

Natural Resources, Energy &
Science Authority of Sri Lanka,
47/5, Maitland Place,
Colombo 7.
16-07-1990.

Hon. Minister of Industries,
Science & Technology,
Ministry of Industries, Science
and Technology,
48, Sri Jinaratana Road,
Colombo 7.

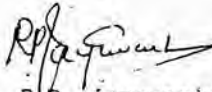
Dear Sir,

ANNUAL REPORT OF THE NATURAL RESOURCES, ENERGY & SCIENCE AUTHORITY OF
SRI LANKA FOR THE PERIOD 1st JANUARY TO 31st DECEMBER 1988

In terms of Section 16(III) of the Natural Resources, Energy & Science
Authority of Sri Lanka Act No. 78 of 1981, I have the honour to
submit the Annual Report of the Natural Resources, Energy & Science
Authority of Sri Lanka for the period 1st January to 31st December 1988
together with

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

Yours obediently,



(Dr. R.P. Jayewardene
Director-General

NATURAL RESOURCES, ENERGY & SCIENCE AUTHORITY

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ANNUAL REPORT 1988

1.0 MEMBERS OF THE NATURAL RESOURCES, ENERGY & SCIENCE AUTHORITY OF SRI LANKA DURING THE YEAR

1.1 Board Members from 1st January 1988 - 31st May 1988

Dr R.P. Jayewardene (Director General, NARESA)
Mr L.C.A. de S. Wijesinghe (Addl. Director General, NARESA)
Prof S. Balasubramaniam
Prof S.T. Fernando
Dr S.D.I. E Gunawardene
Mr M. Faiz Mohideen
Dr Mohan Munasinghe
Prof (Mrs) W.P.D Pereira
Prof K.K.Y.W. Perera
Prof (Mrs) N. Ratnasiri
Mr L.K. Seneviratne

1.2 Board Members from 1st June 1988 - 31st December 1988

Dr R.P. Jayewardene (Director General, NARESA)
Mr L.C.A. de S. Wijesinghe (Addl. Director General, NARESA)
Dr S.L. Amarasiri
Prof S. Balasubramaniam
Prof V. Basnayake
Prof H. Crusz
Dr R.L. de Silva
Dr E.R. Jansz
Dr (Mrs) Swarna Jayaweera
Prof N.S. Karunaratne
Dr D.T. Wettasinghe

2.0 PRINCIPAL STAFF

Director General

Dr R.P. Jayewardene - M.D., F.R.C.P. (Lond), D.Sc.

Additional Director General

Mr L.C.A. de S. Wijesinghe - B.Sc. (Cey), M.A. (Oxon)

Deputy Director General

Mr M.A.T. de Silva - B.Sc. (Lond), M.Sc. (Lond)

Director Scientific Affairs

Mr D.E.F. Fernandez - B.Sc. (Lond), M.Sc. (Wales)

Asst. Director (Scientific Affairs)

Dr K.S.S. Liyanage - B.Sc. (Cey), Ph.D. (Aust) [resigned in March 88]

Mrs S.P. Prelis - B.Sc (Cey) [on study leave]

Mr M. Watson - B.Sc. (Cey) M.Phil. (Lond)

Scientific Officers

Mr D.P. Athulathmudali - B.Sc. (Sri Lanka), M.Phil. (Sri Lanka)

Mr R.M.W. Amaradasa - B.Sc. (Sri Lanka), M.Sc. (Sri Lanka)

Miss H.A.U. Amarasinghe - B.Sc. (Sri Lanka)

Mr J.A. Chandrasiri - B.Sc. (Hons) (Sri Lanka), Dip. Stat.

Miss J.D.S. Dela - B.Sc. (Sri Lanka)

Miss C.G. Perera - B.Sc. (Hons) (Sri Lanka)

Miss W.R.M. Sandanayake - B.Sc. (Sri Lanka), M.Sc (Sri Lanka)

Staff Assistants

Mr B.M.C.K. Basnayake - B.Sc. (Sri Lanka)

Mr A.W.J. Karunasinghe - B.Sc. (Sri Lanka)

Mr W.B. Yapa - B.Sc. (Sri Lanka) [on study leave]

When more than one officer is listed under a designation, the names appear in alphabetical order.

Director Information

Mr N.U. Yapa - B.Sc. (Cey), A.L.A., A.S.L.L.A., M.L.S. (W.Ont)

Asst. Director (Publications)

Mrs N.R. Amarasuriya - B.Sc. (Cey), A.L.A.

Documentalist

Mr W.P. Jayakody - B.Sc.(Cey)

Mr B.G.N. Kumarasinghe - B.Sc. (Cey)

Mrs S.R. Sri Nammuni - B. A. (Cey) , A.S.L.L.A

Mrs W.G.S. Wimalasena - B.A. (Sri Lanka) A.S.L.L.A.

Administrative Secretary

Mr M.A.P. Mudannayake

Accountants

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

Mr M.H.M.S. Hameed

Mrs K. de Silva

Mrs S. Udugama

Graduate Translator

Mrs S.L. Tillegaratne - B.A. (Cey)

Confidential Secretary

Mrs S. Ratnayake

Repographic Technician

Mr S.R.U. Silva

Establishment Assistant

Mr S. Galketiya

Printing Superintendent

Mr A.A.A. Ranasinghe

3.0 AUTHORITY ACTIVITIES

Ten Authority meetings were held during 1988.

The Authority which was constituted on 1st June 1985, went out of office after the statutory 3 year term, on 31st May 1988. The final meeting was held on 13th May 1988. The newly appointed board of NARESA had its first meeting on 08th July 1988.

The Authority submitted a memorandum to His Excellency the President on,

- (a) Strengthening quarantine control of plants and animals prepared by the Working Committee on Natural Resources
- (b) The importance of including substantial research and development inputs within the government sector when drawing up the Industrial Development Plan, a task now receiving the attention of the Ministry of Finance and Planning.

Supplementary Research Grants

In addition to the research grants approved for funding in 1988 at the December 1987 meeting, nine more research grants were approved for the award of grants in 1988.

Forestry Master Plan

The Authority responded to the observations made by the Hon. Minister of Lands and Land Development on the earlier memorandum of NARESA. Subsequently NARESA attended a meeting at the Presidential Office, for a discussion on the Forestry Master Plan. The meeting was chaired by His Excellency the President.

His Excellency directed that a working group be formed for examining matters pertaining to the Forestry Master Plan. The group meeting was to be convened by the Presidential Secretariat and NARESA would be represented.

Implementation of a National Science policy

NARESA was invited to a meeting summoned by the Secretary, Ministry of Plan Implementation, to discuss the implementation of a national science policy. Others represented at the meeting was the Secretary, Ministry of Higher Education, the Sri Lanka Association for the Advancement of Science, the National Academy of Sciences, and the Atomic Energy Authority. The general consensus at the meeting was that a national science policy implementation plan that will link with economic development has still to be prepared. The information given in the 9 volume report on science policy published by the Ministry of Plan Implementation would provide useful information for a science policy implementation plan. The participants were of the view that the preparation of such a plan should be entrusted to NARESA.

The Authority reconstituted the working committees in the following subject areas :

Biological Sciences, Chemical Sciences, Physical and Engineering Sciences, Medical and Veterinary Sciences, Agriculture and Animal Husbandry, Energy, Natural Resources, Social Sciences, Science Information and Science Education.

A new technical committee on Conservation of Genetic Resources was appointed.

The Authority also noted that the Association for Science Co-operation in Asia (ASCA) has come up with ten co-operative S & T projects, and that NARESA will be taking action to identify government institutions in Sri Lanka to participate in these projects.

4.0 ACTIVITIES OF THE COMMITTEES

Main activities of the working committees have been summarized in the Tables (I),(II) & (III). Apart from these activities, the working committees have carried out other functions which are of non-routine nature. These are briefly discussed below.

4.1 Biological Sciences

The Committee undertook the following visits to research sites.

<u>Grant No.</u>	<u>Place of Visit</u>	<u>Date of visit</u>
RG/AID/09	CISIR	18 March 1988
RG/86/B/02	Univ. of Peradeniya	21 April 1988
RG/87/B/04	"	"
RG//87/B/07	"	" "
RG/87/B/09	"	"

4.2 Physical & Engineering sciences

The committee undertook the following visits to research sites.

<u>Grant No.</u>	<u>Place of Visit</u>	<u>Date of Visit</u>
RG/86/P/03	Univ. of Sri Jayewardenepura	29 April 1988
RG/88/P/01	Univ. of Kelaniya	29 April 1988

The committee also completed the first stage of the 'National Computer Software Documentation Centre'. Six government institutions and eleven University Departments responded to the preliminary questionnaire.

4.3 Energy

The committee was involved with two projects.

I project - Field & Laboratory Testing of the Improved SAWOOD Cooker
The improved SAWOOD cooker designed by IDB engineer S.K. Rajapakse was evaluated in laboratory tests at CISIR. Arrangements were also made for field evaluation of the stove.

II project - Oil Producing Plants
Trials on the cultivation of Jatropha and Ricinus were planned with the assistance of the Forest Department.

Compendium of energy technologies

A compendium of energy related technologies was compiled from the responses to questionnaires sent to various institutions. Only technologies that have been developed beyond the experimental phase are included in the document, which is expected to be useful to entrepreneurs and industrialists.

4.4 Natural Resources

Forestry Master Plan

The replies from the secretary to His Excellency the President in response to the memorandum sent by NARESA on 21-10-86 were discussed. On the recommendations of the committee a letter was sent to His Excellency confirming the earlier submissions made by NARESA.

Quarantine

- (a) The Committee noted with concern the occurrence of the ulcerative disease of fish in the west coast and the rinderpest disease of livestock in the eastern and northern provinces of Sri Lanka. On the recommendation of the Committee, a memorandum was sent to H.E. the President informing him of the need to rigidly enforce existing quarantine regulations for import of plants and animals.

In response to this memorandum, the Authority was informed that action is being taken by the Ministry of Agricultural Development and Research, Ministry of Rural Industrial Development, and the Ministry of Fisheries, to ensure that plant and animal diseases do not gain entry into the country.

- (b) The potential danger of yellow fever disease coming into and spreading within the country through incoming passengers from countries where the disease was prevalent, was discussed. The matter is being followed up with the Ministry of Health.

4.5 Social Sciences

A series of meetings to discuss the scope and the problems of some selected disciplines in the Social Sciences such as Sociology, Education, Law, History, Political Science and International Relations, Management, Economics and Geography were held. The objectives of these meetings were to prepare state of the art reviews in each discipline. Specialists from all institutions involved in research participated at these meetings.

4.6 Technical committee on the Conservation of Genetic Resources

The above committee was setup and identified its objectives and activities.

4.7 Man and Biosphere National Committee

A delegation from the MAB National Committee visited the tropical regions of the Peoples Republic of China to study reforestation and rehabilitation of endangered species in that country. The delegation observed the great advances made by the Chinese in reforestation of their degraded land through their 'Green China' policy and the successful management of the replanted areas through peoples participation in the programme.

4.8 National Mangrove Committee (NATMANCOM)

Integrated Multidisciplinary Survey and Research Programme at Ranong, Thailand UNESCO/UNDP Regional Project RAS/86/120

A Sri Lankan scientist participated at the above programme.

Integrated Research Programme on Mangrove Ecosystem in Negombo Lagoon

Five research grants were being continued on following aspects of mangrove ecosystem under the above programme. Mangrove brush-pile fishery, floristic and faunistic composition of mangroves, mangrove molluscs, heavy metal levels in mangrove fauna, and waste oil effect on mangrove fauna.

Conservation and Management of Mangrove Areas

Preparation of a map of mangrove areas in the coastal districts of Sri Lanka from Survey Department land use maps was in progress.

A project proposal was drawn up and submitted to International Union for Conservation of Nature (IUCN) for a NARESA/IUCN collaborative programme on Sustained Management and Conservation of Mangroves of Sri Lanka.

Establishment of a National Mangrove Park

The following state owned islands adjacent to Kadolkellewatta, Negombo were acquired by NARESA to be included in the National Mangrove Park and an agreement to this effect was signed with AGA on the 11th January 1988.

Island I	- Kuda Molliya Land	- 6 ac, 2 roods, 6 perches
Island II	- Maha Molliya Land	- 23 ac, 1 rood, 10 perches
Island III	- No name	- 5 ac, 3 roods, 4 perches

Map of the proposed Mangrove Park

Preparation of a Map of the proposed mangrove park site was in progress.

4.9 Agriculture & Animal Husbandry

A preliminary meeting of scientists engaged in research on the use of botanicals in the control of pests of agricultural crops was held during the year. The objective of the meeting was to take stock of the work that has been done or in progress and to formulate a coordinated programme of research in this area. Once the programme is formulated funds required to implement the programme will be located from within the country and from international funding organizations.

4.10 Science Education

A guide book for the preparation of simple investigation in science at secondary school level was done with the help of leading teachers in science at secondary and tertiary levels. The guide will be printed and made available to teachers and students of science at the secondary school level.

TABLE I : SUMMARY OF COMMITTEE MEETINGS, DISCUSSIONS, SEMINARS, WORKSHOPS, MANUSCRIPTS, MONOGRAPHS AND OTHER PUBLICATIONS

Working Committees Technical Committees National Committees Advisory Committees	No. of Committee Meetings	Seminars, Workshops, and Discussions	Manuscripts, Monographs and Other Publications
1. Agriculture & Animal Husbandry	06	Seminar on Botanicals as Pests and Disease Control Agents was held in May 1988.	
2. Biological Sciences	13		
3. Chemical Sciences	07	Progress A/review seminar of 'Natural Products Chemistry' Biologica- lly Oriented Projects, was held on 05th February 1988 in the NARESA Auditorium. A progress review seminar of Chemical Sciences Grants was held on 17th June 1988 in the NARESA Auditorium	Proceedings of the Seminar "Sampling for Quantitative Analysis" was published.
4. Energy	03		A compendium of energy technologies was prepared for publication.
5. Medical & Veterinary Sciences	12		The following reports were received and were submitted for editing in order to compile a publication of the proceedings of the workshop 'Priority Areas for Research in Medical and Veterinary Sciences' 1. State of the art and bibliography on paediatrics 2. State of the art on community medicine 3. State of the art on animal breeding 4. The bibliography on Parasitology

Working Committees Technical Committees National Committees Advisory committees	No. of Committee Meetings	Seminars, Workshops and Discussions	Manuscripts, Monographs and Other Publications
6. Natural Resources	07		
7. Physical & Engineering Sciences	06		Proceedings of the Workshop 'Landslides - Causes and Prevention' was published. Proceedings of the workshop 'Priority areas for research' was published
8. Science Education	04	Seminar for Preparation of Guidebook for Simple Investigations (projects) in Science was held at NARESA. Discussion between Junior Scientists association and the Working Committee was held at NARESA	
9. Social Science	09	Seminar on Collection and Presentation of Research Materials in Social Science was held on 10th June 1988 in the NARESA Auditorium	
10. Biological control of Aquatic Weeds	03		
11. Conservation of Genetic Resources		Preliminary discussions regarding discussion sessions in Sri Lanka to be held in March 1989 on Management Conservation of Tropical Forests and Coral Reefs, were held	
12. Man and Biosphere	06		
13. Mangroves	01	Seminar on 'Integrated Research Programme on Mangrove Ecosystems in the Negombo Lagoon was held on 26th February 1988 in the NARESA Auditorium	

Working Committees Technical Committees National Committees Advisory Committees	No. of Committee Meetings	Seminars, Workshops, and Discussions	Manuscripts, Monographs and Other Publications
14. Buffalo Research Programme	10		A monograph on buffalo was completed and was to be published under NARESA science education series
15. Inland Fisheries Programme			
16. Zoological Survey of Sri Lanka	02		Arrangements were made to publish the reprints on the "Freshwater Fauna of Sri Lanka" collected by Prof C.H. Fernando
16. Miscellaneous activities		(a) Seminar on 'Evaluation of R&D Effort' was held on 19th February 1988 in the NARESA Auditorium. (b) Workshop on Soil-biology of Natural and cultivated ecosystems was organized by the Univ. of Kelaniya and Univ. of Calgary, Canada and was held at the NARESA Auditorium from 7-9 March 1988. (c) Regional Workshop on Conservation Methodology organized by NARESA and Dept. of Agriculture was held in Royal Botanic Gardens, Peradeniya from 16-20 May 1988. (d) National Workshop on Information Systems for Promotion and Utilization of Technology, sponsored by NARESA, CISIR and APCTT was held from 5-7 October 1988 in the NARESA auditorium.	

TABLE II: GRANTS SPONSORED BY NARESA

Status Summary During 1988

DISCIPLINE STATUS	Agriculture & Animal Husbandry	Biological Sciences	Chemical Sciences	Energy	Medical & Veterinary Sciences	Natural Resources	Physical & Engineering Sciences	Science Education	Social Sciences	Biological Control of Aquatic Weeds Water Hyacinth	Mangroves
	Total No. of grants operating during 1988	18	35	54	01	32	02	16	08	30	02
Grants awarded -1988	08	05	13	-	12	01	08	01	11	02	03
Amount allocated for 1988 (New and ongoing)	869,470	250,000	1,245,800	-	316,000	100,000	573,110	17,200	223,691	35,000	240,663
Grants completed - 1988	04	09	15	-	12	01	05	-	08	-	-
Grants withdrawn - 1988	-	01	01	-	-	-	02	-	02	-	02
Grants terminated - 1988	01	-	01	-	04	-	-	04	03	-	-
RA's appointed - 1988	08	03	07	-	01	01	02	01	03	01	02
Registered for PG -1988	02	02	03	-	02	-	01	01	03	-	-
Thesis PG - 1988	-	-	01	-	01	-	01	-	03	-	-
Communications & publications -1988	-	03	72	-	06	-	20	-	04	-	-
New applications - 1989	20	12	20	-	20	-	14	02	19	-	-
Funds requested for 1989	2,831,490	2,000,000	1,468,954	-	3,000,000	-	1,173,235	51,250	941,140	-	-
Grants recommended for 1989	02	03	08	-	09	-	07	01	-	-	-
Amount recommended for 1st year 1989 - new grants	142,000	173,300	402,520	-	401,130	-	371,500	19,250	-	-	-
Total amount recommended for new grants	223,325	240,300	994,280	-	1,083,390	-	523,300	19,250	-	-	-

* Amount allocated for the duration of the 3 projects including 1988

TABLE III : GRANTS SPONSORED BY FOREIGN AGENCIES

Status Summary During 1988

DISCIPLINE STATUS	Biological Control of Aquatic weeds SALVINIA	CIDA Fertilizer	Commonwealth Science Council Through Univ. of Exeter	US-AID	MARES/SAREC RESEARCH CORPORATION		
					Buffalo Research Programme	Inland Fisheries Research Programme	Zoological Survey of Sri Lanka
Total No. of grants operating during 1988	03	27	01	** 10	12	01	05
Grants awarded - 1988	-	-	-	01	-	-	-
Amount allocated for 1988 (New and Ongoing)	1,374,100 *	4,356,180	443,664	-	-	-	186,000
Grants completed - 1988	-	-	-	02	-	-	-
Grants withdrawn - 1988	-	-	-	-	-	-	-
Grants terminated - 1988	-	-	-	-	-	-	-
RA's appointed - 1988	02	04	01	03	04	-	-
Registered for PG - 1988	-	02	00	-	-	-	-
Thesis PG - 1988	-	-	-	-	01	01	-
Communications & Publications - 1988	-	-	-	08	06	-	02
New applications - 1989	-	08	-	-	34	-	01
Funds requested for 1989	-	4,356,180	-	-	6,989,600	-	65,000
Grants recommended for 1989	-	03	-	-	-	-	-
Amount recommended for 1st year 1989 (New grants)	-	712,030	-	-	-	-	-
Total amount recommended for new grants - 1989	-	1,009,560	-	-	-	-	-

* Including additional allocation made in 1988

** Including USAID/HARVARD Grant

5.0 INTERNATIONAL COLLABORATION IN RESEARCH & DEVELOPMENT

5.1 US-AID Programme in Science and Technology

5.2 Applications for 1989 - Six pre proposals for research projects were submitted by scientists from relevant institutions for consideration under this programme and will be forwarded to AID Washington through US-AID Colombo.

5.3 Third World Academy of Sciences

ICSU - TWAS Lectureship Programme

Details pertaining to the ICSU-TWAS Lectureship Programme were circulated to the working committees.

TWAS Fellowship Scheme

One application was received under the Fellowship scheme and was endorsed and forwarded to TWAS. Details of the scheme were advertised in the press in November 1988.

TWAS Research Grants Scheme

Details of the scheme were notified to the universities in November 1988.

Third World Network of Scientific Organisation (TWNSO)

This network was inaugurated at Trieste in October with the general objectives of promoting south-south and south-north co-operation in the development and application of science and technology in the third world. NARESA and the National Academy of Science of Sri Lanka are members of this network. Dr R.P. Jayewardene, Director General, attended the meeting in Trieste, Italy.

Award for Biology - 1987

The name of following scientist was nominated to TWAS for the above award.

Dr R.L. Wickremasinghe

5.4 Australian Centre for Industrial Agricultural Research (ACIAR) Project

Under the above project the biological control of Salvinia was being continued. This project which was due to end in March 89 was extended to the end of December 1989. In this project the distribution of insects to salvinia infested areas was continued in response to the requests received. Preparation of a film on salvinia control is in progress.

After obtaining information from the Depts. of Irrigation and Agriculture, Agriculture Development Authority, Mahaweli Authority and NARA on other aquatic weeds causing problems, the programme on biological control of salvinia has now been extended to water hyacinth with available local funds. The name of the technical committee was renamed as the technical committee on Biological Control of Aquatic Weeds.

5.5 International Foundation for Science - Sweden

Under the above programme, copies of eleven (11) applications submitted by scientists to IFS were received and seven (7) grants were awarded to Sri Lankan Scientists in 1988.

5.6 Commonwealth Science Council (CSC)

The Commonwealth Science Council organized a programme to provide fellowships for young researchers from developing countries in the Commonwealth to improve their scientific and technical skills in other commonwealth countries. Five Sri Lankan scientists benefited under this CSC Fellow-ship scheme in 1988. The commonwealth science council sponsored "Regional Workshop on Conservation Methodology" was held at Royal Botanic Gardens, Peradeniya.

As a result of this workshop, five modules were prepared giving recommendations to promote a conservation biology network in South Asia, and to develop procedures for training trainers of extension workers in genetic resources conservation methodology.

5.7 SAREC-NARESA Research Co-operation

SAREC International Contacts Fund

This fund provides partial support for research scientists who present papers at international meetings, seminars and conferences etc. Nine (09) travel grants were awarded during the year.

Water Buffalo Research Programme

In response to the invitation for new project proposals, for the second phase of the buffalo research programme, 37 pre-proposals were received. After detail evaluation by the committee, the applicants were requested to put forward full-project proposals according to the lines suggested by the committee. These proposals were forwarded to SAREC for funding in 1989.

Zoological Survey of Sri Lanka

A list of publications on Mollusca was prepared by Prof H. Cruz Scientific Coordinator of the ZSSL Project. This Mollusca inventory will be published as the 1st publication in the NARESA-SAREC-ZSSL faunal publications inventory.

Inland Fisheries Research Programme

A report prepared by Prof S.S. de Silva of University of Ruhuna, titled 'Preliminary Recommendations on the Establishment of a Subsidiary gill net Fishery for Exploitation of Minor Cyprinid Resources in Reservoirs' was forwarded to the Ministry of Fisheries to study and to take necessary actions. The Ministry has appointed a Committee to work out a programme to implement the relevant proposals contained in the report.

Dr Olof Enderlein and Dr Hakan Wickstrom of the Institute of Fresh water Research, Sweden, visited Matara area in May 1988 to carry out Research under the Inland Fisheries Reserch Programme, which is a joint project of University of Ruhuna and Institute of Freshwater Research, Sweden.

6.0 OTHER SCIENTIFIC PROGRAMMES

6.1 Science Statistics and Indicators Project

The first phase of this study relating to 'Organizational Structure and the Status of National Efforts in Science and Technology' which was completed in 1987 was published and circulated during the year. The second phase of the study relating to 'Diffusion and Assimilation of S&T knowhow in the Agriculture Sector of Sri Lanka' was completed and the final report reviewed. The third phase of the study relating to 'Constraints to Research' was initiated on October 1988. While the first phase was fully funded by UNESCO, the second phase received partial assistance from the Commonwealth Science Council. The third phase is fully funded by the Swedish Agency for Research Co-operation with Developing Countries (SAREC).

6.2 SAARC Programme in Science and Technology

As the national focal point of the SAARC Technical Committee on Science and Technology, NARESA has co-ordinated Sri Lankan participation in a number of activities such as workshops, seminars and training courses. Participants from Sri Lanka attended the following workshops and training programmes.

- I. Workshop on Cultivation and Processing of Medicinal and Aromatic plants in Lucknow, India in February 1988
- II Training programme in Tannery Waste Management in Madras, India in March 1988
- III Workshop on Technology diffusion in low cost housing for rural areas in Dhaka, Bangladesh from 08th to 10th August 1988
- IV Training course on low cost housing in Roorkee, India from 09th to 18th September 1988.

6.3 Training of Laboratory Technicians

A working group, consisting of members from the British Council, University of Colombo and CISIR who had been associated with the series of workshops conducted earlier by the British Council, was formed to plan the workshops.

The programme to be held in August had to be postponed due to difficulties in finalizing the course content with the course leaders from U.K.

6.4 Sri Lanka Association of Technicians in Analytical Instruments (SLATAI)

The inaugural meeting of the Sri Lanka Association of Technicians in Analytical Instruments was held on 29th April 1988. The association which is sponsored by NARESA, is a professional body aimed at improving the knowledge and skills of laboratory technicians and assisting in the development of their profession. NARESA rendered assistance to the association by receiving membership fees on behalf of the association, convening meetings of the executive committee etc.

6.5 Merit Awards for Outstanding Research on NARESA Grants

The ceremony for presentation of the 1987 awards was held in January. The presentations were made by the Director General. The following scientists were presented the merit awards for the year.

- | | |
|--|---------------------------------|
| (a) Prof M.A. Pemadasa | - Biological Sciences |
| (b) Dr E.R. Jansz &
Mr E.V. Packiasothy | - Chemical Sciences |
| (c) Prof C.B. Dissanayake | - Chemical Sciences |
| (d) Prof W.D. Ratnasooriya | - Medical & Veterinary Sciences |

7.0 VISITS OF FOREIGN DELEGATES

1. Dr Soven Svensson, Dept. of Animal Ecology, Univ. of Lund, Sweden, visited Sri Lanka in February 1988 as an external evaluator on the Zoological Survey of Sri Lanka Project.
2. Dr C.G. Thornstrom (Senior Research Officer) and Mrs K. Ringberg (Chief Accountant) from SAREC visited in February 1988. The objective of this visit was to review the progress of the ongoing projects and to initiate discussions on new project proposals.
3. Dr Peter Room (Australian Counterpart Scientist) of Commonwealth Scientific and Industrial Research Organizations (CSIRO) visited in March 1988 and had discussions with the scientists, NARESA, and visited selected sites.

4. Consultant to the International Foundation for Science (IFS) Prof J. Moreay visited in April 1988 and had discussions with some of the IFS grantees.
5. The Research Monitor of the Canadian International Development Agency (CIDA) Prof R.J. Soper visited from 23rd May to 10th June 1988 and held discussions with NARESA and all the CIDA Grantees.
6. Dr Olle Lindon a SAREC consultant in Marine Sciences visited to study the requests of Sri Lankan scientists from NARA, Univ. of Sri Jayewardenepura Univ. of Ruhuna and the Ministry of Fisheries for a collaborative research programme on Marine Sciences to be funded by SAREC.

8.0 THE SRI LANKA SCIENTIFIC AND TECHNICAL INFORMATION CENTRE

8.1 1. Working Committee on S & T Information

The following persons served in the Committee upto 31st July 1988.

Dr N. Jayasiri, Mr N.T.S.A. Senadhira, Mr Dayananda de Silva, Mr G.P.S.H. de Silva and Mrs I. Unamboowe

A new Committee comprising of the following persons was appointed with effect from 1st August 1988.

Dr G.C.N. Jayasooriya, Mr G.P.S.H. de Silva, Mr W.B. Dorakumbura, Prof M..U.S. Sultanbawa, Mr James Lanerolle, Mr L.E. Samarasinghe, Dr Kevin Seneviratne and Miss C.L.M. Nethsinghe

The Committee met 10 times during 1988.

The Committee appointed for the formulation of a National Policy for scientific and technical information submitted the report on 02nd February 1988.

8.2 2. Coordination with libraries in Sri Lanka

During 1988, SLSTIC participated in the following library networks.

Sri Lanka Scientific and Technical Information Network (SLSTINET)

Number of libraries participated in the Network was increased to 106. A Committee of SLSTINET formulated a common bibliographic format for libraries. The Cooperative Acquisition Plan on Abstracting & Indexing Journals (CAP/A & I) was revised. A meeting was held on 26th January 1988 to discuss development of geological, hydrological and marine data systems.

Agricultural Information Network (AGRINET)

SLSTIC continued to provide secretarial services for AGRINET which has 24 participating library. Action was initiated to revise the Selective Contents Page Dissemination (SDCP) service.

Renewable Energy Resources Information Network (RERINET)

SLSTIC coordinated the activities of the network. A bulletin on contents pages of current renewable energy journals received by RERINET Libraries was compiled.

Health Science Literature, Library and Information Network (HELLIS)

SLSTIC participated in the meeting of the HELLIS Network organized by the Ministry of Health.

8.3 Coordination with International Organizations

SLSTIC served as the coordinating centre in Sri Lanka, of the following international networks and international organizations.

Regional Network of the Exchange of Information and Experiences in Science and Technology in Asia and Pacific (ASTINFO)

The Sixth ASTINFO Consultative Meeting was held in Kuala Lumpur in September 1988. A meeting of the ASTINFO Associate Centres (AAC) was held on 10 August 1988 to review ASTINFO programmes and to discuss future plans.

Regional Information Network for South and Central Asia (RINSCA)

On the recommendation of the Working Committee on S & T Information, the focal point was transferred to the Computer and Information Technology Council (CINTEC).

Commonwealth Regional Renewable Energy Information System (CRRERIS)

SLSTIC continued to send inputs to the Renewable Energy Information systems (RERIS). On request of CRRERIS, SLSTIC compiled a Keyword in Content (KWIC) index to CRRERIS documents.

Setting up of an Information Dissemination Unit

As a follow-up of recommendation made at the Regional Workshop for South East Asia on Ecosystems Rehabilitation in the Asian Humid Tropics held in Bogor, Indonesia from 22-24 August 1988, NARESA has decided to set up an information dissemination ^{unit} at SLSTIC in order to exchange information on degraded ecosystems in south and south-east Asian countries.

8.4 Cooperative activities

Union Catalogue of Scientific and Technical Books (UNICAST)

Compilation of the computerized Union Catalogue (UNICAST) was continued with the cooperation of SLSTINET libraries. Only 563 entries, compared to 3950 in 1987, received.

A new project named UNICAST II was initiated with libraries using micro CDS/ISIS package for compiling their catalogues. It is planned to receive the acquisition data in diskettes which will be merged to form the Union Catalogue. A meeting to discuss the procedures and techniques was held on 24 November 1988. 16 libraries agreed to participate in UNICAST II.

Union List of Scientific & Technical Periodicals (UNILIST)

A grant was awarded by the International Development Research Centre (IDRC) to convert UNILIST into a database based on micro CDS/ISIS. A system was designed for the conversion and data entry work was started.

Selective dissemination of Contents Pages (SDCP)

Selective Dissemination of Content page service was organized with the assistance of 24 agricultural libraries to disseminate contents pages of 316 agricultural periodicals among 300 scientists. A current list of agricultural periodicals in AGRINET containing 478 titles was compiled.

Cooperative Acquisition Plans (CAP)

Cooperative Acquisition Plans were drawn up to rationalize acquisition of periodical literature. CAP/A & I was designed to rationalize acquisition of 139 abstracting and indexing journals among 28 libraries.

On the request of the Working Committee on S&T Information action was initiated to draw up a cooperative acquisition plan for Chemical Periodicals (CAP/CHEM).

8.5 Information and Documentation Services

National Scientific Reports Collection

The reports collection was organized to collect, published and unpublished reports. 182 reports were added making the total reports in the collection 4669. 62 reports were added to the collection of annual reports of scientific organizations.

Sri Lanka Science Index

92 issues of local journals and selected articles from local newspapers were indexed. Sri Lanka Science Index Vol.9, No.1/4 1985 was issued.

Inter Library Loans

SLSTIC served as the coordinating centre for inter-library loans by channelling requests to appropriate libraries. 38 requests were handled in 1988.

8.6 Technical Services

Microfiche Services

Bureau services for microfiche making and duplication were provided. 5890 diazo fiche and 581 silver fiche were supplied during 1988.

Desk-top printing

SLSTIC operated a desk-top printing machine to duplicate documents at low-cost. A new RICOH offset machine was acquired. 118 jobs for printing 512,880 impressions were executed.

NARESA Press

Services were offered for printing scientific publications at the NARESA press. Total value of the jobs executed by the press exceeded Rs.576,000/-

Computer Services

SLSTIC functioned as the National Distributing Centre for Micro CDS/ISIS package. During 1988, copies were provided to 27 libraries. A workshop to train librarians in using the package was organised. The users of the package were organized as a User Group. The first meeting of the User Group (ISIS/UG) was held on 8 September 1988.

Consultation services were provided to the National Water Supply and Drainage Board to establish a database on Water Supply and Sanitation (WASSDOC).

Libraries were helped to solve software problems cropped up in using the package.

UNICAST, UNILIST and SLSI database were maintained in the WANG MVP 2200 minicomputer. Print-outs for off-set printing of database products were obtained. Word Processing facilities for compilation of reports were provided.

Assistance was provided to the Scientific Affairs division to create a database on on-going NARESA research grants.

Systems were developed to execute the following jobs.

- (a) conversion of UNILIST database to ISIS format
- (b) manpower survey of Library and Information Personnel
- (c) revision of the selective dissemination service of contents pages of agricultural periodicals
- (d) compilation of KWIC index to CRRERIS database

Audio Visual

A pool of AV equipment including video, films, slide, overhead projectors, video camera, projection systems and conference communication systems were maintained for hiring out to the Scientific Organizations and for providing AV facilities to the programmes held at the NARESA Conference Hall.

8.7 Training, Education and Seminars

8.7.1 Seminars and Meetings

Workshop on CDS/ISIS Software

This workshop sponsored by CINTEC and IDRC was held from 11-15 July 1988 at CINTEC. 17 persons participated. Messrs. N.U. Yapa, B.G.N. Kumarasinghe and W. Amaradasa served as resource persons.

Seminar on Sources of Scientific Information

The Seminar was held on 24 June 1988 at NARESA. 37 research personnel participated. The seminar was presided over by Dr R.P. Jayewardene, Director General, NARESA.

Seminar on Hydrological, Geological and Marine Data Systems

Two seminars were organized for two categories of participants. The Librarian's seminar was held on 26 January 1988 and the seminar for research worker was held on 27 January 1988. Miss Young-Cha Cho, Information Specialist of IDRC served as the resource person of both seminars.

Seminar on UNICAST II

A seminar to discuss methods and procedures of compiling the Union Catalogue of Scientific & Technical Books based on the CDS/ISIS Software was held on 24 November 1988.

CDS/ISIS User Group Meeting

A meeting of the users of the micro CDS/ISIS software package was held on 8 September 1988. 35 users attended.

Workshop on Writing Scientific Papers

A Workshop on writing scientific papers was held on 24 and 25 March 1988. 40 research workers attended the workshop.

8.7.2 Training and Education

Three batches of students following the professional course in library and information science underwent in-service training programmes at the library.

8.7.3 Research and Studies

NARESA Research Grants

RG/IS/85/1 - Mrs S. Kodagoda

A research project for compilation of a bibliography of educational reports on Sri Lanka from 1976-1986 was completed.

RG/IS/88/1 - Dr Vijaya Kumara

A grant was awarded to Dr Kumar for creation of a database on the chemistry and activity of endemic plants of Sri Lanka.

Studies

Following surveys were conducted.

Manpower survey of Library, documentation and information personnel
by Mr N.U. Yapa

Study on women in S & T in Sri Lanka - Mrs N. Amarasuriya

8.8 Publications

8.8.1 Journal of the National Science Council of Sri Lanka

Printing of Vol.14 No.2 and Vol.15 No. 1 issues of the journals
were completed. Copies of the these issues were distributed locally
and abroad.

Editing and Proof reading of Vo.15 No.2 and Vo.16 No.1 issues were
completed. Volume 15(2) is being printed at the NARESA Press.

Editing of Volume 16 No.2 December 88 was completed and handed
over for printing.

8.8.2 Vidurava

English issues : Compilation of Vol. No. 1 Poisoning of Pesticides
(English), Vol.10 No.1 Adulteration of Food (Sinhala)
and Vo.11 No.1 Poisoning by Pesticides (Sinhala)

SLSTINET Newsletter : vol.7 No.1 and No. 2 were published.

Science Education Series : No. 22 and No. 24 were published.

9.0 STAFF PAPERS - PRESENTED OR PUBLISHED

- Amarasuriya, N. (1988). Teaching Scientific Writing in the Third World Problems and Prospects. Conference and General Assembly of the European Association of Science Editors (EASE). Basel, Switzerland, May 1988.
- Amarasuriya, N. (1988). Problems of Publishing a Scientific Research Journal in a Third World Country. The TWAS/CIDA Conference on the Role of Women in the Development of Science in the Third World. Trieste, Italy, October 1988.
- Athulathmudali, D.P. and Bogahawatte, E. (1988). Comparative Analysis of Profitability of Rural Cattle and Buffalo Herds. Proc. of Sri Lanka Associ. for Adv. Sci. 43 (1).
- Athulathmudali, D.P. and Bogahawatte, E. (1988). A Study on Factors Effecting the Milk Production of Rural Cattle and Buffalo Herds. Proc. of Sri Lanka Associ. for Adv. Sci. 43 (1)
- Athulathmudali, D.P. (1988). Microeconomics of Rural Cattle and Buffalo Production. A Comparative Study in the Kurunegala District. M.Phil. Thesis, University of Peradeniya.
- Chandrasiri, J.A., Tillekaratne, L.M.V., Deraniyagala, S.A., Amarasekara, A.S., and Hugo E. Gottlieb (1988). The Glyceryl Ether Derivatives from Sri Lankan Soft Corals Sinularia Sp. Proc. Sri Lanka Associ. Ad. Sci. 43(1), 165-166.
- De Silva, M.A.T. (1987). An Overview : Sampling of Biological Materials. Proc. of the Seminar for Recipients of Research Grants on Sampling for Quantitative Analysis. Natural Resources Energy and Science Authority, January 1988, 1-5
- De Silva, M.A.T. (1988). A Measure of the Social Returns in Academic Research. Sri Lanka Journal of Social Sciences. 9(1/2) (1986). In print.

- Wijesinghe, L.C.A. de S. (1988). Science & Technology and National Development in Sri Lanka with special reference to Agriculture and Industry. Country paper to the 10th ASCA Meeting. Seoul, 31 Oct - 2 Nov 1988.
- Wijesinghe, L.C.A. de S. (1988). Ecodevelopment of Degraded Areas - The Sri Lanka Experience. Regional and Planning Meeting for South and South-east Asia on Ecosystems Rehabilitation in the Asian Humid Tropics, Bogor, Indonesia, Aug 1988.
- Wijesinghe, L.C.A. de S. (1988). Formulation of National Science Policy in Sri Lanka. SAARC Workshop on Science Policy. Islamabad, Oct 1988.
- Wijesinghe, L.C.A. de S. (1988). Biomass Fuel and its Utilization in Sri Lanka. ERIC International Energy Journal, 10(1); 67-80
- Wijesinghe, L.C.A. de S. (1988). Keynote address to Seminar on Scientific Management of the Forestry Sector in Sri Lanka. SLAAS, Colombo 7.
- Yapa, N.U. (1988). Training Library Personnel to Exploit Information Technology. The Use of New Information Technologies in Developing Countries. Hongkong, FID (1988), 25-37.
- Yapa, U.U. (1988). SLSTINET Common bibliographic Format with Field Definitions Tables for CDS/ISIS, 28.
- Yapa, N.U. (1988). How to write the Title and References in Research Papers. Seminar on Collection, Collation and Presentation of Research Materials in Social Sciences. June 1988, 12
- Yapa, N.U. (1988). Computerization of Scientific and Technical Information: NARESA's Experience. National Workshop on Information Systems for Promotion and Utilization of Technology. Oct 1988, 13.

- Yapa, N.U. (1988). National Science Library of Sri Lanka : Objectives Policies and Services. 21
- Yapa, N.U. (1988). Keyword in Content Index to the Commonwealth Regional Renewable Energy Resources Index. CSIRO, Melbourne, 1988, 6 microfiche.
- Yapa, N.U. (1988). Marketing Information Products and Services in Sri Lanka. Regional Seminar on Marketing Information Products and Services, Kuala Lumpur, Sep 1988, 5.
- Yapa, N.U. (1988). Sri Lanka Scientific and Technical Information Network. Seminar on Library Networks in Sri Lanka. March 1988, 10

TABLE IV: NEW GRANTS AWARDED IN 1988

AGRICULTURE & ANIMAL HUSBANDRY

Grant No. & Year of Award	Name of grantee & Institution	Title & Duration	Total Allocation
RG/88/Ag/1 1988	Dr L.G.G. Yapa Dept. of Soil Science Fac. of Agriculture Univ. of Peradeniya Peradeniya Dr D.C. Bandara Dept. of Agric. Biology Fac. of Agriculture Univ. of Peradeniya Peradeniya	Evaluation of cowpea (<i>Vigna unguiculata</i>) and Mungbean (<i>Phaseolus aureus</i>) varieties for drought resistance (2 years)	Rs. 11,5250/=
RG/88/Ag/2 1988	Dr Rohan Rajapakse Dept. of Agronomy Univ. of Ruhuna Mapalana Kamburupitiya.	Identification, Distribution and Management of Important* Legume pests of Southern Sri Lanka (2 years)	Rs. 42,000/=
RG/88/Ag/3 1988	Dr V. Ravindran Dept. of Animal Science Univ. of Peradeniya Peradeniya.	Energy and Protein utilization values of some common feeding-stuffs for growing pigs (3 years)	Rs. 188,000/=

Grant No. & Year of Award	Name of grantee & Institution	Title & Duration	Total Allocation
RG/88/Ag/4 1988	<p>Mr. S. Sivapalan Dept. of Agronomy Eastern University Chenkaladi</p> <p>Mr J.B. Rajeswaran Dept. of Agronomy</p> <p>Mr K. Thayalan Dept. of Agronomy</p>	<p>Effect of polythene lined-furrows on growth and yield of chillies while regulating water retention/ release characteristics of sandy Regosols. (2 years)</p>	Rs. 91,200/=
RG/88/Ag/5 1988	<p>Dr Nihal C. Rajapakse Dept. of Crop Science Univ. of Peradeniya Peradeniya</p> <p>Dr P. Abeygunawardena Dept. of Agric. Economics Univ. of Peradeniya</p> <p>Dr S. Rajapakse Dept. of Crop Science Unvi. of Peradeniya</p>	<p>Assesment of postharvest Losses of horticultural crops in Sri Lanka (1 year)</p>	Rs. 274720/=
RG/88/Ag/6 1988	<p>Dr A.de S. Liyanage R.R.I. Dartonfield Agalawatta.</p> <p>Dr(Mrs.) N.I.S. Liyanage R.R.I. Dartonfield Agalawatta.</p> <p>Dr R. Wijesundara Dept. of Botany Univ. of Colombo Colombo.</p>	<p>Studies on resistance mechanisms on <u>Corynespora cassiicola</u> infection in <u>Hevea brasiliensis</u>. (3 years)</p>	Rs. 195000/=

Grant No. & Year of Award	Name of grantee & Institution	Title & Duration	Total Allocation
RG/88/Ag/7 1988	Dr A.L.T. Perera Dept. of Agric. Biology Fac. of Agriculture Univ. of Peradeniya	Genetic analysis of rice quality with a view to selecting and breeding for varieties superior in quality (3 years)	Rs. 168500/=
RG/88/Ag/8 1988	Dr A. Sumanasinghe Dept. of Agric. Biology Univ. of Peradeniya Peradeniya.	Isozyme Analysis of <u>Oryza sativa</u> (1 year & 3 months)	Rs. 151900/=

Biological Science

Grant No. & Year of Award	Name of Grantee & Institution	Title & Duration	Total Allocations LRs.
RG/88/B/01 1988	Dr.(Mrs) S. Piyasiri Dept of Zoology Univ. of Sri Jayawardene- pura	Limnology project at Mahaweli; A study of zooplankton, physical and chemical parameters at Victoria reservoir 3 years	122,380.00
RG/88/B/02 1988	Dr.(Mrs) P.K.T.N.S. Pallewat- tta Dept of Zoology Univ. of Colombo	A survey of the egg parasitoid fauna of low-country grown vegetables 2 years	99,195.00
RG/88/B/04 1988	Dr. T.R. Herat Dept of Botany Open University	A systematic study of the Genus <u>Garcinia</u> in Sri Lanka 2 years	144,368.00
RG/88/B/05 1988	Dr. R.L.C. Wijesundera Dept of Botany Dr. E.D. de Silva Dept of Chemistry Univ. of Colombo	A study of Inhibition of <u>Rhizoctonia solani</u> by soil bacteria 2 years	82,060.00

Chemical Sciences

Grant No. & Year of Award	Name & Institution	Title & Duration	Total Allocation Rs.
RG/88/C/01	Dr C.P.D.W. Mathew Dept. of Biochemistry Univ. of Colombo	'Immobilization of α Galactosidase for utilization in Industry & Medicine' (3 years)	45,000/-
RG/88/C/02 (1988)	Dr H.M.K.K. Pathirana Dept. of Chemistry Univ. of Ruhuna	'Studies on Bidentate Tellurium ligands & their possible industrial application' (1 year)	53,000/- Withdrawn subsequently
RG/88/C/03 (1988)	Dr (Miss) P.de Alwis Mr N.H. Dassanayake NARA	'Determination of the levels of pollution with Agro chemical (pesticide) residues of inland surface waters' (2 years)	42,000/-
RG/88/C/04 (1988)	Dr (Mrs) N.M. Pieris Dr E.R. Jansz CISIR Dr A.M. Abeysekera Dept. of Chemistry Univ. of Sri Jayewardene-pura	'Chemical studies on the constituents of Rubber seed with a view to compiling a data base to support industrial utilization of seed' (2 years)	30,000/-
RG/88/C/05 (1988)	Miss M.J. Goonaratne CISIR	'Isolation, purification & characterization of Amylase inhibitors in legumes (<i>Vigna</i> spp) grown in Sri Lanka' (2 years)	40,000/-
RG/88/C/06 (1988)	Dr V. Kumar Dept. of Chemistry Univ. of Peradeniya	'Studies on <u>Citrus</u> and Rutaceous plants' (3 years)	129,000/-

Grant No. & Year of Award	Name & Institution	Title and Duration	Total Allocation Rs.
RG/88/C/07 (1988)	Dr (Mrs) S.I. Samarasinghe Dept. of Chemistry Univ. of Sri Jayewardenepura	Production of Pharmaceuticals & compounds used as food flavours, colours & sweeteners from tissue cultures of local plants and Medicinal plants. (2 years)	72,000/-
RG/88/C/08 (1988)	Dr J.S.H.Q. Perera Prof A.A.L. Gunatilaka Dept. of Chemistry Univ. of Peradeniya	Electro-organic modification of natural products. (3 years)	123,000/-
RG/88/C/09 (1988)	Dr H.M.N. Bandara Dr J.S.H.Q. Perera Dr M.A.K.L. Dissanayake Dept. of Chemistry Univ. of Peradeniya	Study of solid electrolytes and cathode materials for solid state electrochemical cells. (3 years)	119,000/-
RG/88/C/10 (1988)	Dr (Mrs) S. Amaratunga Dept. of Chemistry Univ. of Sri Jayewardenepura	A scientific study of processing of metallic preparations of ayurvedic medicines. (2 years)	114,000/-
RG/88/C/11 (1988)	Prof K. Balasubramaniam Dept. of Biochemistry Univ. of Jaffna	Fermentation of Corn, Manioc and palmyrah fruit pulp for the production of Alcohol and Lactic acid. (3 years)	156,000/-

Grant No. & Year of Award	Name & Institution	Title & Duration	Total Allocation Rs.
RG/88/C/12 (1988)	Dr W.H.M.W. Herath Dr L.B. de Silva Medical Research Inst.	'Isolation, characterization of antibiotics from local fungi' (1 year)	42,900/-
RG/88/C/13 (1988)	Dr S. Subasinghe Dr A.L. Jayewardene NARA CISIR	'A study of the fatty acid composition of several edible fish varieties commonly consumed in Sri Lanka' (1 year)	44,000/-

Grant No. & Year of Award	Name of Grantee & Institution	Title & Duration	Total Allocation Rs. Cts.
RG/88/M/01 1988	Dr.(Mrs) Nandani de Silva	A study of emotional disorders in women patients in general practice 1 year	14,000.00
RG/88/M/02 1988	Dr.(Mrs) M.S. Chandrasekera Dept of Anatomy Univ. of Peradeniya	Chronological age and sequence of eruption of the deciduous dentition in Sri Lankan children 2 years	26,480.00
RG/88/M/03 1988	Dr.(Ms) K.H. Tennekoon Faculty of Medicine Univ. of Colombo	Evaluation of the galactagogic activity of a selected group of Sri Lankan plants 3 years	195,472.00
RG/88/M/04 1988	Dr. U.N. Premaratne Faculty of Medicine Univ. of Colombo	Production of monoclonal antibodies against Wuchereria bancrofti for the characterization of filarial antigens (somatic) and development of immunodiagnostic techniques 2 years	52,800.00
RG/88/M/05 1988	Prof. M.C.P. Canagaratna Faculty of Medicine Univ. of Colombo	Developing an ELISA kit for assay of serum carcinoembryonic antigen (CEA) 3 years	64,100.00
RG/88/M/06 1988	Dr. U.M.G. Ariyasena Prof. M.A. Fernando Dept of Community Medicine Univ. of Peradeniya	Involvement of traditional medical practitioners in primary health care 1 year	25,000.00
RG/88/M/08 1988	Dr. M. Indran Dept of Anatomy Faculty of Medicine Univ. of Peradeniya	Irradiation effects on salivary gland morphology and topography 2 years	35,814.00

Grant No. & Year of Award	Name of Grantee & Institution	Title & Duration	Total Allocation Rs. Cts.
RG/88/V/01 1988	Dr(Ms) P. Abeynayake Prof. B.M.A.O. Perera Dr. V.Y. Kuruwita Faculty of Vet. Science Univ. of Peradeniya	Studies on cytogenetics of Lanka buffaloes 2 years	72,485.00
RG/88/V/2 1988	Dr(Mrs) C.P. Kodikara Faculty of Vet. Science Univ. of Peradeniya	A study of factors that influence the bacterial content of raw milk 1 year	21,800
RG/88/M/7 1988	Dr(Mrs) I. Ariyawansa Mrs. S. Wijeratne Dr. D.A. Sonnadara	A trial designed to pick up the percentage of viral infections in children admitted to the Sri Jayawardanepura General Hospital Kotte 2 years	48,000
RG/88/M/9 1988	Dr. B.R.R.N. Mendis Miss A.S. Attele Dept of Oral Pathology Univ. of Peradeniya	Morphometric studies on human salivary glands (normal glands those affected by chronic sialoadenitis, those affected by tumours) 2 years	20,000
RG/88/M/10 1988	Prof. G.P. Samarawickrama Vice Chancellor Univ. of Ruhuna	Occupational health and safety - workers perception 1 year	25,000

Natural Resources

Grant No. & Year of Award	Name of grantee & Institution	Title & Duration	Total Allocation
RG/88/EN/01	Dr. A.H. Perera Dept. of Crop Science Univ. of Peradeniya	A study of ecological succession in <u>Pinus caribaea</u> plantations at <u>Wewalthalawa</u> : nutrient accumulation and litter dynamics. 18 months	167,500/=
USAID Grants RG/AID/11	Prof. L.M.V. Tillekeratne Dr. J.P.N.R. Chandrasena Faculty of Science Univ. of Colombo	Studies on the allelopathic potential of selected plant species and characterisation of allelochemicals. 3 years	3,343,040/=

Physical & Engineering Sciences

Grant No. & Year of Award	Name/Institution	Project Title/Duration	Total Allocation Rs. Cts
RG/88/E/01 (1988)	Mr Basil S. Marasinghe Dept. of Mining & Mineral Engin., Univ. of Moratuwa	Performance of hydrocyclones and the wear pattern of the body (1 year)	12000.00
RG/88/E/02 (1988)	Dr H.B. Maliyasena Faculty of Engin., Univ. of Peradeniya	History of metallurgy in Sri Lanka through chemical and metallographic analysis of metal artifacts (1 year)	47000.00
RG/88/P/01 (1988)	Dr W.P. Siripala Dept. of Physics Univ. of Kelaniya	Low cost Photovoltaic Solar Cells (1 year)	35000.00
RG/88/P/02 (1988)	Dr K.A.K.D.D. Jaya-suriya Dept. of Physics Univ. of Kelaniya	Measurements of Electrical conductivity of semiconductor films at Low Temperatures (1 year)	35000.00
RG/88/P/03 (1988)	Prof. P.G. Cooray 426 Mahakanda Road Hindagala	Detailed geological mapping of new road sections, Kandy-Victoria dam-Randenigala dam (1 year)	22160.00
RG/88/P/04 (1988)	Dr W. Shanti Wickremeratne National Aquatic Resources Agency	The study of shallow water carbonate facies and facies models in continental shelf sediments-west coast Sri Lanka (3 years)	162000.00

Grant No. & Year of Award	Name/Institution	Project Title/Duration	Total Allocation Rs. Cts
RG/88/P/05 (1988)	Prof. K.G.A. Dahanayake Dept. of Geology Univ. of Peradeniya	Petrological and geochemical studies of precambrian iron occurrences with emphasis on graphite (1 year)	98250.00
RG/88/P/06 (1988)	Dr I.K. Perera Dept. of Physics Univ. of Sri Jayewardenepura Nugegoda	Development of N ₂ - Laser pumped dye laser systems for photo-chemical studies (2 years)	73500.00 withdrawn subsequently

SOCIAL SCIENCE

Grant No. & Year of Award	Name of grantee & Institution	Title & Duration	Total Allocation
RG/88/SS/1 1988	Mr. M.B. Wijedasa Dept. of Geography Univ. of Kelaniya	Decentralized development strategies in Sri Lanka: Some experiences of district development councils (1 year)	Rs. 9700/=
RG/88/SS/2 1988	Mr. S. Rupasinghe Fac. of Education Univ. of Colombo	A study of some concepts and attitudes on international affairs in students studying in the G.C.E. (O/L) grades in Sri Lanka (1 year)	Rs.12000/=
RG/88/SS/3 1988	Ms. R.L. Ratnayake Dept. of Geography Univ. of Kelaniya	Family size & sex preference: a case study of estate sector in Sri Lanka in Agalawatta and Matugama areas (1 year)	Rs.10000/=
RG/88/SS/4 1988	Mr. P. Hewage Dept. of Geography Univ. of Ruhuna	Socio-economic determinants of infant mortality in Sri Lanka: A case study of the area of the Regional Director of Health Services, Matara. (1 year)	Rs.15000/=
RG/88/SS/5 1988	Mrs.N.A.I. Sriyani Dias Dept. of Geography Univ. of Sri Jayewardenepura	Linkage effects of small and medium scale industries in Sri Lanka (1 year)	Rs.14,400/=

Grant No. & Year of Award	Name of grantee & Institution	Title & Duration	Total Allocation
RG/88/SS/6 1988	Mr. N.K. Dangalle Dept. of Geography Univ. of Kelaniya	Development planning, Population Policies and Demographic process: The Experience of Sri Lanka (3 years)	Rs.57040/=
RG/88/SS/7 1988	Mr. M.J.R. David Community Radio Unit Mahanuwara SLBC Sevaya Pushpadana Mawatha Kandy.	Extension and integration of folk media with mass media for development communication (1 year)	Rs.37250/=
RG/88/SS/8 1988	Mr. M.M.A. Rassaz Dept. of Geography Univ. of Ruhuna	Impact of periodic central places in southern Sri Lanka on rural development with special references to the Matara district (1 year)	Rs.13000/=
RG/88/SS/9 1988	Mr. P.A.W. Ponnampereuma Sri Lanka Technical College Colombo 10.	Minor Irrigation Rehabilitation under the Integrated Rural Development Programme of the Puttalam District (1 year)	Rs. 7300/=
RG/88/SS/10 1988	Mr. Leel Gunasekera Central Council of Social Services Sri Lanka Colombo 5.	Directory/Guide to Social welfare legislation in Sri Lanka (1 year)	Rs.28500/=

Grant No. & Year of Award	Name of Grantee & Institution	Title & Duration	Total Allocation
RG/88/SS/11 1988	Dr. S.A. Bandaranayake Fac. of Law Univ. of Colombo	Devolution of power and the local authorities of Sri Lanka: The legal context; a comparative Study (2 years)	Rs.13000/=

Biological Control of Aquatic Weeds

Grant No. Year of Award	Name of Grantee & Institution	Title & Duration	Total Allocation Rs. Cts.
RG/88/WW/01 (1988)	Prof. S.A. Gunasekera Dept. of Botany Dr I.V.S. Fernando Dept. of Zoology Univ. of Kelaniya Kelaniya.	Integrated Control of Water Hyacinth 3 years	110,000.00
RG/88/WW/02 (1988)	Dr P. Shivanathan CARI Gannoruwa Peradeniya	Integrated Control of Water Hyacinth 1 year	10000.00

MANGROVES

Grant No. Year of Award	Name of Grantee & Institution	Title & Duration	Total Allocation Rs. Cts.
RG/MAN/88/01 (1988)	Dr L. Pinto Mrs B.G. Jayatilleke Dept. of Zoology Open University	Level of waste oil (from boats) in some west coast estuaries and the effect of oil on selected mangrove fish and prawn species. (1½ yrs)	82900.00
RG/MAN/88/02 (1988)	Dr (Mrs) D. Nugegoda Dept. of Zoology Univ. of Colombo	Heavy metal levels in selected mangrove fauna of the Negombo lagoon with special reference to their physiology and potential as bio-monitors of metal pollution. (3 yrs)	180810.00
RG/MAN/88/03 (1988)	Dr S.U.K. Ekaratne Dept. of Zoology Univ. of Colombo	Biology and production of molluscs in Negombo lagoon. (2½ yrs)	167320.00

TABLE V : GRANTS COMPLETED DURING 1988

Agriculture & Animal Husbandry

Grant No. & Year of Award	Name of grantee & Institution	Title & Duration	Total Expenditure
RG/85/Ag/3 1985	Mr P. J. Wickremasinghe • Dr P. de A. Gurusinghe Mr I. M. H. B. Herath Dept. of Minor Export Crops Research Station Matale.	Genetic improvement and cultural practices in Betel (3 years)	Rs. 112,049/86
RG/86/Ag/2 1986	Dr I. V. S. Fernando Dept. of Zoology Univ. of Kelaniya Kelaniya.	Evaluation of the efficiency of protection of Snake Gourds from Melonfly attack using polythene covers (1 year)	Rs. 2484/70
RG/86/Ag/3 1986	Ms. A. M. K. Hemalatha Mr D. B. T. Wijeratne Ms. S. F. Hussain Div. of Food Technology CARI Gannoruwa.	Investigation of Post Harvest losses (Nutritional inclusive) in rice (1 year)	Rs. 39,107/21
RG/86/Ag/5 1986	Mrs. S. F. B. N. Gunawardene Fac. of Agriculture Univ. of Ruhuna Mapalana Kamburupitiya	Studies on the use of organic matter in crop production (2 years)	Rs. 49,768/42

BIOLOGICAL SCIENCES

Grant No. & Year of Award	Name of Grantee & Institutions	Title & Duration	Total Expenditure Rs. Cts.
RG/82/11 1982	Mr. W.L.E. de Alwis National Zoological Gardens Dehiwala.	Aspects of the ecology of Udawalawe National Park 3 years	60,108.00
RG/83/69 1983	Dr. S. Widanapathirana Dept of Botany Univ. of Kelaniya	Microbio-geochemical activities in forest soils in Sri Lanka with special reference to mineral cycling and Nitrogen transformation 2 years	115,000.00
RG/83/70 1983	Dr. P. Shivanathan Mr. R.S.Y. de Silva Plant Quarantine Office C.A.R.I. Gannoruwa	To develop methods of detection and exclusion of papaw viruses and vectors in plant imports 3 years	114,000.00 49
RG/84/B/5 1984	Dr. J.P. Edirisinghe Dept of Zoology Univ. of Peradeniya	Studies on the field release of the parasites <u>Evania appendigaster</u> and <u>Tetrastichus hagenowii</u> for the control of <u>Periplaneta americana</u> , the American cockroach. 3 years	73,870.00
RG/85/B/8 1985	Dr. A.H.M. Jayasuriya National Herbarium Peradeniya	Systematic investigation of the plant family Dioreaceae in Sri Lanka 1 year	45,000.00
RG/85/B/9 1985	Dr. K.S.P. Kalpage Antifilaria Campaign Miss. V.L. Gunatillaka SACEP	A study of the mosquito fauna of the Sinharaja MAB reserve with special reference to their breeding biology 2 years	36,457.00
RG/86/B/1 1986	Dr. K. Chitravadivelu Dept of Zoology Univ. of Jaffna	Biology of prawns in the Jaffna Lagoon and the evaluation of the performance of the gear used in prawn fishery. 2 years	60,540.00

Grant No. & Year of Award	Name of Grantee & Institutions	Title & Duration	Total Expenditure Rs. Cts.
RG/86/B/4 1986	Dr. J.P.N.R. Chandrasena Dept of Botany Univ. of Colombo	Survey of rice-field weeds of Sri Lanka- Stage II 1 year	23,400.00
RG/86/B/5 1985	Dr. H.N. de Silva Miss T.D. Silva Dept of Botany University of Colombo	Characterization of Sri Lankan banana germplasm based on morphological, vegetative and biochemical characters 1 year	21,645.00

CHEMICAL SCIENCES

Grant No. & Year of Award	Name & Institution	Title & Duration	Total Expenditure Rs.
RG/82/23 (1982)	Dr B.M.R. Bandara Dept. of Chemistry Univ. of Peradeniya	'Chemical investigation of the marine flora of Sri Lanka with view to isolation of biologically, industrially useful compounds' (3 years)	127,725.94
RG/84/C/02 (1984)	Prof 'uley de Silva Dept. of Chemistry Univ. of Sri Jayewardene- pura	'The Chemistry & Pharmacognosy of the substituted drugs and adulterants of Ayurvedic medicinal plants' (2 years)	79,407.00
RG/84/C/03 (1984)	Mr D.T. Jayamanne Div. of Occupational Hygiene Dept. of Labour Colombo 5	'Investigation of health hazards due to chromium in exposed workers of leather tanning and electroplating industries and the role of chromium in the effluents' (3 years)	23,639.75
RG/84/C/06 (1984)	Prof G.P. Wannigama Dr N.L.V.V. Karunaratne Dr B.M.R. Bandara Dept. of Chemistry Univ. of Peradeniya	'Alkaloids, Coumarins, triterpenes and other biologically active principles of some plant families of Sri Lanka' (3 years)	209,947.63
RG/84/C/07	Dr L.B. de Silva Dr W.H.M.W. Herath Medical Research Inst. Colombo 08	'Research on indigenous medicinal plants' (3 years)	116,815.14

Grant No. & Year of Award	Name & Institution	Title & Duration	Total Expenditure Rs.
RG/84/C/09 (1984)	Dr (Mrs) T.M.S. Atukorala Dept. of Biochemistry Fac. of Medicine Colombo 08	'A study of total and glucose tolerance factor chromium content of foods' (3 years)	138,442.48
RG/84/C/10 (1984)	Dr K.K.M.W. Silva Prof C.B. Dissanayaka Dept. of Geology Univ. of Peradeniya	'Study of Geology rock, soil and water Geochemistry of the Walawe Ganga Basin' (3 years)	213,179.87
RG/85/C/08 (1985)	Mr C.D.R.A. Jayewardene Sri Lanka Standards Inst. Dharmapala Mawatha Colombo 03	'Development of methods for estimation of fruit content in processed fruit products' (2 years)	25,253.67
RG/85/C/10 (1985)	Prof V. Kumar Dr N.L.V.V. Karunaratne Dept. of Chemistry Univ. of Peradeniya	'Studies on Citrus and other rutaceous plants' (2 years)	100,354.84
RG/85/C/15 (1985)	Dr L.B. de Silva Dr W.H.M.W. Herath Medical Research Inst. Colombo 08	'Chemical investigation of indigenous medicinal plants' (3 years)	121,221.45

Grant No & Year of Award	Name & Institution	Title & Duration	Total Expenditure Rs.
RG/85/C/14 (1985)	Dr N.S. Kumar Dr N.L.V.V. Karunaratne Dept. of Chemistry Univ. of Peradeniya	'Chemical investigation of the mucilaginous constituents in some plants used in traditional medicine' (1 year)	56,265.20
RG/85/C/03 (1985)	Prof K. Balasubramaniam Univ. of Jaffna Jaffna	'Biochemistry of drought resistance in coconut and palmyrah' (3 years)	165,628.92
RG/87/C/03 (1987)	Dr (Mrs) C.M. Arewgoda Mrs Sukumal Wimalasena Dept. of Chemistry Univ. of Kelaniya	'Pollution due to heavy metals and agro-chemicals in Kelaniya area' (Continuation of grant no. RG/85/C/13) (1 year)	33,875.00
RG/87/C/06 (1987)	Dr (Mrs) L.S.R. Arambewela Natural Products Section CISIR	'Phytochemical, analytical and agronomical studies on some common medicinal plants of Sri Lanka' (1 year)	26,258.00
RG/79/14 (1979)	Prof A.A.L. Gunatilaka Dr N.L.V.V. Karunaratne Dept. of Chemistry Univ. of Peradeniya Univ. of Colombo	'Chemical investigation of marine fauna of Sri Lanka and testing of their constituents for anti-microbial and pharmacological activity' (3 years)	72,059.67

Grant No. & Year of Award	Name of Grantee & Institution	Title & Duration	Total Expenditure Rs. Cts.
RGB/82/27 1982	Dr(Mrs) N.V.I. Ranatunga Dept of Pathology Univ. of Peradeniya	Histopathology of chronic obliterative arterial disease of limbs in the central province 3 years	18,000.00
RG/84/M/4 1984	Dr. Kamini Mendis Mr. W. Abeywickrema Dept of Parasitology Univ. of Colombo	Biology, Bioeconomics and population genetics in relation to 'possible' <u>Anopheles culicifacies</u> species complex in Sri Lanka. 2 years	26,000.00
RG/85/M/4 1985	Dr. D. Samarasinghe Dept of Psychiatry Univ. of Colombo	Traditional therapists-evaluation of present role and potential usefulness 2 years	71,900.00
RG/85/M/6 1986	Dr(Mrs) T. Saravanapavanathan Dept of Pharmacology Univ. of Jaffna	A study of the aetiology of urinary calculi 2 years	50,000.00
RG/85/M/7 1985	Dr. N.A.de S. Amaratunga Dr(Mrs) S. Karalliedde Dr. I.G. Premadasa Faculty of Medicine Univ. of Peradeniya	A study of epidemiological, clinical and bacteriological aspects relevant to treatment of cleft lip and palate and a feasibility study of a system of initial management of cleft lip and palate. 2 years	77,300.00
RG/85/M/8 1985	Dr(Mrs) G. Ponnampalam Prof. C. Sivagnanasundaram Faculty of Medicine Univ. of Jaffna	Study of infant mortality and still-births in the Jaffna Municipal area 1½ years	15,000.00
RG/85/M/9	Dr. K. Weerasuriya Mr. P.L.D.S. Perera Dept of Pharmacology Univ. of Colombo	Pharmacokinetics and pharmacodynamics of propranolol in Sri Lankans 1 year	3,000.00

Grant No. & Year of Award	Name of Grantee & Institution	Title & Duration	Total Expenditure Rs. Cts.
RG/86/M/2 1986	Dr. J.S.M. Peiris Dept of Microbiology Univ. of Peradeniya	Humoral antibody response to Shiga toxin in Shigellosis 1 year	50,000.00
RG/86/M/3 1986	Dr. T. Vinayagamoorthy Dept of Biochemistry Univ. of Jaffna	Stability of R-plasmids (isolated from clinical sources and drinking water sources) in <u>Salmonella typhi</u> , <u>Shigella dysenteriae</u> , <u>E.coli</u> , and <u>Klebsiella aerogenes</u> in nutritive and non nutritive media 2 years	50,000.00
RG/86/M/4 1986	Dr(Mrs) I.I. Angunawela Dept of Pharmacology Univ. of Peradeniya	A prospective study of the prescribing habits in the state sector 1 year	50,000.00
RG/87/M/2 1987	Dr. J.S.M. Peiris Dept of Microbiology Univ. of Peradeniya	Studies on shigellosis and shiga toxin producing <u>E. Coli</u> 1 year	62,000.00
RG/87/V/2 1987	Dr. D.D. Wanasinghe V.R.I. Gannoruwa	Development of an Improved Black Quarter (BQ) disease Vaccine 2 years	60,300.00

Natural Resources

Grant No. & Year of Award	Name of Grantee & Institution	Title & Duration	Total Expenditure
RG/87/EN/01 (1987)	Dr. A.H. Perera Dept. of Crop Science Univ. of Peradeniya	A study of ecological succession in <u>Pinus caribaea</u> plantations at Wewalthalawa : floristic composition, biomass accumulation, and litter dynamics. 15 months	125,601.69
USAID Grants RG/AID/02* (1983)	Dr. J.M.R.S. Bandara Dept. of Agricultural Biology Univ. of Peradeniya	Improving nitrogen fixation in grain legumes using selected strains of Rhizobia. 2 years - extended to 3½ years	536,513.29
RG/AID/08* (USAID/Harvard) (1985)	Prof. C.V.S. Gunatilleke Prof. I.A.U.N.Gunatilleke Dept. of Botany Univ. of Peradeniya	Population biology of tropical forest species in relation to conservation and domestication. 3 years	1,757,943.71

* Final reports awaited

PHYSICAL & ENGINEERING SCIENCES

Grant No. & Year of Award	Name & Institution	Title & Duration	Total Expenditure Rs.
RG/85/P/01 (1985)	Prof O.W. Jayaratne Dept. of Physics Univ. of Colombo	'Some aspects of atmospheric electricity in Sri Lanka (a) Diurnal and annual variations of earth's vertical electric field (b) The 'sunrise effect' (c) Possible correlations with plant growth (2 years)	40,652.02
RG/86/P/01 (1986)	Prof K. Tennakoon IFS Hantana	'Semiconductor materials for chemical storage of solar energy' (2 years)	72,670.71
RG/86/E/02 (1986)	Dr L.N. Pussegoda Mr K.E.D. Sumanasiri Dept. of Mech. Engineering Univ. of Peradeniya	'Prediction of the stress strain curve of a cold twisted circular bar and compare with experimental results' (2 years)	20,249.72
RG/87/P/01 (1987)	Dr W.P. Siripala Dept. of Physics Univ. of Kelaniya	'Low cost photovoltaic solar cells (1 year)	36,009.43
RG/87/E/04 (1987)	Dr C. Kariyawasam Dept. of Civil Engineering Univ. of Moratuwa	'Victoria and Randenigala threat to Kalawewa farmers' (1 year)	8,750.00

SOCIAL SCIENCE

Total Expenditure

Title & duration

Name of Grantee
& Institution

Grant No. &
Year of Award

Rs.8020/=

Arts education curriculum in the universities
of Sri Lanka: its reorganization & innovations
(2 years)

Mrs. S. Senadeera
Ph.D. Student
Fac. of Education
Univ. of Colombo

RG/84/SS/3
1984

Rs.3074.40

A study of the wastage of human resources in the
field of education in Sri Lanka and strategy for
its prevention; with special reference to the
district of Anuradhapura
(1 year)

Mrs. K.P.K. Wimala-
dharma
M.Phil. Student
Fac. of Education
Univ. of Colombo

RG/84/SS/8
1984

Rs.19558.65

Social network and exchange of favours among
higher officials in formal organizations in
Sri Lanka
(1 year)

Dr. S.T. Hettige
Dept. of Sociology
Univ. of Colombo.

RG/86/SS/2
1986

Rs.8740/=

Comparative study of 'common services' in
selected 'estate' settlement and 'village'
settlement in central Sri Lanka'
(1 year)

Mr N.K. Danggalle
Mr. M.B. Wijedasa
Dept. of Geography
Univ. of Kelaniya.

RG/86/SS/8
1986

Nil

Development of the Western medical profession
in Sri Lanka
(1 year)

Mrs. K.S. Pieris
M.Phil. student
Dept. of Sociology
Fac. of Arts
Univ. of Colombo.

RG/87/SS/2
1987

Rs.46250/=

Sinhala Buddhist Iconography and Iconometry
(1 year)

Dr. Chandra Wickrama-
gamage
Head/Dept. of Pali &
Buddhist Studies
Univ. of Sri Jayewar-
denepura.

RG/87/SS/3
1987

Grant No. & Year of Award	Name of Grantee & Institution	Title & Duration	Total Expenditure
RG/87/SS/12 1987	Mr. Rohana Ulluwishewa Dept. of Geography Univ. of Sri Jayewardenepura	Traditional Buffalo Grazing system in Sri Lanka: Limitations and Consequences, A case study Kurunegala District (1 year)	Rs.7925/=
RG/88/SS/9 1988	Mr. P.A.W. Ponnamparuma Sri Lanka Technical College Colombo 10.	Minor Irrigation Rehabilitation under the Integrated Rural Development Pro- gramme of the Puttalam District (1 year)	Rs.9300/=

Man and Biosphere

Grant No. & Year of Award	Name of Grantee/Institution	Title & Duration	Total Expenditure
MAB/85/1 1985	Mr. Lyn de Alwis Director Zoological Gardens Anagarika Dharmapala Mawatha Dehiwela. Dr S.W. Kotagama Open Univ. of Sri Lanka, Col.10.	'The ecology and social biology of the Western purple faced leaf monkey: <u>Presbytis senex</u> <u>nestor</u> an endangered species in Sri Lanka'	156287

TABLE VI : GRANTS TERMINATED/CANCELLED/WITHDRAWN IN 1988

Agriculture & Animal Husbandry

Grant No. Year of Award	Name of Grantee and Institution	Title of Project and Duration	Date of Termination Cancellation, Withdrawal	Reasons for Termination, Cancellation, Withdrawal
RG/88/Ag/5 1988	Dr. Nihal Rajapaksa Dr. (Mrs.) S. Rajapaksa Dr. P. Abeygunawardene	Assessment of post-harvest losses of horticultural crops in Sri Lanka 1 year	1988-12-9	Terminated due to the grantees Dr. N. Rajapaksa and Dr. (Mrs.) S. Rajapaksa left the country without making proper arrangements for the continuation work of their project RG/88/Ag/5.

Biological Science

Grant No. Year of Award	Name of Grantee & Institution	Title of Project & Duration	Date of Termination, Cancellation, Withdrawal	Reasons for Termination, Cancellation, Withdrawal
RG/88/B/3 1988	Rev. Dr. L.H. Cramer Mrs. R. Gangeswaran Dept of Botany Eastern University	Taxonomic and floristic studies on the Flora of the Northern part of the Polonnaruwa District 3 years	11.03.1988	Withdrawn due to 1) Prevailing conditions in the area. 2) The left of the co-grantee from the Island.

Chemical Sciences

Grant No./Year of Award	Name of Grantee & Institution	Title of Project and Duration	Date of Termination / Cancellation / Withdrawal	Reasons for Termination/ Cancellation/Withdrawal
RG/86/C/06 1986	Dr M. Jayaratne Mr F.L.N. Dissanaikie Dept. of Materials Engi. Univ. of Moratuwa Cey. Ceramics Corp. Pilliyandala	A study of the use of Zirconium minerals occurring in Sri Lanka in the fabrication of refractories and other ceramics (3 years)	13-01-1988	Terminated on grantee's request.
RG/88/C/02 1988	Dr H.M.K.K. Pathirana Dept. of Chemistry Univ. of Ruhuna	Studies on bidentate Tellurium Ligands and their possible industrial applications (1 year)	15-06-1988	Cancelled on grantee's request.

Medical & Veterinary Sciences

Grant No. Year of Award	Name of Grantee & Institution	Title of Project & Duration.	Date of Termination Cancellation Withdrawn	Reasons for Termination, Cancellation, Withdrawn
RG/83/30 1983	Dr. A.T.W.P. Jayawardena Cardiothoracic Unit Colombo General Hospital Dr. C.G. Uragoda Chest Clinic Colombo General Hospital	Measurements of lung function in normal Sri Lankans 2 years	13.05.1988	Terminated 1) Not utilized funds from the grant. 2) No report has been submitted.
RG/83/75 1983	Prof. N. Sreeharan Dr. K. Ranjadayalan Faculty of Medicine Univ. of Jaffna	The use of <u>Momordica charantia</u> (Bitter gourd) in diabetes mellitus 1 year	13.05.1988	Terminated Grantees have left the island.
RG/85/M/2 1985	Prof. C. Sivagnanasundram Prof. N. Sreeharan Mrs. J. Jegatheesan Faculty of Medicine Univ. of Jaffna	Study of the demographic socio-econo- mic and epidemiological features in relation to the state of health of the Brahmin community in Jaffna 1½ years	11.11.1988	Terminated Not possible to carry out the project due to prevailing conditions in the area.
RG/88/M/9 1988	Dr. B.R.R.N. Mendis Miss. A.S. Attele Dept of Oral Pathology Univ. of Peradeniya	Morphometric studies on human sali- vary glands (normal glands those affected by chronic sialoadenitis, those affected by tumours 2 years	11.11.1988	Terminated. 1) Co-grantee left the island. 2) Grantee was not in a position to carry out the project.

Physical & Engineering Sciences

Grant No./Year of Award	Name of Grantee and Institution	Title of Project and Duration	Date of Termination /Cancellation /Withdrawal	Reasons for Termination/ Cancellation/Withdrawal
RG/87/E/03 1987	Mr D.L.O. Mendis 16/1 George E. De Silva Mawatha Kandy	An evaluation of the ancient irrigation system in the Walawe Basin, including an identification of the components of the system; an estimate of the costs of construction and maintenance; evaluation of economic surpluses; estimate of population densities and a study of methods of irrigation water management & theories of social organization including modes of production. (1 year)	02-03-1988	Cancelled, because the grantee did not accept it.
RG/88/P/06 1988	Dr I.K. Perera Dept. of Physics Univ. of Sri Jayewar - denepura	Development of N ₂ - Laser pumped dye laser systems for photo chemical studies (2 years)	15-06-1988	Cancelled on grantee's request

Social Sciences

Grant No. Year of Award	Name of Grantee and Institution	Title of Project and Duration	Date of Termination/ Cancellation/Withdrawal	Reasons for Termination, Cancellation, Withdrawal
RG/86/SS/6 1986	Mr. M.K.D. Dharmadasa Teachers Training School Maharagama.	The progress of blind students in special schools and the uniform education system a comparative assessment (In Sinhala) (2 years)	Terminated 30/11/88	Terminated due to non-submission of final report despite several reminders.
RG/87/SS/6	Mr. S.O. Fernando K/Govinna Maha V. Govinna.	Influence of geographical variations on the educational process (In Sinhala) (2 years)	Terminated 30/11/88	Terminated due to lack of any progress in the project.
RG/85/SS/1	Mr. L. Ranwatta Research Officer Kangikkuliya Mugunuwatawana Chilaw.	An investigation into the supervision of teaching in schools in Sri Lanka to highlight its weaknesses with special reference to Chilaw educational region (In Sinhala) (1 year)	Terminated 30/11/88	Terminated due to non-submission of the final report despite several reminders.

Mangroves

Grant No. Year of Award	Name of Grantee and Institution	Title of Project and Duration	Date of Termination Cancellation Withdrawal	Reasons for Termination, Cancellation, Withdrawal
RG/MAN/87/03	Dr R.A.S. Rebel Department of Community Medicine Faculty of Medicine Colombo 8.	The object of this study is to find out whether Mangrove Vegetation and its Environment has any Influence on the Health of its Inhabitants. 07 months	17 May 1988	Withdrawn due to failure to sign the Contractual Agreement
RG/MAN/87/04	Prof. S. Balesubramaniam Department of Botany Prof. M. de Silva Department of Zoology University of Peradeniya Peradeniya.	The short-term and Long-term Effects of Removal and Replantation of Tree Species on the Structure and Floristic and Faunistic Compositions of Mangroves in Negombo Area. 03 years	19 August 1988	Cancelled. For resubmission of a modified project proposal in 1988.

TABLE VII : PARTICIPATION AT CONFERENCES, SEMINARS AND WORKSHOPS OVERSEAS DURING 1988
ON THE NOMINATION OF NARESA

Subject and Period	Awarding Agency	Nominee/s
1. MAB delegation to study Forestry and conservation of endangered species China, 18-29 April 1988	UNESCO	Mr D.E.F. Fernandez, DSA Prof R.N.D. Fonseka Prof B.A. Abeywickrema Prof S. Balasubramaniam
2. 5th Tripartite Review Meeting on Mangroves Thailand, 23-26 May 1988	UNESCO	Dr R.P. Jayewardene, DG
3. CSC Science & Technology Meeting Mauritius, 23-29 May 1988	CSC	Mr M.A.T. de Silva, DDG
4. Regional Technical & Research Planning Meeting for South and South-East Asia on Ecosystem Rehabilitation in the Asian Humid Tropics Bogor, Indonesia, 22-24 August 1988	UNESCO	Mr L.C.A. de S. Wijesinghe, Addl.DG
5. SAARC meeting on Science Policy Islamabad, 19-22 September, 1988	SAARC	Dr R.P. Jayewardene, DG Mr L.C.A. de S. Wijesinghe, Addl.DG

Subject and Period	Awarding Agency	Nominee/s
6. Sixth ASTINFO Meeting & Regional Seminar on Marketing of Information Products and services Kualalampur, 19-27 September 1988	UNESCO	Mr N.U. Yapa, DI
7. Ad Hoc Committee on the Establishment of Network of Scientific Organizations in the Third World Trieste, Italy, 4-5 October 1988	Third World Academy of Sciences (TWAS)	Dr R.P. Jayewardene, DG
8. Tenth Congress/Assembly-International Federation of Documentation (FID/CAO) Beijing, China, 24-29 October 1988	FID/CAO	Mr N.U. Yapa, DI
9. TWAS Conference on the Role of Women in the Scientific & Technological Development of the Third World Trieste, Italy, 3-7 October 1988	TWAS	Mrs N. Amarasuriya, Asst. Director (Pub) Dr (Mrs) L.G. Jayewardene Prof (Mrs) U. Coomaraswamy
10. Sixth Meeting of the SAARC Technical Committee on Science & Technology Dhaka, Pakistan, 10-12 October 1988	SAARC	Mr M. Watson, Asst. Director (SA)

Subject and Period	Awarding Agency	Nominee/s
11. Tenth meeting of the Association for Science Co-operation in Asia (ASCA) Seoul, Korea, 1-3 November 1988	ASCA	Mr L.C.A. de S. Wijesinghe, Addl.DG Dr P.A.J. Ratnasiri, Dty. Director, CISIR
12. Implementation of International Standards and methods of Data Collection on Scientific and Technological Information and Documentation Bangkok, 7-11 November 1988	UNESCO	Mr W.R. Jayakody, Documentalist

					14,600,251.78
<u>Total B/F</u>					
<u>Miscellaneous Fund</u>					
Add: Drawings from Treasury	752,794.33		796,240.61		
Treasury Deposit	740,750.00	800,000.00			
	<u>1,493,544.33</u>				
Less: Expenditure - Note 1.4	697,303.72				
	796,240.61				
	<u>153,497.94</u>		153,497.94		715,069.13
<u>Scientific Manpower Project Fund</u>					
Add: Drawings from Treasury					
Treasury Deposit					
Less: Expenditure	153,497.94				
	<u>153,497.94</u>				153,497.94
<u>Working Committees Fund</u>					
Add: Drawings from Treasury	686,050.00		741,707.34		
Treasury Deposit	375,000.00	400,000.00			
	<u>1,061,050.00</u>				
Less: Expenditure - Note 1.5	319,343.32				
	741,707.34				
	<u>1,141,707.34</u>				1,141,707.34
<u>Foreign Aid Fund</u>					
Add: Drawings from Treasury	18,155,403.57		23,043,813.81		
Treasury Deposit	10,987,040.00	7,625,964.10			
Foreign Aid held by NARESA	1,228,646.96				
	<u>394,902.25</u>				
Less: Net Expenditure - Note 1.6	30,740,982.78				
	7,697,168.97				
	<u>71,047,813.81</u>				
<u>Total C/F</u>					25,897,867.23
					<u>42,268,052.34</u>

184,246.11	Total B/F			42,268,032.34
409,604.81	<u>Current Liabilities</u>			
1,858,553.10	Creditors		150,698.27	
12,000.00	Accrued Charges		402,733.07	
50,000.00	Provisions		3,583,901.06	
	Endowment Fund		23,560.00	
	Refundable Deposit		50,000.00	
	Store-keepers Refundable Security Deposit		1,750.00	
	Tender Deposit		<u>17,950.00</u>	
2,514,404.02				4,210,592.40
42,128,453.68				<u>46,478,624.74</u>

NATURAL RESOURCES ENERGY & SCIENCE AUTHORITY OF SRI LANKA

Balance Sheet as at 31st Dec. 1988

As at 31.12.87	As at 01.01.88	Additions (Disposals) during the year	Accumulated Depreciation	Net Balances As at 31.12.88
Represented by Fixed Assets				
Buildings	2,400,533.56	27,309.00 (10,900.00)	1,177,682.00	1,250,160.56
Office Equipment & Furniture	1,639,448.22	453,591.66	1,504,886.00	577,253.88
Motor Vehicles	1,604,746.38	916,426.60 (20,480.00)	1,543,372.73	977,800.45
Motor Bicycles	114,925.00	1,970.00	56,739.00	39,676.00
Bicycles	9,338.60	(1,878.60)	4,927.00	2,533.00
Sports Equipment	1,504.00	(2,550.00)	1,504.00	
Accessories & Miscellaneous	94,347.35	10,897.50	75,479.00	27,215.85
Library Books	1,197,328.62	(200.00) 25,139.95 (85,815.33)		1,222,268.57
Scientific Library Equipment out on loan	16,899,643.06	4,811,197.76 (164,640.00)	8,306,580.50	13,318,444.99
Documentation Equipment	3,754,384.60	234,685.88	2,435,137.00	1,389,293.48
Telephone Installation Work in Progress	27,716,199.59	6,194,754.42	15,106,307.23	18,804,646.78
				13,953.64
				45,232.45
				18,864,132.87
Current Assets				
Stocks	440,846.22			
Debtors	1,660,462.33			
Prepayments	5,006,309.34			
Deposits	37,395.45			
Treasury Deposit	17,411,336.31			
Balance at Bank A/C No. 4530800224	2,482,655.94			
4530800232	511,295.16			
Petty Cash	10,000.00			
Cash in Hand	9,881.12			
Fixed Deposit	23,560.00			
National Savings Bank A/C	750.00			
	3,038,142.22			
				27,614,491.87
				46,478,624.74

W. M. M. M.
Acty. Director General
Natural Resources, Energy & Science Authority of Sri Lanka
 47, Matiland Place, Colombo 7.

NATURAL RESOURCES ENERGY & SCIENCE AUTHORITY OF SRI LANKA

Income & Expenditure A/C for the year ended 31st December 1988

As at 31.12.87				
3,990,000.00	Drawings from Treasury			4,750,000.00
21,502.88	<u>Income for the year</u>			
167,462.42	Interest received		17,249.23	
128,142.17	Sundry Income		137,260.46	
12,912.75	Sale of Publications		92,039.70	
106,459.66	Photocopy receipts		6,528.15	
18,915.00	Receipts from printing out side jobs		89,929.82	
1,217,960.00	Profit on sale of fixed assets		9,021.00	
5,663,334.88	10% foreign aid administration cost		<u>981,818.00</u>	
	<u>Less: Expenditure for the year</u>			<u>1,328,846.36</u>
	<u>Council Expenditure</u>			<u>6,078,846.36</u>
21,411.30	Travelling & Allowances for Authority members	29,251.00		
10,084.20	Entertainment	<u>12,214.70</u>		41,465.70
	Staff Emoluments			
2,221,342.61	Salaries & Allowances	3,217,528.72		
366,384.87	Employees Provident Fund	516,926.63		
72,662.84	Employees Trust Fund	91,902.40		
51,544.56	Retiring Gratuity	7,672.50		
50,363.77	Provisions for retiring Gratuity	450,209.78		
70,766.46	Overtime	<u>127,162.44</u>		4,411,402.47
	<u>Office Administrations</u>			
11,827.87	Travelling (Official)	10,251.57		
198,054.46	Stationary & Consumables	163,015.15		
97,536.15	Electricity	162,253.80		
120,421.81	Telephone	<u>152,778.25</u>		
	Total C/F	488,298.77		<u>4,452,868.17</u>
				<u>6,078,846.36</u>

72,254.81	Balance B/F	488,298.77	4,452,860.17	6,078,845.56
42,625.00	Postage	46,391.96		
1,387.50	Audit fees	42,625.00		
9,939.30	Banking Charges	5,287.47		
54,400.00	Medical Expenses	13,971.97		
247,864.07	Advertising	74,660.00		
42,521.23	Maintenance of Motor Vehicle	159,526.43		
49,036.55	Maintenance of Office Equipment & Furniture	52,131.84		
1,775.00	Maintenance of Office Building	71,171.39		
58,284.67	Staff Welfare	400.00		
478.19	Insurance	103,898.07		
	Water Consumption charges	1,800.00		
	Bad Debts			
	Provision for Doubtful debts			
	Loss of Fixed Assets	2,743.00		
	Loss of Stocks			
115,687.12	Security Services	116,784.00		
2,648,831.00	Depreciation	3,380,266.00		
50,411.25	Sundry Expenses	75,703.70		
7,833.91	Custom Duty & B.T.T			
			<u>4,635,659.60</u>	
1,032,847.62	Excess of Expenditure over Income			<u>9,088,527.77</u>
7,002.12	Add Prior year Adjustment (Net)			<u>3,009,681.41</u>
<u>1,025,845.50</u>				<u>178,845.33</u>
				<u>3,188,526.74</u>

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 & policies relevant in accounting have been adhered to on a consistent basis as in the previous year.

The ten percent of foreign donor funds received, which is for covering overheads, has been taken credit in the Income and Expenditure statement.

1.1 Documentation Unit Capital Fund Expenditure

1. SISTIC Equipment	179,425.00
2. " Books & Periodicals	201,230.78
3. " In House Printing & Binding	121,471.53
4. " Consumables	274,454.98
5. " Miscellaneous	31,193.87
6. " Services	8,216.00
7. " Publications & Publicity	103,349.50
8. " Maintenance & Repairs	98,849.23
9. Expenditure out of UNESCO funds	<u>55,260.88</u>
	1,073,451.77
<u>Less</u> Cost of Documentation Equipment & Library books	<u>259,064.58</u>
	<u>814,387.19</u>

1.2 Research Grants Expenditure

Actual expenditure for the year	1,785,448.94.	
<u>Add</u> Expenditure on grants terminated & completed before '88	<u>15,651.75.</u>	1,801,100.69
<u>Less</u> Cost of Scientific equipment acquired during the year		<u>69,961.88</u>
		1,731,138.81
<u>Add</u> Provision for balance funds		<u>2,589,551.06</u>
		4,320,689.87
<u>Less</u> Net Prior year adjustments		<u>22,067.35</u>
		<u>4,298,622.52</u>

1.3 Man & the Biosphere Expenditure

1. MAB/81/02	10,475.25
2. MAB/85/01	16,264.45
3. MAB/85/02	4,200.00
4. MAB/86/01	71,556.63
5. MAB National Committee	<u>46,081.60</u>

148,577.93

Less: Prior year adjustments (cancelled cheque)

1,800.00

146,777.93

1.4 Miscellaneous Fund Expenditure

1. Awards for outstanding research work	892.50
2. Participation in International Scientific Work	178,518.06
3. Seminars & Symposias	26,920.88
4. Subscriptions to International Scientific Unions	375,350.50
5. Special Research Projects	
1. SAREC 11, SAREC/11/ZSSL/2,3,4,8	134,778.07
2. STP Survey	34,017.92
3. Mangrove Commission	6,597.00
4. UNESCO/86/PP/01	<u>124,096.55</u>

881,171.48

1.5 Working Committees Fund Expenditure.

1. Agriculture & Animal Husbandry Working Committee	4,897.50
2. Biological Sciences Working Committee	13,596.25
3. Chemical Sciences Working Committee	20,138.10
4. Medical & Vet. Sciences Working Committee	8,530.50
5. Natural Resources Working Committee	5,647.50
6. Physical & Engineering Science Working Committee	3,575.00
7. Social Science Research Working Committee	46,456.00
8. Science Education Research Working Committee	31,138.25
9. Science Information Working Committee	20,369.90
10. Working Committee on Energy	13,369.00
11. Mangrove Survey	<u>4,050.00</u>

171,768.00

Add Prior year adjustments

68,573.08

240,341.08

1.6 Foreign Aid Expenditure

1. Advisory & Buffalo Research Working Committee	11,720.00
2. ACIAR Project Expenditure	157,799.75
3. CIDA	4,654,557.16
4. SAREC	1,892,853.23
5. RG/AID	3,218,966.27
6. RG/87/AG/03	332,754.55
7. RG/87/IS/01	3,650.00
8. RG/87/NORAD/SS/08	9,562.00
	<u>10,281,862.96</u>

<u>Less</u> Cost of Scientific equipment & motor vehicles acquired during '88.		4,922,620.88
		<u>5,359,242.08</u>

<u>Less</u> Prior year adjustments	57,000.80	
Money received from sale of products	<u>6,603.00</u>	<u>63,603.80</u>
		<u><u>5,295,638.28</u></u>

2. Assets & the basis of their valuation

Depreciable assets & Depreciation:

Depreciation has been provided on original cost or at valuation on a straightline basis consistent with that of the previous years & is calculated to write off the assets over their estimate useful lives.

2.1 Debtors

Total Debtors	1,686,239.90
Less: Provision for doubtful debts	<u>25,777.57</u>
	<u><u>1,660,462.33</u></u>

3. Liabilities & Provisions

3.1 Creditors

Creditors amounting to Rs.132,258.72 represents monies held by NARESA on behalf of 11 projects given below).

Creditors:-

1. CANLIT	- 5,843.25
2. Minor Micro CDS/ISIS Workshop	.1,501.16
3. MAB delegators wait A/c	12,316.50
4. Reserves for NTIS Lending of books programme	- 597.37
5. NTIS Creditors	- 4,239.75

6. RINSCA	17,929.87
7. COSTFOD	7,880.00
8. SLATAI	6,030.00
9. UNILIST/ISIS	38,715.00
10. Sundry Creditors	4,877.37
11. APCTT	30,000.00
12. Suspense A/c	<u>772.00</u>
	<u>130,698.27</u>

These sums will be expended as the programme advance.

3.2 Provisions

Provisions included the provisions made for the balance funds allocated to the various research grants and not utilized during the current year, but allowed on principle to be utilized in future, during the currency of the grant.

3.3 Employees' Benefit

All employees are covered by EPF & ETF.

3.4 Retiring Gratuity

Provision has been made in the accounts in respect of liability for retiring gratuity.

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Telephone
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My No.
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Your No.

691151

EG/S/NARESA/88/01.



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AUDITOR-GENERAL'S DEPARTMENT
INDEPENDENCE SQUARE, COLOMBO 7
SRI LANKA (CEYLON)

දිනය/දිනය/දිනය July 27, 1990.

Director General,
Natural Resources, Energy and
Science Authority of Sri Lanka,
Maitland Place,
Colombo 07.

Report of the Auditor General on the Accounts of the
Natural Resources, Energy and Science Authority of
Sri Lanka for the year ended December 31, 1988 in terms
of Section 14(2)(c) of the Finance Act, No.38 of 1971.

The audit of the accounts of the Natural Resources, Energy and Science Authority
of Sri Lanka for the year ended December 31, 1988 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 Authority 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 was furnished to the Authority on March 21, 1990.

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 extent of such reviews and tests were such as to
enable as wide an audit coverage as possible within the limitations of staff,
resources and time available to me. Sub-sections (3) and (4) of Section 13 of
the Finance Act give discretionary powers to the Auditor General to determine the
scope and extent of the audit.

2. Accounts

2:1. Opinion

Subject to my comments in this report, I am of opinion that the accounts presented
have been satisfactorily prepared on the basis of generally accepted accounting
principles applied on a basis consistent with that adopted in the preceding year.

2:2. Financial Results

The activities of the Authority are operated on a General Fund and Special Funds. According to the accounts rendered, the operating result of the General Fund for the year ended December 31, 1988 was a deficit of Rs.3,009,681 as compared with a corresponding deficit of Rs.1,032,848 in the preceding year. The activities under the Special Funds for the year under review had resulted in a surplus of Rs.4,842,510 as compared with a corresponding surplus of Rs.5,968,063 in the preceding year.

2:2:1. General Fund

A summary of the financial results of the General Fund of the Authority for the year under review and the preceding year is given below.

	<u>Year ended December 31,</u>	
	<u>1988</u>	<u>1987</u>
	Rs.	Rs.
<u>Income</u>		
Interest received	17,249	21,503
Sale of Publications	92,040	128,142
Receipts on account of the cost of Administration of Foreign Aid	981,818	1,217,960
Income from sale of photocopies	6,528	12,913
Profit from sale of Fixed Assets	9,021	18,915
Receipts on account of Printing works done for outside parties	89,930	106,460
Other Income	<u>132,261</u>	<u>167,462</u>
	<u>1,328,847</u>	<u>1,673,355</u>
<u>Less : Expenditure</u>		
Staff Emoluments	4,411,402	2,833,065
Office Administration	4,635,660	3,831,642
Council Expenditure	<u>41,466</u>	<u>31,496</u>
	<u>9,088,528</u>	<u>6,696,203</u>
Deficit before the Government Grant	7,759,681	5,022,848
<u>Less</u>		
Government Grant for Recurrent Expenditure	<u>4,750,000</u>	<u>3,990,000</u>
Deficit after the Government grant	<u>3,009,681</u>	<u>1,032,848</u>

Contd...3.

2:2:2. Special Funds

The following statement shows the financial results of each of the special funds for the year under review and the preceding year.

	Year ended December 31,	
	1988	1987
	Rs.	Rs.
<u>Documentation Unit Capital Fund</u>		
Government contribution	1,750,000	975,000
UNESCO and SAREC Grants	<u>500,000</u>	<u>286,120</u>
	2,250,000	1,261,120
Less: Expenditure for the year	<u>814,387</u>	<u>729,659</u>
Surplus for the year	1,435,613	531,461
<u>Reserach Grants Fund</u>		
Government Contribution	4,375,000	3,550,000
Less: Expenditure for the year	<u>4,298,623</u>	<u>3,240,719</u>
Surplus for the year	76,377	309,281
<u>Man and Biosphere Fund</u>		
Government Contribution	400,000	300,000
Other Income	<u>144,756</u>	<u>38,000</u>
	544,756	338,000
Less: Expenditure for the year	<u>146,778</u>	<u>218,202</u>
Surplus for the year	397,978	119,798
<u>Miscellaneous Funds</u>		
Government Contribution	800,000	740,750
Less: Expenditure for the year	<u>881,171</u>	<u>697,304</u>
Surplus/(Deficit) for the year	(81,171)	43,446
<u>Working Committees Fund</u>		
Government Contribution	400,000	375,000
Less: Expenditure for the year	<u>240,341</u>	<u>319,343</u>
Surplus for the year	159,659	55,657
<u>Foreign Aid Fund</u>		
Government Contribution	7,625,964	10,982,040
Treasury Deposits	-	1,228,647
Other Income	<u>523,728</u>	<u>394,902</u>
Less: Expenditure for the year	<u>8,149,692</u>	<u>12,605,589</u>
	5,295,638	7,697,169
Surplus for the year	<u>2,854,054</u>	<u>4,908,420</u>
Surplus on special funds for the year	<u>4,842,510</u>	<u>5,968,063</u>

2:3. Financial Structure

The financial structure of the authority as at December 31, 1988 as compared with that as at December 31, 1987 is given below :

<u>Resources</u>	<u>As at December 31,</u>	
	<u>1988</u> Rs.	<u>1987</u> Rs.
General Fund of the Authority	5,727,015	7,915,541
Special Funds -		
Documentation Unit Capital Fund	2,864,629	1,429,016
Research Grants Fund	4,434,790	4,358,413
Man and Biosphere Fund	1,573,798	1,175,820
Miscellaneous Funds	715,069	796,240
Scientific Manpower Project Fund	153,498	153,498
Working Committees Fund	901,367	741,707
Foreign Aid Fund	<u>25,897,867</u>	<u>23,043,814</u>
	42,268,033	39,614,049
	=====	=====
<u>Utilisation</u>		
Fixed Assets (written down value)	18,804,647	15,805,112
Net Current Assets	<u>23,463,386</u>	<u>23,808,937</u>
	42,268,033	39,614,049
	=====	=====

2:4. Source and application of funds

The following statement shows the source and application of funds of the authority during the year under review.

	Rs.	Rs.	Rs.
<u>Source</u>			
Deficit for the year			3,009,681
<u>Add</u> : Profit from sale of fixed assets			<u>9,021</u>
<u>Add</u> : Adjustments in respect of the preceding year			<u>3,018,702</u>
			<u>178,845</u>
			3,197,547
<u>Less</u> : <u>Adjustments not involving movement of funds</u>			
Depreciation		3,380,266	
Depreciation adjustments in respect of preceding year		114	
Loss of Assets		2,743	
Write off of assets		<u>200</u>	<u>3,383,323</u>
			185,776

Other Sources

Government Capital Grant - General Fund		1,000,000	
Surplus from Special Funds -			
Documentation Unit Capital Fund	1,435,613		
Research Grants Fund	76,377		
Man and Biosphere Fund	397,978		
Working Committees Fund	159,659		
Foreign Aid Fund	<u>2,854,054</u>	4,923,681	
Proceeds from the Sale of Fixed Assets		25,485	
Refund of insurance payments		<u>101</u>	<u>5,949,267</u>
			6,135,043

Application

Deficit from Special Funds - Miscellaneous Funds		81,171	
Purchase of Fixed Assets		6,399,423	
Work in Progress		<u>45,532</u>	<u>6,526,126</u>
Decrease in Working Capital as analysed below			391,083
			=====

Effect on Working Capital

	<u>Increase</u>	<u>Decrease</u>	
	Rs.	Rs.	
Stocks	-	16,174	
Debtors	615,477	-	
Prepayments	3,289,539	-	
Treasury Deposits	-	3,042,218	
Other Deposits	-	6,958	
Cash and Bank Balances	465,439	-	
Creditors	53,548	-	
Accrued Expenses	6,872	-	
Provisions	-	1,725,348	
Donations Fund	-	11,560	
Tender Deposits	-	17,950	
Security Deposits	-	<u>1,750</u>	
	<u>4,430,875</u>	<u>4,821,958</u>	391,083
	=====	=====	=====

2:5. Comments on Accounts

2:5:1. Unidentified Transactions

Direct Bank debits aggregating Rs.3,335 as at December 31, 1988 had^{not} been identified and brought to account.

2:5:2. Lack of Evidence for Audit

The following items could not be satisfactorily vouched or accepted in audit due to the reasons indicated against each items:

<u>Item</u>	<u>Value</u>	<u>Evidence not made available for audit</u>
	<u>Rs.</u>	
(a) Petty Cash Imprests granted for Research Grants	580,854)	Confirmations
(b) Deposits and Sundry Debtors	14,599,963)	
(c) Sundry Creditors	130,698)	

2:5:3. Non-compliance with Objectives, Statutes, Laws, Rules, Regulations and Management Decisions

According to ^{the} Circular No.A/04 of the Authority all petty cash imprests where no expenditure had been incurred for three months should be refunded in full but the number of imprests that remained without being refunded as at December 31, 1988 was 49 while the amount due was Rs.173,081.

3. Financial and Operating Review

3:1. Financial Results

According to the accounts, the deficit under the General Fund for the year under review was Rs.3,009,681 as compared with a corresponding deficit of Rs.1,032,848 in the preceding year, this disclosing a deterioration of Rs.1,976,833 in the financial result. This adverse variance can be analysed as follows.

	<u>Favourable</u>	<u>Adverse</u>
	Rs.	Rs.
Increase in income for the year	415,492	-
Increase in staff expenses	-	1,578,337
Increase in office administration expenses	-	804,018
Increase in council expenditure	-	<u>9,970</u>
	<u>415,492</u>	<u>2,392,325</u>
<u>Less: Favourable variance</u>	<u>415,492</u>	<u>415,492</u>
Net Adverse Variance		<u><u>1,976,833</u></u>

It had been a regular feature of this institute to adjust the financial results disclosed in the financial statements in subsequent years for omissions, errors, etc. after the rendition of annual financial statements to audit. Details of adjustments in subsequent years to the annual accounts during the last five years are given below.

Year	Financial results as per accounts <u>(Deficit)/Surplus</u>	Subsequent year adjustments	(Deficit)/Surplus after adjustment
-----	Rs.	Rs.	Rs.
1983	(3,894,566)	-	(3,894,566)
1984	(3,829,138)	3,539,288	(289,850)
1985	(2,045,796)	(79,322)	(2,125,118)
1986	(2,117,017)	250,798	(1,866,219)
1987	(1,032,848)	7,002	(1,025,846)

In the circumstances the possibility of such adjustments to the financial results disclosed in the accounts presented to audit in the ensuing years cannot be ruled out.

3:2. Research Projects

Grants are paid to individuals and institutions for carrying out research works of the authority. Details of research works undertaken during the year under review and the preceding year are given below.

	<u>1988</u>	<u>1987</u>
Number of ongoing Researches as at the beginning of the year	167	138
Number commenced during the year	<u>44</u>	<u>65</u>
Total	211	203
Number completed during the year	<u>55</u>	<u>36</u>
Number of ongoing Researches as at the end of the year	<u>156</u>	<u>167</u>

The 156 ongoing Researches as at the end of the year under review included 10/ Researches which had not been completed on the due dates. The delays in completion had ranged from 1 to 4 years.

3.3. Transport Fleet

The transport fleet of the Authority included 04 Jeeps, 02 waggons, 02 vans, 02 cars and 02 motor cycles. Some of the significant data relating to the usage of these vehicles are given below.

Total performance as per Daily Running Charts - Kilometres	111,304
Quantity of fuel consumed - Petrol litres	5,877
- Diesel fuel litres	4,741
Average performance per litre of fuel -	
Petrol - Kilometres	12.04
Diesel fuel - Kolometres	8.55
Total expenditure on fuel	Rs. 111,878
Total expenditure on repairs	Rs. 128,995
Average expenditure on fuel per kilometre - Jeeps	Rs. 1.06
Waggons	Rs. 0.82
Vans	Rs. 2.20
Cars	Rs. 1.58
Motor Cycles	Rs. 0.56
Average expenditure on repairs per kilometre - Jeeps	Rs. 2.20
Waggons	Rs. 0.31
Vans	-
Cars	Rs. 1.69
Motor Cycles	-

Average expenditure on repairs and fuel per kilometre -	Jeeps	Rs. 3.26
	Waggons	Rs. 1.13
	Vans	Rs. 2.20
	Cars	Rs. 3.27
	Motor Cycles	Rs. 0.56

The Authority had deployed 2 motor cycles and a motor vehicle for use by the University of Peradeniya, one motor cycle for use by the University of Ruhuna and one motor vehicle for use by the Rubber Research Institute, Agalawatte.

Log Books and Records of Expenditure on repairs and fuel had not been maintained in respect of the vehicles of the Authority. Monthly performance summaries had not been furnished to the Auditor General.

3.4. Budgetary Control

Major variances between the budgeted income and expenditure and the actual income and expenditure of the Authority were observed in audit, thus disclosing that the budget had not been made use of as an effective instrument of control.

4. Systems and Controls

Deficiencies observed during the course of audit were referred to in my detailed report furnished to the Director General on March 21, 1990. Special attention is needed in respect of the following areas of control.

- (a) Budgetary Control
- (b) Assets Control
- (c) Cash Control
- (d) Research Projects.

Auditor General.

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