & Attitudes for PL Staff (15/11/2022)
549	Mr. P J M C Perera	Office Aide	Improving Knowledge, Skills & Attitudes for PL Staff (15/11/2022)
551	Mr. M R Bandara	Office Aide	Improving Knowledge, Skills & Attitudes for PL Staff (15/11/2022)
413	Mr. Umeka S Gunarathne	Library Attn	Improving Knowledge, Skills & Attitudes for PL Staff (15/11/2022)
482	Mr. P S D Fernando	Printing Atten	Improving Knowledge, Skills & Attitudes for PL Staff (15/11/2022)
425	Mr. R P C J Perera	Driver	Improving Knowledge, Skills & Attitudes for PL Staff (15/11/2022)
533	Mr. U G Nuwan Nishantha	Driver	Improving Knowledge, Skills & Attitudes for PL Staff (15/11/2022)
542	Mr. G D Nilantha Ranjan	Driver	Improving Knowledge, Skills & Attitudes for PL Staff (15/11/2022)
552	Mr.R.D.S.D.Wijesurendra	Driver	Improving Knowledge, Skills & Attitudes for PL Staff (15/11/2022)
442	Mr. S C S Fernando	Technician	Improving Knowledge, Skills & Attitudes for PL Staff (15/11/2022)
404	Ms. W P S S Weerasinghe	Management Assistant	Office Management (04.11.2022), Annual Board of survey and Disposal of assets (18.11.2022), Public Procurement process (24.11.2022)
407	Ms. K G C M Silva	Management Assistant	Office Management (04.11.2022)
408	Ms. K S Haputhanthrige	Management Assistant	Office Management (04.11.2022), Annual Board of survey and Disposal of assets (18.11.2022)
409	Ms. J A C G Samarasinghe	Management Assistant	Annual Board of survey and Disposal of assets (18.11.2022)
412	Ms. H K C Priyadarshani	Management Assistant	Office Management (04.11.2022)
415	Mr. E.M.D.C.B. Ekanayake	Management Assistant	Office Management (04.11.2022), Public Procurement process (24.11.2022)
424	Ms. B V I D Wimalarathna	Management Assistant	Annual Board of survey and Disposal of assets (18.11.2022) Public Procurement process (24.11.2022)
428	Ms. T S U Thilakarathne	Management Assistant	Office Management (04.11.2022), Annual Board of survey and Disposal of assets (18.11.2022), Public Procurement process (24.11.2022)
434	Ms. D W M S Dematagolla	Management Assistant	Annual Board of survey and Disposal of assets (18.11.2022)
440	Mr. S A Jayasinghe	Management Assistant	Office Management (04.11.2022), Annual Board of survey and Disposal of assets (18.11.2022)
441	Ms. P N Hansamali	Management Assistant	Office Management (04.11.2022)

450	Ms. M Shamila	Management Assistant	Office Management (04.11.2022), Annual Board of survey and Disposal of assets (18.11.2022)
466	Ms. J K H S Nandasiri	Management Assistant	Office Management (04.11.2022), Annual Board of survey and Disposal of assets (18.11.2022)
467	Ms. W H V Chandi	Management Assistant	Office Management (04.11.2022), Annual Board of survey and Disposal of assets (18.11.2022)
535	Ms. N M Wickramasinghe	Management Assistant	Office Management (04.11.2022)
536	Ms. C N Moragoda	Management Assistant	Office Management (04.11.2022), Public Procurement process (24.11.2022)
541	Ms. A H D R Monali	Management Assistant	Office Management (04.11.2022), Annual Board of survey and Disposal of assets (18.11.2022)
322	Ms. D M N Prishanthi	Management Assistant	Office Management (04.11.2022), Public Procurement process (24.11.2022)
341	Ms. W A D A Perera	Management Assistant	Office Management (04.11.2022), Annual Board of survey and Disposal of assets (18.11.2022), Public Procurement process (24.11.2022)
330	Ms. I C Ramani	Management Assistant	Office Management (04.11.2022), Annual Board of survey and Disposal of assets (18.11.2022)
357	Ms. J A C H Samarasinghe	Management Assistant	Office Management (04.11.2022), Annual Board of survey and Disposal of assets (18.11.2022)
358	Ms. M A R L Millawithana	Management Assistant	Office Management (04.11.2022), Annual Board of survey and Disposal of assets (18.11.2022)
346	Ms. K N R H D Mahapitiya	Management Assistant	Office Management (04.11.2022), Annual Board of survey and Disposal of assets (18.11.2022)
359	Ms. S V P M Rukshani	Management Assistant	Office Management (04.11.2022), Annual Board of survey and Disposal of assets (18.11.2022)
230	Ms. H A Kanthi	Management Assistant	Annual Board of survey and Disposal of assets (18.11.2022)
274	Miss. N S S Silva	Management Assistant	Office Management (04.11.2022), Annual Board of survey and Disposal of assets (18.11.2022), Public Procurement process (24.11.2022)
266	Miss. N Paranavidana	Management Assistant	Office Management (04.11.2022), Annual Board of survey and Disposal of assets (18.11.2022)
272	Ms. N S Liyanage	Management Assistant	Office Management (04.11.2022), Public Procurement process (24.11.2022)
281	Ms. M Wijemanna	Management Assistant	Office Management (04.11.2022), Annual Board of survey and Disposal of assets (18.11.2022)
318	Ms. A J N Silva	Management Assistant	Office Management (04.11.2022), Annual Board of survey and Disposal of assets (18.11.2022), Public Procurement process (24.11.2022)
280	Ms. R K D Uppalamedavi	Management Assistant	Office Management (04.11.2022), Annual Board of survey and Disposal of assets (18.11.2022), Public Procurement process (24.11.2022)
294	Ms. D M R Ipalawatte	Management Assistant	Office Management (04.11.2022), Annual Board of survey and Disposal of assets (18.11.2022), Public Procurement process (24.11.2022)
270	Ms. V R Priyanganie	Management Assistant	Office Management (04.11.2022)
204	Mr. S M Amarasinghe	Management Assistant	Office Management (04.11.2022)
374	Mr. C.A.B.Wickremasinghe	Management Assistant	Office Management (04.11.2022)
405	Mr. K K Yohan Chandeera	Management Assistant	Office Management (04.11.2022), Annual Board of survey and Disposal of assets (18.11.2022), Public Procurement process (24.11.2022)

416	Ms. P Ellapallage	Management Assistant	Office Management (04.11.2022), Annual Board of survey and Disposal of assets (18.11.2022), Public Procurement process (24.11.2022)
393	Mr. T D K G Soyza	Management Assistant	Office Management (04.11.2022)
547	Ms. Chamathka Dias	Graphic Design Assistant	Office Management (04.11.2022), Annual Board of survey and Disposal of assets (18.11.2022)
443	Mr. W A B Fernando	Network Administrator	Evaluation of Divisional Performance (31.08.2022), Public Procurement process (24.11.2022)
385	Ms. B T Wickramasinghe	Procurement Officer	Office Management (04.11.2022), Evaluation of Divisional Performance (31.08.2022), Public Procurement process (24.11.2022)
277	Mr. I W Saman Sujeewa	HRD Officer	Office Management (04.11.2022), Evaluation of Divisional Performance (31.08.2022), Annual Board of survey and Disposal of assets (18.11.2022), Public Procurement process (24.11.2022)
310	Ms. N A H Priyadarshani	Junior Information Officer	Office Management (04.11.2022), Annual Board of survey and Disposal of assets (18.11.2022), Public Procurement process (24.11.2022)
379	Ms. H I Sandanayake	Scientific Officer	Evaluation of Divisional Performance (31.08.2022), Developing Key Performance Indicators (18.10.2022), Identifying a Strategic Approach for Future Activities of NSF (26.10.2022), Public Procurement process (24.11.2022), Annual Board of survey and Disposal of assets (18.11.2022)
395	Ms. R A A R Ranatunga	Scientific Officer	Evaluation of Divisional Performance (31.08.2022), Developing Key Performance Indicators (18.10.2022), Identifying a Strategic Approach for Future Activities of NSF (26.10.2022), Annual Board of survey and Disposal of assets (18.11.2022)
400	Ms. K A T K G Kandanamulla	Scientific Officer	Office Management (04.11.2022), Identifying a Strategic Approach for Future Activities of NSF (26.10.2022), Annual Board of survey and Disposal of assets (18.11.2022), Developing Key Performance Indicators (18.10.2022),
401	Ms. Chamika Dharmasena	Scientific Officer	Office Management (04.11.2022), Evaluation of Divisional Performance (31.08.2022), Identifying a Strategic Approach for Future Activities of NSF (26.10.2022), Annual Board of survey and Disposal of assets (18.11.2022), Public Procurement process (24.11.2022) , Developing Key Performance Indicators (18.10.2022),
438	Ms. M A D D Munasinghe	Scientific Officer	Evaluation of Divisional Performance (31.08.2022), Developing Key Performance Indicators (18.10.2022), Identifying a Strategic Approach for Future Activities of NSF (26.10.2022), Public Procurement process (24.11.2022), Annual Board of survey and Disposal of assets (18.11.2022),
464	Ms. M S K Meneripitiya	Scientific Officer	Evaluation of Divisional Performance (31.08.2022), Annual Board of survey and Disposal of assets (18.11.2022)
486	Ms. G R P I Abeysiri	Scientific Officer	Office Management (04.11.2022), Evaluation of Divisional Performance (31.08.2022), Identifying a Strategic Approach for Future Activities of NSF (26.10.2022), Annual Board of survey and Disposal of assets (18.11.2022), Public Procurement process (24.11.2022)
488	Ms. G G K P Sumudu Kumari	Scientific Officer	Office Management (04.11.2022), Evaluation of Divisional Performance (31.08.2022), Developing Key Performance Indicators (18.10.2022), Identifying a Strategic Approach for Future Activities of NSF (26.10.2022), Annual Board of survey and Disposal of assets (18.11.2022), Public Procurement process (24.11.2022)
516	Ms. S Warnasooriya	Scientific Officer	Office Management (04.11.2022), Developing Key Performance Indicators (18.10.2022), Annual Board of survey and Disposal of assets (18.11.2022), Public Procurement process (24.11.2022)
520	Ms. N L Muhandiram	Scientific Officer	Developing Key Performance Indicators (18.10.2022), Identifying a Strategic Approach for Future Activities of NSF (26.10.2022), Annual Board of survey and Disposal of assets (18.11.2022), Public Procurement process (24.11.2022)

524	Ms. H M A J Herath	Scientific Officer	Evaluation of Divisional Performance (31.08.2022) Developing Key Performance Indicators (18.10.2022), Identifying a Strategic Approach for Future Activities of NSF (26.10.2022), Annual Board of survey and Disposal of assets (18.11.2022)
525	Ms. K B Hasanthi	Scientific Officer	Evaluation of Divisional Performance (31.08.2022), Developing Key Performance Indicators (18.10.2022)
356	Ms. H D N Jayaweera	Scientific Officer	Office Management (04.11.2022), Evaluation of Divisional Performance (31.08.2022), Developing Key Performance Indicators (18.10.2022), Identifying a Strategic Approach for Future Activities of NSF (26.10.2022), Annual Board of survey and Disposal of assets (18.11.2022), Public Procurement process (24.11.2022)
367	Ms. W M U K Ratnayake	Scientific Officer	Office Management (04.11.2022), Evaluation of Divisional Performance (31.08.2022), Identifying a Strategic Approach for Future Activities of NSF (26.10.2022), Developing Key Performance Indicators (18.10.2022)
378	Ms. E M D C K Ekanayake	Senior Scientific Officer	Office Management (04.11.2022), Evaluation of Divisional Performance (31.08.2022), Developing Key Performance Indicators (18.10.2022), Identifying a Strategic Approach for Future Activities of NSF (26.10.2022), Annual Board of survey and Disposal of assets (18.11.2022), Public Procurement process (24.11.2022)
389	Ms. L M N Nadugala	Senior Scientific Officer	Office Management (04.11.2022), Identifying a Strategic Approach for Future Activities of NSF (26.10.2022), Annual Board of survey and Disposal of assets (18.11.2022), Public Procurement process (24.11.2022) , Developing Key Performance Indicators (18.10.2022),
391	Ms. U T Karunaratne	Senior Scientific Officer	Office Management (04.11.2022), Evaluation of Divisional Performance (31.08.2022), Developing Key Performance Indicators (18.10.2022), Identifying a Strategic Approach for Future Activities of NSF (26.10.2022), Annual Board of survey and Disposal of assets (18.11.2022), Public Procurement process (24.11.2022)
369	Ms. W L C Dasanayake	Senior Scientific Officer	Office Management (04.11.2022), Evaluation of Divisional Performance (31.08.2022), Public Procurement process (24.11.2022), Developing Key Performance Indicators (18.10.2022), Identifying a Strategic Approach for Future Activities of NSF (26.10.2022), Annual Board of survey and Disposal of assets (18.11.2022)
399	Ms. M D Senarathne	Senior Scientific Officer	Developing Key Performance Indicators (18.10.2022), Identifying a Strategic Approach for Future Activities of NSF (26.10.2022), Public Procurement process (24.11.2022)
324	Mr. H M M Perera	IT Manager	Developing Key Performance Indicators (18.10.2022) Identifying a Strategic Approach for Future Activities of NSF (26.10.2022)
419	Ms. E M P Bamunendra	Accountant	Office Management (04.11.2022), Evaluation of Divisional Performance (31.08.2022), Identifying a Strategic Approach for Future Activities of NSF (26.10.2022), Annual Board of survey and Disposal of assets (18.11.2022), Public Procurement process (24.11.2022)
420	Ms. M M Jayajeewani	Internal Auditor	Office Management (04.11.2022), Evaluation of Divisional Performance (31.08.2022), Developing Key Performance Indicators (18.10.2022), Annual Board of survey and Disposal of assets (18.11.2022), Public Procurement process (24.11.2022)
460	Mr. P D Hewawasam	Information Officer	Office Management (04.11.2022), Evaluation of Divisional Performance (31.08.2022), Developing Key Performance Indicators (18.10.2022), Identifying a Strategic Approach for Future Activities of NSF (26.10.2022), Annual Board of survey and Disposal of assets (18.11.2022), Public Procurement process (24.11.2022)

461	Ms. M N Thasneem	Information Officer	Developing Key Performance Indicators (18.10.2022), Identifying a Strategic Approach for Future Activities of NSF (26.10.2022), Public Procurement process (24.11.2022)
521	Ms. K N Samanthi	Information Officer	Office Management (04.11.2022), Evaluation of Divisional Performance (31.08.2022), Developing Key Performance Indicators (18.10.2022), Annual Board of survey and Disposal of assets (18.11.2022), Public Procurement process (24.11.2022)
370	Mr. S N P K Sapumohotti	Senior Admin Officer	Office Management (04.11.2022), Evaluation of Divisional Performance (31.08.2022), Developing Key Performance Indicators (18.10.2022), Identifying a Strategic Approach for Future Activities of NSF (26.10.2022), Annual Board of survey and Disposal of assets (18.11.2022), Public Procurement process (24.11.2022)
259	Ms. A A Amila Tennakoon	Senior Information Officer	Developing Key Performance Indicators (18.10.2022)
248	Ms. R P Sugathadasa	Senior Information Officer	Developing Key Performance Indicators (18.10.2022), Public Procurement process (24.11.2022)
309	Mr. S M A W Anuruddha	Principal Scientific Officer	Office Management (04.11.2022), Evaluation of Divisional Performance (31.08.2022), Developing Key Performance Indicators (18.10.2022), Identifying a Strategic Approach for Future Activities of NSF (26.10.2022), Public Procurement process (24.11.2022)
332	Mr. K G J Karunasena	Principal Scientific Officer	Office Management (04.11.2022), Evaluation of Divisional Performance (31.08.2022), Developing Key Performance Indicators (18.10.2022), Identifying a Strategic Approach for Future Activities of NSF (26.10.2022), Annual Board of survey and Disposal of assets (18.11.2022), Public Procurement process (24.11.2022)
325	Mr. J G Shanthasiri	Principal Scientific Officer	Office Management (04.11.2022), Evaluation of Divisional Performance (31.08.2022), Identifying a Strategic Approach for Future Activities of NSF (26.10.2022), Annual Board of survey and Disposal of assets (18.11.2022), Public Procurement process (24.11.2022)
337	Dr. P R M P Dilrukshi	Principal Scientific Officer	Evaluation of Divisional Performance (31.08.2022), Developing Key Performance Indicators (18.10.2022), Identifying a Strategic Approach for Future Activities of NSF (26.10.2022), Annual Board of survey and Disposal of assets (18.11.2022), Public Procurement process (24.11.2022)
513	Mr. Manuja Karunarathne	Principal Information Officer	Identifying a Strategic Approach for Future Activities of NSF (26.10.2022), Annual Board of survey and Disposal of assets (18.11.2022), Public Procurement process (24.11.2022)
344	Ms. D N Wickremaarachchi	Principal Scientific Officer	Office Management (04.11.2022), Evaluation of Divisional Performance (31.08.2022), Developing Key Performance Indicators (18.10.2022), Identifying a Strategic Approach for Future Activities of NSF (26.10.2022), Annual Board of survey and Disposal of assets (18.11.2022), Public Procurement process (24.11.2022)
553	Eng.T.M.R. Dissanayake	Principal Scientific Officer	Office Management (04.11.2022), Evaluation of Divisional Performance (31.08.2022), Developing Key Performance Indicators (18.10.2022), Identifying a Strategic Approach for Future Activities of NSF (26.10.2022), Annual Board of survey and Disposal of assets (18.11.2022), Public Procurement process (24.11.2022)
279	Dr. T F Dias	Additional Director	Evaluation of Divisional Performance (31.08.2022)

Common - Short term Training Programmes

Date	**04.11.2022**
Training programme	**Office Management**
Targeted group/s	MA and above categories
Number of Participants	60
Training objectives	Providing required Office Management knowledge and skills to secondary, tertiary and higher management staff
Content of the programme	Introduction of Office Management, Role of the office, File and documents management, Communication, Public relations
Duration	Half-day
Resource person	Mr Nalaka Dissanayake

Date	**08.11.2022**
Training programme	**Improving Knowledge, Skills & Attitudes for PL Staff**
Targeted group/s	Primary level staff (PL 1,2 and 3)
Number of Participants	13
Training objectives	Improving the technical skills and soft skills of the NSF Primary level staff
Content of the programme	Role and Responsibilities of the Primary level staff, Loyalty to the Institution and discipline, Offenses and related punishments, Care and maintenance of institutional properties, Cost and Waste prevention, General knowledge of office work, Public relations, Time Mgt. and Positive attitude development
Duration	Half-day
Resource person	Mr Chaminda Paranamana

Date	**18.11.2022**
Training programme	**Annual Board of survey and Disposal of assets**
Targeted group/s	MA and above categories
Number of Participants	57
Training objectives	Providing the required knowledge for annual stock verifications
Content of the programme	Introduction of annual stock verifications, Types of Board of survey, Conducting Board of survey and Disposal of assets, Relevant Financial regulations, Circulars, Documents and Forms (Internal / External)
Duration	Half- day
Resource person	Mr. Sumith J Kumara

Date	**24.11.2022**
Training programme	**Public Procurement procedure**
Targeted group/s	MA and above categories
Number of Participants	35
Training objectives	Improve competency of officers who deal with Public Procurement activities in the institution
Content of the programme	Introduction, Objectives, Role and Categories of Public procurement, Methods of Public procurement and Types of bids, Preparation of bidding documents, Role and Responsibilities of the bid opening committee, Technical Evaluation Committee and Procurement committee, Bids evaluation and contract closeout activities
Duration	Half- day
Resource person	Mr Anura Lokugamage

Date	**08.12.2022**
Training programme	**How to minimize Audit issues and answer Audit quarries**
Targeted group/s	JM and above categories
Number of Participants	35
Training objectives	- Identifying audit issues and taking necessary arrangements to avoid them - Correct answering for audit quarries
Content of the programme	Audit opinion and matters affecting it, Key areas in audit reports, Responsibility and Accountability of Govt./ Semi Govt. Officials, Proper and correct Answering for audit quarries
Duration	Half-day
Resource person	Mr. S C Mayadunne

Date	**31.08.2022**
Training programme	**Evaluation of divisional performance**
Targeted group/s	JM and above categories
Number of Participants	29
Training objectives	Enhancing the divisional/organizational performance
Duration	Half-day
Resource person	Dr. Shamini Perera

Date	**18.10.2022**
Training programme	**Developing Key Performance Indicators**
Targeted group/s	JM and above categories
Number of Participants	30
Training objectives	To provide good knowledge on developing corporate plan / Action plan
Content of the programme	- Objectives of performance management - Understand the importance of KPIs - Developing KPIs
Duration	Half-day
Resource person	Mr. P C Abeysiriwardena

Date	**26.10.2022**
Training programme	**Identifying a Strategic Approach for Future Activities of NSF**
Targeted group/s	AR, MM and HM categories
Number of Participants	30
Training objectives	
Content of the programme	
Duration	Half-day
Resource person	Dr. Chandra Embuldeniya

Efficiency Bar Examination based training programmes

EPF No.	Name	Designation	Training programme
404	Ms. W P S S Weerasinghe	Mangement Assistant	Office systems (16.03.2022), Computer knowlegde (21.06.2022 & 22.06.2022)
424	Ms. B V I D Wimalarathna	Mangement Assistant	Office systems (16.03.2022), Computer knowlegde (21.06.2022 & 22.06.2022)
428	Ms. T S U Thilakarathne	Mangement Assistant	Office systems (16.03.2022), Computer knowlegde (21.06.2022 & 22.06.2022)
450	Ms. M Shamila	Mangement Assistant	Office systems (16.03.2022), Computer knowlegde (21.06.2022 & 22.06.2022)
534	Mr. H K Amila Saman	Mangement Assistant	Office systems (16.03.2022), Computer knowlegde (21.06.2022 & 22.06.2022)
535	Ms. N M Wickramasinghe	Mangement Assistant	Office systems (16.03.2022), Computer knowlegde (21.06.2022 & 22.06.2022)
536	Ms. C N Moragoda	Mangement Assistant	Office systems (16.03.2022), Computer knowlegde (21.06.2022 & 22.06.2022)
541	Ms. A H D R Monali	Mangement Assistant	Office systems (16.03.2022), Computer knowlegde (21.06.2022 & 22.06.2022)
448	Ms. N A A L P Nissanka	Mangement Assistant	Office systems (16.03.2022), Computer knowlegde (21.06.2022 & 22.06.2022)
547	Ms. Chamathka Dias	Mangement Assistant	Office systems (16.03.2022), Computer knowlegde (21.06.2022 & 22.06.2022)
393	Mr. T D K G Soyza	Mangement Assistant	Office systems (16.03.2022)
451	Mr. L R Kumara De Silva	Mangement Assistant	Office systems (16.03.2022)
277	Mr. I W Saman Sujeewa	HRD Officer	Office systems (16.03.2022), Computer knowlegde (21.06.2022 & 22.06.2022)
310	Ms. N A H Priyadarshani	Junior Information Officer	Office systems (16.03.2022), Computer knowlegde (21.06.2022 & 22.06.2022)
488	Ms. G G K P Sumudu Kumari	Scientific Officer	Office systems (16.03.2022)
516	Ms. S Warnasooriya	Scientific Officer	Office systems (16.03.2022)
520	Ms. N L Muhandiram	Scientific Officer	Office systems (16.03.2022)
524	Ms. H M A J Herath	Scientific Officer	Office systems (16.03.2022)
525	Ms. K B Hasanthi	Scientific Officer	Office systems (16.03.2022)
419	Ms. E M P Bamunendra	Accountant	Management principles (14.03.2022)
420	Ms. M M Jayajeewani	Internal Auditor	Management principles (14.03.2022)
460	Mr. P D Hewawasam	Information Officer	Management principles (14.03.2022)
324	Mr. H M M Perera	IT Manager	Office systems (16.03.2022), Management principles (14.03.2022)
461	Ms. M N Thasneem	Information Officer	Office systems (16.03.2022), Management principles (14.03.2022)
521	Ms. K N Samanthi	Information Officer	Office systems (16.03.2022), Management principles (14.03.2022)

Individual training programmes

EPF No.	Name	Designation	Training programme
529	Mr. M D P Perera	Office Aide	Operation and preventive maintenance of Diesel Generators (27.06.2022)
549	Mr. P J M C Perera	Office Aide	Enhancing attitude & professional knowledge of PL staff (20.06.2022 & 21.06.2022)
551	Mr. M R Bandara	Office Aide	Enhancing attitude & professional knowledge of PL staff (20.06.2022 & 21.06.2022)
409	Mrs. J A C G Samarasinghe	Management Assistant	Improving workplace productivity using ICT (17.02.2022 & 24.02.2022)
448	Ms. N A A L P Nissanka	Management Assistant	Improving workplace productivity using ICT (17.02.2022 & 24.02.2022)
524	Ms. H M A J Herath	Scientific Officer	Improving workplace productivity using ICT (17.02.2022 & 24.02.2022)

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