ANNUAL REPORT

2002

RESEARCH IS THE FOUNDATION OF KNOWLEDGE

NATIONAL SCIENCE FOUNDATION
SRI LANKA

National Science Foundation
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National Science Foundation
47/5, Maitland Place
Colombo 07.

10.06.2003

Hon. Minister of Economic Reform, Science and Technology
Ministry for Economic Reform, Science and Technology
561/3, Elvitigala Mawatha
Colombo 05.

Dear Sir,

Annual Report of the National Science Foundation
for the period 1st January to 31st December 2002

In terms of Section 40 (3) of Science and Technology Development Act No. 11 of 1994, I have the honour to submit the Annual Report of the National Science Foundation for the period 1st January to 31st December, 2002 together with

(a) A copy of the Audited Income and Expenditure Accounts
(b) A copy of the Audited Balance Sheet
(c) Auditor General's Report

Yours sincerely,

M Watson
Director
National Science Foundation

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Introduction

Historical Background

The National Science Foundation (NSF) is a state funded institution established by the Science and Technology Development Act, No. 11 of 1994 on 01/04/1998 under the Ministry of Science and Technology. It is the successor to the Natural Resources, Energy and Science Authority of Sri Lanka (NARESA) which was set up in 1982 by Parliament Act No. 78 of 1981. NARESA itself succeeded the National Science Council (NSC) which was established by Act No. 9 of 1968.

Management

The NSF is governed by a Board of Management which consists of the Chairman, the Director and the Members appointed by the Hon. Minister for Economic Reform, Science and Technology. The Director functions as the Chief Executive of the institution.

Objectives

(a) to initiate, facilitate and support basic and applied scientific research by universities, science and technology institutions and scientists, with a view :

- (i) to strengthening scientific research potential, including research in the social sciences, and science education programmes;
- (ii) to developing the natural resources of Sri Lanka;
- (iii) to promoting the welfare of the people of Sri Lanka and
- (iv) to training research personnel in science and technology

(b) to foster the interchange of scientific information among scientists in Sri Lanka and foreign countries;

(c) to award scholarships and fellowships for scientific study or scientific work at science and technology institutions;

(d) to maintain a current register of scientific and technical personnel, and in other ways to provide a central clearing house for the collection, interpretation and analyses 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.

Summary of Financial Status – 2002

		Consolidated funds Rs.	*Foreign Funds* Rs.
• Amount requested by NSF	-	*62 794 014.00*	*16 000 000.00*
• Amount originally approved by the Treasury	-	14 650 000.00	10 720 000.00
• Additional funds released by the Treasury	-	8 380 000.00	5 280 000.00
• Total funds received		*23 030 000.00*	*16 000 000.00*
Recurrent funds			
• Amount requested by NSF	-	*41 321 890.00*	
• Amount contributed by the Treasury	-	24 000 000.00	
• Amount estimated by the Treasury as NSF revenue	-	1 000 000.00	
• Total estimate	-	*25 000 000.00*	

Sponsorship of Scientific Research

✱ *Research Grants Scheme*

The award of research grants is one of the main activities of the NSF to promote scientific and technological research in the country.

Applications for research grants are screened and evaluated by the NSF Research Committees. The Research Committees consist of eminent scientists of different disciplines drawn from universities and public/private sector institutions. Applications for research are forwarded to the Board of Management for approval based on the recommendations by the Committees.

Research grants awarded are monitored half-yearly through progress reports. Progress review seminars are held and grantees make presentations based on the work carried out under the projects annually in addition to the progress reports. This is a forum for discussion and clarification of problems faced by grantees effectively. Research Committee members visit project sites to ascertain the work carried out by the grantees.

A final report is submitted by the grantees on completion of a Research Project which is evaluated by a specialist appointed by the Research Committee. The evaluation takes into account any postgraduate degrees awarded to personnel associated with the project and also the intrinsic scientific contributions made towards enhancement of knowledge and/or application of science and technology for development.

Summary of information about the Research Grants Scheme for the year 2002 is given below. Details of grants awarded in year 2002 are given in the annexes.

On going grants as at 31.12.2002	- 14 4
Grants awarded in 2002	- 10
Amount allocated for new grants for the first year (2002)	- Rs. 3428024.50
Grants Completed	- 34
Research Students appointed	- 10
No. of Research Students registered for postgraduate degrees	- 07
No. of publications & communications	- 37
Postgraduate theses received	- 07

MD	- 02
M. Phil	- 04
Ph. D	- 01

* ***Block Grants***

The Block grants (Twelve) awarded in December 2000 were extended by four months up to the end of April 2002, with no additional funds. Final reports of six Block grants have been received in 2002.

* ***Equipment Grants***

Funds have been transferred connected to purchase of two equipment under the Equipment Grants Scheme.

- UV spectrophotometer for Dept of Physics, University of Peradeniya
- Fat analysis Equipment for ITI

* ***Research Assistantships***

Seventeen research assistantships awarded to research institutions and industries (two) were in operation during the year. These research assistantships were concluded on 31st December 2002. Research Assistants received an allowance of Rs. 10,000/- p.m. for conducting research activities in the research institutions.

* ***Research Studentships***

Twenty three research studentships were in operation during the year 2002, and eight studentships were concluded.

Meetings, Seminars and Workshops

A number of meetings, seminars, workshops and conferences were organized by the NSF during the year 2002 in order to initiate interaction among scientists, researchers and policy makers. This would enable them to share experiences, update knowledge and at the same time pave the way for the NSF to emerge as a very strong platform for development of scientific dialogue and a channel for efficient dissemination of science and technology information.

✱ *Progress Review Seminars*

As part of the monitoring process of research projects, NSF held several Progress Review Seminars to evaluate the progress of ongoing projects in different disciplines. The Research Committee members of the relevant fields, grantees and invited scientists participated in them. The expert comments of eminent scientists are much valued in conducting research work more efficiently and effectively. The details of the progress Review Seminars held during year 2002 are given below.

Discipline	*Date*	*No. of Presentations*
Agriculture	*02nd August*	*07*
Chemistry	*28th October*	*06*
Physics	*22nd November*	*06*
Medicine	*14th November*	*06*
Zoology	*12th December*	*04*

✱ *Meetings, Seminars, Workshops, Conferences...*

- Theme : **Workshop on Priority Areas in Veterinary Medical Sciences and Dental Sciences**
  Date : 29th January 2002
  Venue : Session I - Institute of Continuing Education on Animal Production and Health, Gannoruwa

  Session II - Faculty of Dental Sciences, Univ. of Peradeniya

The objective of the workshop was to identify research priorities through participatory appraisal. The participants consisted of members of the Faculties of Vet. Medicine & Animal Science and Dental Sciences, researchers involved in the field of Dental Sciences & Veterinary Medicine and representatives from the related institutions. Priority areas for research were selected in each session.

- Theme : **Potential for Mineral Based Industries**
  Date : 13th February 2002
  Venue : BMICH, Colombo

The Working Committee on Natural Resources organized a workshop on Potential for Mineral Based Industries on 13th February 2002 at BMICH. The workshop was organized as the Committee was concerned on the problems faced by the mineral based industries and the future of such industries. The presentations were based on the availability, quality and proper mining of raw materials, requirements of the industry and investment / development required for the industry to continue.

- Theme :**Workshop on Hands-on Science for Primary School Teachers**
  Date :15th February 2002
  Venue : Sri Nishanka MahaVidyalaya Kurunegala

The main objective was to educate school teachers regarding new teaching methods which were introduced at an International Seminar in Beijing, China.

- Theme :**Bioassay Methods in Medicinal Plants Research**
  Date :15th February 2002
  Venue : NSF

The workshop was organized by the Research Committee on Chemistry with the objective of dissemination of information on Bioassay Methods in Medicinal Plants Research and also to identify the problems researchers face in carrying out bioassays. As a follow up of the workshop it was decided to take action to arrange facilities for researchers, for bioassay testing. The NSF has communicated with the Medical Research Institute in this regard.

- Theme :**Data Analysis**
  Date :22nd February 2002
  Venue :NSF

A workshop on Data Analysis was organized by Research Committee on Chemistry with the objective of making granlees aware of the essential statistical analysis for interpretation data of research grants. As a follow up another workshop on Data Analysis will be organized during 2003 when funds are available.

- Theme : **Workshop on Planning Research Proposals in Traditional Medicine**
  Date :04th March 2002
  Venue :NSF

A Workshop on Planning Research Proposals in Traditional Medicine was held for researchers, academics and other scientific staff attached to different institutions engaged in research in the field of Traditional Medicine and related fields. The main objective was to create awareness on how to develop research proposals and to encourage more scientific and reproducible research and publications by researchers.

- Theme : **Research Proposal Workshop on Development of New Materials**
  Date : 08th March 2002
  Venue : NSF

Consequent to the discussion held with Sida/SAREC a comprehensive project proposal on Development of Materials for Industrial and Technological Applications in Sri Lanka was submitted to Sida/SAREC for financial support. 17 participants from Industries and Academic Institutes participated at the workshop.

- Theme :**Workshop on Solving Problems Encountered in Conducting Scientific Research**
  Date :28th June 2002
  Venue :NSF

The above workshop was organized, with a view to identify the problems encountered by the scientists in fund management, maintenance and repair of equipment, ordering and supply of equipment/ chemicals , Importation of special chemicals and reagents, access to published work etc. and to recommend ways and means to eliminate or minimize these problems.

The workshop was attended by senior officials and researchers from Universities, Research Institutes, Customs, Treasury, Ministry of S&T, Policy making/facilitating bodies.

Recommendations were documented and were transmitted to the NASTEC for follow up. A special Working Group has been appointed by NASTEC for this purpose.

- Theme :**Evaluation of Biotechnological Processes for Treatment of Wastewaters Generated from Textile and Desiccated Coconut Industries**
  Date :10th September 2002
  Venue :NSF

This is a project (SIDA(IL)/2000/BT/02) carried out under Indo-Sri Lanka S & T Cooperation – Biotechnology Programme. The progress of the work was presented by Dr R.A. Pandey (Indian counterpart investigator), Scientist, National Environmental Engineering Research Institute (NEERI) and Dr (Ms) S.I. Abeygunawardena (Sri Lanka counterpart investigator), Senior Lecturer, Dept. of Microbiology, Faculty of Science, University of Kelaniya. Dr A.M. Mubarak, Director, Industrial Technology Institute and Mr H.A. Thilakaratne, Chairman, Coconut Development Authority being external experts assisted the Research Committee on Biotechnology to evaluate the progress of the project. The students, Technical assistants and other scientists (20 participants) working in the area participated at this meeting.

- Theme :**Workshop on Problems and Issues in the Treatment of Wastewater Effluents in the Textile and Desiccated Coconut Industries**
  Date :12th September 2002
  Venue :NSF

A workshop on Problems and issues in the treatment of wastewater effluents in the textile and desiccated coconut industries was jointly organized by Department of Microbiology, Faculty of

Science, University of Kelaniya, NSF and science & technology personnel development project (ADB) on September 12, 2002 in the NSF Auditorium. The workshop was arranged in connection with a visit of Indian counterpart scientists of the project (Sida(IL)/2000/BT/02) under the Indo Lanka S&T Cooperation programme.

About 85 scientists and technical personnel participated at this workshop. Dr S.N. Kaul, Director Grade Scientist and Dr R.A. Pandey, Scientist, of National Environmental Engineering Research Institute (NEERI), Nagpur, India were among the resource persons.

The topics discussed were:

- Problems and remedial technologies involved in the treatment of wastewater effluents in textile and desiccated coconut (DC) industries – Dr S.I. Abeygunawardene, Dept. of Microbiology, Faculty of Science, University of Kelaniya
- Improving Profits and Productivity while reducing environmental burden in textile and DC industries using cleaner production – Mr Sena Peiris, Director, National Cleaner Production Centre
- Challenges of treating wastewater generated in DC industries – Mr S.B. Ratnayake, DGM, Coconut Development Authority
- Overview of some issues in the treatment of wastewater effluents in textile industry- Indian experience – Dr R.A. Pandey, Scientist, NEERI, India
- Introduction to ISO 140000: Benefits of Certification – Dr A.M. Mubarak, Director, ITI
- Maintenance and anaerobic wastewater treatment units – Dr Suren Wijeyekoon, Dept. of Chemical Engineering, Faculty of Engineering, Univ. of Moratuwa

Group discussions and presentations (Textile Industry Group, Desiccated Industry Group) were also held during technical session 2.

- Theme : **South & Central Asian MAB Meeting of Experts on Environmental Conservation, Management and Research**
  Date : 15th – 18th October 2002
  Venue : Coral Gardens Hotel, Hikkaduwa

A regional meeting of experts on the above theme was organized as a follow up to the Regional Meeting of Coordinators of MAB Committees and Biosphere Reserves in South and Central Asia held in Dehradun, India in 2001. The meeting was organized by the NSF and National MAB Committee under the aegis of UNESCO. The objective of the meeting was to share information and experiences on the various aspects of management of biosphere reserves to fulfil the functions of conservation and encourage the prudent use of resources and research, in the countries of South and Central Asia.

Representatives from Bangladesh, Bhutan, India, Iran, Maldives, Nepal, Pakistan and Sri Lanka participated at the meeting. The meeting was able to take forward the proposal and agree on statutes for the establishment of a networking system on the management of biosphere reserves in South and Central Asia.

- Theme :**UNESCO World Science Day for Peace and Development**
  Date :09th November 2002
  Venue :BMICH, Colombo

A seminar was organized to celebrate the World Science Day for Peace and Development on 09th November 2002 at BMICH. Sri Lanka National Commission for UNESCO funded this event. A press conference was held on the same day to publicize the NSF Science Magazine through the electronic media.

The Chief Guest was Hon. Dr Karunasena Kodituwakku, Minister of Human Resources Development, Education and Cultural Affairs. Two special lectures on Science for sustainable development and Trial and error methodology in the peace process were delivered by Dr Janaka Ratnasiri, President, SLAAS and Dr Jehan Perera, Director/ Media, National Peace Council respectively. Prof. Ranjan Ramasamy, Chairman, NSF, Prof. M.T.M. Jiffry, Chairperson, NSF Special Committee on Science Communication, Mr Mahinda Abeywickrama , Secretary General, Sri Lanka National commission for UNESCO, Dr Jayantha Wattevidanage and Dr Gayathri Jayatilleke at the Open University of Sri Lanka participated at the press conference.

✱ *Training Workshops for Young Social Scientists*

The tenth workshop for Young Social Scientists was held in July 2002 in collaboration with Section F of the Sri Lanka Association for the Advancement of Science. A four day initial stage of a seven day advanced training workshop in social science research was held in September 2002 for 20 young social scientists who participated in the initial two day workshop, held in July. The trainees were guided in the actual implementation of a research project.

The details of the two training workshops are as follows:

(1) **NSF/SLAAS Training Workshop for Young Social Scientists – No. 10**

Date	-	19th – 20th July
Venue	-	NSF
No. of Resource Persons	-	04
No. of Participants	-	20

(2) **NSF/SLAAS Advanced Training Workshop for Young Social Scientists – Phase 1**

Date	-	27th – 30th September
Venue	-	NSF
No. of Resource Persons	-	Four panels
No. of Participants	-	16

* ***NSF/SLAAS Science Forum***

The NSF initiated a regular series of monthly public seminars in June 2002, in collaboration with the SLAAS. These public seminars are arranged for scientists who are recipients of travel grants form the NSF and the Commonwealth Science Council to share the knowledge and experience gained from the International/Regional Conferences/Seminars with the rest of the scientific community who did not obtain the opportunity to attend such events. Six seminars were held and ten Scientists presented their experience at seminars during the period of June - December 2002.

Significant Research Findings

- ***Development of DNA markers for identification of individuals in the Sri Lankan human population***

DNA typing is now the most powerful tool to identify individuals and to determine family relationships. It is widely used in other countries for forensic and civil casework. The objective of the proposal was to develop the methodology to type human DNA samples and establish a population DNA database for the Sri Lankan population. The ultimate aim of the project was to facilitate DNA typing for criminal and civil casework in Sri Lanka. The method of STR (Short Tandem Repeat DNA analysis) typing was used as it is the latest and the most accepted method for DNA case work.

DNA typing was used to identify suicide bombers and to resolve disputed paternity, for both Criminal and Civil Courts. One of these was a case of alleged incest in which a woman accused her own father of being the father of her child. Most of the paternity tests performed were for civil procedures, such as child custody, child maintenance, and divorce and was able to determine whether the alleged father of the child was actually the biological father or not. The evidence based on DNA typing was accepted by Court in all these cases. The findings of the research project fulfilled a national need for the establishment of an accurate technique for identification of individuals in the Sri Lankan human population.

(Dr Maya B. Gunasekera & Dr Nalin C.E. Goonesekera – RG/96/M/12)

- ***Monitoring landslide movements using geophysical methods***

The damages caused by landslides is a threat to development of hilly terrains. The determination of slope stability and obtaining information on the state of soil masses must be clearly understood to plan landslide control procedures. Geophysical methods can be applied for this purpose equally effectively as the existing engineering geological methods observing the dynamics of landslides.

Results of this research revealed that the electrical resistivity method is not suitable for detecting the substrata since the exact soil properties cannot be described. But it will help to differentiate soil layers and avoid unnecessary drilling procedures. It was also found that detecting a moving magnetic anomaly is an advanced methodology to determine the direction and velocity of a displacement of soil masses. Magneto-metric method is more effective and applicable in measuring the dislocation of subsurface soil masses since the monitoring and instrumentation cost is very low.

(Mr R.M.S Bandara - RG/99/NR/02)

- ***The testing of specific pre-and post harvest treatments for reducing the incidence of chilling injury in pineapple***

When pineapple stored under low temperature (around 10°C), a brown colorations in the internal flesh and core tissues developed, and this condition is referred to as internal browning. Fresh pineapples (Kew and Mauritius) are exported to various countries from Sri Lanka especially under

sea freight and low temperature conditions. The destinations are far from the country, such as Europe and Middle East. It takes about 21 days to reach Europe and fruits take another 3-4 days to reach the consumer through wholesale and retail outlets.

Therefore, it was very important to find a control measure for this physiological condition of fresh pineapple when subjected to low temperature. In order to develop post harvest treatments that include cold tolerance in pineapple fruits and to reduce the incidence of internal browning, three research students tested specific pre and post harvest treatments for reducing the chilling injury in pineapple. Based on the results, recommendations were formulated for the benefit of the pineapple growers and for the exporters of the country.

(Dr *R.S. Wilson Wijeratnam, Dr Deepthi Bandara, Prof. N.K.B. Adikaram, RG/97/AG/04a,b,c*)

- **Dramatization of teaching to popularize science among Sri Lankan students.**

It has been shown in several academic syllabi in upper grades of secondary education that there are theoretical concepts, which are difficult to teach and convey the underlying concepts of such theories. Traditional teaching methods in most cases are weak in capturing such concepts. As an alternative method of conveying such concepts, teaching through drama has been accepted as an effective educational tool. This research on empirical ground amply demonstrated that teaching through drama in conveying some of the scientific concepts have been effective. The marks of almost all the students in all subject areas have been higher in post assessment when compared to the pre-assessment. It is particularly interesting to note that those students who were within the lower mark ranges have performed relatively better when compared to that of the students who are in the higher marks ranges. This indicates that the method is particularly effective among the students who have not been responding to traditional method of teaching.

(*Mrs C. Warakadeniya, RG 2000/SE/01*)

- ***Survey of fish fauna of upper Walawe river basin.***

Fish fauna of Upper Walawe river basin ($6^0 33'$ N-$6^0 50'$N and 80^0 E – 81^0 E) was studied from March 1999 to April 2001. During the above period seven tributary systems including 154 stations of 48 major streams and 131 rivulets above elevation of 200m of Upper Walawe river basin have been studied. Biological parameters such as species diversity, population density, distribution, fecundity, food habits, mortality, growth and environmental parameters such as dissolved oxygen concentrations, water, pH, total dissolved solids concentration, temperature were estimated using standard methods and gears.

There were 26 species of fish in the area, 300m above the sea level. The assemblage consisted of 15 Cyprinids. *G ceylonensis, P. bimaculatus, P. nigrofasciatus, P pleurotaenia, S.notostigma, L. thermalis and B.signata* were endemic to Sri Lanka. *Rasbora daniconius* was the most numerically abundant species followed *by Garra ceylonensis* having the percentage abundance of 32.42% and 21.32% respectively. Among endemics most common species was *Garra ceylonensis* (21.32%) followed by *Puntius bimaculatus* (14.4%).

Distribution of species among different altitude intervals revealed that the species richness (r=0.91406), total dissolved solids (r=0.82984), water temperature (r=0.88613) and air temperature (r=0.087648) have inverse relationship with increasing altitudes. Dissolved oxygen (r=0.82598) and pH (r=0.84705) showed positive relationship with increasing elevations.

(Prof. J. Jinadasa, ZSSL/99/01)

- ***Clarification of taxonomic status of newly described fish species Rasbora wilpita and its genetic relationship with Rasbora species found in Sri Lanka.***

The results revealed that, genetic divergence of *Rasbora vaterifloris* from other species is sufficient for the inclusion of this species in a separate genus. Molecular studies also confirmed that *Rasbora wilpita* is a separate species and the presence of symphysial knob is the major character in their identification. With respect to the species studied under this project, a sequence divergence rate of 1% per million years (for the 12S rRNA marker) suggests that *R. vaterifloris* diverged from the lineage to which other three species of *Rasbora* belong, approximately 8.6 million years ago (mya). *R. daniconius* represents a lineage that diverged from a common ancestor with *R. caverii* and *R. wilpita* approximately 3.2 mya. *R. caverii* and *R. wilpita* shared a common ancestor approximately 1.6 mya.

This study gives the first hand information on phylogeny of *Rasbora spp.* in Sri Lanka which is essential to conserve the extant of biodiversity in this group of fishes and to implement the conservation and management strategies.

(Dr M. P.K.S.K. de Silva SIDA/98/BT/01)

Publications/Periodicals

- ***Regular Publications***

  - **Journal of the National Science Foundation**

The following issues of the JNSF were published.

JNSF Vol 28(3)	-	September 2000 issue
JNSF Vol 28 (4)	-	December 2000 issue
JNSF Vol 29(Nos 1 & 2)	-	March & June 2001 issue
JNSF Vol 29 (Nos 3 & 4)	-	September & December 2001 issue

  - **Sri Lanka Journal of Social Sciences**

Volume 23 No.s 1&2 (2000) and Volume 24 No.s 1&2,(2001) were in the press. Material was also processed for Vol 25 No.s 1& 2 (2002) and Vol 26 No. 1 (June 2003) and articles were gathered for Vol 26 No 2. (December 2003).

  - **Vidya – Quarterly Newsletter**

Volume 4, No. 1	-	January 2002
Volume 4, No. 2	-	April 2002
Volume 4, No. 3	-	July 2002
Volume 4, No. 4	-	October 2002

  - **Vidurava**

Volume. 20, No 02 on Mosquito Borne diseases
Sinhala version: printed
English version: printed
Tamil version: translation and proof reading in progress

Volume 21, No.01 on Science Communication
Sinhala version: printing in progress
English version: printed
Tamil version: translation and proof reading in progress

- ***Special Publications***

  - ***Protected Fresh water Fishes of Sri Lanka***
    Guide book for Protected Fauna & Flora - Series No. 1

This manual has been prepared for freshwater fishes that are prohibited or restricted from export in live form. This document relates to the thirteen species of freshwater fish prohibited from export, in live form, under the Fisheries and Aquatic Resources Act No. 2

1996. (Regulation 02, First Schedule) and the eight species of freshwater fish restricted from export in live form under the same Act (Regulation 03, Second Schedule). This manual should help the Custom Officers responsible for implementing these regulations to identify the species which are subject to removal and sale in violation of the existing regulations. A colour photograph, distinguishing features and a short description with vernacular names are given for each species.

- ***Research Highlights***

The book contains abstracts on some selected research projects (30) funded by the NSF and completed during the period 1995 – 2000. The projects were selected based on their potential for application in agriculture, industry, education, health sectors etc.

Chapters are on Agriculture, Chemical Sciences, Biological Sciences, Biotechnology, Natural Resources, Health Sciences, Physical Sciences, Social Sciences & Science Education and Buffalo Research & Development Programme. Complimentary copies of the book were distributed to Universities, Research Institutes, Chamber of Industries and other relevant bodies with the objective of disseminating the research findings and their implications to the potential users.

- A monograph on *Ficus benghalensis* was published in January 2002.

- ***Technical Reports***

- R.M.W.Amaradasa, M.A.T. De Silva, R.P.Pathirage, Patents in a small developing economy : A case study of Sri Lanka Journal of Intellectual Property Rights, Vol 7, Sep. 2002, pp 395-404.

- The Research Committee on Biotechnology completed the final draft of the manual on Guidelines for the safe use of recombinant DNA technology in the laboratory.

- ***Proceedings of Seminars***

Abstract of presentations of the Symposium on Mathematical Modeling (15 September 2001).

International Scientific Activities

Sida/SAREC Programme

- *International Contacts*

Sri Lankan scientists are supported by International Contacts Fund of NSF to attend International Conferences/Seminars/Workshops. Applications for travel grants are considered six times a year. During the year 2002, 153 applications were received and 67 travel grants were approved. Of which, 62.5% grantees were from Universities and rest from other Institutions and 52% grantees were below the age of 40 years.

- *Urgent Spare Parts*

Ten requests for urgent spare parts from universities, and research institutions were forwarded to the International Science Programme of Sweden for supply of items. In addition, nine urgent spare parts were supplied (list below) using the local funds available under sida programmes.

	Item	*Institute*	*Cost Rs.*
-	Gas charomatograph Accessories	Univ. of Kelaniya	72 900.00
-	Microscope & Spare Parts	Univ. of Colombo	165 210.00
-	Spare parts for AGILENT 1100 HPIC	Office of the Registrar Pesticides	181 600.00
-	Spare parts for BRAHSTEAD Easy Pure	RRI, Agalawatta	351 788.45
-	Laboratory Equipment	CRI	33 600.00
-	Splanapochnomat	CRI	310 000.00
-	Mercury Burner	Univ. of Colombo	52 898.00
-	Spectrophotometer (repairs)	Univ. of Kelaniya	183 712 00
-	Microscope	Univ. of Colombo	59 000.00
			1410708.45

- *R&D policy studies and S&T indicators*

  - The National Survey of R&D in Sri Lanka 2000 and the survey and case studies on University industry linkages in Sri Lanka were concluded during the year.

- The field work related to impact of Policy issues on Technological innovations in rice production in the Agricultural sector of Sri Lanka was commenced and the analysis on Productivity and impact assessment of Natural Products Research in Sri Lanka was continued during the year.

- *Activities with Sida*

A proposal for the enhancement of the capacity of the NSF by way of developing the Scientific Infrastructure, development of materials for industrial applications, and a Central S&T library was submitted to Sida in April 2002, for funding under the next agreement period (2003-2006) of the Sweden/Sri Lanka bilateral research cooperation.

Delegates from the Swedish South Asian Studies Network (SASNET) met Sri Lankan Scientists in June 2002. The objective of the meeting was to encourage and promote an open and dynamic networking process for research collaboration between Sweden and South Asia.

✱ ***Commonwealth Science Council***

- *Travel Grants Scheme*

32 applications were received to be endorsed by the NSF. CSC awarded 12 travel grants to Sri Lankan scientists during the year 2002.

- *Fellowship Scheme*

Three applications were received and processed during the year.

The Board of the National Science Foundation revised the criteria for CSC Travel Grants and Fellowship Awards in November 2002. These revised criteria came into effect from 01st December 2002.

- *Workshops*

Information of the following workshops (fully sponsored by the CSC) were circulated to relevant institutions and nominations were forwarded to the CSC (sponsor).

- Regional training workshop on Marine Toxins, 17 – 22 June 2002, Suva, Fiji
  - One participant

- Building an Innovation based Economy – The European, Commonwealth and Worldwide experience on High Technology based Incubators, 07 – 10 May 2002, Pafos, Cyprus
  - Two participants

✱ *43rd International Mathematical Olympiad*

The 43rd International Mathematical Olympiad (IMO – 2002) was held in Glasgow, U.K. from19th to 30th July 2002. The NSF selected the national team (04 contestants and a team leader) to participate in the IMO. The NSF provided the necessary funds towards the airfare and incidental expenses of the team under the SIDA International Travel Fund. Mr S.V.W. Kodituwakku (Royal College) won a certificate of 'Honourable Mention' at the Olympiad.

✱ *International Foundation for Science*

The IFS provides support to young scientists of merit in developing countries by awarding them research grants to carry out research projects of high priority. The NSF disseminated the information pertaining to the IFS Research Grants Scheme to the Universities and Research Institutes in Sri Lanka. During the year 2002, eleven scientists from Sri Lankan universities and Research Institutes submitted applications to the IFS for research grants.

✱ *International Council for Science (ICSU)*

The Chairman/NSF, represented Sri Lanka at the 27th General Assembly of ICSU held from 20 – 27th September in Rio de Janeiro, Brazil.

✱ *International Centre for Genetic Engineering & Biotechnology (ICGEB)*

- Six applications were endorsed and forwarded for consideration under pre-doctoral fellowship programme.
- Three applications were endorsed and forwarded for consideration under ICGEB collaborative research programme (CRP).
- One application was endorsed and forwarded for consideration under ICGEB post-doctoral fellowship programme.

- Prof. Sirimalie Fernando, Chairperson of the Research Committee on Biotechnology attended the Ninth Session of the Board of Governors of the ICGEB from 13-14 November 2002 in New Delhi, India.

✱ *Asian Association of Social Science Research Councils (AASSREC)*

The NSF continued to function as the national focal point for AASSREC (Asian Association of Social Science Research Councils) and coordinated its activities with the Sri Lankan Social Scientists. Its connections with this body and related organizations led to the NSF being associated with the visits of two eminent social scientists from abroad, during the year.

✱ *Visits of Foreign Delegates*

31 January	-	Prof. S. Sotheeswaran, Prof. of Organic Chemistry, The University of South Pacific, Fiji
25 February	-	Mr Fred Naggs Natural History Museum, London.
10 September	-	Dr S.N. Kaul (Director Grade Scientist) Dr R.A. Pandey, Scientist National Environmental Engineering Research Institute, Nagpur
25 October	-	Prof. Osamu Kitani Nishon University, Japan
16 October	-	Dr M.G. Siriwardene University of Paris, Jussieu Campus
01 November	-	Dr Armand Clesse Director, Luxembourg Institute for European and International Studies
13 November	-	Dr Anders Clarhall Programme Officer, Sida

Other Activities

✱ Manpower Information System (MIS)

The establishment of the MIS is funded under S&T personnel Development Project of the Ministry of Economic Reform, Science & Technology. Four computers & accessories, Printer and SQL- Server were received by the MIS during the year 2002,

Manpower Forecasting and Related Studies

A report was produced on tracer study on fresh graduates passed out in 1998/99 in each S&T discipline. The tracer study measures the demand and supply of fresh graduates in different S&T disciplines. Tracer study of passed out graduates during the years 2000 or 2001 was carried out. Seven Research Assistants were recruited to collect data to develop databases on graduates passed out in the years 2000 or 2001 from universities in Sri Lanka.

Survey/Database/Website on Industry Specialists

The computer based information system, data collection tool and a comprehensive database were developed to share the information (collection) via the Internet. It was planned to share the information without human interface by setting up a proper database management system as a back – end at the S&T institutions. International consultants and local consultants worked in the project during the period April- July 2002 assisted the designing of the computer based system.

Process of installation of data collection tools was established.

Name of Consultant	Start Date	End date	Duration
Dr Ing.Lothar P.Warich (International)	18/03/2002	28/04/2002	4 weeks
Mr S.C.R.Fonseka (Local)	18/03/2002	18/07/2002	3 months

✱ NSF Science Magazine ("Sevilla" in Sinhala, and "Vignanathedal" in Tamil)

The NSF Science Magazine for the television media was initiated with the objective of taking recent developments of science and technology to the nation's children and to the general public. The NSF expects to broadcast a series of programmes on current issues, in all three languages (Sinhala, Tamil, and English). Specialists in different fields of science and technology were invited to write scripts for the programmes. The Open University of Sri Lanka (OUSL) and Talent Factory Lanka (pvt) Ltd.were contracted for production of the programmes for the NSF Science Magazine. UNICEF provided funds for production of the programmes.

Completed programmes:-

- "Is the Power Crisis Over?" (Scriptwriter: Dr Tilak Siyambalapitiya, producer: Mr G.Algama)
- "Human Impact on Biodiversity" (Scriptwriter & producer: Dr Jayantha Wattevidanage).

Programmes in progress in 2002.

- "Biological Nitrogen Fixation" (Scriptwriter: Prof. S.A. Kulasuriya, producer: Dr V. Karunaratne)
- "Road Safety and Traffic Management" (Scriptwriter: Prof. Amal Kumarage)
- "AIDS can be prevented" (Scriptwriter: Dr Y.L.H. Yakandawala, producer: Mr Waruna Lelwala)
- "Dengue" (Scriptwriter: Prof. Sirimali Fernando, producer: Mr Chatura Jayatilleke).

❋ Participation at Exhibitions

NSF participated in the following exhibitions by running a stall which displayed models and posters pertaining to NSF funded projects. The publications of NSF including VIDURAWA and Science Education series were also displayed for sale.

- Exhibition 'DEST 2002', University of Colombo – 20th to 23rd June 2002.
- Book Fair and Exhibition, BMICH – 10th to 15th September 2002.
- Organization of Professionals Association (OPA) Book Fair, BMICH - 18th to 21st September 2002.
- SLFI Annual Convention Stalls Sri Lanka Foundation Institute – 21st to 23rd November 2002
- Science and Technology Exhibition organized by Ministry for Economic Reform, Science and Technology, Negombo – 28th to 30th November 2002.
- Science and Technology Exhibition (58th Annual Session of SLAAS) University of Colombo – 4th and 5th December 2002.
- Science and Technology Exhibition organized by Ministry for Economic Reform, Science and Technology, Kalutara – 15th to 16th December 2002.

✱ NSF Support to Scientific Programmes in other Institutions

▪ 31/01/02	-	Workshop on Good Governance (The Organization of professional Association of SL)	-	Rs. 30000.00
▪ 26/11/02	-	School Science Programme (Institute of Fundamental Studies)	-	Rs. 10000.00
▪ 04/01/02	-	13th Annual Congress (Postgraduate Institute of Agriculture)	-	Rs. 27500.00
▪ 18/01/02	-	District School Science Day Programmes (Sri Lanka Association for the Advancement of Science)	-	Rs. 25772.73
▪ 27/08/02	-	Advertisement for the Souvenir Back page PGIS - 14th Annual Congress (Postgraduate Institute of Agriculture)	-	Rs. 5000.00
				Rs. 98272.73

✱ Donation of Books

	Vidurava	Science Education Series
▪ Ranpokunagama Maha Vidyalaya Nittambuwa	10	05
▪ Delan Silvathanna Vidyalaya Kuliyapitiya	12	01

▪ Vidurava Vol. 20(1) on Projects for Learning (Sinhala - 50, Tamil – 10, English – 15) were distributed among the participants at the SLASS/NSF Science Forum.

Sri Lanka Scientific & Technical Information Centre (SLSTIC)

SLSTIC established in 1979, has been the focal point for dissemination of Science and Technology information in Sri Lanka. During the year 2002 the following tasks were fulfilled to enhance the resources and services at SLSTIC.

Collection development

During the year 2002, 255 books, 268 journals, 349 newsletters, 46 annual reports, 38 final reports, 46 gazettes, 9 CD ROMs were added to the collection.

Database development

Since 1996 SLSTIC has been actively engaged in the database development, which was facilitated by the Local Area Network. The existing databases were strengthened with the addition of new records as follows: 538 records to Sri Lanka Science Index (SLSI); 683 to SLSTICAT (Library Catalogue) ; 516 to newspaper articles index (NEWSP) ; 32 to Act & bills database and 80 records to the WEB; 211 records to NATURAL database; and 350 to Union List of Periodicals database.

Assistance in Utilization of IT

SLSTIC/NSF contributed as the National Distributor of the UNESCO software CDSISIS Dos & Windows version and WINISIS was distributed to 35 libraries during the year 2002.

- Five workshops on developing databases using WINISIS were held for and 32 library personnel attended these workshops.
- One Advanced WINISIS workshop held and 09 participants were trained
- Continuous assistance in trouble shooting in WinISIS

In addition, the training package on "ICT for Library & Information Professionals" developed by UNESCO for developing countries, was also promoted among the Universities and other teaching Institutes in Library and Information Science (LIS).

Intranet/ Internet activities

- Thakshana.nsf.ac.lk server software was upgraded to Windows 2000 Advance Server. The server hosts ISIS databases, cache DNS and handles two Remote access incoming connections.
- 4 New Workstations were connected to the NSF Network.
- Network security was strengthened to minimize illegal network probing through SLSTIC server.
- Two new websites were launched at NSF main Web server with their own URLS www.most.gov.lk & www.idb.lk

- Library databases from IUCN, International Labour Organization (Colombo Office) and Institute of Chartered Accountants of Sri Lanka were hosted at NSF site

Library Network Activities

SLSTIC being the co-ordinator of SLSTINET organized a meeting of SLSTINET members and ISIS users. 79 library professionals participated at this meeting to share their experiences. Also a demonstration and a seminar on access to INASP/PERI online databases were also organized for SLSTINET member libraries. SLSTIC also offered the document procuring services through British Lending Library and INSDOC, India. During the year 2002, 80 articles were obtained from the BLLD and 25 articles from INSDOC.

SLSTIC contributed to the development of the following networks by participating in their cooperative activities.

- HELLIS: Health Literature and Library Information Services
- AGRINET: Agricultural Information Network
- NATNET LANKA: Provides news items for the Newsletter on Library & Information Networks in Sri Lanka

SLSTIC was also nominated as the National Focal Point of Asia Pacific Information Network (APIN) and the UNESCO Regional Observatory of the Information Society in Asia.

Technology Watch Centre

The Centre for Technology Watch stepped forward with useful activities for the development of industry. The Centre is funded under the S&T Personnel Development Project of the Ministry of Economic Reform, Science & Technology.

- TWC activities were expanded to four more important thrust areas namely Biotechnology, Environmental Science & Technology, Textile Technology and Information Technology in addition to the Food Technology, Rubber & Polymer Science Technology and Aquaculture Technology.
- The Database on specific technologies related to seven thrust areas has been developed and linked to the web site. The information under this database can be accessed online. The database consists of 480 technologies.
- Two issues of TECHWATCH LANKA, the TWC newsletter containing information on latest technological developments have been disseminated among industries, related associations, R&D institutes and relevant libraries.
- Technology related articles were published in the Daily News weekly.
- Establishment of links with local R&D was completed.
- In addition to the present links with local associations, TWC was able to further link with Sri Lanka Inventors' Commission and Industry Institute Interaction Cell at the University of Moratuwa.
- Databases on industry information were updated including some new companies.
- Thirteen queries from the industry related to technology were dealt with.
- Memberships were obtained for three international magazines in the areas of Aquaculture technology, Food Science and Technology and Polymer Technology.
- Worked together with the sub committees on relevant thrust areas under the Industry Institute Partnership (IIP).
- Three Scientific Officers of TWC attended a training programme on Technology Watching at the School of Management of Asian Institute of Technology (AIT), Thailand from 1st May to 30th May.
- Technical information on Sturgeon fish was disseminated for review among the Consultants with a view to introduce the fish in Sri Lanka
- Three industry status reports on Food industry, Rubber industry in Sri Lanka and Aquaculture industry were prepared.

Seminars, Conferences, Meetings, Workshops attended by Staff

Mr M. Watson, Director

Foreign

16-19 July - Presentation on Research policy and industrial development in Sri Lanka
- APO Symposium on R&D Policy
Ulaanbatar, Mongolia

Local

25 January - Soil Science Society seminar on Soil fertility management
- In Service Institute. Maha Iluppallama.

05 April - COSTED Planning Meeting to establish a regional science communication Network
Tangerine Beach Hotel, Kalutara

28 June - Workshop on Solving problems encountered in conducting scientific research, NSF

24 July - Presentation on Preparation of quality research proposals
- Workshop on Towards quality research proposals
PGIA, Peradeniya

20 August - UGC workshop on Survey of research & research training in Sri Lanka
SLFI, Colombo

18 September - Seminar on R&D management
NERD Centre

Attended meetings:

- As member of Board of Management of PGIS
- Parliamentary Consultative Committee
- As Member/Secretary of Science and Technology Advisory Committee (STAC) of SLAAS
- As a member of the Biodiversity Experts Committee of the Ministry of Environment & Natural Resources

Other Staff Members

Ms. D. Talagala
Director/ Information

Foreign

15th – 19th June	-	AGM of the International Council for Science & Technology Information and the Conference on Scientific Information: Challenges of creating and maintaining access, Stockholm
18th 20th November	-	Seminar and meeting on UNESCO Observatory of the Information Society in Asia Bandung, Indonesia
11th –13th December	-	First Statutory Meeting of Asia pacific Information Network (APIN) Bangkok
14th – 15th December	-	Regional Seminar on the World Summit on Information Society (WSIS) Bangkok

Local

10th & 24th May	-	National Seminar on Library Automation Colombo
10th July	-	Seminar for teacher librarians on Information networks with special reference to Sri Lanka Meepe
5th, 9th – 11th October	-	PERI e-journals and e- resource management in libraries Colombo

Attended meetings:

- LEARN Management Committee
- Inter University Librarians Committee at the UGC
- NASTEC Study Group on establishing a Central Library of S & T
- National Committee on Environmental Research Database

Foreign

22nd - 25th April	-	The Workshop on Technology management & commercialization of inventions and research results, Tehran. **Dr Thamara F. Dias**

06th May-07th June	-	Workshop on "Writing of successful project proposals on Climate Change and Energy, The Netherlands **Dr Saman Fernando**
30th – 31st July	-	The second meeting of the SAARC Technical Committee on Science & Technology New Delhi, India **Dr Thamara F. Dias**
31st May	-	Training Seminar on Product Innovations and Leadership, A need in the New Millennium, Hilton, Colombo **Mr J. Karunasena**
30th July	-	The Workshop to discuss draft chapters on Coastal Zone Management Plan **Mrs H.A.U. Amarasinghe**
05th – 08th September	-	Second Biennial Conference on Science and Technology (BICOST – II) The Role of S & T in Infrastructure Development – Riverine Hotel, Beruwala **Mrs H.A.U. Amarasinghe**
17th-20th September	-	Workshop on Development of a National Strategy for Incorporating Traditional Knowledge into Development Practices Culture Club Resort, Dambulla **Mr J. Karunasena**
03rd October	-	Workshop to discuss the draft chapter on Special area Management Plan of the CZMP, ARTI **Mrs H.A.U. Amarasinghe, Mrs I.C.K. Werapitiya**
07th – 08th October		The BIMST-EC expert group meeting on technology cooperation, Trans Asia Hotel, Colombo. **Dr Thamara F. Dias**
15th – 18th October	-	Regional meeting of the South and Central Asian MAB Meeting of Experts on Environmental conservation, management and research **Mrs H.A.U. Amarasinghe, Miss Asha Pitadeniya** (Organizers and NSF Participants)
25th November	-	National Stakeholder workshop (Strengthening Undergraduate Education Project), Hilton JAIC Tower **Mrs Shyamalie Perera**
11th December	-	Seminar on Technology transfer and R & D management in developing countries, NERD Centre **Dr Thamara F. Dias**

Attended meetings - The Wildlife Sector Research Committee
Mrs H.A.U. Amarasinghe (as a member)

Special Meetings

Prof R Ramasamy (Chairman), Mr. M Watson (Director) and Miss K C J T K Fernando (Chief Accountant) attended the special meeting (Committee Stage Programme of Parliament the Appropriation bill/Budget 2002) held at the Parliament on 10th April 2002.

Staff Development and Training

- During the year 2002, SLSTFC staff was given the opportunity to attend International and National Workshops and Conferences as given below:
  - Masters in Library & Information Science (Associateship in Information Science) at INSDOC, India (Information Officer)
  - MS Office 2000 Special Training Progrmme sponsored by HELLIS/ WHO - (Two Library Assistants)
  - National Seminar on Library Automation (Information Officer and Two Library Assistants)

- Mr A.P. Hettiarachchi attended a part time (06 months) training programme (would continue until February 2003) on Software Training JAVA on Programming at the Software Technology Groups International (PVT) Ltd, Colombo.
- Seminar on Zero – Base Budgeting System and Implications of Budget Proposals on Taxes (Sri Lanka Institute of Development Administration) – Miss C. Fernando (2nd August), Mr A. Daniel (3rd August).
- A course on Sri Lanka Accounting standards – (Institute of Chartered Accounts of Sri Lanka) -- Mrs. Rohini Fernando (23rd & 30th May)

➢ **Ongoing Postgraduate Programmes**

- Mr R.M.W Amaradasa continued his PhD programme at the University of Wollongong, Australia to study on University industry linkages in Sri Lanka

- Mrs S. Wickramasinghe, continued her PhD programme on Impact of Policy issues on Technological innovations in rice production in the agricultural sector of Sri Lanka at the University of Sri Jawaharlal Nehru , New Delhi.

- Mrs G.Yapa continued her MPhil Degree programme on Productivity and impact assessment of Natural Products Research in Sri Lanka at the University of Colombo

  Mrs. C.G. Yapa, Assistant Director (Scientific Affairs) participated in a short programme on Science Policy research, at the Centre for Research Policy, University of Wollongong, Australia from 10th to 30th November 2002. She worked under the supervision of Prof. Sam Garret – Jones during this period.

- Miss Asha Pitadeniya continued her M.Sc. on Natural Resource Management at the Postgraduate Institute of Agriculture, University of Peradeniya

- Mr S.M.A Wasantha Anurudha continued his M.Sc. in Nuclear Science at the Department of Nuclear Science at University of Colombo.

- Dr Thamara F. Dias completed two semesters of her MBA in Technology Management at the Department of Management of Technology, University of Moratuwa

- Mr R.P. Pathirage obtained his M.Sc. degree (effective date – 29th August 2002) in Applied Statistics at the Postgraduate Institute of Science, University of Peradeniya.

- Miss Manoja Jayasekera continued her M.Sc. in Mass Communication at the Faculty of Social Science, University of Kelaniya.

- Dr S. Fernando completed his MBA at the University of Colombo. He continued his M.Sc. in Computer Science at the Department of Statistics and Computer Science at the University of Kelaniya.

Board of Management

(From 1st January 2002 - 12th January 2002)

Prof. Eric Karunanayake (Chairman)
Head, Dept. of Biochemistry
Faculty of Medicine
Univ. of Colombo

Mr M. Watson
Director, National Science Foundation

Prof. J.N.O. Fernando
President, SLAAS
Colombo - 7

Prof. Carlo Fonseka
Member, University Grants Commission

Eng.(Gp.Capt) P. Mervyn Gunasekera
President, The Institution of Engineers
Colombo - 7

Dr G.B. Gunawardena
Director General
National Institute of Education
Maharagama

Prof. Vijaya Kumar
Senior Prof. of Chemistry
University of Peradeniya

Prof. W.D. Lakshman
Dept. of Economics
Univ. of Colombo

Dr W.W.D. Modder
Director
Tea Research Institute

Mr K.G.K. Nemmawatte
Deputy Director
Dept. of National Planning
General Treasury
Colombo 01

Prof. Janaka de Silva
Dean, Faculty of Medicine
Univ. of Kelaniya

(From 5th February 2002 – 31st December 2002)

Prof. Ranjan Ramasamy
Chairman/ National Science Foundation

Mr M Watson
Director/ National Science Foundation

Prof. Uma Coomaraswamy
Vice Chancellor
Open University of Sri Lanka
Nawala, Nugegoda

Prof. Savitri Gunesekere
Professor of Law
University of Colombo
Colombo 03.

Prof. Anoja Fernando
Prof. of Pharmacology
University of Ruhuna
Wellamadama, Matara

Prof. Lalitha Mendis
Director PGIM
Kynsey Road
Colombo 08.

Eng. B R O Fernando
45A, Lady Evelyn de Soysa Road
Idama,
Moratuwa

Prof. J N O Fernando
Senior Professor
Open University
Nawala
Nugegoda

Prof. K D Arulpragasam
Vice Chairman
National Education Commission
223C, Narahenpita
Colombo 05.

Mrs N Madanayake
Director
Dept. of Public Finance
General Treasury
Colombo 01.

Audit and Management Committee

The following served as members of the Audit and Management Committee, appointed by the Board of Management.

Mrs N Madanayake (Chairperson)
Prof. J N O Fernando
Eng. B R O Fernando
Mr M Watson

Two meetings of the Audit and Management Committee were held during the year 2002.

Principal Staff of NSF

Chairman	
Prof. R. Ramasamy (From 05.02.2002)	B.A. (Hons.) (Cantab), M.A. (Cantab) Ph.D (Cantab)
Director	
Mr M. Watson	B.Sc. (Agric.) (Ceylon), M.Phil. (London)
Director, Scientific Affairs	
Mr R.M.W. Amaradasa	B.Sc. (Peradeniya), M.Sc.(Peradeniya)
Mrs H. A. U. Amarasinghe	B.Sc.(Ruhuna), M.Sc.(Colombo)
Director, Information	
Mrs D.D.D. Talagala	B.A.(Peradeniya), ASLLA, M.LSc. (Colombo)
Assistant Directors, Scientific Affairs	
Mrs C. G. Yapa	B.Sc.(Hons.) (Colombo)
Mr A.W.J. Karunasinghe (On no-pay leave from 02.05.2002)	B.Sc. (Ruhuna), M.Phil. (Colombo)
Project Manager (TWC)	
Dr R.S. Fernando (From 11/11/2002)	M.Sc. (Moscow), Ph.D (Moscow)
Scientific Officers	
Mrs S. L. Tillekeratne	B. A. (Ceylon)
Mrs S. I. Wickramasinghe	B.Sc.(Hons.) (Peradeniya), M.Sc. (Agric.) (Peradeniya)
Mrs R. Wijayaratne	B.Sc. (Hons.) (Peradeniya)
Dr T. F. Dias	M.Sc. (Hons.) (Moscow), Ph.D(Moscow)
Dr R.S. Fernando (Until 11/11/2002)	M.Sc. (Moscow), Ph.D (Moscow)
Mr R. P. Pathirage	B.Sc. (Hons.) (Colombo), M.Sc. (Peradeniya)
Mr S.M.A.W. Anuruddha	B.Sc. (Hons.) (Colombo)
Mrs R.A.A.D. Gunawardena (Until 27/09/2002)	B.Sc. (Agric.) (Peradeniya)
Miss A. M. Pitadeniya	B.Sc. (Agric.) (Hons.) (Peradeniya)
Mr A.P. Hettiarachchi	B.Sc. (Colombo)
Mr B.H.P.K. Thilakaweera (Until 28/02/2002)	B.Sc. (Hons.) (Colombo)
Mr J.G. Shanthasiri	B.Sc. (Hons.) (Colombo)

Miss N.B.K.R. Liyanage	B.Sc. (Agric.) (Hons.) (Peradeniya)
Miss P.C. Warnasooriya	B. Sc. (Hons.) (Colombo)
Mr K. G. J. Karunasena (From 01.02.2002)	B.Sc. (Agric.) (Hons.) (Peradeniya) M.Phi. (Agric.) (Peradeniya)
Mrs E. M. I. C. K. Werapitiya (From 04.03.2002)	B.Sc. (Agric.) (Hons.) (Peradeniya) M.Sc. (Peradeniya)
Mrs W. A. L. D. Wanasekera (From 01.10.2002)	B.Sc. (Hons.) (Open University of Sri Lanka)
Mrs R. A. S. K. Perera (From 01.10.2002)	B.Sc. (Hons.) (Colombo)
Miss P. R. M. P. Dilrukshi (From 14.10.2002)	B.Sc. (Hons.) (Peradeniya)
Miss S. A. Vinayagamoorthy (From 01.11.2002)	B.Sc. (Jaffna), M.Sc. (Colombo)

Scientific Officer (Publicity)

Miss M. Jayasekera (Until 30.09.2002)	B. Sc. (Open University of Sri Lanka)

Information Officers

Miss V. N. Perera	B.Sc. (Open University of Sri Lanka), ASLLA
Mrs R. P. Hathurusinghe	B.Sc. (Sri Jayawardenapura)
Mrs A.A. A. Vijayanthi	B.Sc. (Kelaniya)
Mrs V. N. Dharmaratne	ASLLA
Mrs J. Weeratunga	ASLLA

Administrative Officer

Mr S.P. Dissanayake	B.Sc. (Business Ad.) (Sri Jayawardenapura) M.A. (IP - New Delhi)

Chief Accountant

Miss K. C. J.T.K.Fernando	FCMA

Accountants

Mr M.H.M.S. Hamid
Mr A.C.M. Daniel

Assistant Administrative Officer

Mr S. Galketiya

Network Administrator

Mr H. M. M. Perera

Printing Manager

Mr K.P. Senanayake

Confidential Secretaries
Mrs S. P. Wijesinghe
Miss A. Palihawadana

Accounting Assistant
Mrs Y. J. Pathirana
Mr D.W. Wickremaarachchi
(from 01.08.2001)

Administrative Assistant
Mr M.K. Rathnaweera
(from 01.08.2001)

NSF Research Committees

➢ *LIFE SCIENCES RESEARCH COMMITTEES*

Biotechnology

Prof.(Ms) Sirimalie Fernando(Chair)
Prof.(Ms) Priyani Amarasinghe
Dr(Ms) Kumudu Fernando
Prof.(Ms) Ksharika Hirimburegama
Prof. A. Perera
Prof. S. Widanapathirana
Dr(Ms) S. Yasawardena

Botany & Microbiology

Prof. Kanthi Abeynayake (Chair)
Dr A. Jayasekera
Dr T. Jayasingham
Prof. S.A. Kulasooriya
Dr B.M.P. Singhakumara
Dr Tamara Weerasinghe
Prof. R.L.C. Wijesundera

Medicine

Prof. J.S. Edirisinghe (Chair)
Dr N. Karunaweera
Dr A. Mohamed
Prof. R. Panabokke
Prof. N.P.Sunilchandra
Prof.(Ms) I. Thabrew
Dr M. Vijayakumar
Prof. K. Wijewardena
Prof. S.M.D.N. Wickremasinghe

Veterinary Medicine and Animal Science

Prof. H. Abeygunawardena (Chair)
Prof. Sunil Chandra
Prof. (Ms) V.K. Gunawadena
Prof. M.N.M. Ibrahim
Prof. U. Jayasekera
Prof. S.S.C. Ranawana
Dr R. Wickremasinghe

Zoology

Prof.(Ms) J.P. Edirisinghe (Chair)
Dr C. Bambaradeniya
Ms R. Bandaranayake
Dr Ruchira Cumaranatunga
Ms Y. Mapatuna
Dr U. Padmalal
Mr H.D. Ratnayake
Prof. W.D. Ratnasooriya
Mr A. de Silva
Prof. M.J.S. Wijeratne

Traditional Medicine

Dr S. Sritharan (Chair)
Dr(Ms) Lakshmi Arambewela
Prof. R. Bandara
Dr(Ms) B.M.R. Fernandopulle
Dr S.L.M. Rashad
Dr(Ms) Leela Ramanayake
Dr(Ms) Lakshmi Senaratne
Prof. T. de Silva
Dr A.M.R. Thahir

➢ *PHYSICAL SCIENCE RESEARCH COMMITTEES*

Chemistry

Dr A.M. Mubarak (Chair)
Prof. A.M. Abeysekera
Mr A. Dole
Prof. H.D. Gunawardena
Prof.(Ms) N.S. Kumar
Prof. J.S.H.Q Perera

Engineering & Built Environment

Prof. S.S.L Hettiarachchi (Chair)
Dr G.E. Amirthanathan
Prof. L. Balasuriya
Mr W.M. Jayawardena
Prof J.R. Lucas
Mr R. Rodrigo
Mr G. Silva
Dr T. Siyambalapitiya

Geology & Mineral Resources

Mr P. Dias (Chair)
Prof. P.G.R. Dharmaratne
Prof W.L.W. Fernando
Prof. W.K. Flugel
Mr J. Ranatunga
Mr S. Silva
Dr A. Senaratne
Dr N.P. Wijayananda

Information Technology

Dr K. Liyanage (Chair)
Mr Ajith Ekanayake
Dr A.S. Karunananda
Prof. S. Karunaratne
Mr G. Seneviratne

Mathematics

Prof. R.A. Dayananda (Chair)
Dr M.A.U. Mampitiya
Prof. R.O Thatil
Dr J.R. Wedegedera
Dr(Ms) W.C.W. Perera
(From 29/07/2002 to 08/11/2002)

Physics

Prof. M.A. Careem (Chair)
Prof. T.R Ariyaratne
Prof. C. Dahanayake
Prof. B.S.B. Karunaratne
Dr J.C.N. Rajendra
Prof. W.P. Siripala
Dr W.L. Sumathipala

➢ *AGRICULTURAL RESEARCH COMMITTEES*

Agriculture

Prof. H.P.M. Gunasena (Chair)
Dr S. Abeysiriwardena
Dr S.J.B.A. Jayasekera
Dr D. Kirthisinghe
Prof. C.S. Weeraratne
Prof. K.D.N. Weerasinghe
Mr L.D. Niyangoda
Dr P. Wickremasinghe

Food Science

Dr Shanthi Wilson (Chair)
Prof. N. Adikaram
Prof. S. Athukorala
Dr(Ms) Nandani Ediriweera
Dr Janaki Gooneratne
Dr C.P. Kodikara
Mr S. Mendis
Prof. U. Samarajeewa

Forestry

Dr Hemanthi Ranasinghe(Chair)
Mr Sarath Fernando
Dr H. Gunathilleke
Dr D. Kariyawasam
Dr N.D.R. Weerawardhana
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Dr D.S. Jayakody
Mr J. Jayasinghe
Mr L. Jayasinghe
Mr H.D. Ratnayake
Prof. Anoja Wickremasinghe
Dr S. Yasaratne

Research Grants Awarded by the NSF

Status Summary – 2002

Discipline / Status	Agriculture	Botany & Microbiology	Biotechnology	Chemistry	Engineering & Built Environment	Food Science	Forestry	Geology & Mineral Resources	Information Technology
No. of ongoing grants as at 01.01.2002	14	10	-	19	28	05	01	01	02
No of ongoing grants as at 31.12.2002	-	09	-	15	27	05	01	01	02
Total no of applications received in 2002	-	-	-	05	02	02	-	-	-
Total no of grants awarded during 2002	-	01	-	-	01	-	-	-	-
Funds requested for new grants for 1st year 2002	-	370700/-	-	-	2879818/50	-	-	-	-
Amount allocated for ongoing grants for 2002 (Rs)	1192974/-	1318152/-	-	3098000/-	4698705/50	2627570/-	196384/-	463000/-	-
Grants completed	06	02	-	04	01	-	-	01	-
Grants withdrawn	-	-	-	-	-	-	-	-	-
Grants terminated	-	-	-	-	-	-	-	-	-
RS s appointed	01	01	-	-	03	02	-	-	-
Thesis (PG) received	01	-	-	-	-	-	-	-	-
RS s registered for PG	-	01	-	01	01	02	-	-	-
Communications		02	-	07		03	-	-	-
Publications									
Foreign	01	-				03			
Local		-			01	02			

Cont'd.... II

Research Grants Awarded by the NSF (cont'd..... ii)

Status Summary – 2002

Discipline / Status	Man & Biosphere	Mathematics	Medicine	Physics	Science & Technology Information	Science Education	Social Sciences	Traditional Medicine	Veterinary Medicine & Animal Sciences	Zoology	Total
No. of ongoing grants as at 01.01.2002	06	05	25	09	05	05	01	-	05	13	154
No of ongoing grants as at 31.12.2002	04	04	21	06	03	04	01	01	05	09	118
Total no of applications received in 2002	01	-	-	-	-	-	-	-	-	-	11
Total no of grants awarded during 2002	-	-	-	-	-	-	-	01	-	-	3
Funds requested for new grants for 1st year 2002 (Rs)	-	-	-	-	-	-	-	590000/-	-	-	3840518
Amount allocated for ongoing grants for 2002 (Rs)	818560/-	397875/-	3538788/-	877450/-	78000/-	117950/-	-	590000/-	1425100/-	1367012/-	22805520.50
Grants completed	02	-	04	03	03	01	-	-	-	-	27
Grants withdrawn	-	-	-	-	-	-	-	-	-	-	-
Grants terminated	-	01	-	-	-	-	-	-	-	-	01
RS s appointed	-	-	-	-	-	-	-	-	-	03	10
Thesis (PG) received	-	-	02	01	-	-	-	-	-	-	04
RS s registered for PG	-	-	-	-	-	-	-	-	01	01	07
Communications	01		01	03	-	-	-	-	01	04	22
Publications						-					
Foreign				02		03					09
Local		01		02							06

Research Grants Awarded by the NSF with SIDA Funding

Status Summary - 2002

Foreign Agency/Discipline Status	SIDA Social Sciences	SIDA Biotechnology	SIDA Food Science	SIDA Engineering & Built Environment	SIDA Medicine	Total
Total no of ongoing grants as at 31.12.2002	11	08	01	05	01	26
Total no of grants awarded during 2002	06	-	-	-	01	07
Grants completed	03	04	-	-	-	07
Grants withdrawn	-	-	-	-	-	-
Grants terminated	-	-	-	-	-	-
RS s appointed	-	-	-	-	-	-
RS s registered for PG	-	-	-	-	-	-
Thesis (PG) received	03	-	-	-	-	03
No of applications received during 2002	20	12	-	-	01	33
Amount allocated for 2002 (Rs)	229114/-	-	115500/-	221500/-	332772	898886/-

Research Grants Awarded in year 2002 by the NSF

Botany & Microbiology

Grant No.	Grantee/s & Institution/s	Project Title & Duration	Total Allocation (Rs)
RG/2002/B/01	Dr(Ms) Mala D. Amarasinghe Dept. of Botany Dr(Ms) J.A. Liyanage Dept.of Chemistry Univ. of Kelaniya Kelaniya	Determination of the potential and feasibility of using freshwater wetlands for wastewater treatment 03 Years	730400/-

Engineering & Built Environment

Grant No	Grantee/s/Institution/s	Project Title/Duration	Total Allocation (Rs)
RG/2002/E/01	Dr P.B.R. Dissanayake Dr K.R.B. Herath Mr R.B. Rathnayake Dept. of Civil Engineering Univ. of Peradeniya Peradeniya	Reliability assessment and lifetime prediction of bridges in Sri Lanka 02 Years	4290840/-

Research Grants Awarded by the NSF with SIDA Funding

Medicine

Grant No	Grantee/s/Institution/s	Project Title/Duration	Total Allocation (Rs)
RG/Sida/2002/M/01	Dr Nadira Karunaweera Head/Dept. of Parasitology Fac. of Medicine Univ. of Colombo Colombo 08	Species/strain identification of Leishmania parasites causing cutaneous leishmaniasis in Sri Lanka 06 Months	332772/-

Research Grants Awarded by the NSF with SIDA Funding

Social Sciences/SIDA

Grant No.	Grantee/s & Institution/s	Project Title & Duration	Total Allocation (Rs)
RG/2002/SIDA/SS/01	Ms H.M.N.K.K. Dharmawardana Univ. of Peradeniya Peradeniya	The behavior patterns of senior secondary school student peer groups: study to be conducted in three selected national schools in the Kandy District 01 Year	32046/-
RG/2002/SIDA/SS/02	Ms P. R. Dasanayake Dept. of Education University of Peradeniya Paradeniya.	A critical study of the problems faced by women who are engaged in school management 02 Years	66900/-
RG/2002/SIDA/SS/03	Mrs Abeygunasekara Dept. of Education Faculty of arts University of Peradeniya Peradeniya	The management of facilities and service fees in Sri Lankan schools 01 Year	49210/-
RG/2002/SIDA/SS/04	Ms K. Kodagoda Dept. of Education Univ. of Peradeniya Peradeniya	An analytical study of the study approaches of G.C.E. (A/L) students in the science stream 01 Year	38615/-
RG/2002/SIDA/SS/05	Ms D.M.A.S. Dharmadasa Dept. of Education Univ. of Peradeniya Peradeniya	Teachers at work: student reactions. (An ethnographic study conducted in a few selected schools in the Kandy District) 01 Year	15343/-
RG/2002/SIDA/SS/06	Ms E.K.S.K. Embakke Dept. of Education Fac. of Arts Univ. of Peradeniya Peradeniya	Student typification by teachers (An analytical study based on a few selected schools in the Kandy District) 01 year	27000/-

NATIONAL SCIENCE FOUNDATION

Balance Sheet as at 31-12-2002

As at 31-12-01 (RS.)		RS.	RS.	RS.
	Funds Employed			
(44,526,177.91)	**NSF Fund**	(50,054,415.24)		
135,000.00	Add : Drawings from Treasury	200,000.00		
26,815.00	Acquisition of assets	109,371.50		
(44,364,362.91)			(49,745,043.74)	
(5,690,052.33)	Less : Excess of Expenditure over income		(4,950,479.36)	
(50,054,415.24)				(54,695,523.10)
9,231,692.58	**Documentation Unit Capital Fund**	9,901,599.28		
900,000.00	Add: Drawings from Treasury	650,000.00		
10,131,692.58			10,551,599.28	
230,093.30	Less: Net Expenditure Note 1-1		19,420.70	
9,901,599.28				10,532,178.58
5,726,793.24	**Research Grants Fund**	3,776,892.61		
17,842,263.00	Add: Drawings from Treasury	17,150,000.00		
23,569,056.24			20,926,892.61	
19,792,163.63	Less: Net Expenditure - Note 1-2		20,207,864.08	
3,776,892.61				719,028.53
1,911,497.05	**Man & the Biosphere Fund**	1,975,903.42		
570,000.00	Add: Drawings from Treasury	1,000,000.00		
2,481,497.05			2,975,903.42	
505,593.63	Less : Expenditure - Note 1-3		518,070.53	
1,975,903.42				2,457,832.89
1,798,999.53	**Miscellaneous Funds**	3,225,662.86		
3,921,737.00	Add: Drawings from Treasury	4,030,000.00		
5,720,736.53			7,255,662.86	
2,495,073.67	Less : Net Expenditure - Note 1-4		3,362,256.62	
3,225,662.86				3,893,406.24
71,788,898.92	**Foreign Aid Fund** Note 1.5	71,839,006.01		
14,400,000.00	Add: Drawings from Treasury	16,000,000.00		
(2,909,451.84)	Treasury Deposit	(16,032.73)		
83,279,447.08			87,822,973.28	
11,440,441.07	Less: Net Expenditure Note 1.5		13,796,703.17	
71,839,006.01				74,026,270.11
47,622,660.00	**Capital Reserves**			47,507,932.50
	Current Liabilities			
3,894,730.17	Creditors	4,633,874.51		
2,400,363.04	Accrued Charges	10,678,356.57		
6,570,315.00	Provisions for retiring gratuity	7,055,565.00		
6,538.70	Store-keepers refundable security deposits	6,995.79		
-	Tender Deposits	12,750.00		
12,871,946.91				22,387,541.87
101,159,255.85				106,828,667.62

NATIONAL SCIENCE FOUNDATION

As at 31.12.2001 RS.		Cost as at 01.01.2002 RS.	Additions Disposals RS.	Accumulated Depreciation RS.	Net Balance RS.
	Represented by				
	Non Current Assets				
42,328,515.45	Land	42,328,515.45	57,980.24		42,386,495.69
			(26,895.00)		
4,078,292.50	Buildings	4,092,198.50	120,081.60	3,045,266.83	1,140,618.27
			(1,746,669.91)		
23,516,256.42	Office Equipment & Furniture	23,761,748.05	856,809.62	20,608,955.16	2,262,932.80
9,791,038.95	Motor Vehicles	9,284,165.42	(578,323.53)	7,063,648.62	1,642,193.27
263,951.14	Motor Bicycles	237,951.14	(27,735.00)	208,616.14	1,600.00
13,170.50	Bicycles	13,170.50		13,170.50	
1,324.00	Sports Equipment	1,324.00		1,324.00	
			(23,589.80)		
636,027.13	Accessories & Miscellaneous	711,676.67	56,135.42	603,985.61	140,236.68
			(33.25)		
1,713,742.10	Library Books	1,843,541.41	174,048.10	1,168,381.09	849,175.17
30,815,123.98	Scientific & Laboratory Equipment out	30,846,125.98	(4,600.00)	30,605,597.17	235,926.81
			(399,492.40)		
10,028,067.86	Documentation Equipment	10,605,867.86	210,891.59	6,992,353.53	3,424,913.52
123,187,510.03		123,726,284.98	(1,330,892.12)	70,311,238.65	52,084,094.21
13,953.64	Telephone Installation				
13,953.64					
	Current Assets				
2,195,307.40	Stocks		2,110,762.33		
7,124,201.75	Debtors		6,254,044.51		
1,318,332.68	Prepayments		302,549.32		
66,109.45	Deposits		85,450.00		
21,467,498.66	Treasury Deposits		21,451,465.95		
10,033,038.55	Government Revenue A/C		10,033,038.55		
108,154.30	Balance at Bank A/C Nos. 453080022	938,479.59			
27,186.91	4530800232	15,012.91			
2,606,435.78	4530124763	2,966,734.50			
15,000.00	Petty Cash	15,000.00			
1,554,150.69	Cash in hand	10,565,039.96			
6,538.70	National Savings Bank A/C	6,995.79	14,507,262.75		
46,521,954.89					54,744,673.41
101,159,255.85					106,828,667.62

28/7/03

Director,
NATIONAL SCIENCE FOUNDATION
47/5, Maitland Place,
Colombo 7.

NATIONAL SCIENCE FOUNDATION

Income and Expenditure Account as at 31-12-2002

As at 31.12.01 (RS.)		RS.	RS.	RS.
22,852,312.00	Drawings from Treasury			24,000,000.00
	Income for the year			
200,718.51	Interest received		168,930.56	
175,367.01	Sundry Income		52,710.75	
176,183.17	Sale of Publications (Note 1.8)		346,838.59	
44,545.00	Photocopy receipts		68,428.00	
83,810.37	Receipts from printing outside jobs		37,828.29	
593,136.00	SLSTIC Income (Note - 1.8 a)		331,785.85	
2,068.00	Profit on sale of fixed Assets		13,330.75	
5,433.30	Cash Discount received		-	
3,324.00	Income on consultation		-	
23,636,897.36				1,019,852.79
	Less: Expenditure for the year			25,019,852.79
	Office Expenditure			
57,834.00	Travelling & Allowances for Board Members	71,354.00		
37,186.50	Refreshments for meetings	35,484.50		
32,589.97	Printing & Publications	31,175.46		
127,610.47			138,013.96	
	Staff Emoluments			
13,344,132.21	Salaries & Allowances	14,516,406.08		
1,493,730.80	Employees Provident Fund	1,797,117.57		
349,263.34	EmployeesTrust Fund	360,773.52		
843,230.00	Provisions for Retiring Gratuity	604,050.00		
210,580.15	Overtime	260,658.87		
19,239.26	Holiday Payment	23,373.50		
83,851.14	Uniforms	80,018.13		
66,450.00	Staff Training	53,900.00		
16,410,476.90			17,696,297.67	
	Office Administration			
97,336.25	Travelling	10,717.00		
664,829.59	Stationary & Consumables	666,645.77		
481,131.18	Electricity	818,941.14		
630,153.21	Telephone	766,279.61		
74,604.10	Postage	133,556.75		
410,997.00	Audit fees	105,633.00		
-	Legal fees	3,000.00		
16,980.00	Bank charges	11,332.49		
45,408.20	Medical expenses	43,055.00		
70,204.07	Advertising	71,069.22		

973,292.80	Maintenance of Motor Vehicles	950,540.24		
324,420.86	Maintenance of Office Equipment & Furniture	424,265.83		
93,183.27	Maintenance of Building	143,618.23		
114,000.00	Staff Welfare	110,500.00		
94,564.12	Insurance	96,779.91		
81,207.07	Water Consumption charges	78,115.05		
451,904.48	Security Services	462,174.48		
4,275,628.88	Depreciation	3,888,564.88		
219,032.98	Sundry Expenses	37,081.15		
182,251.87	Exhibitions & Publicity	47,745.42		
2,670.23	Provisions for doubtful debtors	54,051.87		
108.68	Loss from sale of fixed assets	-		
16,500.00	House rent	-		
331.05	Loss of stocks	-		
4,883.07	Bad debts	8,342.30		
-	Fixed assets written off	13,953.64		
10.75	Suspence A/C writtenoff	-		
-	Translation charges	94,850.00		
9,325,633.71			9,030,812.98	
	Others			
392,241.78	Steering Committees Note 1.6	318,498.88		
887,159.84	Sri Lanka Scientific & Technical Information Center - Note 1.7	924,532.06		
1,666,704.36	Subscriptions to International Scientific Organizations	1,688,346.76		
9,530.00	Publications arising out of Steering Committees	6,350.00		
428,685.39	Special Scientific Fellowships	19,545.05		
15,000.00	Expenditure out of SLSTIC Income	152,934.79		
63,907.24	Expenditure out of NSF Journal Subscriptions	-		
3,463,228.61			3,105,207.54	
				29,970,332.15
(5,690,052.33)	Excess of Expenditure over Income			(4,950,479.36)

Cash Flows Statement- 2002

	Rs.	
Cash flows from operating Activities		
Net excess of expenditure over income	4,950,479.00	
Adjustments for		
Depreciation	(3,883,565.00)	
Bad debts	(8,342.00)	
Acquisition of assets	(109,372.00)	
Provision for Gratuity	(604,050.00)	
Provision for doubtful debts	(54,052.00)	
Fixed Assets written off	(13,954.00)	
Profit on sale of fixed assets	13,331.00	
Operating loss before working capital	(290,475.00)	
Changes		
Net decrease in trade other receivables	1,804,205.00	
Decrease in inventories	84,545.00	
Net increase in trade payables	9,030,346.00	
Cash generated from operations	10,628,621.00	
Net cash from operating activities		10,628,621.00
Cash flows from Investing Activities		
Outflow from activities	(38,023,116.00)	
Purchase of assets	(1,475,947.00)	
Proceeds from sale of equipment	(30,238.00)	
Net cash used in investing activities		(39,468,824.00)
Cash flows from Financial Activities		
Contribution from Government	23,030,000.00	
Foreign Aid	16,000,000.00	
		39,030,000.00
Net cash from financing activities		(10,189,797.00)
Cash & cash equivalent at beginning period		4,317,466.00
Cash & cash equivalent at end of period		14,507,263.00

NOTES ON ACCOUNTS

1. General Accounting

The Financial Statements have been prepared in accordance with generally accepted accounting principles on a historical cost basis. The fundamental accounting assumptions and policies relevant in accounting have been adhered to on a consistent basis as in the previous year. Expenditure on equipment purchased under capital budget items have been excluded from expenditure under respective funds and is shown under the relevant categories of equipment.

1.1 Documentation Unit Capital Fund Expenditure

		RS.
1.	SLSTIC Equipment	210,891.59
2.	SLSTIC Books	174,048.10
3.	SLSTIC Workshops & Seminars	19,420.70
		404,360.39
Less :	Cost of Equipment & Books 210,891.59 + 174,048.10	384,939.69
		19,420.70

1.2 Grants for Research & Other Scientific Work

Our policy in funding research grants asformulated in the Research Grants contractual agreement is to transfer the funds to the institution where the grantee is employed in installments.If there is an unused balance of funds with the relevant institution, after completion of the project, the balance has to be refunded to NSF. Hence we treat the funds transferred to the institution as expenditure. At the end of the project if there remain unutilized funds, we create a debtor.

	RS.
Actual expenditure for the year	13,365,427.82
Accrued expenditure	8,426,708.00
	21,792,135.82
Zoological Survey expenditure	254,392.91
	22,046,528.73
Less : Cost of Books	13,237.00
	22,033,291.73
Less: Prior year adjustments (Net)	1,825,427.65
	20,207,864.08

1:3 Man & the Biosphere Expenditure

	RS.
1. RG/98/MAB/02	18,000.00
2. RG/2001/MAB/01	186,250.00
3. RG/2000/MAB/02	54,550.00
4. MAB/1.3/03	149,453.99
5. Regional Seminar	220,580.41
	628,834.40
Less: Prior year adjustment	110,763.87
	518,070.53

1.4 Miscellaneous Fund Expenditure

				RS.
1.	Participation in International Scientific Work		-	146,771.00
2.	Research Training		-	2,307,780.18
3.	Seminars & Symposia		-	651,332.72
4.	Intellectual Property Rights		-	2,710.00
5.	Special Publications	126,220.67		
	Less: Ficus bengalisis - 15,795.91			
	Rubber Pathogenes - 12,077.91			
	Waders in SL - 61,525.29			
		89,399.11	-	36,821.56
6.	Rehabilitation of Assets		-	216,841.16
				3,362,256.62

1.5 Foreign Aid Expenditure

		RS.
SIDA Expenditure	-	15,594,625.73
Less: Cost of Fixed Assets	-	660,342.00
Less: Prior Year Adjustment	-	1,137,580.56
		13,796,703.17

1.6 Research Committees Expenditure

			RS.
1.	Agriculture & Animal Husbandry	-	7,306.00
2.	Biotechnology	-	31,104.10
3.	Biological Sciences	-	12,240.00
4.	Chemical Sciences	-	11,001.75
5.	Editorial Board of the JNSF	-	25,742.00
6.	Energy	-	5,466.00
7.	Engineering & Built Environment	-	25,841.00
8.	Forestry	-	1,200.00
9.	Health Sciences	-	9,356.00
10.	Natural Resources	-	6,700.00
11.	Physical & Mathematical Sciences	-	14,142.50
12.	Social Sciences Research	-	33,378.70
13.	S & T Information	-	9,816.00
14.	Science Education	-	7,490.00
15.	Traditional Medicine	-	6,228.00
16.	Zoological Survey	-	14,378.23
17.	Physics	-	12,380.00
18.	Mathematical Sciences	-	4,500.00
19.	Science Communication	-	23,740.00
20.	Medicine	-	9,859.00
21.	Botany & Microbiology	-	8,590.00
22.	Information Technology	-	7,209.60
23.	Vet Medicine & Animal Science	-	11,325.00
24.	Food Science	-	7,605.00
25.	Chemistry	-	5,100.00
26.	Life Sciences	-	1,800.00
			313,498.88

1.7 Sri Lanka Scientific & Technical Information Center Expenditure

			RS.
1.	SLSTIC Maintenance & repairs	-	115,598.43
2.	SLSTIC Periodicals	-	125,655.70
3.	SLSTIC Paper & Board	-	52,568.57
4.	SLSTIC Consumables & Chemicals	-	346,736.26
5.	SLSTIC Miscellaneous	-	59,253.96
6.	SLSTIC Publications & Publicity	-	44,719.14
7.	SLSTIC Services	-	180,000.00
			924,532.06

1.8 **Sale of Publications**

			RS.
1.	NSF Journal	-	99,973.00
2.	Other Publications	-	129,243.30
3.	SSR Journal	-	11,911.00
4.	Posters	-	420.00
5.	MAB Publication	-	5,786.50
6.	Vidurawa	-	11,582.50
7.	Food Security	-	8,570.00
8.	Tutor Package	-	2,224.96
9.	Checklist of Flowering Plants	-	18,168.20
10.	Natural Resources of Sri Lanka (2000)	-	55,595.84
11.	Checklist of Rubber pathogen	-	(2,277.91)
12.	Waders of Sri Lanka	-	8,107.54
13.	New year cards	-	518.50
14.	Ficus bengalensis	-	(2,984.84)
			346,838.59

1:8 a. **SLSTIC Income**

			RS.
1.	Income received from WINISIS	-	79,049.85
2.	Other Income	-	85,736.00
3.	Internet membership fees	-	167,000.00
			331,785.85

2. **Assets & the basis of their valuation**
Depreciable assets & Depreciation

Depreciation has been provided on original cost or at valuation on a straight-line basis consistent with that of the previous year and is calculated to write off the assets over their estimated useful lives.

Capitalization of Assets

Treatment of accounting in capitalizing of equipment purchased out of Capital Budget Votes is to debit the relevant category of equipment.

2:1 **Debtors**

		RS.
Total Debtors	-	6,388,420.75
Less: Provision for doubtful debts	-	134,376.24

Provision has been provided for the debts outstanding over 3 years.

3. Liabilities

3:1 Creditors

Creditors amounting to RS. 4,633,874.51 represents monies held by NSF as given below

			RS.
1.	CSC A/C	-	26,143.52
2.	Sundry Creditors	-	2,237.50
3.	CSC funds received for Remote Sensing Seminar	-	24,098.13
4.	Fauna & Flora Project A/C	-	63,410.00
5.	Genetic Resources A/C (CSC funds)	-	104,815.00
6.	MAB Seminar A/C	-	139,656.12
7.	Staff Creditors	-	11,175.69
8.	Funds received for preparation of bio-diversity report A/C	-	11,648.08
9.	Man Power Survey A/C	-	268,945.46
10.	MAB News Letter year 2001	-	45,216.56
11.	Research Project on energy - Ministry Of Science & Technology – year 2001	-	2,912,500.00
12.	Costed Workshop – Year 2002	-	10,816.75
13.	Science Magazine – Year 2002	-	763,957.00
14.	World Science Day – Year 2002	-	177,747.95
15.	TWAS – Third World Academy of Science	-	47,668.00
16.	Funds received for Sinharajah Biosphere Project- Year 2002	-	23,838.75
			4,633,874.51

Tender Deposit –

		Rs.
Sale of Audiovisual equipment – Yr. 2002	-	2,000.00
Tender for Colour washing - Yr. 2002	-	10,750.00
		12,750.00

3:2 Employees Benefit

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

3:3 Retiring Gratuity

Provisions have been made in the accounts in respect of liability for retiring gratuity.

Amount paid for the year	-	RS.	118,800.00
Provision for the year	-	RS.	604,050.00

4. Publications (Valued at selling price)

Available at NSF	-	RS. 4,699,154.00
Out on consignment basis	-	Rs. 152,375.00

5. NSF owns 15 vehicles. They are located as follows

AT NSF	-	12 (includes 02 push Bicycles)
With Research Grantees	-	3
		15

6. **Funds drawn from the Treasury during 2002**

Consolidated Funds	-	RS. 23,030,000.00
Recurrent Funds	-	RS. 24,000,000.00
Foreign Aid Funds	-	RS. 16,000,000.00

Funds drawn from the Treasury from 1968 to 2002

Consolidated Funds	-	RS. 234,019,276.45
Foreign Aids	-	RS. 251,029,164.13

Schedule – 1

Provisions

			RS.
1.	Provisions for Retiring Gratuity	-	7,055,565.00

Schedule – 2

Accured Charges

			RS.
1.	ADB Expenditure	-	6,677.48
2.	Audit fees	-	876,900.00
3.	Advertising	-	31,824.00
4.	Biotechnology	-	2,140.60
5.	ETF	-	32,754.45
6.	Electricity	-	91,064.09
7.	Exhibition charges	-	424.93
8.	Food Science W/C	-	1,540.00
9.	JNSF Expenditure	-	8,500.00
10.	Life Science	-	300.00
11.	MAB/Regional seminar MAB/1.3/3B (South Central Asia)	-	81,400.00
12.	Maintenance of Building	-	8,585.80
13.	Maintenance of Motor Vehicles A/C	-	106,630.04
14.	Medical Expenses A/C	-	1,000.00
15.	Overtime	-	24,959.83
16.	Office Traveling	-	230.00
17.	Printing & Stationary	-	30,100.00
18.	Refreshment for meetings	-	973.00
19.	RG/Exp./ Control A/C	-	46,708.00
20.	Salaries & Allowances A/C	-	697,659.02
21.	Security Service	-	38,658.67
22.	Seminar & Symposia	-	3,435.00
23.	SAREC Expenditure control A/C	-	44,621.56
24.	SLSTIC Miscellaneous A/C	-	1,165.00
25.	Telephone charges (Staff debtors)	-	735.08
26.	Telephone A/C	-	149,832.47
27.	Vet. Medicine & Animal Science	-	1,440.00
28.	Water Consumption	-	8,097.55
29.	Research Grant	-	8,380,000.00
			10,678,356.57

Schedule – 3

Stocks

			RS.
1.	Stationary & Consumables -	Stores	546,261.26
		Printing	20,694.10
2.	Coral Reef Posters	-	41,800.00
	Sinharajah Posters	-	4,540.00
3.	Research Grants	-	4,000.00
4.	Horton Plane Video Cassettes	-	8,043.75

5. **Books**

1. Check list of the Flowering Plant	-	155,829.00
2. Food Security & small tank systems in SL	-	88,530.00
3. Tutor	-	721.88
4. Natural Resources of SL – 2001	-	1,166,698.44
5. Ficus bengalensis	-	12,111.07
6. Waders in Sri Lanka	-	61,532.83
		2,110,762.33

Schedule– 4

Debtors

		RS.
1. SERC Cash Imprests - Schedule 4.1	-	573.00
2. Miscellaneous Cash Imprest - Schedule 4.2	-	120,825.00
3. SIDA Cash Imprest – Schedule 4.3	-	505,030.00
4. Sundry Debtors	-	1,645,280.07
5. Staff Debtors	-	216,354.68
6. Loans to staff – Distress Loan – Schedule 4.4	-	2,636,855.00
7. Motor bicycle loan – Schedule 4.5	-	1,159,057.00
8. Vehicle loan - Schedule 4.6	-	52,000.00
9. Push cycle loan – Schedule 4.7	-	4,446.00
10. Festival Advance - Schedule 4.8	-	48,000.00
		6,388,420.75
Less: Provisions for doubtful Debts	-	134,376.24
		6,254,044.51

Schedule 4.1

SERC Cash Imprest

SERC/ GEN - RS. 573.00

Schedule 4.2

Miscellaneous Cash Advance A/C as at 31-12-2002

		RS.
R.1032	Mr. S. Galketiya - MAB/1.3/3	675.00
G. 1197	RGB/GEN/04 – SLAAS	63,490.00
G. 1224	RGB/GEN/04 – SLAAS	11,510.00
G.116	The Organization of Professional Associations of Sri Lanka – RGB/GEN/04	30,000.00
G.1356	RGB/GEN/04 – IFS	10,000.00
O.377	Mr. P. Dissanayake – AG/28	1,000.00
O. 1131	Mr. P. Dissanayake – AG/27	1,000.00
O.1409	Mr. P. Dissanayake – AG/28	2,500.00
O. 1097	RGB/GEN/04 – Mr. M.G. Dynis AG/28	650.00
		120,825.00

Schedule 4.3

SIDA Cash Imprest Balances as at 31.12.2002

			RS.
1.	Dr. V.Y. Kuruwita	SAREC/09/Vehicle	20,000.00
2.	Mrs. C.G. Yapa – NSF	SIDA/Policy (Library deposit)	1,000.00
3.	- Do -	- Do - cash adv.	1,000.00
4.	SO – Dr. (Ms.) T.F. Dias	SIDA/Policy (Library deposit)	2,500.00
5.	DSA -Mr. W. Amaradasa	SIDA/Policy	9,000.00
6.	SO – Ms. S.I. Wickremasinghe	SIDA/Policy	48,510.00
7.	– Do -	SIDA/Policy	403,020.00
8.	– Do -	SIDA/Policy	20,000.00
			505,030.00

Schedule 4.4

Distress Loan Balances as at 31st December 2002

		RS.
1	Mr. M.K. Ratnaweera	7,735.00
2	Mr. K.A. Andrayas	43,635.00
3	Mr. R.P.D. Premaratne	40,608.00
4	Mr. E.P. Jayasena	53,816.00
5	Mr. R.P. Mycheal	46,830.00
6	Mr. K.D. Mithrasena	49,104.00
7	Mr. B.G. Senevirante	70,900.00
8	Mr. R.P.D. Sunil	31,530.00
9	Mrs. T.K.A. Perera	36,639.00
10	Mrs. A.V.B. Rajapakse	67,037.00
11	Mr. K.A. Ratnapala	47,268.00
12	Mrs. P.I. Premalatha	33,312.00
13	Mr. W. Somadasa	59,148.00
14	Mr. K. G. Karunashanthi	32,246.00
15	Mrs. W.D. Kusumawathie	40,768.00
16	Mrs. P.N.K. Wickremarachchi	84,930.00
17	Mr. J.A.D. George	33,326.00
18	Mr. M.L. Cooray	45,320.00
19	Mr. E.G. Darmadasa	36,482.00
20	Mr. M.D. Vajira	45,193.00
21	Mr. A. Dias	1,874.00
22	Mrs. D.L. Sirimathie	8,433.00
23	Mrs. P. Samarasinghe	19,275.00
24	Mrs. L.S.P. Fernando	16,248.00
25	Mrs. S.C. Vithanage	30,576.00
26	Mr. B. H. Perera	45,898.00
27	Ms. N. Paranawidana	14,736.00
28	Mrs. S.H.W. de Silva	54,120.00
29	Ms. N.S. S. Silva	23,040.00
30	Mrs. G.G. Kusumalatha	53,277.00
31	Mr. J.S.K. Weerawardene	36,670.00
32	Mrs. V.R. Priyanganie	20,150.00
33	Ms. U.M. Ranaweera	49,800.00
34	Ms. M.J. Wijemanna	17,825.00

35	Vajira Perera	17,825.00
36	Mr. K.A.D. Nanayakkara	24,500.00
37	Mr. S. Cooray	19,096.00
38	Mr. H.P.L. Kaldera	27,300.00
39	Mrs. N.A.H. Priyadarshanie	25,730.00
40	Miss. A.S. Krishanaratne	42,029.00
41	Mrs. K. R. Fernando	31,845.00
42	Mr. R.M.W. Amaradasa	123,767.00
43	Mrs. C.G. Yapa	99,720.00
44	Mr. M.H.M.S. Hameed	16,250.00
45	Mr. S.P. Dissanayake	64,000.00
46	Mrs. S.I. Wickremasinghe	88,314.00
47	Mr. K.P. Senanayake	128,736.00
48	Mrs. R. Wijeratne	84,000.00
49	Mrs. A. Tennakoon	18,948.00
50	Mrs. S.P. Wijesinghe	88,504.00
51	Mr. A.C.M. Daniel	92,064.00
52	Mrs. V.N. Darmaratne	19,370.00
53	Dr. (Mrs.) T.F.Dias	138,450.00
54	Mrs. Y.J. Pathirana	49,879.00
55	Dr. S. Fernando	46,667.00
56	Mr. A.P. Hettiarachchi	92,112.00
		2,636,855.00

Schedule 4.5

Motor Bicycle Loan Balances as at 31st December 2002

		RS.
1	Mr. C. Attapattu	57,772.00
2	Mr. T.A. Padmasiri	95,744.00
3	Mrs. N.D. Somawathie	17,395.00
4	Mr. K.A. Ranatunga	53,280.00
5	Mr. K.K. Asoka	25,875.00
6	Mr. D. D. Siripala	76,096.00
7	Mr. L.B. Ekanayake	75,734.00
8	Mr. G. Munasinghe	124,184.00
9	Mrs. H. Siriwardene	54,266.00
10	Mrs. L.S.P. Fernando	8,330.00
11	Mr. S. Sujeewa	35,730.00
12	Mrs. D. Dahanayake	65,057.00
13	Mrs. D.M.R. Ippalawatta	63,096.00
14	Mrs. K. R. Fernando	24,990.00
15	Mrs. W.A.J. Weeratunga	85,690.00
16	Mrs. N.R. Mapatuna	114,070.00
17	Mrs. C. Wijetunga	100,650.00
18	Mrs. N.S. Liyanage	81,098.00
		1,159,057.00

Schedule 4.6

Vehicle Loan Balances as at 31st December 2002

		RS.
1	Dr. (Mrs.) T.F. Dias	10,000.00
2	Mr. W. Amaradasa	14,000.00
3	Mrs. R. Wijeratne	28,000.00
		52,000.00

Schedule 4.7

Bicycle Loan Balances as at 31st December 2002

		Rs.
1	Mr. M.G. Dynis	1,434.00
2	Mr. B.G. Seneviratne	1,044.00
3	Mr. K.G.K Shantha	1,968.00
		4,446.00

Schedule - 4.8

FESTIVAL ADVANCE BALANCES AS AT 31st DECEMBER - 2002

1	Mr. M K Ratnaweera	400.00
2	Mr. M G Dynis	400.00
3	Mr. K A Andrayas	400.00
4	Mr. R P D Premaratne	400.00
5	Mr. D.W. Wickremarachchi	400.00
6	Mr. E P Jayasena	400.00
7	Mr. R P Mychel	400.00
8	Mr. K D Mithrasena	400.00
9	Mr. C Attapattu	400.00
10	Mr. B G Senaviratne	400.00
11	Mr. T A Patmasiri	400.00
12	Mr. R P D Sunil	400.00
13	Mrs. N D Somawathie	400.00
14	Mrs. T K A Perera	400.00
15	Mrs. A V B Rajapaksa	400.00
16	Mr. K Ratnapala	400.00
17	Mrs. P I Premalatha	400.00
18	Mr. W Somadasa	400.00
19	Mr. K G K Santha	400.00
20	Mrs. N R Mapatuna	400.00
21	Mrs. W D Kusumawathie	400.00
22	Mrs. P N K Wickremarachchi	400.00
23	Mr. K A Ranatunga	400.00
24	Mr. K A Asoka	400.00
25	Mr. E G Darmadasa	400.00
26	Mrs. W J P C Wijetunga	400.00
27	Mr. D D Siripala	400.00
28	Mr. L B Ekanayake	400.00
29	Mr. G Munasinghe	400.00

30	Mrs. H. Siriwardene	400.00
31	Mr. M D Vajira	400.00
32	Mr. A A Dias	400.00
33	Mrs. H A Kanthi	400.00
34	Mrs. D L Sirimathie	400.00
35	Mrs. P. Samarasinghe	400.00
36	Mrs. L S P Fernando	400.00
37	Mr. S M Amarasinghe	400.00
38	Mr. R P D T Rajapakse	400.00
39	Mrs. S C Vithanage	400.00
40	Mr. B H Perera	400.00
41	Miss. N Paranavidana	400.00
42	Mrs. S H W Silva	400.00
43	Miss. N S S Silva	400.00
44	Mrs. G G Kusumalatha	400.00
45	Mr. L W Saman Sujeewa	400.00
46	Mr. J S K Weerawardene	400.00
47	Mrs. V R Priyanganie	400.00
48	Mrs. D Dahanayake	400.00
49	Mrs. N S Liyanage	400.00
50	Miss. U M Ranaweera	400.00
51	Miss. M J Wijemanna	400.00
52	Mr. B S Cooray	400.00
53	Mr. H P L Kaldera	400.00
54	Mrs. D M R Ippalawatta	400.00
55	Mrs. N A H Priyadarshanie	400.00
56	Miss. A S Krishnaratne	400.00
57	Mr. M L Gunapala	400.00
58	Miss. A J N Silva	400.00
59	Miss. D.M.N. Prishanthi	400.00
60	Mr. S. Galketiya	400.00
61	Miss. K C J T K Fernando	400.00
62	Mr. R M W Amaradasa	400.00

63	Mrs. C G Yapa	400.00
64	Mr. S.P. Dissanayake	400.00
65	Mr. K P Senanayake	400.00
66	Mrs. R Wijeratne	400.00
67	Mrs. A A Tennakoon	400.00
68	Mrs. S P Wijesinghe	400.00
69	Mrs. V N Darmaratne	400.00
70	Dr(Mrs.) T F Dias	400.00
71	Mrs. W A J Weeratunga	400.00
72	Mrs. D.D. Talagala	400.00
73	Dr. Saman Fernando	400.00
74	Miss. P A Palihawadana	400.00
75	Mr. R P Pathirage	400.00
76	Mr. S M A W Anuruddha	400.00
77	Mr. A P Hettiarachchi	400.00
78	Mr. K.J.G. Santhasiri	400.00
79	Miss. P.C. Warnasooriya	400.00
80	Mrs. N.B.K.R. Liyanage	400.00
81	Mr. J.A.D. George	2,000.00
82	Mr. M.L. Cooray	2,000.00
83	Miss. M.W.M.D.V.L. Perera	2,000.00
84	Mr. D.G.N. Nanayakkara	2,000.00
85	Mrs. K.R. Fernando	2,000.00
86	Mr. M.H.M. Hameed	2,000.00
87	Mr. A.C.M. Daniel	2,000.00
88	Mrs. Y.J. Pathirana	2,000.00
		48,000.00

Schedule – 5

Prepayments

			RS.
1.	Insurance charges	-	25,571.57
2.	Maintenance of Motor vehicles	-	12,310.15
3.	Maintenance of office equipment	-	65,892.66
4.	SLSTIC Miscellaneous	-	6,821.92
5.	SLSTIC Periodicals	-	15,705.20
6.	SLSTIC – Maintenance & Repairs	-	6,373.89
7.	SLSTIC – Books	-	1,750.00
8.	Postage	-	1,124.35
9.	ADB Expenditure Control A/C	-	3,671.23
10.	SAREC/Exp. Control Account	-	163,328.35
			302,549.32

Schedule – 6

Deposits

			RS.
1.	Felix Perera & Son	-	65,000.00
2.	Director of Telecommunication	-	450.00
3.	Telecom	-	5,000.00
4.	Ceylon Electricity Board	-	10,000.00
5.	Telecom – I.D.D facilities	-	5,000.00
			85,450.00

Schedule – 7

Depreciation

				RS.
1.	Building	5%	-	154,309.32
2.	Office equipment & furniture	20%	-	1,855,581.91
3.	Miscellaneous & Accessories	20%	-	81,663.16
4.	Bicycles	25%	-	-
5.	Motor Vehicles	20%	-	659,474.98
6.	Motor Bicycles	20%	-	800.00
7.	Documentation equipment	10%	-	704,862.55
8.	Scientific equipment out on loan	10%	-	384,766.95
9.	Library books	5%	-	42,106.01
				3,883,564.88

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கணக்காய்வாளர் தலைமை அதிபதி திணைக்களம்
AUDITOR-GENERAL'S DEPARTMENT

මගේ අංකය / எனது இல. / My No. EC/R/NSF/FA/02

මගේ අංකය / உமது இல. / Your No.

දිනය / திகதி / Date 9 April 2003

The Chairman,
National Science Foundation.

Report of the Auditor General on the accounts of the National Science Foundation for the year ended 31 December 2002 in terms of Section 14(2)(c) of the Finance Act No.38 of 1971.

The audit of accounts of the National Science Foundation for the year ended 31 December 2002 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 Section 13(1) of the Finance Act No.38 of 1971. My observations which I consider should be published with the annual report of the Foundation in terms of Section 14(2)(c) of the Finance Act appear in this report. A detailed report in terms of Section 13(7)(a) of the Finance Act will be furnished to the Chairman of the Foundation in due course.

1:2 Scope of Audit

Audit opinion, comments and findings in this report are based on a review of the financial statements presented to audit and substantive tests of samples of transactions. The scope and the extent of such review and tests were such as to enable as wide an audit coverage as possible within the limitations of staff, other resources and time available to me. The audit was carried out in accordance with Sri Lanka Auditing Standards, methods and practices to obtain reasonable assurance as to whether the financial statements are free of material misstatements. The audit included examination of evidence supporting the amounts and disclosures in financial statements and assessment of accounting principles and significant estimates and judgements made in the preparation of financial statements, evaluation of their overall presentation and determining whether accounting policies adopted were appropriate, consistently applied and adequately disclosed. Sub-sections (3) and (4) of Section 13 of the Finance Act No.38 of 1971 give discretionary powers to the Auditor General to determine the scope and extent of the audit.

විදහස් චතුරශ්‍රය, කොළඹ 07. ශ්‍රී ලංකාව
சுதந்திர சதுக்கம், கொழும்பு 07. இலங்கை
INDEPENDENCE SQUARE, COLOMBO 07, SRI LANKA
දුරකථනය / தொலைபேசி / Telephone 691151
ෆැක්ස් අංකය / பக்ஸ் இல. 697451
ඉලෙක්ට්‍රොනික තැපැල / ஈ-மெயில்

2. Accounts

2:1 Audit Opinion

Except for the effects of the adjustments arising from the matters referred to in paragraph 2:3 of this report, I am of opinion that, the financial statements have been satisfactorily prepared to present fairly, in all material respects, the financial position of the Foundation as at 31 December 2002 and the results of its operations for the year then ended, in accordance with Sri Lanka Accounting Standards.

2:2 Financial Results

The activities of the Foundation are being operated under the General Fund and 7 Special Funds. According to the accounts presented, the working of the General Fund of the Foundation for the year ended 31 December 2002 had resulted in a deficit of Rs.28,950,479 before taking into account the Government Grant for recurrent expenditure as compared with the deficit of Rs.28,042,365 for the preceding year.

The deficit was reduced to Rs.4,950,479 after taking into account the Government Grant of Rs.24,000,000 including foreign aid received for recurrent expenditure of the year under review. The deficit for the previous year was reduced to Rs.5,690,053 after taking into account the Government Grant of Rs.22,352,312 received for recurrent expenditure for that year.

The activities under special funds had resulted in a deficit of Rs.37,904,316 before taking into account the Government Grant and foreign aid for special funds as compared with the previous year's deficit of Rs.34,463,365. The deficit for the year under review was converted to a surplus of Rs.925,684 after taking into account the Government Grant of Rs.38,830,000 (including foreign aid) received for activities of the special funds as the surplus of Rs.3,170,635 for the previous year after taking into account the Government Grant of Rs.37,634,000 (including foreign aid) received for activities of the special funds for the preceding year.

2:3 Comments on Accounts

2:3:1 Accounting Policies

(a) The policy of the Foundation is to debit purchase of fixed assets from foreign aid project funds to the project fund accounts and credit same to project funds accounts in capitalization of those assets instead of crediting to the general fund. This accounting policy had not been disclosed with the accounts. In consequence of the failure to debit the sum of Rs.25,675,683 being capital expenditure in respect of three

funds for the year under review and the preceding year to the respective Foreign Aid Project Accounts, the Project Fund Accounts balances had been overstated by similar amounts.

(b) Funds released to the relevant institutions and officers for implementation of projects are accounted for as expenditure at the time of release. As a result, the expenditure had been overstated due to the actual expenditure not being reflected. This accounting policy had not been disclosed with the accounts.

2:3:2 Inappropriate Disclosures in the Accounts

The following observations are made.

(a) Eight motor vehicles costing Rs.2,877,518 fully depreciated but in use at present had not been revalued and brought to account at fair value.

(b) The verification of goods in respect of the year 2001 had been carried out in the year 2002. The Board of Survey had not submitted a complete summarized report and recommendations. A sample of library books only had been verified. Physical balances had not been reconciled with stock books.

(c) A sum of Rs.760,504 paid in connection with the ensuing year had been brought to account as expenditure for the year under review instead of accounting for as prepayments.

(d) The unusable fixed assets written off from the books during the year under review had been brought to account at an estimated value of Rs.58,995 instead of the book values.

(e) Fixed Assets had been shown in the accounts at book value.

3. Financial and Operational Review

3.1 Financial Performance

The financial results and the balance of the General Fund of the Foundation for the year under review as compared with those of the preceding 5 years are given below.

Year	Financial Result (Deficit)	Balance of the Fund as at 31 December (Debit Balance)
	Rs.	Rs.
2002	(4,950,479)	(54,695,523)
2001	(5,690,052)	(50,054,415)
2000	(8,836,448)	(44,526,178)
1999	(5,420,994)	(36,328,204)
1998	(5,145,485)	(32,372,857)
1997	(5,264,929)	(28,034,834)

In view of the practice of the Foundation to incur expenditure exceeding the income and increase in the negative value of the Fund, there is a deterioration of the financial results and the financial position of the Foundation.

3.2 Transactions not Supported by Adequate Authority

(a) Two sums of Rs.697,638 and Rs.43,055 had been paid for unavailed leave and for medical treatment respectively.

(b) (i) Sums of Rs.45,500, Rs.35,000 and Rs.518,545 had been spent for gift vouchers, death donations and loans for purchase of furniture respectively.

(ii) Four permanent employees, 4 contract employees and 5 casual employees had been appointed and salaries amounting to Rs.718,049 had been paid during the year under review without obtaining the approval of the Department of Management Services.

3.3 Uneconomic Transactions

The following instances were observed in audit.

(a) A sum of Rs.26,650 being the course fee paid by an officer of the Foundation for registration for the course before he joined the services of the Foundation had been refunded to him.

(b) Although a sum of Rs.547,491 had been paid as salary to the officers in the Internal Audit Section of the Foundation it was observed in audit that an adequate internal audit had not been done by the Internal Audit Unit.

3:4 Idle Assets

Audio visual equipment valued at Rs.348,904 purchased out of foreign aided funds were lying idle since 1989 and they were found to be in an unusable condition.

3.5 Assets issued for Private Activities

A computer and a printer purchased for Rs.61,999 for the Manpower Utilisation Project out of funds of National Apprentice and Industrial Training Authority (NAITA) had been allowed to be removed to the private residence of a consultant since the year 2000. The items had not been returned up to the end of the year 2002.

3.6 Identified Losses

The following identified losses were observed in audit.

(a) An extra payment of Rs.7,000 due to the delay in purchasing a lazer printer.

(b) Excess payment of Rs.7,290 due to cancellation of quotations originally received and in purchasing from agents.

(c) Loss of Rs.14,591 due to damages caused by accidents to vehicles.

(d) Account receivable from research grants projects and employees amounting to rs.8,342 had been written off without taking action for the recovery. The provision for doubtful debts amounted to Rs.134,376.

(e) Action had not been taken for the recovery of a sum of Rs.1,112,135 due from the institutions concerned, resulting from, completion or

suspension of research activities, which had remained without being recovered for over 02 years.

3.7 Security Service

Security service of the Institute had been entrusted to one firm since 1979 without calling for quotations annually An agreement had not been entered into with the firm. Payments for the services also had been increased on requests made by the firm.

3.8 Conduct of Research Works

The following observations are made.

(a) Although a sum of Rs.279,000 had been paid to the officers who assist the research and projects evidence that research work had been done by those was not available.

(b) Advances had been granted for research works in excess without proper control and advances granted had been settled after long delays. Advances amounting to Rs.316,000 granted for 21 projects were outstanding as at the end of the year under review.

(c) Some of the research works had been delayed or abandoned due to lack of proper monitoring.

(d) In some instances, balances of advances remaining after completion of Projects had not been refunded. An audit test check revealed that a sum of Rs.272,011 relating to 13 completed projects had not been refunded.

(e) Moneys allocated for project activities had been utilized for other purposes such as for the payment of graduate fees, repair to computers etc. The amount so spent during the year under review had been Rs.67,500.

(f) A uniform procedure had not been followed in the appointment of Research Assistants and Technical Assistants for research works. The appointments had been made at the discretion of the Research Officers.

(g) The foundation had not taken effective follow up on the funds released for research works. The Project ledgers had also not been maintained properly.

3.9 Implementation of Project

A sum of Rs.3,000,000 had been received from the Ministry of Scientific and Technology to carry out a Power Research Project. Funds utilized during the two years for the purpose amounted to Rs.87,500 only while the balance of Rs.2,912,500 had remained idle.

(S.C. Mayadunne)
Auditor General.

Response of the NSF to the Report of the Auditor General on the accounts of the National Science Foundation for the year ending 31st December 2002

2:3 Comments on Accounts

2:3:1 Accounting Policies

(a) & (b) - Comment incorrect. We have stated these two policies in our notes on accounts. Please refer items 1, 1 2 and 2 under notes on accounts.

2:3:2 Inappropriate Disclosures in the Accounts

(a) Eight vehicles (3 Double Cabs, 3 Cars, 1 Van and 1 Motor Bicycle) have already been revalued during 2003. The values will be taken to the books in 2003.

(b) In the future, the Board of Survey will be initiated in December

(c) All prepayments have been accounted as such, except for the payment of membership fees for CSC, for Rs. 746,246/=. Annual membership fee for Commonwealth Science Council, UK is from 1st July, 2002 to 30th June, 2003.

(d) These are items which were auctioned. The purchase value of these items could not be identified in our fixed asset register, due to (1) items for the value of Rs.21,200.00 have been purchased prior to 1983 (year in which our fixed asset register had been introduced), (2) Items for the value of Rs. 37,795.00 are only parts of equipments and parts removed from the building fittings . Hence we had to account on an estimated value.

(e) Comment incorrect - we state the fixed assets in our accounts after taking into account , additions/disposals and depreciation as follows:-

Cost	Additions/ Disposals	Accumulated Depreciations	Net value

3 Financial and operational review

3.1 Financial performance

Comment incorrect, we do not incur expenditure exceeding the income. The negative value is due to items not involved in the movement of funds. Eg. Depreciation Rs.3,883,565.00, and gratuity provision Rs.604,050.00.

3.2 Transactions not supported by adequate authority

(a) (i) Reimbursement of medical bills

The normal medical bills of the staff have been reimbursed under the medical assistance scheme operated by the institution. Medical bills have been reimbursed at Rs.500/= per employee per year. The new Board of Management appointed in March 2002, authorized the payment in year 2002, as the payment was already initiated in January 2002. Board of Management wanted an insurance scheme implemented with the approval of the treasury from year 2003.

(ii) Payment for un-availed medical leave

As the payment for medical leave has been made since1983 and as it was already in operation in January 2002 the new Board of Management appointed in March 2002, approved the same only for the year 2002 and decided to seek approval from the Treasury for the payments, in future years.

(b) (i) Board of Management had identified that the welfare of the employees is essential. Accordingly the NSF has been providing facilities for the welfare society operated within the organization. The loans for the purchase of furniture are provided by the welfare society with their own funds and not out of NSF funds. In 1994 NSF had granted Rs. 150,000/= to provide these loans to employees. In year 2002, C.W.E gift vouchers for the new year for the value of Rs.500/= was given as in the previous years but without the approval of the new Board which had only just been appointed.

(ii) The comment incorrect. Only 7 appointments were made during the year 2002. Two Scientific Officers (permanent) were recruited based on the approval granted before the circular was issued. At the time when the circular re- stoppage of recruitments was received, the NSF had almost completed the procedure to fill some of the vacancies. Accordingly a clearance was obtained from the Ministry for Economic Reform, Science and Technology to do the recruitments. On this approval one Scientific Officer on permanent basis and three (3) Scientific Officers on contract basis were recruited. In addition to this an Editor was recruited to the TWC on the approval of the ADB Project.

The casual employees (5) were appointed to the subordinate staff by the Director as was the practice at the time on an approval granted by the Ministry for Economic Reform, Science & Technology until the positions are filled permanently with proper approval. As the service of these casual employees are badly needed, approval will be sought from Dept. of Management Services to fill these positions

3.3 Uneconomic Transactions

(a) In the past the expenses of officers, incurred to achieve the postgraduate qualifications, which are relevant to the duties, has been reimbursed on Board decisions. Mr. R P Pathirage, Scientific Officer was recruited initially on contract basis according to the practice of NSF at that time and subsequently taken to the permanent cadre. He has registered for the course while in the service of NSF. His expenses for the Master's degree have been reimbursed on a decision taken by the Board of Management after he had been made permanent.

(b) The Internal Audit Unit has carried out several activities within the scope of the internal audit work plan, including the board of survey. From January 2003 the Internal Audit Unit has been asked to report directly to the Chairman. The new work programme of the unit is quite intensive, for the year 2003 and will be closely monitored.

3:4 Idle Assets

It was decided to dispose these items and hence sealed tenders were called through press advertisement. Only one party had responded and the quoted price was very low compared to the valuation of the items. Arrangements are therefore being made to auction as suggested by the Audit and Management Committee.

3:5 Assets issued for private activities

Special permission was granted for Mr. Gamini Senevirathne (Consultant) to take the computer out of NSF due to inability to provide office space at NSF.
Mr. Senevirathne was served with several reminders. This matter was referred to the police. Thereafter the printer was returned. Action is being taken to recover the computer through the police.

3:6 Identified Losses

(a), (b), (c) , (d), (e) – These cannot be considered as losses.

(a) The matter took a long time for Tender Board to resolve because lower quoted supplier did not reply in time. Since the lowest quoted supplier could not provide a compatible Printer, we ordered from 2nd lowest quoted supplier Wijaya Graphics (Pvt) Ltd.

We had requested Wijaya Graphics (Pvt) Ltd to supply the printer at the original quoted price. But they have stated that was a special promotion for a very limited period of time, and was no longer applicable.

Since we had by this time requested for tenders four times for this purchase. We made the purchase, at the current quoted price.

(b) We purchase the most suitable quality required for the equipment ref. the items reported- Typewriter ribbon, Toner, Computer papers. Quotations were not cancelled. We purchased items from the agents though not the lowest quotation for ensuring quality. Hence it cannot be considered as a loss.

(c) Action was taken to recover the damages of relevant accidents from Insurance Corporation. It is a known fact that the Insurance Corporation does not reimburse the full cost but pay percentages for certain parts of vehicles. Therefore we are not in a position to recover the full cost of the damage.

(d) The service of Mr. S Kariyawasam was terminated in 1990, He paid the value of the books borrowed from the NSF library. Rs.8342/= is the fine for not returning the books. Since it is not possible to recover this amount it was written off from our books of accounts with the approval of the Board of Management.

As stated in our notes on accounts (2.1) provision has been provided for the debts outstanding for three years. We will redress the issue by recovering the outstanding amounts from the current payments to be made.

(e) We will take action to redress the issue. Rs. 243,400/= out of the Rs. 1.1 M has been settled in the year 2003. Bursars/Financial officers are slack in responding.

3:7 Security Service

The security service has not been obtained on a contract. Payments have been made for the bills produced monthly. As the service of the relevant company has been satisfactory action has not been taken to call for tenders regularly.

Additional payments have been made (on the request of the company) based on the decisions taken by the Wages Board. Only the salary increase has been added for the payment and not the other expenses claimed by the company.

However according to the decision of the Board of Management action has been taken to call tenders for security service from reputed service providers.

3:8 Conduct of Research Works

(a) Payments for Research Students and Technical Assistants are made on the certification of the grantee on the face of the vouchers & on the recommendation of the relevant scientific officer. This certification & recommendation are given only if the relevant person works on the project.

(b) This refers to research grants, where we transfer funds to the Institutions (University of Ruhuna & University of Sri Jayawardenapura) where the research is carried out. According to the agreement the relevant institution has to disburse funds according to prevailing financial regulations. We have written to the Vice Chancellor's of these universities to adhere to our guide lines.

(c) Except for one grant – RG/99/C/05, grant work has been completed in all other projects. This grant could not be completed on time as the grantee could not find a Research Student to undertake the work up to completion. Two Research Students who worked on the project left without completing the work. When the grant period was over, the NSF asked the grantee to submit a comprehensive report of work done up to the end of the grant period. A final reminder has been sent giving a deadline, 15th July, 2003.

(d) Out of the 13 projects reported only Rs.98,360/= from six projects is to be refunded to NSF. Position of other projects are given below :-

Two projects – reported value Rs. 45,910/= are yet to be completed
One project – reported value Rs.22,077/= money has been refunded to NSF
One project – reported value Rs.29,010/= money has been transferred to another grant by NSF
One project reported value Rs.45,181/= -- We do not have such a grant Number – RG/98/BT/04
Two projects reported value Rs.31,533/= - There are no balance funds to be refunded to NSF.

(e) These are not payments made by NSF. These payments have been made by the university which is disbursing funds. These are permissible items under miscellaneous expenditure.

(f) Procedure for selection by individual scientific investigator does not require the concurrence of NSF as the appointments are temporary. University procedure for such recruitments are followed. Qualifications and the payment rates are according to NSF criteria.

(h) Funds for research grants are released to government institutions who follow the accepted financial regulations and whose books of accounts are subject to audit by the government Auditors. Hence we accept the financial statements submitted by the relevant institutions certified by the Bursar/Accountant and enter the figures in to our grant ledgers and we properly maintain the grant ledgers. We do have problems with universities in receiving financial statements.

3:9 Implementation of Project

We have received Rs.3.2 M. for appropriate research on renewable energy. We have utilized Rs.287,500.00. The preparation of a road map for renewable energy for the country is being undertaken using balance funds.

R. Ramisamy

Chairman
National Science Foundation