## **ANNUAL REPORT - 2014** NATIONAL RESEARCH COUNCIL

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## **VISION & MISSION**

## Vision

"Enable Sri Lanka to achieve science and knowledge based developed country status"

## Mission

**"To promote, fund and facilitate and monitor** fundamental and applied research and enhance human resource of Sri Lanka to achieve science and technology based developed country status"

## **OBJECTIVES**

- To bring in private sector and industry representation in addition to the highly productive academics into the Council;
- To promote fundamental and applied research and facilitate human resource development in all disciplines of Science by funding University based Research Students registered for Higher Research Degrees;
- To plan and coordinate the research effort of researchers in each Public Sector Scientific Research and Development Institutes;
- To facilitate the research and evaluate the performance of individual researchers in the Public Sector Scientific Research and Development Institutes and make periodic recommendations through the Presidential Secretariat to the Treasury for funding such research;
- To promote, fund and facilitate collaborative research programmes between Researchers in Public Sector Scientific Research and Development Institutes and Universities leading to the award of Higher Research Degrees by the Universities;
- To promote and facilitate partnerships among the industry, Universities and the Public Sector Scientific Research and Development Institutes;
- To develop systems of national recognition and awards for successful research and innovations;
- To foster and sustain a Science and Technology Research Culture and Community in Sri Lanka that would respond productively to national development needs.

## CHAIRMAN'S MESSAGE

#### (Message to be edited)

I am pleased to submit for tabling in Parliament, the Annual report of the National Research Council (NRC) of Sri Lanka for the Year 2014, the apex institution for funding scientific research in state sector institutions in Sri Lanka. The National Research Council was established under constitutional powers of His Excellence President Mahinda Rajapakse to fulfill his Mahinda Chinthana "Idiridekma" development plan through Research.

The year began with the Presidents Awards for Scientific research, the honor of the president for the publications done at international level in indexed journals, awarding 148 scientists of the country for their achievements in 2007, 2008 and 2009 years. During the year we were able to award 2010, 2011 and 2012 by awarding 450 scientists holding two prestigious functions during the year.

The new program commenced 2013, Target oriented multi-disciplinary mega grants program received funding enabling 5 mega grants to come forth during the year anticipating solving 5 key national issues.

The year also led to initiate one private public partnership, while few partnerships are on the trail to be initiated. 21 Investigator driven research grants over 160 applicants were funded through the competitive and strict evaluation process during the year.

The new focus towards building research partnerships between the private and public sector and the encouraging scientists to collaborate through our target oriented multi-disciplinary research projects is progressing well towards the success.

I am deeply grateful to the Minister for Technology and Research Hon. Patali Champika Ranawaka and the Secretary to the Ministry Mrs. Dhara Wijayathilake, for the support they have extended, and continue to extend, to the NRC.

Prof. H. J. De Silva. Chairman

## COUNCIL

#### Chairman

1. Prof. Hithanadura Janaka de Silva Esquire

#### Other Members

- 2. Madam Prof. Kamini Nirmala Mendis
- 3. Prof. Ananda Rajitha Wickremasinghe Esquire
- 4. Madam Prof. Hema Malinie Kumbalgoda Kankanam Pathirana
- 5. Madam Prof. Hemanthi Ranasinghe
- 6. Madam Prof. Wijerupage Sandhya Sulochana Wijesundera
- 7. Prof. Lakshman Lloyd Ratnayake Esquire
- 8. Madam Prof. Aurelia Jennifer Perera
- 9. Prof. Delgahawatthage Raj Kumar Somadeva Delgahawatta Esquire
- 10. Prof. Wiranjith Priyan Solomon Dias Esquire
- 11. Prof. Kathiragamanathan Kandasamy Esquire
- 12. Madam Prof. Aruni Tilakaratne
- 13. Dr. Nanda Amarasekera Esquire
- 14. Dr. Rohan Prasantha Perera Esquire
- 15. Dr. Galbada Arachchige Sirimal Premakumara Esquire
- 16. Dr. Nihal Jinasena Esquire
- 17. Moksevi Prelis Esquire

Treasury Representative

18. Ms. D. Senanayake

## STAFF

Executive Secretary:	M. C. Rajapakse
Accountant:	N. S. Hewagama
Assistant Accountant cum Research Officer	S. K. Gamhewa
Scientific Officer:	S. Sarathchandra
Scientific Officer:	S. Nonis
Scientific Officer:	K. N. Dharmasiri
Scientific Officer:	N. K. Dissanayake
Accounts Officer:	A. K. D. M. Perera
Account's Assistant:	A. E. K. Dayarathne
Program Assistant:	C. Madumani
Program Assistant:	S. H. S. Priyankara
Drivers:	K. K. T. Sandaruwan
Drivers:	S. Premakumara
Naita Trainee	T. Madushani
As at 31.12.2014	

National Research Council – Annual Report 2014

## **REVIEW BY THE CHAIRMAN FOR YEAR 2014**

(Review to be edited)

The Year was a very successful year to the national research council, with the appointment of the new council and streamlining of present programs and introducing new programs to achieve the mandated objectives.

I am pleased to submit for tabling in Parliament, the Annual report of the National Research Council of Sri Lanka for the Year 2014.

The year began with the Presidents Awards for Scientific research, the honor of the president for the publications done at international level in indexed journals, awarding 148 scientists of the country for their achievements in 2007, 2008 and 2009 years. During the year we were able to award 2010, 2011 and 2012 by awarding 450 scientists holding two prestigious functions during the year.

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The year also led to initiate one private public partnership, while few partnerships are on the trail to be initiated.

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The new focus towards building research partnerships between the private and public sector and the encouraging scientists to collaborate through our target oriented multi-disciplinary research projects is progressing well towards the success.

Local newspaper articles were published over year showing how the NRC research grants contributes to national development.

In the year ahead, the government will continue its investment on research and technology strengthening private public partnerships, and bridging the division between the research and business communities towards the development of the country. With the view of creating the economic and knowledge hub, the NRC will be able to contribute immensely through its program portfolio which will ultimately benefit the general public of the country.

## **EXECUTIVE SECRETARY'S REPORT**

(To be added )

Manisha C. Rajapakse Executive Secretary

## FINANCIAL HIGHLIGHTS IN THE PRECEDING 3 YEARS

Programs(Strategies)		Ph	ysical Progress		Fina	ancial Progre Rs. Mn	ess
	Indicator	2012	2013	2014*	2012	2013	2014*
General administration of NRC					9.48	10.815	14.87
Development Assistance for below Programs					229.02	245.77	232.89
Target Oriented Multi-disciplinary Research Program (Program started in 2014)	No of Programs			5 Programs commenced			
Private Public Partnership Program (Program started in 2013)	No of Programs		4 Programs commenced	1 Programs commenced			
Investigator Driven Grants Program (NRC Research Grant Program)	No of Research Grants Selected/Applicati ons PhD/ M Phi Students	58 Research and PhD Grants was awarded 67 PhD /M Phils are awarded	41 Research and PhD Grants was awarded 36 PhD /M Phils are awarded	23 Investogatr driven Grants was awarded	-	-	-

resident's Awards for Scientific	Functions held and	Compilation of	Preparations for the	Two PASP Functions	
ublications Program(PASP)	No of Scientists	database of	PASP Function was	covering year	
	awarded	awarding	continued	2007,2008,2009 (451	
		scientists for		scientists) ,2010,2011,201	
		2007, 2008 and		2 (236 scientists) were	
		2009 is completed		completed	
Other Programs	Activities	-Participated	Maritime training	The simulator for	
	completed	Dayata Kirula	program is being	maritime traines launched	
		development	established at Ocean	during the period at the	
		Exhibition	university – Prof. N.	Ocean university – Prof.	
			D. Kodikara/NRC	N. D. Kodikara/NRC	
			Grant 11-065.	Grant 11-065.	
			NRC facilitated initial	The Information web	
			conference on	portal for train commuters	
			structural engineering	were launched with	
			construction	department of Railways	
			conference and	and University of	
			management in	Colombo School of	
			Kandy – Dr. PBR	Computing/Dr, K de	
			Dissanayake/NRC	Soyza/NRC Grant 12-075	
			Grant 11-106.	Public awareness on	
			Discussions with the	Thalesimia- the hidden	
			Ministry of Health	disease in Kurunegala	

	was conducted on	district, A health clinic			
	Neonatal Screening	and awareness workshop			
	Program – by Prof. C.	conducted to school			
	Liyanage and Dr. M.	children.			
	Hettiarachchi, They agreed to continue to improve it as a policy. (NRC Grant 08-08 & 11-160) Participated Dayata Kirula development Exhibition	Epidemiology of Rickettsial infections in hilly central provinces in Sri Lanka special references on species identification, diagnosis, transmission reservoir animal studies, an awareness program was conducted in Kandy			
T. ( )			020 5	256 505	04776
Total			238.5	256.585	247.76

\*Tentative

## NRC PROGRAMS

#### **Investigator Driven Research Grants**

The R&D activities in Sri Lanka are conducted mainly by public institute and universities are funded from various sources; government institutional funds, competitive grants and research contracts. The NRC Research Grants programme was initiated for scientists to do research with minimum bureaucracy.

NRC Research Grants programme provides competitive grants for R & D activities to public institute. This programme has been streamlined over years of its implementation and now is more or less perfected. The grants are advertised annually, evaluations are based on scientific aspects, relevance to national development, and the findings being published in international journals. The applications undergo a strict evaluation process. For the proposals selected, the Council will decide on an appropriate allocation of funds which will be channelled from the Treasury directly to the Principal Investigator, who will be solely responsible for implementing the project. Funds are considered for equipment, consumables, etc. A project bank account is opened for each project and the NRC monitors all transactions. This gives the scientists considerable flexibility in utilizing the funds with minimum red tape. The monitoring and evaluation are done by the Council and the NRC Secretariat.

It should be mentioned here that the present grants are diversified in nature. Other than funding research on pure science and on food, water, environment and energy, the NRC has lately been funding research on national surveillance, irrigations systems, wildlife and ecotourism, speech translations, construction & architecture, railway traffic, sports and many others.

Group research with multidisciplinary approaches, collaborative research programmes, and problem oriented research are encouraged. Start-up grants are offered to young scientists and post doctoral fellowships will be offered from this year. A simple but comprehensive single set of applications is available for all programmes. The number of applications we receive has increased over the year which is a positive sign. The challenges for this programme is to keep the momentum that we have already achieved.

The focus for the PhD/MPhil generation has incorporated to the grant program during the year by the Present Council to be more focus on the Research outcomes, which making PhD/MPhil are a additional output of the investigator driven Research Grants.

Lot of new regulations and guidelines were introduced by the council to the benefit of the program, focusing on maximum output to the general public and other benefitting party.

#### Presidential Awards for Scientific Research Program

The programme of Presidential Awards for Research was started in year 2001, to honour scientists for reaching international standards, to increase national scientific production. The national statistics of output of publications from 1991 to 2009 shows what could perhaps be the beginning of an upward trend.

The program was designed by Sir Arthur c Clarke, Prof Arees Kovoor and other senior scientists of the NRC council and the country.

The entire scheme is based on the Science Citation Index (SCI). SCI is a database of the world's scientific periodicals judged to be the topmost by its publisher, with respect to quality and impact on science. Thus the SCI analyses about 3700 periodicals containing a world total of about 12,000,000 titles of articles, in a given year.

The compilation done for the Research Award scheme covers all the "hard science" titles (excluded the social science) with a Sri Lankan address against at least one author as given in the SCI. This criteria will be changed by the Council incorporating the SCORPUS in to the criteria and the present standards will increase in future awarding ceremonies.

Under this program it was completed several programs by 2013 covering publications listed in SCI (Science Citation Index) from 1999 - 2012. During the year 2014, it has been awarded over 700 scientist for the publications in indexed journals for year 2007-2012.

#### **Public Private Partnership Program**

Advances in R&D in S&T will lead to development of value-added products and services that are competitive in the global market, and which will form an essential pillar of Sri Lanka's envisaged economic development aimed at becoming the Wonder of Asia. To accomplish this goal, research carried out in Sri Lanka needs to be demand-driven by addressing the needs of key industries of the country, which are expected to drive the economy forward.

The Public R & D  $\neg$ - Private Industry – Partnership (PPP) programme is to build on local strength by networking key players in R & D activities and industries to contribute towards the economic development of the country. Promoting R&D in S&T should lead to economic development by way of increasing exports, diversifying exports, and promoting import substitutes. All innovative research leading to the development of new or better products, processes, services, value addition and solving technical problems with commercial potential will be considered for this programme. Meaningful partnerships between the different sectors will enable us to share our research expertise, cost, services and facilities more effectively to develop solutions for industry R&D needs. The partnerships will also improve efficiency of public R&D activities and reduce the time horizon for it. The Private sector participation is encouraged by providing tax concessions in relation to R&D expenditure undertaken by an enterprise with public sector partnership. The NRC will interface between government – local institute - ministries –University – R & D Institutes – corporate sector- SME sector in providing research based solutions to national needs.

#### **Other Programmes**

Outreach Programmes – with the direction of the Ministry of the Technology and Research an outreach programme will be conducted in each quarter showcase the output of the research grants to the general public.

Development of Research Laboratories – Through the NRC research grants programme highvalued, specialized equipment has been provided to research laboratories. Collaborative research programmes facilitate the use of such equipment.

Public Awareness programme – Grantees are encouraged to publish their research in peer reviewed journals. At the same time NRC facilitates scientists to publish their finding in newspapers to make the general public aware the research carried out by scientists.

## TARGET ORINTED MULTI DISCOPLINARY MEGA RESEARCH GRANTS

During the year Target Oriented Multi-Disciplinary Grants were commenced intending to find solutions through R & D intervention for important national issues.



The grants awarded were;

 Community Mobilization and Integrated Vector Management (IVM) for control of dengue vectors Aedes aegypti and Ae.albopictus in Sri Lanka

(Signed by PI and Deputy PI – Prof. W. Abeyewickreme and Dr. M. Hapugoda of University of Kelaniya)



Developing a polyvalent anti-venom for snake bite in Sri lanka

(Signed by PI and Deputy PI – Prof. I Gawarammana and Dr. A. Dangolla of University of Peradeniya)



■ Improving dairy industry to achieve self-sufficiency in milk

(Signed by PI and Deputy PI – Prof. Missaka P.B. Wijayagunawardane and Dr. K. Mahipala of University of Peradeniya)



 A comprehensive study on chronic kidney disease of uncertain aetiology in Sri Lanka (PI: Dr. R. L. R. Chandrajith and Deputy PI: Dr. J. G. S. Ranasinghe, University of Peradeniya)



Ensuring food security through developing climate smart crop varieties and cultivation techniques in Sri Lanka

(PI – Dr. W.M.W. Weerakoon and Deputy PI: Dr. D. M. J. B. Senanayake, Field Crop Research and Development Institute, Mahailluppallama)



## NRC INVESTIGATOR DRIVEN RESEARCH GRANTS PROGRAM...

The 2014 year started with calling for Applications for the NRC Investigator driven Research Grants Program by paper advertisement, which was circulated to all universities, faculties and the R & D institutes.

The priority for Group research with multidisciplinary approaches, collaborative research continued.

Applications were closed on 28th February 2014 and 150 applications were received. During the first Quarter the annual progress reports of the ongoing grants were send for evaluations. Meanwhile 02 Grants of 2013 applications were funded.

The applications (2014) were send to evaluators who are experts in the field. The Council through panel discussions screened the applications further and selected the application with high scientific merit and national relevance.

ACTIVITY	2012	2013	2014
No. of Applications selected for funding after evaluation	61	28	21
No of Grants Funded	58	26+15*	21+2*
Total value of grants awarded through treasury funding	Rs. 220 Mn	Rs. 183 Mn	Rs. 84.2 Mn

\*previous year selected grants

Only 14% (21/150) of the applicants submitted got selected. The selected applications were forwarded to the treasury for funding.

During the Year, 21 Research Grants were funded form the applications of 2014 and the activities of the grants were commenced.

#### **Funded Research Grants 2014**

Grant	Principal Investigator &	Project Title
No	Institution	
13-15	Dr. M. Y. U. Ganehenage University of Peradeniya	Utilization of Environmental pollutants and Biomass Byproducts for the production of Biofuels and Industrial Chemicals using Heterogeneous Nano Catalysts
13-59	Dr. S. Kodithuwakku University of Peradeniya	Effect of endocrine disrupturing fungicide "Mancozeb" (metalethylene-bis- dithiocarbamate) on human endometrial receptivity and fertility
14-13	Dr. V. Y. Waisundara Institute of Fundamental Studies	"In vitro assay-guided Identification of Functional Food and Nutraceuticals from Sri Lankan Plant Products"
14-15	Prof. J. B. Ekanayake University of Peradeniya	"DC networks for Energy Efficiency and Renewable Additions"
14-16	Dr. W. R. M. de Silva University of Colombo	Hydroxyapatite (HAp) coated iron oxide nanoparticles for controlled and targeted delivery of drugs for cancer and other diseases
14-19	Dr. D. A. L. Leelamanie University of Ruhuna	Assessment of Municipal Solid Waste Compost (MSWC) as a soil amendment with respect to physicochemical and biological aspects and development of management strategy for potential constraints
14-23	Dr. H. M. Y. C. Mallikarachchi University of Moratuwa	"Multi-scale modelling of fibre composites, carbon nanotube systems and thin films"
14-27	Dr. M. G. Sathiadas University of Jaffna	Study on body fat and its relation to Non Communicable Disease related metabolic derangement in Sri Lankan children
14-38	Dr. S. F. Jayamanne University of Kelaniya	"The impact of a pharmacist-led patient management in improving chronic non communicable diseases in rural and urban outpatient settings in Sri Lanka"
14-43	Dr. R. Premathilake University of Kelaniya	"Investigating the precursors and appearance of banana and rice cultivation in Sri Lanka: with the background of long-term climate and environmental changes"
14-45	Dr. E. Corea University of Colombo	Determination of resistance mechanisms and the genes coding for such resistance in clinically significant Enterobacteriacae isolated from urine at a state

Grant	Principal Investigator &	Project Title
No	Institution	
		tertiary care referral hospital and a privatehospital in Sri Lanka
14-61	Dr. C. I. Clayton Institute of Fundamental Studies	The effect of six pesticides on development, behavior and immune response in the Asian hive bee, Apis cerana
14-67	Dr. S. R. Samarakoon IBMBB	" Cancer stem cells targeted drug leads from Sri Lankan endemic plants for breast cancer
14-69	Dr. G. S. A. Gunawardena University of Colombo	Determination of genetic variants associated with G6PD enzyme deficiency in selected Sri Lankan populations
14-72	Dr. B. S. S. Seneviratne University of Colombo	How the Genetic Diversity is Produced in Mountains of SriLanka and its Implications for the Management of Montane Biodiversity
14-79	Dr. M. D. S. T. de Croos Wayamba University of Sri Lanka	Generation of new knowledge for a sustainable industry: blue swimming crab fishery off northern Sri Lanka
14-94	Prof. S. H. P. P. Karunaratne University of Peradeniya	Dengue vector control in Sri Lanka: Occurrence of `kdr' type mutations and wolbachia in Aedes vector mosquito populations, and the effect of insecticide fogging on insect pollinators
14- 105	Dr. R. S. Kalupahana University of Peradeniya	"Identification of the prevalence of methicillin-resistant Staphylococcus aureus (MRSA) in pig farms, farm employees and characterization of isolates in selected areas of Sri Lanka"
14- 117	Dr. H. M. V. G. Herath University of Peradeniya	"Functional and Comparative Genomics of Grain Number, Plant Height, and Heading date 7 (Ghd7) in Sri Lankan Rice Varieties and Its Role in Conferring Abiotic Stress Tolerance
14- 123	Prof. S. R. Munasinghe University of Moratuwa	Quadrotor-Wing Novel Hybrid Unmanned Aerial Vehicle with vertical take-off and landing capability
14- 125	Dr. H. P. Sooriyaarachchi University of Ruhuna	Influence of Tropical Environmental conditions and materials on plastic shrinkage cracking of concrete

Grant	Principal Investigator &	Project Title
No	Institution	
14-	Dr. J. J. Wijetunge	Integrated Probabilistic Analysis and Assessment of the
134		Risks of Inundation from Tsunami, Storm Surges and
	University of Moratuwa	Sea Level Rise for Vulnerable Coastal Areas of Sri Lanka
14-	Prof. R. A. Attalage	Performance based approach for building indoor
139	_	thermal comfort of naturally ventilated buildings in Sri
	University of Moratuwa	Lanka
		Lanxa

# PRESIDENTS AWARDS FOR SCIENTIFIC PUBLICATION

During the year, two functions for Presidents' awards for scientific publications program were held at water's Edge, Battaramulla on 17<sup>th</sup> January 2014 and 31<sup>st</sup> October 2014.

At the first function, 451 Scientists with publication in indexed journals in year 2007, 2008 and 2009 were awarded by Mr. Patali Champika Ranawaka, Hon. Minister of Technology and Research.

The second function was for the years 2010, 2011, 2013 and it was held with the grace of the Hon. President Mahinda Rajapakse. 236 Scientists were awarded by the President of Sri Lanka.

Both functions were organized by the National Research Council and held in collaboration with of the Presidential secretariat and the Ministry of Technology and Research. Mrs. Dhara Wijeyathilake, Secretary to the Ministry of Technology and Research and Heads of the Research and Development institutions and universities were also participated for both occasions.

## PRIVATE PUBLIC PARTNERSHIP PROGRAM

The PPP Program is continued during the period.

Activities	2012	2013	2014
No of Expression of Interest (EOI) received for PPP	59		9
No of EOI's Selected to submit detail proposals	17	1	4
No. of Partnerships to be facilitated with Private	6	-	1 (2 under
Sector			discussion)
Total Funds required	Rs. 156 Mn	-	Rs. 20.2
			Mn
Funds Provide buy the Private Sector (Approx. 50%)	Rs. 78 Mn	-	Rs. 10.1 Mn

#### **Ongoing Private Public Partnerships...**

Research Partner	Project Title
Dr. Anil Goonatilleke	Locally developed respiratory care products
University of Sri Jayewardenepura	
Mr. R. M. Dharmadasa	Formulation of a Para- pheromone from local varieties of
Industrial Technology Institute	Ocimum sanctum for the control of fruit and melon flies
Dr. S. M. C. U. P. Subasinghe	Variation of naturally and artificially induced agarwood
University of Sri Jayewardenepura	resin content and quality of Gyrinops walla for
	commercial extraction and its nursery establishment
Prof. Saroj Jayasinghe	Investigation into the effect of drinking and cooking water
University of Colombo	with reduced fluoride content and hardness, on the
	prevalence, incidence and severity of chronic kidney
	diseases of uncertain aetiology (CKDu) in a selected G.N.
	Division in Vavuniya District

## **MEDIA & DEVELOPMENT PROGRAM...**

Four Out Reach Programs were conducted during the period.

 Railway Traffic Optimization system to provide better quality transport service to the general public (Principle Investigator: Dr. Kasun De Zoysa, University of Colombo School of Computing )

First quarter outreach program: Railway Traffic optimization system was successfully completed and launched on 27th June 2014 at University of Colombo School of Computing (UCSC), Colombo 07. The Director/ UCSC, the Executive Secretary/NRC, General Manager/Srilanka Railways, invitees and the students were participated at the event. Now the railway commuters can retrieve the real time of the trains in southern railway line via www.slrail.lk on computers and android phones as well.



Prof. Gihan Samaranayake/ Director-UCSC addresses the gathering



Mrs. Manisha Rajapakse is explaining the benefits of NRC to the audience



Dr. Kasun De Zoysa, Principle Investigator of the project is explaining the outcome of the project



Mr. BAP Ariyaratne is discussing the importance of the NRC project



Launching of the <u>www.slrail.info</u> website by the delegates



Mobile Interface of the outcome

Vidusayura – A perception enhance immersive virtual environment for maritime education for Mariners

The latest version of the award winning Vidusayura ship handling simulator was deployed at the Ocean University of Sri Lanka. The inauguration ceremony was held in 2014, This was the second outreach program of the NRC. The Ocean University of Sri Lanka and the University Of Colombo School Of Computing signed a memorandum of Understanding with the Ocean University to further enhance the simulator. The simulator was developed with funding from the National Research Council of Sri Lanka.

(Daily Mirror, Wednesday 5th Nov., 2014)





Public awareness on Thalassemia- the hidden disease in Kurunegala district

The Thalassaemia Public Awareness Programme" was held on 14 November 2014 at Vihara Maha Devi Girls' School, Kiribathgoda. It was organised by Hemal's Thalassaemia Unit, Colombo North Teaching Hospital, Ragama. Prof Anuja Premawardhena, Professor in Medicine, Faculty of Medicine, University of Kelaniya, was the principal resource person. The event was funded by the National Research Council as one of its outreach programmes to mark Science Week 2014. Stakeholders were school-children aged between 16-18 years



Epidemiology of Rickettsial infections in hilly central provinces in Sri Lanka special references on species identification, diagnosis, transmission reservoir animal studies

National Research Council successfully conducted the 4th quarter outreach programme "Awareness Workshop on Tropical Diseases" in Kandy. Its purpose was to enhance awareness on rickettsial Infections, snakebite, hepatitis, rabies, typhoid, leishmaniasis, dengue and leptospirosis. The event was organized by the Centre for Research in Tropical Medicine, University of Peradeniya, and sponsored by the NRC.

Resource persons were Prof. RPVJ Rajapakse, Prof. SAM Kularathne, Dr. WATA Jayalath, Prof. A. Jayasinghe, Dr. M. Pathirage, Dr. Sanjeewani Fonseka, Dr. U. Ralapanawa, Dr. M. Pathirage and Dr. Susiji Wickramasinghe.

Health officers (PHI, midwives), gramasevaka officers, samurdi niyamakas, and agrarian officers were the target groups.





Glimpse of the Event

## **CONTACT INFORMATION**

#### National Research Council

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## **ANNUAL ACCOUNTS - 2014**

## **NATIONAL RESEARCH COUNCIL**



MAY 28, 2015 NATIONAL RESEARCH COUNCIL 380/97, Bauddhaloka Mawatha, Colombo 07 Web: <u>www.nrc.gov.lk</u> E-mail: nrc@sltnet.lk Financial statements for year 2014

Statement of financial position Statement of financial performance Cash flow statement Statement of changes in net Assets/Equity Notes to the financial statements

#### NATIONAL RESEARCH COUNCIL -SRI LANKA STATEMENT OF FINANCIAL POSITION AS AT DECEMBER 31, 2014

	Notes	2014 Rs.	2013 restated Rs.
ASSETS			
Current assets			
Cash and cash equivalents		7,523,325.29	3,464,852.86
Special Advance		150,000.00	75,000.00
Receivables		-	-
Inventories			
Prepayments	3.10	300,000.00	400,000.00
TO Program		204,255,570.48	-
NRC grants NRC PPP Program		234,128,737.79	354,392,389.88
Other current assets		16,312,471.71	41,948,125.00
Other current assets		462,670,105.27	400,280,367.74
Non-current assets			, ,
Receivables			
Investments in associates			
Other financial assets	3.09	480,000.00	480,000.00
Property, plant and equipment	3.07	223,731,467.85	201,871,941.71
Land and buildings			
Intangible assets			
Other non-financial assets			
		225,211,467.85	202,351,941.71
Total assets		225,211,467.85 686,881,573.12	202,351,941.71 602,632,309.45
Total assets LIABILITIES			
LIABILITIES Current liabilities	3.11		602,632,309.45
LIABILITIES	3.11	686,881,573.12	
LIABILITIES Current liabilities	3.11	<b>686,881,573.12</b> 471,908.25	<b>602,632,309.45</b> 601,220.68
LIABILITIES Current liabilities Payables	3.11	<b>686,881,573.12</b> 471,908.25	<b>602,632,309.45</b> 601,220.68
LIABILITIES Current liabilities Payables Non-current liabilities Payables	3.11	686,881,573.12 471,908.25 471,908.25	602,632,309.45 601,220.68 601,220.68
LIABILITIES Current liabilities Payables Non-current liabilities Payables Total liabilities	3.11	686,881,573.12 471,908.25 471,908.25 - 471,908.25	602,632,309.45 601,220.68 601,220.68 - 601,220.68
LIABILITIES Current liabilities Payables Non-current liabilities Payables	3.11	686,881,573.12 471,908.25 471,908.25	602,632,309.45 601,220.68 601,220.68
LIABILITIES Current liabilities Payables Non-current liabilities Payables Total liabilities	3.11	686,881,573.12 471,908.25 471,908.25 - 471,908.25	602,632,309.45 601,220.68 601,220.68 - 601,220.68
LIABILITIES Current liabilities Payables Non-current liabilities Payables Total liabilities Net assets	3.11	686,881,573.12 471,908.25 471,908.25 - 471,908.25	602,632,309.45 601,220.68 601,220.68 - 601,220.68
LIABILITIES Current liabilities Payables Non-current liabilities Payables Total liabilities Net assets NET ASSETS/EQUITY	3.11	686,881,573.12 471,908.25 471,908.25 - 471,908.25	602,632,309.45 601,220.68 601,220.68 - 601,220.68
LIABILITIES Current liabilities Payables Non-current liabilities Payables Total liabilities Net assets NET ASSETS/EQUITY Capital contributed by;	3.11	686,881,573.12 471,908.25 471,908.25 - 471,908.25	602,632,309.45 601,220.68 601,220.68 - 601,220.68
LIABILITIES Current liabilities Payables Non-current liabilities Payables Total liabilities Net assets NET ASSETS/EQUITY Capital contributed by; other government entities	3.11	686,881,573.12 471,908.25 471,908.25 - 471,908.25	602,632,309.45 601,220.68 601,220.68 - 601,220.68
LIABILITIES Current liabilities Payables Non-current liabilities Payables Total liabilities Net assets NET ASSETS/EQUITY Capital contributed by; other government entities Reserves	3.11	686,881,573.12 471,908.25 471,908.25 471,908.25 686,409,664.87	602,632,309.45 601,220.68 601,220.68 - 601,220.68 602,031,088.77
LIABILITIES Current liabilities Payables Non-current liabilities Payables Total liabilities Net assets NET ASSETS/EQUITY Capital contributed by; other government entities Reserves Accumulated surpluses/(deficits)	3.11	686,881,573.12 471,908.25 471,908.25 471,908.25 686,409,664.87	602,632,309.45 601,220.68 601,220.68 - 601,220.68 602,031,088.77

Council is responsible for preparation and presentation of these financial statements. Signed for and on behalf of the council.

Prof. H. J. De Silva	M. C. Rajapakse	N. S. Hewagama
Chairman/NRC	Executive Secretary	Accountant

#### NATIONAL RESEARCH COUNCIL -SRI LANKA STATEMENT OF FINANCIAL PERFORMANCE FOR THE YEAR ENDED DECEMBER 31, 2014

	Notes	2014 Rs.	2013 Rs.
Revenue	_		
Recurrent receipts – NRC Administration	3.08D	14,884,700.00	9,867,000.00
Capital Grant		681,770.44	-
Recurrent receipts – Research and development	3.08C	155,499,984.99	145,865,650.50
Other receipts	_	970,485.58	673,000.00
Total revenue	_	172,036,941.01	156,405,650.50
Expenses			
Personal emoluments		6,646,904.68	6,155,020.34
Research & development	3.08A	125,419,003.04	116,822,400.19
Supplies and consumables		2,795,756.05	1,829,320.58
Depreciation expense –NRC Grants	3.08B	30,080,981.95	29,043,250.31
Depreciation – NRC office equipment's		681,770.44	609,577.85
Other expenses		5,361,072.66	4,293,341.19
Finance costs	-	12,750.00	10,500.00
Total expenses	-	170,998,238.82	158,763,410.46
Share of surplus of associate's	-	-	-
Surplus/(deficit) for the period	-	1,038,702.19	(2,357,759.96)
Attributable to:			
Owners of controlling entity		1,038,702.19	(2,357,759.96)
Minority interest	_	-	-
	=	1,038,702.19	(2,357,759.96)

Notes from the pages 06 to 14 form an integral part of these financial statements. Figures in brackets indicate deductions

Note: Adjustment was done to accumulated fund amount of Rs. 3,487.046.00

#### NATIONAL RESEARCH COUNCIL -SRI LANKA CASH FLOW STATEMENT FOR THE YEAR ENDED DECEMBER 31, 2014

	2014 Rs.	2013 Rs
CASH FLOWS FROM OPERATING ACTIVITIES		
<b>Receipts</b> Taxation		
Receipt from treasury (Recurrent)	14,884,700.00	9,867,000.00
Receipt from treasury (Development Assistance)	236,034,583.00	217,447,000.00
Sales of goods and services	00 007 000 00	
Receipts from closed grants	82,297,386.92	28,649,245.14
Interest received Other receipts	970,485.58	673,000.00
	,	070,000.00
Payments	(6 646 004 69)	
Cash payment to employees Superannuation	(6,646,904.68)	(6,155,020.34)
Suppliers		
Research grants and Other Programs	(314,250,684.42)	(243,541,990.07)
Interest paid		
Other payments	(8,221,872.57)	(5,991,506.75)
Net cash flows from operating activities	5,067,693.83	947,727.98
CASH FLOWS FROM INVESTING ACTIVITIES		
Purchase of plant and equipment	(935,921.40)	(991,125.87)
Proceeds from sale of plant and equipment	1,700.00	
Proceeds from sale of investments		
Purchase of foreign currency securities Net cash flows from investing activities	(934,221.40)	(991,125.87)
Net cash hows from investing activities	(00 1,22 11 10)	(991,125.67)
CASH FLOWS FROM FINANCING ACTIVITIES		
Proceeds from borrowings		
Repayment of borrowings		
Distribution/dividend to government Net cash flows from financing activities		
Net cash hows from maneing activities		<u> </u>
Net increase/(decrease) in cash and cash	4 400 470 40	(40.007.00)
equivalents Cash and cash equivalents at beginning of period	4,133,472.43 3,539,852.86	(43,397.89) 3,583,250.75
Cash and cash equivalents at beginning of period	7,673,325.29	3,539,852.86
sach and sach equivalence at end of period		0,000,002100

Notes from the pages 06 to 14 form an integral part of these financial statements.

Figures in brackets indicate deductions

# NATIONAL RESEARCH COUNCIL -SRI LANKA STATEMENT OF CHANGES IN NET ASSETS/EQUITY FOR THE YEAR ENDED DECEMBER 31, 2014

	Accumulated Surplus or Deficit Rs	Total Rs	Total net Assets / Equity Rs
Balance as at December 31, 2013	602,031,088.78	602,031,088.78	602,031,088.78
Adjustment to opening balance	3,487,046.34	3,487,046.34	3,487,046.34
Changes in accounting policy	605 549 425 42	605 549 425 42	605 519 125 12
A Change in net asset/equity for 2014	605,518,135.12	605,518,135.12	605,518,135.12
Gain on property revaluation	-	-	-
Equipment Transfers Proceeds to Institutions	-	-	-
Loss on revaluation of investments	-	-	-
Exchange differences on translating foreign operations	-	-	-
Net of revenue recognized directly in net asset/equity	79,852,827.57	79,852,827.57	79,852,827.57
Surplus/ (deficit) for the period	1,038,702.19	1,038,702.19	1,038,702.19
Total recognized revenue and expenses for the period (B)	80,891,529.76	80,891,529.76	80,891,529.76
Balance at December 31, 2014 carried forward (A+B)	686,409,664.88	686,409,664.88	686,409,664.88

Notes from the pages 06 to 14 form an integral part of these financial statements. Figures in brackets indicate deductions

#### **1. CORPORATE INFORMATION**

#### 1.1 GENERAL

National Research Council ("NRC") is established as a special agency by a Presidential Directive under the article 33 of the constitution by the extra ordinary gazette notification No. 1514/28.

The National Research Council is a public organization located at 380/97, Baudhdhaloka Mawatha, Colombo 07.

The financial statements are prepared for a common financial year, which ends on  $31^{st}$  December.

# 1.2 THE PRINCIPAL ACTIVITIES AND NATURE OF OPERATIONS

The functions of NRC set out in the Presidential Directive under the article 33 of the constitution by the extra ordinary gazette notification No. 1514/28. The following main programs carried out during the year to fulfil the stated objectives.

#### Research Grants & PhD Program

- Funding for research in public R & D institutions and post graduate fellowships. The Program Combined to one Program during the Year as "Investigator Driven Research Grants Program"

#### Presidential Awards for Scientific Research

- Recognition to researchers and research institutions of Sri Lanka

The name of the program is changes during the year to "President's Awards for Scientific Publication"

Private Public Partnerships Program

- Funding for research needs of private sector/public in a combined approach

The private sector partnership program keeps the investment by the private sector and there are four PPP projects ongoing during the year, thus the balances in these private partners' accounts at 31<sup>st</sup> December 2014 is Rs. 4,597,368.63

#### Other Development Programs

- Other programs necessary to fulfill the objectives of NRC

Target Oriented Multi-Disciplinary Mega Projects Program

NRC council has revised its funding policy, and from 2014, the major thrust of funding will be for target-oriented research projects. Each year, preproposals will invited from groups of researchers of public scientific R & D organizations and universities for possible funding of target-oriented multi-disciplinary research projects aimed at solving nationally-relevant issues aiming at economic development, social welfare and environmental sustenance of the country. The value of a grant would be up to Rs. 50 million, over a 5 year period. Proposals will be invited from several priority areas in keeping with the National Science and Technology Policy Report.

#### 1.2 DATE FOR AUTHORIZATION FOR ISSUE

The Financial Statements of National Research Council, for the year ended 31<sup>st</sup> December 2013 were authorized for issue by the Board of Council Members on .....

#### 2. ACCOUNTING POLICIES

#### 2.1 BASIS FOR PREPARATION

The financial statements have been prepared in accordance with Sri Lanka Public Sector Accounting Standards (SLPSAS) as issued by the Institute of Chartered Accountants of Sri Lanka.

#### 2.1.1 STATEMENT OF COMPLIANCE

The financial statements of the NRC have been prepared in accordance with the Sri Lanka Public Sector Accounting Standards (SLPSAS) as issued by the Institute of the Chartered accountants of Sri Lanka.

#### 2.1.2 GOING CONCERN

The Council of NRC is satisfied that the NRC has recourse to continue in its activities for the foreseeable future. Furthermore, the Council is not aware of any material uncertainty.

#### 2.1.3 BASIS OF MEASUREMENT

The financial statements of NRC have been prepared on the basis of historical costs and no adjustment has been made for inflationary factors affecting these accounts.

# 2.1.4 FUNCTIONAL AND PRESENTATION CURRENCY

The financial statements are presented in Sri Lankan Rupee, is the functional currency of NRC. All financial information presented in Sri Lankan rupee has been given to the nearest cent, unless stated otherwise.

# 2.4 SIGNIFICANT ACCOUNTING JUDGMENTS, ESTIMATES AND ASSUMPTIONS

The financial statements are sensitive to assumptions and estimates made in measuring

certain carrying amounts represented in the statements of financial position and amounts charges to the statement of financial performance. These could result in significant risk of casing material adjustments to the carrying amounts of assets and liabilities which are disclosed in the relevant notes to the financial statements.

The presentation of financial statements in conformity with SLPSAS, requires managements to make judgments, estimates, and assumptions that affect the application of accounting policies and reported amounts of assets, liabilities, income and expenses. Judgments and estimates are based on historical experience and other factors, including expectations that are believed to be reasonable under circumstances. Hence actual experience and results may differ from these judgments and estimates.

Estimates and underlying assumptions are reviewed at an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimates are revised if the revision affects only that period and any future periods affected

# 3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The accounting policies set out below are consistent with those used in previous year.

Certain comparative information has been reclassified wherever necessary to conform to the current year's presentation.

#### 3.1 FOREIGN CURRENCY TRANSLATON

All foreign exchange transactions have been converted in to functional currency at the rates of exchange prevailing at the date of the transactions.

# 3.2 ASSETS AND BASES OF THEIR VALUATION.

Assets classified as current assets on the balance sheet are cash and bank balances and those which are expected to be realized in cash during the normal operating cycle or within one year from the reporting date, whichever is shorter.

# 3.2.1 PROPERTY PLANT AND EQUIPMENT 3.2.1.1 INITIAL RECOGNITION

All Items of property plant and equipment are measured at cost less accumulated depreciation. They are initially recognize at cost. The cost of property plant and equipment includes the cost of purchase or construction together with any incidental expenses that are directly attributable to the acquisition or construction of assets and to bringing any assets to a working condition for its intended use, and cost of dismantling and removing the items and restoring the site on which they are located. Purchased software that is integral to the functionality of related equipment is capitalized as a part of that equipment. When parts of an item of property plant and equipment have different useful lives, they are accounted for as separate items of property plant and equipment.

Property plant and equipment purchased from NRC research grants are identified as part of property plant and equipment of NRC temporarily until they transferred or disposed.

The accumulated depreciation is provided for, on the basis specified in 3.2.1.3 below

#### 3.2.1.2. SUBSEQUENT EXPENDITURE

The cost of replacing part of an item of property, plant & equipment is recognized in the carrying amount of the item if it is probable that the future economic benefits are embodied within the part will flow to the NRC/NRC grants and its cost can be measured reliably. This includes major inspection and overhaul expenditure and accounted separately.

The cost to day to day servicing of property plant and equipment are recognized in profit and loss as incurred.

All other expenses include repairs or maintenance of property, plant and equipment in order to restore or maintain the future economic benefits expected from the originally assessed standard of performance, is recognized as an expense when incurred.

#### 3.2.1.3 DEPRECIATION

The depreciation is recognized in profit and loss calculated on the cost of fixed assets in order to write off such cost over the estimated useful life provided.

The depreciation is recognized in profit and loss on straight line basis over estimated useful lives of assets from the date on which they are available to use.

The estimated useful lives and annual rates of depreciation generally used by NRC for current and comparative periods are as follows:

Sundry assets	2 years	50.00%
Cutlery & Crockery	3 years	33.33%
Room linen	3 years	33.33%

Safety Equipment	3 years	33.33%
Library books	3 years	33.33%

#### Computers, Printers, and Accessories

	5 years	20 %
Calculators & Clocks	5 years	20 %
Power supply equipment	5 years	20 %
Brass item	5 years	20 %
Motor vehicles	5 years	20 %
Air conditioners/Safes	10 years 10	) %
Building	10 years 10	) %
Expandable assets	10 years 10	) %
Machinery & Tools	10 years 10	) %
Office equipment	10 years 10	) %
Refrigerators	10 years 10	) %
CCTV System	5 years 20	%
Internet installation	0	

The estimated useful values of property plant and equipment purchased from research grants are depreciated until they are transferred or disposed based on following useful lives and percentages for current and comparative periods.

Lab equipment (Section 1)	10 years	10 %
Lab equipment (Section 2)	5 years	20%

Depreciation methods, useful lives and residual values are reassessed at the reporting date.

#### 3.2.1.2. DERECOGNITION

The carrying amount of the property plant and equipment's or any subsequent expenditure is derecognized upon disposal or when no future economic benefits are expected from its use or disposal. Any Gains and losses arising of such de recognition of assets (calculated as the difference between the net disposal proceeds and carrying amount of the assets) are recognized in profit and losses (in the statements of financial performance) in the year the assets are derecognized and gains are not classified as revenue.

# 3.2.2. INTANGIBLE ASSETS AND AMORTIZATION

An intangible asset is recognized if it is probable that future economic benefits that are attributable to the assets will fall to the NRC and the cost of the asset can be measured reliably. These assets are stated in the in balance sheet at cost less accumulated amortization. Amortization is recognized in profit and loss on straight line basis over the estimated useful lives of intangible assets from the date on which they are available to use.

#### 3.2.3. INVENTORIES

Inventories are measured at historical cost basis.

#### 3.2.4. TRADE AND OTHER RECEIVABLES

Trade and other receivables are stated at their estimated realizable amounts.

#### 3.2.5. NRC GRANTS

NRC grants represent the total amount accumulated over the years of awarded research grants.

Expenditure incurred from NRC grants are recognized as an expense in the income statement in the period in which they are incurred, except to the extent that they are directly attributable to acquisition, construction or production of assets, in which case they are identified as part of property plant and equipment until they are transferred or disposed

The funds received for research grants are capitalized directly to accumulated funds and the expenditure incurred except to acquisition, construction or production of assets are recognized in the income statement in year in which the expenses are incurred.

The expenditure from NRC grants identify as expenses incurred are recognized as part of recurrent receipt in income in the income statement in the respective periods in which the expenses are recognized.

#### **3.3 LIABILITIES**

Liabilities classified as current liabilities on the balance sheet are those which fall due to payments on demand or within one year from the reporting date. Noncurrent liabilities are those balances fall due for payment later than one year from the reporting date.

All known liabilities as at the date of the Balance Sheet have been accounted for in preparing the financial statements.

# 3.3.1. EMPLOYEE PROVIDENT FUND AND EMPLOYEE TRUST FUND

Employees are eligible for Employees Provident fund contributions and Employees trust fund contributions in line with respective statues and regulations. These are recognized as an expense in the statement of financial performance as incurred.

EPF deductions from the gross emoluments are as follows:

Employer 12% Employee 8%

ETF deduction from the gross emoluments is as follows: Employer 3%

#### **3.3.2. TRADE AND OTHER PAYABLES**

Trade and other payables are stated at their cost.

### 3.4. STATEMENT OF FINANCIAL PREFORMANCE

For the purpose of presentation of the statement of financial performance (statement of income), the nature of expenses method is adopted.

#### 3.4.1 REVENUE

Government Grants received during the year under review towards recurrent and capital expenditure of NRC administration have been recognized to income statement and accumulated funds respectively. The expenditure from NRC grants as expenses incurred identify, annual depreciation of equipment, and loss on transferring equipment to Research Centers are recognized as part of recurrent receipt in income in the income statement in the respective periods in which the expenses are recognized.

Losses on disposal or transfer of items of property plant and equipment are determined by comparing the net sales or transfer proceeds with carrying amounts of property, plant and equipment and are recognized in statement of financial position as a loss and the impact to revenue is also identify as income to reflect the true nature of operations in the statement of financial position. The gains are adjusted vice versa.

#### 3.4.2. EXPENDITURE

All expenditure incurred NRC operations has been charged to income in arriving at the profit /loss of the year. Repairs and renewals are charges to profit and loss in the year in which the expenditure is incurred.

Expenditure from NRC grants is also recognized as research and development expense in the income statement in the period in which they are incurred, except to the extent that they are directly attributable to acquisition, construction or production of assets, in which case they are identified as part of property plant and equipment.

Finance income and expenses comprises of gains and losses of translation of foreign currency are recognized in profit and loss as it occurs.

Rental income is recognized on an accrual basis. Other income is recognized on an accrual basis.

# 3.5. EVENTS AFTER THE BALANCE SHEET DATE

All material post balance sheet events have been considered and where appropriate adjustments or disclosures have been made in the respective notes in the financial statements.

#### 3.6 CASH FLOW STATEMENT

Cash flow statement has been prepared using the direct method.

#### 3.7 PROPERTY, PLANT AND EQUIPMENT

#### 3.7.1. GROSS CARRYING AMOUNTS

	Balance as at 31.12.2013	Previous Year Adjustment	Additions /Transfers	Disposals/ Transfers*	Balance as at 31.12.2014
Cost	Rs.		Rs.	Rs.	Rs.
NRC Office Assets	9,415,534.48	-	935,921.40	188,397.50	10,163,058.38
Grants' Major Equipment	223,978,422.97	-	70,011,074.07	47,789,561.07	246,199,935.97
Grants' Minor Equipment	26,470,552.25	-	11,105,874.24	2,518,315.12	35,058,111.37
Total - Assets	259,864,509.70	-	82,052,869.71	50,496,273.69	291,421,105.72

#### 3.7.2. DEPRECIATION

	Balance as at 31.12.2013	Previous Year Adjustment	Additions /Transfers	Disposals/ Transfers	Balance as at 31.12.2014
	Rs.		Rs.	Rs.	Rs.
Less : Provision for Depreciation		-			
NRC Office Assets	6,446,015.64	-	681,770.44	180,847.50	6,946,938.58
Grants' Major Equipment	44,920,527.30	126,482.10	24,576,942.87	19,216,413.17	50,407,539.11
Grants' Minor Equipment	6,626,025.03	50,101.51	5,504,039.08	1,845,005.45	10,335,160.17
Total - Provision for Depreciation	57,992,567.97	176,583.61	30,762,752.40	21,242,266.12	67,689,637.86

#### 3.7.3 NET BOOK VALUES OF PPE

	2014	2013
	Rs.	Rs.
NRC Office Assets	3,216,119.80	2,969,518.84
Grants' Major Equipment	195,792,396.85	179,057,895.65
Grants' Minor Equipment	24,722,951.20	19,844,527.22
Total	223,731,467.85	201,871,941.71

#### 3.08 RECURRENT RECEIPTS

	2014	2013
	Rs.	Rs.
3.08 RESEARCH & DEVELOPMENT		
Grantees' Consumable	46,207,860.83	34,508,642.74
TO Program Expenses	777,240.80	-
Grantees' PhD Stipend	40,758,732.97	41,068,001.18
Grants & Programs Administration	1,809,057.04	3,088,236.89
Transfer Proceeds	29,201,580.70	31,802,714.60
PPP Prog . Expenses	720,972.40	4,286,951.00
PASR Prog . Expenses	3,150,000.00	110,509.10
Grantees' Travelling	2,793,558.30	1,957,344.68
3.08A		
	125,419,003.04	116,822,400.19
3.08B Depreciation of Major & Minor		
Equipment	30,080,981.95	29,043,250.31
3.08C	155,499,984.99	145,865,650.50
TREASURY RECURRENT RELEASE		
January to December	14,884,700.00	9,867,000.00
Funds Returned to Treasury	-	-
3.08D	14,884,700.00	9,867,000.00
Total Amount (3.09C + 3.09D)	170,384,684.99	155,732,650.50
Total Amount (3.09C + 3.09D)	170,384,684.99	155,732,650

## 3.09 OTHER FINANCIAL ASSETS

	2014 Rs.	2013 restated Rs.
Building Rental Deposit	375,000.00	375,000.00
Building Rental Deposit (IFS)	90,000.00	90,000.00
Telecommunication Deposit	15,000.00	15,000.00
Transport Deposit		
Total	480,000.00	480,000.00

#### 3.10 PREPAYMENTS

	2014 Rs.	2013 Rs.
Building Rent Advance for Hotel Reservation	300,000.00	250,000.00 150,000.00
Total	300,000.00	400,000.00

# 3.11 PAYABLES

	2014 Rs.	2013 Rs.
Telecommunication Payable	72,989.24	45,713.84
Electricity Charges Payable	85,910.01	59,503.84
Water Charges Payable	6,833.00	1,045.24
Other Payables	208,400.00	494,957.76
Audit Fees Payable	97,776.00	-
	-	-
	_	-
Total	471,908.25	601,220.68



විගණකාධිපති දෙපාර්තමේන්තුව

கணக்காய்வாளர் தலைமை அதிபதி திணைக்களம் AUDITOR GENERAL'S DEPARTMENT



ecd අ.කය எனது இல. My No. මබේ අංකය உமது இல. Your No. දිතය නියනි Date

11 August 2015

The Chairman

National Research Council

Report of the Auditor General on the Financial Statements of National Research Council for the year ended 31 December 2014 in terms of Section 14(2) (c) of the Finance Act No. 38 of 1971

The audit of financial statements of the National Research Council for the year ended 31 December 2014 comprising the statement of financial position as at 31 December 2014 and the statement of financial performance, statement of changes in equity and cash flow statement for the year then ended and a summary of significant accounting policies and other explanatory information, was carried out under any 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 and, Notification published in the Gazette Extraordinary No. 1514/28 dated 15 September 2007. My comments and observations which I consider should be published with the Annual Report of the Council 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 furnish to the Chairman of the Council on 22 April 2015.

# **1.2** Managements Responsibility for the Financial Statements

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

අංක 306/72, පොල්දුව පාර, බන්තරමුල්ල, ශී ලංකාව, . - இல. 306/72, பொல்தாவ வீதி, பத்தரமுல்லை, இலங்கை. - No. 306/72, Polduwa Road, Battaramulla, Sri Lanka

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#### 1.3 Auditor's Responsibility

My responsibility is to express an opinion on these financial statements based on my audit. I conducted my audit in accordance with Sri Lanka Auditing Standards consistent with International Auditing Standards of Supreme Audit Institutions (ISSAI 1000-1810). Those Standards require that I comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatements.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgement, including the assessment of risks of material misstatements of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the Council's preparation and fair presentation of financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Council's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of financial statements. Subsections (3) and (4) of the Section 13 of the Finance Act, No.38 of 1971 give discretionary powers to the Auditor General to determine the scope and extent of the audit.

I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my audit opinion.

## 1.4 Establishment of National Research Council

The National Research Institute had been established by a Notification published in the Gazette Extraordinary No. 1514/28 dated 15 September 2007 under the President's Special Provisions. As mentioned in the Special Provisions, the evidence relating to actions taken to establish a National Research Council by a Statute had not been furnished to audit.

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### 1.5 Basis for Qualified Opinion

My opinion is qualified based on the matters described in paragraph 2.2 of this report.

#### 2. Financial Statements

#### 2.1 Qualified Opinion

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In my opinion except for the effects of the matters described in paragraph 2.2 of this report, the financial statements give a true and fair view of the financial position of the National Research Council as at 31 December 2014 and its financial performance and cash flows for the year then ended in accordance with Sri Lanka Public Sector Accounting Standards.

#### 2.2 Comments on Financial Statements

The following observations are made.

- (a) A separate Grant Account had not been maintained in order to show the capital grants received from the Government and adjustments made thereto. The transactions connected thereto had been adjusted to the Accumulated Fund.
- (b) Adjustments totalling Rs.3,487,046 relating to prior periods had been adjusted to the Accumulated Fund in the year under review without restatement of comparative values presented for prior period and disclosed with the financial statements.
- (c) The amortization adjustments had not been made for the depreciation amounting to Rs.609,578 made in the preceding year for the office equipment purchased from the capital grants.

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#### Non-compliance with Laws, Rules, Regulations and Management Decisions 2.3

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Non-compliances with the following Laws, Rules, Regulations and Management Decisions were observed.

# Reference to Laws, Rules etc.

# Non-Compliance

(a) Financial Regulation of the Democratic Socialist Republic of Sri Lanka, 371(2) (b) (c)

Even though the maximum Ad hoc sub-imprest that can be issued by an Accounting Officer to a subordinate officer in one instance should not exceed Rs.20,000 , ad hoc sub-imprests totalling Rs.1,724,300 had been granted contrary to that requirement in 27 instances.

- (b) 1983
- Public Enterprise Circular No. (c) PED/12 dated 02 June 2003.
  - (i) Sections 9.3.1

Gratuity Payment Act, No.12 of Provision for gratuity had not been made for any of the employees of the Research Council.

> The acting officers could be appointed for the vacant posts for maximum of 3 months and appointments on acting basis should not be given for uncertain periods. However, the post of Accountant of the Research Council had been filled by appointing an acting officer and allowances had been paid for over 11 years since the year 2003.



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(ii) Sections 9.3.1 (vi) (vii)

Action had not been taken to prepare a formal Scheme of Recruitment and to forward for the approval of the Department of Public Enterprises though a period of over 6 years had elapsed since the establishment of the Research Council.

(d) Section 8.9.1 (a) of Procurement National January 2006

equipments valued the Even though at Rs.30,999,100 had been purchased for 5 Guideline Circular dated 25 research Projects, a formal agreement had not been signed.

(e) dated 23 February 2012

Section 2.14.1 of Supplement Even though the open bid procedure should be 21 of Procurement Hand Book applied for the purchases valued more than Rs.2,000,000, the shopping method had been applied for the purchase of 4 equipments totalling Rs.27,549,100 during the years 2012 and 2013.

#### Transaction not support by an Adequate Authority 2.4

The following observations are made.

- Sums totalling Rs.82,287,388 saved from the Projects abandoned during the year, (a) had been utilized for new Research Projects without Treasury approval without taking action to transmit such money to the Treasury.
- The Gas Chroma Graph valued at Rs.6,550,000 had been purchased for a Project, (b)without proper approval.



### 3. Financial Review

# 3.1 Financial Results

According to the financial statements presented, the operations of the National Research Council for the year ended 31 December 2014 had resulted in a surplus of Rs.1,038,702 as against with the deficit of Rs.2,357,760 for the preceding year thus indicating an improvement of the financial result by Rs.3,396,462. Increase of Recurrent Grants by 50 per cent during the year under review as compared to the preceding year had been the main reason attributed to the improvement of the financial result.

# 3.2 Analytical Review

Ninety eight per cent of the Current Assets represented the money deposited in Bank Current Accounts on account of Research Grants. Since this situation had prevailed throughout the year, attention had not been paid for the effective management of the funds.

# 4. Operational Review

# 4.1 Performance

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# 4.1.1 Physical Performance

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- (a) A sum of Rs.1,155,000,000 had been granted by the Research Council for the period from 2006-2013 for 276 researches. Of those, 22 researches had been abandoned and 40 researches could not be completed during the stipulated period. Further, the evaluation of 07 final research reports had not been completed up to the date of audit.
- (b) Even though 37 completed researches for which final reports had been furnished and evaluated in the years 2013 and 2014 out of those, only 07 reports had been published in the Science Citation Index. It was further observed that local and foreign publications had not been made relating to 11 researches for which research grants totalling Rs.37,052,360 had been given.



- (c) Even though the Technology Transfers should be effected in the case of completed the research works conducted using the Treasury grants, in order to make improvements to the results, application and obtain the benefits. However, action had neither been taken up to the end of the year under review to apply nor transfer the research results relating 23 researches for which Treasury grants amounting to Rs.69,036,964 had been obtained.
- (d) The National Research Council which functions as the agent providing Treasury funds for research works on behalf of the Government, had not done any followup work on 76 completed researches.
- (e) After the evaluation of the Project Reports of 07 Research Projects for which Treasury provisions totalling Rs.23,627,572 had been granted had been shown as failed/ unsatisfactory projects
- (f) Even though it had been planned according to the Annual Action Plan to grant a sum of Rs.100,000,000 to the "Target Oriented Multi Subject Research Projects Award Programme" in the year under review, a sum of Rs.234,120,000 had been given to 3 Projects. Even though it had been planned to spend a sum of Rs.50,000,000 for the "Private Public Partnership Programme" during the year under review, a sum of Rs.10,109,000 only had been spent for one Project.

## 4.2 Management Inefficiencies

The assets and equipments purchased from the Treasury Provisions amounting to Rs.50,307,876 in the year under review had not been properly transferred on the completion of the projects institution which had been conducted after being completed the Projects.



# 4.3 Operating Inefficiencies

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(a) When granting the Treasury provisions for the selected research Projects by the National Research Council, the total provision for the period of 3 years had been credited to the respective current accounts under each Project at the time of commencement of Projects. However, an examination of the balances of the Bank Current Accounts of several preceding revealed that excessive amounts of money had been held idle regulatory those accounts.

Year	Provisions Credited to the Current Accounts	Current Account Balances as at the end of the year
	Rs.	Rs.
2011	200,000,000	268,113,399
2012	220,000,000	346,873,287
2013	217,000,000	396,340,514
2014	236,034,583	454,696,778

(b) Purchase of equipments valued at Rs.30,999,100 for 5 projects of 2 to 3 years duration had taken periods ranging from 3 to 11 months.

# 4.4 Transactions of Contentious Nature

The following observations are made.

(a) Purchase of required chemical and equipment should be expedited within the 3 years of the project period and research activities should be completed within the relevant period. However, after the lapse of the 6 project period and after closing down of the Bank Current Accounts, an aggregate amount of Rs.1,196,070 had been paid to purchase chemicals from the Research Council Bank Account.



- (b) According to clause 06 of the Project Agreement, the fixed assets / equipment purchased for finalized projects from Treasury provisions should either be taken over by the National Research Council, or transfer to the relevant research institute or to transfer to some other research project. Nevertheless, assets/ equipments costing to Rs.8,028,334 related to 4 Projects which had been completed their activities during the years 2009 to 2011 had been transferred in April 2015, after a lapse of a long period. Assets and equipments costing Rs.8,361,080 purchased for 04 projects had not been taken over. As such those assets could not be utilized effectively.
- (c) The Research Council had granted advances exceeding the requirements by Rs.328,600 in 19 instances and the unspent balances of the advances ranged between 13.5 per cent and 68.9 per cent.

### 4.5 Underutilization of Funds

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The following observations are made.

- (a) An examination of Projects' Bank Current Accounts, revealed that the funds credited to the Projects' Bank Accounts had been saved due to non-implementation of Projects and non-utilization of the entire amount of funds. Accordingly, it was observed that the funds amounting to Rs.52,523,721 had been idling over a period exceeding 3 years from the year 2010 to 2014, without being utilized.
- (b) According to Annexe II of Section I of the Projects Agreement and the Research Project Guidelines, all assets and equipments required for the research Projects should be purchased within 06 months, after release of the provisions. Nevertheless, a sum of Rs.32,110,583 given to 16 Projects for acquisition of the assets had remained idle over periods ranging from 1 year to 4 years without being utilized.



- (c) The Provisions amounting to Rs.3,336,500 had been made for a Project in October 2013 and agreements had been entered into for the purchase of the required chemicals for the Projects from those provisions. However, the Treasury provisions remained idle due to non-purchasing of chemicals up to the end of the year under review.
- (d) A sum of Rs.6,162,870 had been given to a Project in October 2013 and the provisions had been idling even by end of the year under review without being utilized.

### 4.6 Abandoned Projects

The following observations are made.

- (a) Isolation and Characterization of Nitrogen Fixing Bacteria Associated with Rice

  - (i) The research Project was scheduled to be commenced and completed in October 2010 and October 2013 respectively. Even thought the Provision amounting to Rs.3,684,500 had been credited to a Bank Current Account in October 2010, the Project had not been implemented.
  - (ii) The assets purchased for the Project Rs.2,743,309 during the years 2011 and 2012 had been idling due to non-implementation of the project.
  - (iii) Sums totalling Rs.490,454 idling in Project Current Accounts had been taken over by the Council on 28 April 2014 and the sum of Rs.450,737 spent on the Project was observed in audit as an uneconomic transaction.



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# (b) Screening and Treatment of Garment Factory

A sum of Rs.2,935,000 had been credited to a Current Account on 21 December 2012. None of the research activities had been carried out and the project period was scheduled to be ended by 31 December 2014. The Council had recovered a sum of Rs.2,919,250 on 31 December 2014 after leaving the Project funds idle in the Current Account over a period of 2 years.

# (c) Space-Time Dynamics and Parameters of Growth of Toxic

This Project was scheduled to be commenced in August 2011 and completed in April 2014. A sum of Rs.4,825,000 had been banked in August 2011 as project funds. The objectives of the Project had not been achieved and the National Research Council had recovered a sum of Rs.2,846,372 after leaving the project funds idle in the Bank Account over a period of 03 years.

# (d) Spatial Modeling of Elephant Movement for Identification of Elephant Corridors

This Project was scheduled to be commenced on 31 August 2012 and completed on 31 August 2014 and a sum of Rs.1,665,000 had been banked for the Project. The project had not been implemented and National Research Council had closed the Project Bank Account and recovered a sum of Rs.1,424,320 on 31 December 2014 after leaving the money idle over a period of 02 years.

# (e) Comparative Analysis of Disinfection by Products Formation Mechanism with other Water Quality Parameters

(i) This project was scheduled to be commenced in April 2013 and completed in April 2014. A sum of Rs.8,940,000 had been credited to a Current Account at the commencement of the Project. Even though agreements for the purchase of assets valued at Rs.6,008,717 had been entered into, none of the assets had been purchased even up to the end of the year under review.



 (ii) The Project was not implemented and the provision amounting to Rs.2,031,840 had been recovered by the National Research Council on 28 February 2014.

# (f) Evaluation of the Clinical Features and Identification

The above Project was scheduled to be commenced on 29 October 2010 and completed on 29 October 2013. A sum of Rs.3,352,384 had been banked as project provisions in October 2010. A progress of the Project was not observed and the National Research Council had recovered a sum of Rs.2,842,803 on 31 December 2013 after leaving the money idle in the Bank Account over a period of 3 years.

(g) According to Clause 8 (i) and (ii) of the Project Agreement, the Bank Accounts of the abandoned and uncompleted Projects should be closed down immediately and balance money in the accounts should be immediately withdrawn. Although 04 Researchers who had obtained research grants amounting to Rs.15,794,759 had abandoned the projects halfway, action had not been taken to close down the Bank Accounts and recover the money.

# (h) PPP-12-34 Milk Preservation Research Project

The proposed total cost estimate of the Project amounted to Rs.65,392,016 and the Research Council had entered into an agreement to finance a sum of Rs.32,696,008 out of that amount and the entire sum had been deposited at the Bank of Ceylon on 15 May 2013. A sum of Rs.200,000 had been banked by the private Sector. The Project had stalled halfway due to the disagreements between the two parties and a sum of Rs.32,696,008 had been lying in the Current Account without accruing any benefit.



### 4.7 Delayed Projects

The following observations are made.

- (a) Four Research Projects for which Treasury provisions amounting to Rs.19,203,130 had been provided and scheduled to be completed during the year 2013 had not been completed even up to the end of the year under review.
- (b) Three projects in the year 2013 and one project in the year 2014 had been commenced under the Private – Public Sectors Partnership Programme with a view to obtaining the Contribution of the Private Programme with a view to obtaining the contribution of the Private Sector for the field of research. The projects had been commenced for a period of 3 years with the consensus of making contribution in equal measure by the Research Council and the Private Companies to meet the costs of the projects. Even though a total sum of Rs.18,814,000 should have been banked as at 31 December 2014 by the 04 Companies as their contribution in terms of the Project Agreements, a sum of Rs.4,607,046 only had been banked.
  - (i) A sum of Rs.23,211,800 had been deposited in the Bank Current Accounts as the Treasury Contribution for the 04 projects. As the National Research Council had released the provisions without taking into account the progress of the projects, it was observed that a sum of Rs.16,242,471 had been idling in the Bank Current Accounts as at 31 December of the year under review without being utilized despite the elapse of 02 years since the commencement of the projects.
  - (ii) According to the Circular No. 380 dated 19 January 2000 of the Department of Public Enterprises, the management and service fees should be paid from the income earned by the ongoing projects. But one research project had not earned income. The agreements based on the circular had been entered into for the payment of a sum of Rs.4,230,250 as the management fees of 04 projects while a sum of Rs.677,802 had been paid during the year under review from the Bank Accounts of the Private Companies.



(iii) In terms of Chapter II of the Project Agreements, the Research Partners should, submit Progress Reports on the progress of the researches only in every 06 months. Even though 03 Progress Reports should have been submitted by the end of the year under review, only 02 reports had been received during the year and the evaluation of only, one report had been finalized.

## 4.8 Staff Administration

The following observations are made.

- (a) There were 05 vacancies in the executive and non-executive posts as at 31 December 2014 and the posts of the Secretary, the Higher Management and Chief Executive post of the National Research Council had been vacant since the year 1999 and the post of Accountant had been vacant since the year 2003.
- (b) A formal Scheme of Recruitment for the recruitment of the staff of the National Research Council had not been prepared and approval obtained. Recruitment had not been done in a transparent manner by publishing the vacancies in the newspapers.
- (c) The officers had been recruited on assignment and contract basis to the approved cadre of the Research Council since the year 2006 and action had not been taken to confirm their service up to the end of the year under review.



# 5. Accountability and Good Governance

# 5.1 Action Plan

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Even though the manner in which the physical and financial targets to be achieved the objectives of the Research Council by utilizing the Treasury funds should be indicated in the Action Plan, the Physical targets had not been included in the Action Plan.

# 5.2 Internal Audit

# The following observations are made.

- (a) An internal audit division had not been established in the Research Council.
- (b) Even though 06 Audit and Management Committee meetings had been held during the year under review, the internal or external audit reports had not been discussed at the meetings.

#### 5.3 Procurement Plan

A Procurement Plan had not been prepared for the year under review and the assets totalling Rs.82,052,869 had been purchased during the year.

# 5.4 Budgetary Control

Variances in the actual expenditure ranging from 32 per cent to 137 per cent exceeding the budgeted expenditure had been shown as at 31 December 2014. Thus, it was observed that the budget had not been made use of an as effective instrument of management control.



# 6. Systems and Controls

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Weaknesses in systems and controls observed during the course of audit were brought to the notice of the Chairman of the Council from time to time. Special attention is needed in respect of following areas of control.

- (a) Awarding of Research Grants
- (b) Assets Management
- (c) Project Management
- (d) Accounting

W.P.C.Wickramarathne Auditor General (Acting)