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வருடாந்த செயல்திறன் அறிக்கை  
ANNUAL PERFORMANCE REPORT

2017



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விஞ்ஞான, தொழில்நுட்பவியல் மற்றும் ஆராய்ச்சி அமைச்சு  
Ministry of Science, Technology and Research



# **Annual Performance Report 2017**

**Ministry of Science Technology and Research**

**Compiled on the instructions of**

**Public Finance Circular No.402 dated 12<sup>th</sup>  
September 2002**

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## **VISION**

**Sri Lanka becomes a scientifically and technologically advanced country by the year 2020**

## **MISSION**

**To formulate and implement policies pertaining to the popularization and advancement of science and technology, including scientific research and development and transfer of technologies, to ensure improved quality and productivity so as to upgrade economic activities, which are essential for the economic and social development of Sri Lanka.**



## 1. INTRODUCTION

In the increasingly competitive global economy, Science and Technology (S & T) have become strategically more important in national development. Therefore, Advanced industrial economies around the world are steadily moving towards high-end technologies ensuring sustainable economic growth. However, as a developing country, Sri Lanka has relatively very low investment on Research and Development and it is 0.1 percent of GDP which compares unfavourably to a regional average of 2.41 percent according to a report by UNESCO. Therefore, in competing with the global market, it is important that the country adopts new technologies and innovation thinking in businesses and processes in addition to Research and Development.

Accordingly, the Ministry of Science, Technology and Research (MSTR) plays a significant role in contribution of National Development goals through Research and Development, innovations and inventions and Product Design Engineering. Recognizing this, MSTR is specially engaged in promoting demand driven research, innovation focused industry - research tie-ups and creating enabling environment through financially and technically supporting techno entrepreneurships. On the other hand, special focus is given on developing and adapting emerging technologies such as Biotechnology, Nanotechnology, Space Technologies, Robotics, Artificial Intelligence etc. Science popularization is being promoted at all levels through various initiatives such as promotion of Science, Technology, Engineering and Mathematics (STEM education), development of technology based curriculum in collaboration with relevant line Ministries. In order to perform this task, the Ministry continued to accord the highest priority to create a link between research, research funding and development priorities.

In terms of the assignment of subjects and functions made by H. E. the President under Article 44 (1) (a) of the Constitution and published in Gazette Extraordinary 1933/13 of 21<sup>st</sup> September 2015, the Minister of Science, Technology and Research was vested with the following subjects and functions-

### **Subjects and Functions:**

1. Formulation of policies, programmes and projects, monitoring and evaluation in regard to the subjects of science, technology and research and those subjects that come under the purview of Departments, Statutory Institutions and Public Corporations vested in the Ministry
2. Provision of necessary facilities for local research and discoveries to fall in line with new discoveries made in research conducted in the fields of science and technology internationally
3. Adoption of measures to expand scientific, technical and development activities
4. Provision of facilities to research and research institutes to plan and conduct research
5. Provision of information on findings and knowledge from new research and discoveries, including nano and biotechnology, to relevant stakeholders including the business community
6. Activities related to establishment of standards and administration
7. Provision of technical assistance to research programmes conducted by research institutions under the purview of the Ministry

8. Adoption of measures to guide and motivate the community towards new discoveries
9. Implementation of research for the promotion and development of construction industry
10. Matters relating to all other subjects assigned to institutions vested in the Ministry
11. Supervision of the Organizations vested in the Ministry

Accordingly, following Institutions are vested under the Ministry of Science, Technology and Research to fulfil the above functions.

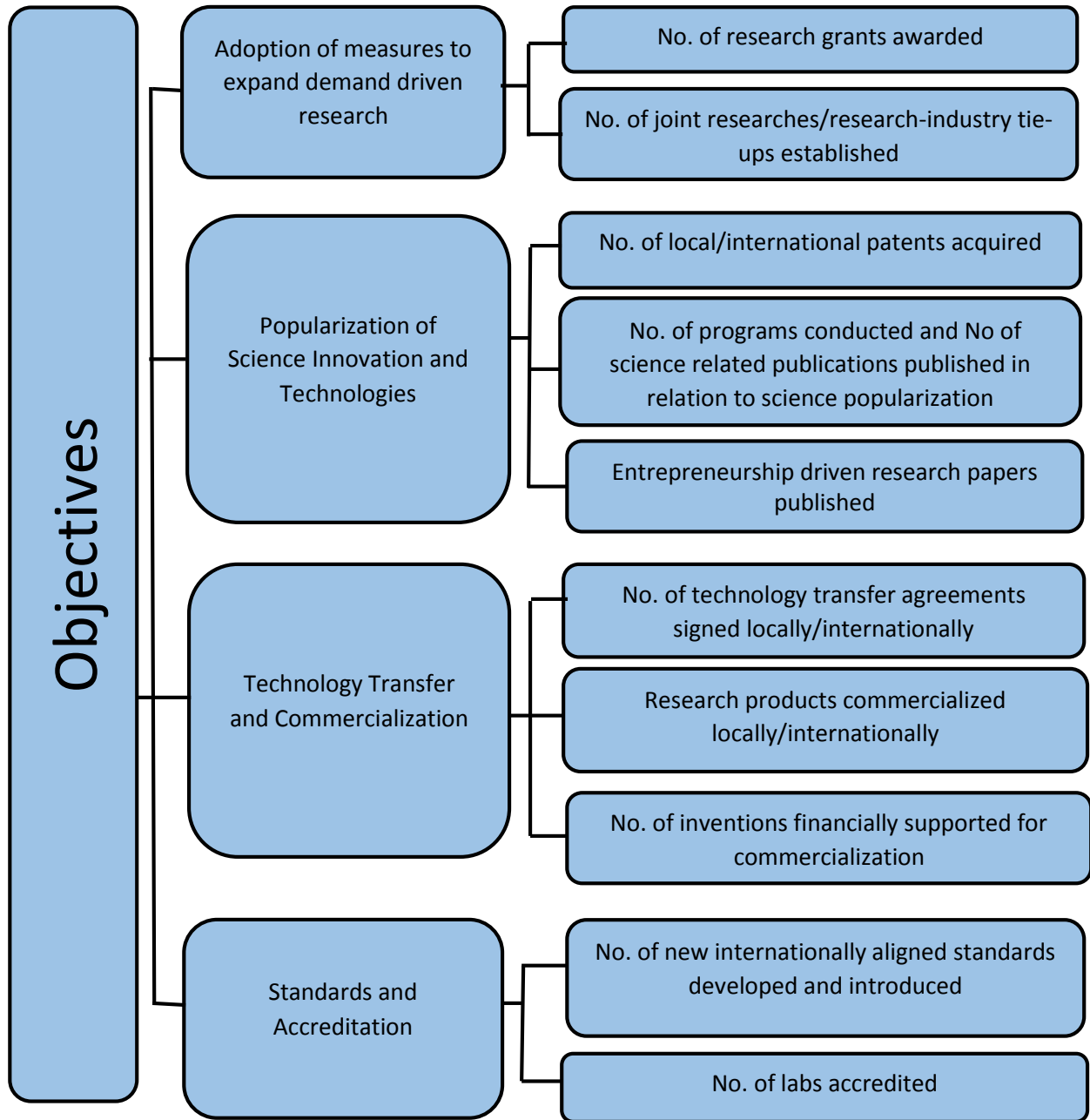
**Institutions:**

1. Arthur C. Clarke Institute Modern Technologies (ACCIMT)
2. Industrial Technology Institute (ITI)
3. National Engineering Research and Development Centre (NERDC)
4. National Institute of Fundamental Studies (NIFS)
5. National Research Council (NRC)
6. National Science Foundation (NSF)
7. National Science and Technology Commission (NASTEC)
8. Sri Lanka Accreditation Board for Conformity Assessment (SLAB)
9. Sri Lanka Inventors Commission (SLIC)
10. Sri Lanka Planetarium
11. Sri Lanka Standards Institution (SLSI)
12. Sri Lanka Institute of Nanotechnology (pvt) Ltd (SLINTEC)

This report includes the progress of the capital and recurrent expenditure of the programmes, projects and activities conducted by the Ministry from January to December 2017. The report was prepared in accordance with the Guidelines set out in section 3.2 “Annual Performance Report” of the Treasury Circular No. 01/2004 of 24.02.2004.

The total Recurrent and Capital Budget allocations made to the Ministry for 2017 were Rs. 1843.360 Mn and Rs. 3931.498 Mn respectively. Out of the total allocation Rs. 1721.901 Mn of Recurrent expenditure and Rs. 1912.674 Mn Capital expenditure was spent during 2017.

## 1.1 Objectives and Key Performance Indicators of the Ministry



## **2. ORGANIZATIONAL ARRANGEMENT**

The Ministry consists of five divisions such as:

1. Administration and Finance Division
2. Technology Transfer Division (Vidatha Programme)
3. Technology and Research Development Division
4. Internal Audit Division
5. Coordinating Secretariat for Science, Technology and Innovation (COSTI)

### **2.1 Administration and Finance Division**

Responsibility of this division is office administration, Human Resource Management, Financial Management and Procurement of the Ministry and the Institutes come under the Ministry in terms of delegation of authorities.

### **2.2 Technology Transfer Division (Vidatha Programme)**

Responsibility of this division is to transfer scientific knowledge and technologies to the Micro, Small and Medium entrepreneurs, while popularizing science among general public and school children at grassroots level through 266 Vidatha Resource Centres.

### **2.3 Technology and Research Development Division**

There are three units under this division.

#### **2.3.1 International Relations Unit**

Responsibility of this unit is to facilitate the international collaborations on Science, Technology and Innovation fields.

#### **2.3.2 Science and Research Development Unit**

Responsibility of this unit is to initiate, facilitate and support technology development and innovation through funding, knowledge creation, capacity building and information dissemination.

#### **2.3.3 Planning Unit**

Responsibility of this unit is to facilitate planning, monitoring, reviewing and reporting development activities of the Ministry and Institutions come under the Ministry.

### **2.4 Internal Audit Division**

Responsibility of this division is to contribute for the strengthening of the internal control system in order to smooth functioning of the Ministry.

### **2.5 Coordinating Secretariat for Science, Technology and Innovation**

Responsibility of this division is to work towards promoting value addition and commercialization in line with the National Science Technology and Innovation (STI) Strategy of Sri Lanka.

### 3. PERFORMANCE OF THE MINISTRY IN THE YEAR 2017

#### 3.1 Administration and Finance Division

##### 3.1.1 Cadre Information as at 31.12.2017

Level	Approved Cadre	Existing Cadre	Deficit/Excess Cadre (if any)
Senior level	26 *	23	Vacant 03
Tertiary level	29	04	Vacant 25
Secondary level	741	657	Vacant 84
Primary level	236	232+77 **	Vacant 04
<b>Total</b>	<b>1032</b>	<b>993</b>	<b>Vacant 116</b>

\*Department of Management Service approved cadre 25 + Secretary to the State Ministry (Cabinet Approved)

\*\* 80 Watchers recruited as per the Public Administration Circular 25/2014 have been granted permanent appointment and these have not been included in the approved cadre of the Ministry.

##### 3.1.2 Cadre changes in 2017

Designation	Approved Cadre	transferred	pensioned	Resigned
Senior Level	26	3	0	0
Tertiary level	29	0	0	0
Secondary level	741	11	1	4
Primary level	236	4	2	2
<b>Total</b>	<b>1032</b>	<b>18</b>	<b>3</b>	<b>6</b>

##### 3.1.3 Training

###### 3.1.3.1 Foreign Training 2017

No. of Programmes	No. of Officers Participated	Total Cost Incurred by Ministry (Rs.)
45	29	12,248,360.03

###### 3.1.3.2 Local Training: - Training, Workshop and Seminar

12 Training Programmes		Cost Incurred by Ministry (Rs.)
06 Individual Trainings	06 Trainings for all staff members	979,440.00



## 3.2 Technology Transfer Division (Vidatha Programme)

The total Capital Budget allocations made to the Vidatha Programme for 2017 were Rs. 53.373 Mn. and expenditure is Rs. 50.954 Mn.

### 3.2.1 Technology Transfer Programmes

Main activities undertaken by Vidatha during the year 2017

1. Technology Transfer Programmes
2. Technology Clinics
3. Science and Technology Special Projects for Rural Community
4. Science Popularization
5. Vidatha Haritha Kadamandiya Programme
6. Construction of Vidatha Resource Centres
7. Capacity Building for Vidatha Staff
8. Issuing test reports and quality certificates (Vidatha System Certificate/ GMP/SLS) collaboratively with Industrial Technology Institute (ITI) and Sri Lanka Standards Institution (SLSI)

#### 3.2.1.1 Technology Transfer Programmes

	Description of the Programme		No. of Programmes	No. of Beneficiaries	Expenditure (Rs. Mn.)
1.	Technology for Community	Public Awareness Programmes	2569	107528	12.50
2.	Technology for entrepreneurs	Technology Transfer Programmes <ul style="list-style-type: none"><li>• Food based Technology</li><li>• Material based technology</li><li>• Chemical based Technology</li><li>• Agriculture</li></ul>	1413	58000	

#### 3.2.1.2 Technology Clinics

Technology Clinics were held as scheduled in Kalutara, Rathnapura, Kegalle, Kandy, Badulla, Monaragala, Matale, Anuradhapura, Polonnaruwa and Nuwara Eliya districts to address technology issues pertaining to the 851 entrepreneurs. National Engineering, Research and Development Centre (NERDC), Industrial Technology Institute (ITI), Sri Lanka Standards Institution (SLSI), Export Development Board (EDB), National Design Centre and Industrial Development Board (IDB) provide assistance for the programme. In addition to that, five Vidatha entrepreneurs were selected from EDB to participate the International Canton Fair held in China.

### 3.2.1.3 Science and Technology Special Projects for Rural Community

The Ministry has initiated 14 Science and Technology Special Projects to facilitate rural community via supporting Micro, Small and Medium Entrepreneurs.

Serial No.	Project Title	VRC	No. of Beneficiaries	Expenditure (Rs.)
01.	Equipment for incense sticks production	Mahara	03	225,000.00
02.	Bio gas project	Jaela	155	903,169.75
03.	Bag production	Mahiyanganaya	20	816,980.00
04.	Post-harvest technology for pepper	Medagama	20	190,000.00
05.	Gem cutting and polishing	Kahawattha	15	439,245.00
06.	Mushroom cultivation	Kuruwita	10	282,500.00
07.	Mushroom cultivation	Tangalle	10	100,000.00
08.	Footwear production	Millaniya	05	54,375.00
09.	Mushroom cultivation	Imaduwa	10	243,600.00
10.	Batik products	Meegahakiula	15	275709.60
11.	Asamodagam spirit production	Warakapola	15	92,000.00
12.	Development of packaging	Ambagamuwa Korale	29	537,974.00
13.	Alternative energy sources	Hingurakgoda	15	137,456.65
14.	Tissue culture project (A/C plant)	Mawanella	110	121,990.00

### 3.2.1.4 Science Popularization

- 334 articles were published in Prabashwara Blog to popularize Science Technology and Innovation among school children and young generation.
- 24 Mini Science and Technology libraries were established at district level to popularize Science Technology and Innovation among school children and young generation.
- Popularization of Science, Technology, Engineering and Mathematics (STEM) Programme initiated through Research and Development division of the Ministry collaboratively with National Science Foundation and the Ministry of Education. The Programme expands to grassroots level through Vidatha network and two groups of Science and Technology officers completed training at Sarvodaya Training Centre, Bandaragama in 2017.



Training Programme on Popularization of Science, Technology, Engineering and Mathematics (STEM) for Science and Technology officers

### 3.2.1.5 Vidatha Haritha Kadamandiya Programme

- National level Vidatha Haritha Kadamandiya was held on 26<sup>th</sup> and 27<sup>th</sup> October 2017 at ITI premises to provide marketing opportunities for 44 entrepreneurs.



National level Vidatha Haritha Kadamandiya at ITI premises

- District Vidatha Haritha Kadamandiya was held in 16 Districts to promote Vidatha products and micro level entrepreneurs at grassroots level.



Kalutara District Vidatha Haritha Kadamandiya

### 3.2.1.6 Construction of VRC Buildings

Construction of new VRC Building was initiated at Mahiyanganaya VRC in 2017.

### 3.2.1.7 Capacity Building for Vidatha Staff

Staff Category	Title of the Workshop	Resource Institute	Place	No. of Participants	Expenditure (Rs.)
Science and Technology Officers	Workshop on herbal products	ITI	ITI	10	900,000.00
Science and Technology Officers	Awareness Programme	Represent different Institutions	Auditorium, Sri Lanka Foundation	223	599,000.00
Office Assistants	Workshop on attitude development and how to perform duties in office premises	National Institute of Labour Studies	National Institute of Labour Studies	114	240,000.00
Science and Technology Officers	Trouble shooting at ground level of an industry	ITI	ITI	29	225,000.00
Computer Operators	Workshop on ICT for beginners NVQ 3	Tertiary and Vocational Education Commission	Tertiary and Vocational Education Commission	13	32,500.00
Science and Technology Officers	Awareness workshop on NERD technologies	NERD	NERD	44	-

### 3.2.2 Other Development Initiatives

- Work in progress on issuing 101 Test reports, 60 GMP Certificates and 72 Vidatha System Certificates collaboratively with ITI and SLSI to improve quality of Vidatha products in Food, Herbal, Agriculture and Electrical fields.
- 250 Tree Planting Programmes were completed at Divisional level in island wide under “Thirasara Yugayaka Thewasara Arambuma” Programme implemented by the Presidential Secretariat.





### 3.3 Technology and Research Development Division

#### 3.3.1 Scientific Development Programme

##### 3.3.1.1 Investment on research and development (National Research and Development Framework - NRDF)

- In order to facilitate Implementation of Identified National Research & Development frame work (NRDF) Interventions, the Ministry organized 11 research Symposia with Universities & Institutions.
- (I). First International conference on “Natural Products Genomics and drug Discovery” was collaboratively organized with Faculty of Medicine – University of Colombo, under the theme “Basic & Translation Research on Cancer and Inflammation. Program was held on 10<sup>th</sup> & 11<sup>th</sup> of July 2017 in Colombo.



- (II). 10th International Research Conference on “Changing Dynamics in the Global Environment: Challenges and Opportunities” was collaboratively organized with the General Sir John Kotelawala Defence University.





- (III). International Conference on “Advance in Tea, Agronomy & Processing” was held on 12th & 13th of August 2017 which was organized in collaboration with Faculty of Agriculture and Plantation Management of Wayamba University of Sri Lanka.



- (IV). 9th Annual Research Symposium 2017 of Rajarata University of Sri Lanka, held on 31st of August 2017 was co - organized by the Ministry.

- (V). “PGIS Research Congress – 2017” was co - organized with Postgraduate Institute of Science (PGIS) University of Peradeniya, under the theme of “Earth & Environmental Science; ICT, Mathematics & Statistics; Life Science; Physical Science & Science Education”. It was held on 8th & 9th of September 2017 in Kandy.



- (VI). 4th International Conference on “Multidisciplinary Research - 2017” was collaboratively organized with the Faculty of Graduate Studies, University of Sri Jayewardenepura. The program was held from 21<sup>st</sup> to 23<sup>rd</sup> September 2017 at Hikkaduwa. Main theme of the symposium was “High Impact Research for Sustainable Development”.



- (VII). "22<sup>nd</sup> International Forestry and Environmental Symposium" has been co-organized with Department of Forestry and Environmental Science, University of Sri Jayewardenepura. The program has been scheduled to be held on 10<sup>th</sup> & 11<sup>th</sup> November 2017.
- (VIII). A symposium on "Scientists role in S & T innovation for National Development: Current Status & Future directions in the use of indigenous knowledge and value additional of Mineral resource" was collaboratively organized with Sri Lanka Association for the Advancement of Science (SLAAS), Section D. which was held on 15<sup>th</sup> of September 2017 in Colombo.
- (IX). A series of training programs (provincial programs) for "Upgrading Science Activities in Schools" are being organized collaboratively with Sri Lanka Association for the Advancement science (SLAAS). The first program of the series was held on 10<sup>th</sup> & 11<sup>th</sup> of October 2017 at the Ibbagamuwa Education Development Centre for Wayamba province.
- (X). 5<sup>th</sup> International conference on "Ayurveda, Unani, Siddha and Traditional Medicine (CAUST 2017)" was collaboratively organized with the Institute of Indigenous Medicine, University of Colombo. It provided a platform for eminent researchers, academicians, physicians, traditional & medical practitioners, manufactures & exporters of Ayurveda & herbal products to share their knowledge and Experience. The program was held from 27<sup>th</sup> to 29<sup>th</sup> of October 2017.
- (XI). 3<sup>rd</sup> International Conference on "Dry Zone Agriculture – 2017 (ICDA – 2017)" has been collaboratively organized with Faculty of Agriculture, University of Jaffna. The program is scheduled to be held on 1<sup>st</sup> & 2<sup>nd</sup> of November 2017 in Jaffna.

### 3.3.1.2 Science popularization

- **STEM Education Development Program**

A series of Programs organized to develop the Science, Technology, and Engineering & Mathematic (STEM) Education in Sri Lanka.

A program for STEM Education development was held on 26<sup>th</sup> – 28<sup>th</sup> January 2017 at NERD Centre to build consensus among all stakeholders & prepare an action plan for implementation. The target group of the program was Provincial Education Directors (Science) & officials from the Ministry of Education and relevant institutions.

Accordingly three provincial symposia (3 days each) were held in Colombo in June & July 2017 with the collaboration of the Ministry of Education for upgrading and popularization of STEM Education.

The target group of the symposia was Science Education Officers and Master Teachers of the Science Education throughout the Country. Panel Discussions on Nano Technology, Bio Technology, Artificial Intelligence, Space Technology & ICT & Quality Laboratory Infrastructure, and field exposure to the ITI ACCIMT & SLINTEC were included to each symposium.

- **Trilingual "Vidya" Paper Supplement**

The newspaper supplement "Vidya" is published in, last Wednesday of every month in three languages along with Dinamina, Thinakaran and Daily News to disseminate scientific knowledge useful to school children and all sectors of General Public.



- **Exhibitions**

"Vidya – 2017" Exhibition was co – organized with the Faculty of Science, University of Kelaniya which was held from 2<sup>nd</sup> to 9<sup>th</sup> October 2017. The theme of the exhibition was "The Evolution of Science - Big Bang to Artificial Intelligence". The exhibition was patronized by large crowds from all over the country which was success beyond expectations.



- **Workshops and Forum**

A Workshop on creating awareness for "Innovating Sri Lanka" among senior members of Science and Technology sector was organized & held on 17<sup>th</sup> & 18<sup>th</sup> February 2017 in Kandy. Senior staff officers of the Ministry & the institutions under the Ministry participated and contributed to the workshop.





- **World Science Day**

In line with World Science Day, 10th of November; Series of workshops were organized to celebrate the “National Science Day” and “National Science Week”

Science exhibitions, Science film festivals for university students, School children & General Public, Science walk & Discussions sessions for school Children were held on Island wide.

In line with the decision of the cabinet of Ministers to celebrate World Science Day on 10<sup>th</sup> November 2017 and to declare the week from 10<sup>th</sup> to 17<sup>th</sup> November, a series of activities were implemented island wide.



- **Science Film Festival**

In line with the World Science Day and National Science Week Science Films are screening for

1. General Public
2. University Students
3. Primary level (Year 05- 10) and Secondary level (Year 11-18) School Children.

This Science festival has been organized to provide an opportunity for Sri Lankans to share the scientific entertainment experience with international scientific world and create answers on Science, Technology and Innovation culture among various target groups in the Sri Lankan Society. In this endeavour, Ministry of Science Technology and Research joined hand with the Ministry of Education, Ministry of Higher Education and Ministry of Skills Development and Vocational Training.



### 3.3.1.3 Bilateral Cooperation

- **Indo Sri Lanka Joint Research Symposium**

The first Indo - Lanka Joint Research Symposium was held under the patronage of Hon. Minister of Science Technology and Research Mr. Susil Premajayantha and the Indian High Commissioner to Sri Lanka Tharjith Shanmugu at Water's Edge Hotel, Colombo on 29<sup>th</sup> May 2017. During this symposium, 15 research papers were presented under three thematic areas. Researchers from Sri Lanka and India participated and presented their findings. Academics from universities, research institutes and government stakeholders participated for this symposium.



- **Indo-Sri Lanka Joint Research Program**

During the 3<sup>rd</sup> meeting of the Sri Lanka India Joint Committee on Science and Technology which was held on 4<sup>th</sup> August 2016 in Delhi, India between the Ministry of Science, Technology and Research, Sri Lanka and the Department of Science and Technology, India, a new Program of Cooperation (PoC) was discussed and concluded. The new PoC addressed many new areas of cooperation and both parties agreed to actively take part in implementing the PoC. The areas agreed include food technology, Plant based Medicine, Metrology, Space Research and application, Robotics and Automation and Industrial Electronics. The research call was concluded on 31<sup>st</sup> December 2016. By the deadline, the Ministry had received 90 proposals for Joint Research and 8 proposals for Joint Workshops. After an evaluation by an expert team, eighteen joint research projects selected for funding and two joint workshops were selected for funding.

The tripartite Agreements were signed on 13<sup>th</sup> October 2017. The research projects started by mid October 2017.





- **Indian Scientific and Research Fellowship Programme (ISRF)**

The Science and Technology Ministry of India had initiated a program to offer fellowships to Sri Lankan Scientists and researchers through the “Indian Scientific and Research Fellowship programme (ISRF)”. The details of the programme were posted in websites of the Ministry of Science, Technology and Research, National Science Foundation and National Science and Technology Commission and also advertised in the newspapers. Two applications were received and after an evaluation by an expert team, two applications were sent to Indian authority for approval to offer fellowships.

- **Agreement and MoUs Signed and Initiated**

- (I). International Cooperation Agreement between The Democratic Socialist Republic of Sri Lanka and The European Organization for Nuclear Research (CERN) concerning Scientific and Technical Cooperation in High – Energy Physics was signed on 08<sup>th</sup> February 2017, Geneva, Switzerland



- (II). MoU between the Ministry of Science Technology and Research of the Democratic Socialist Republic of Sri Lanka and the Ministry of Education and Science of the Russian Federation on Cooperation in Science, Technology and Innovation was signed on 24<sup>th</sup> March, 2017, Moscow, Russia



- (III). The Ministry of Science, Technology and Research, Sri Lanka and the Ministry of Science Technology, Iran Signed a MoU on “Science Technology and Innovation Cooperation” on 15<sup>th</sup> January 2017, Tehran, Iran



- **Other Collaborations**

- (I). Meeting between Ministry of Science Technology and Research, Sri Lanka and Department of Science and Technology (DST), Yunnan Province China was held on 27<sup>th</sup> May 2017 at 9.30 am at the Ministry of Science Technology and Research Sri Lanka



- (II). Agreements on Science, Technology and Innovations have been initiated with Ecuador, Belarus, South Africa, Latvia, New Zealand, Slovenia, Viet Nam and Indonesia and are being discussed for signature

- **Fourth Expert Group Meeting on the Establishment of the BIMSTEC Technology Transfer Facility**

4<sup>th</sup> Group meeting on the establishment of the Bay of Bengal Initiative for Multi sectoral Technical and Economic Corporation (BIMSTEC), Technology Transfer Facility (TTF) was successfully concluded. The meeting was held on 21-22 November 2017 in Colombo. Eight Members from the BIMSTEC Member Countries (Bangladesh, Bhutan, India, Nepal, Sri Lanka and Thailand) had participated for this meeting.



The meeting was inaugurated by Hon. Susil Premajayantha Minister of Science, Technology and Research. BIMSTEC meeting was headed by Sri Lankan Delegation Prof. Jayantha Wijerathne, Chairman, National Science and Technology Commission. Mr. S. M. Nazmul Hasan the Director of the BIMSTEC Secretariat also participated. After deliberations the Memorandum of Association to establish the TTF was finalized.

- **Visit of the Science and Technology Policy Institute (STEPI), South Korea**

In responding to our request for a Workshop on Policy Analysis and R & D Commercialization a Team from STEPI visited Sri Lanka from 21<sup>st</sup> -22<sup>nd</sup> December 2017. During the visit they visited Sri Lanka Nanotechnology Institute, Industrial Technology Institute and the University of Moratuwa. The purpose of this visit is to do a need assessment survey before conducting the Workshop in 2018.



#### **3.3.1.4 Development Initiatives by COSTI**

- COSTI Public Observatory System is a platform to facilitate knowledge sharing between the academic institutions, and public and private sector institutions with common synergies for better understanding and to obtain mutual benefits. This system is expected to act as the focal point for scientific community to resolve their issues. The system is easy to access and can be used intuitively making it usable by all.
- COSTI conducted an IP Sharing Project on Appropriate Technology development, in Collaboration with Korean Intellectual Property Office (KIPO), Korean Invention promotion Association (KIPA), for the year 2017. Under this project, COSTI developed a Coconut Oil Expeller (COE) Machine for SME's with the financial and technical support from KIPO, KIPA. The local partners of the project were NERDc, ITI and Vidatha. A brand name for the COE and certificate mark for the Ceylon coconut was developed under the brand development component of the project.





EIE Project Tech Transfer & Commercialization Workshop Organized by COSTI in Collaboration with WIPO on 30<sup>th</sup> October – 03<sup>rd</sup> November, 2017

- With the opinion of the Hon Minister to Come up with a National Solid Waste Management Action Plan, The Ministry of Science Technology & Research, Coordinating Secretariat for Science Technology and Innovation (COSTI) and the Ministry of Local Authority & Provincial Councils, organized a Two day forum on “Solid Waste Management” from 23<sup>rd</sup> -24<sup>th</sup> June 2017 to update the current technologies, experts’ ideas and opinions on this issue. The “Draft National Solid Waste Management Action Plan” compiled those expert ideas which were discussed (in the Base camp virtual platform) and presented at the meeting on “the Solid Waste Management of the local Government” organized by the Presidential Secretariat on 14.12.2017.
- COSTI is working on the project of Mechatronic Enabled Economic Development Initiative 2017-2018

### **3.3.1.5 Other Development Initiatives**

- **Social Innovation Lab**

Sri Lanka’s first National Summit on Foresight and Innovation for Sustainable Human Development was held in May 2016, co-hosted by UNDP together with other multi-sectoral partners. The primary outcome of the Summit was to establish an Innovation Lab for Sri Lanka. The main purpose of the Innovation Lab is to bring innovation into the national decision formulation processes, while being in line with the Government's development agenda and thereby successfully withstand the local and global processes of economic, social and political changes. The Lab will be able to comprehensively test an idea, problem or solution within a given timeline to ensure there are no potential loop holes that would occur during implementation.

The Ministry recognizing the importance of such initiatives signed an Agreement with the UNDP-Sri Lanka in September 2017 with the approval of the Cabinet of Ministers to establish the Social Innovation Lab -Sri Lanka with the main objective of setting up a mechanism/platform that will complement the current structure of innovation in order to adapt to fast changing regional and global trends and will function as a research and experimenting facility which will scan the horizon for best practices and will also be able to bring in foresight and innovation approaches into assessing development solutions and initiatives. The Lab will be initially established within the ITI premises and suitable mechanism will be in place to institutionalize the activities of the Lab.



The Ministry also signed an MOU with UNDP in view of promoting the IDEA Board and make it more user friendly and ensure better usage of the citizen engagement aspects of the planned Social Innovation Lab.



- **14th Governing council of the NAM&ST**

A Delegation led by the Secretary of the Ministry participated at the 14<sup>th</sup> Governing Council of the NAM S&T in Malaysia from 5<sup>th</sup> to 6<sup>th</sup> September 2017. During the meeting, Sri Lanka was voted to become the Vice President of the Governing Council and accordingly, Sri Lanka has been selected as the host to hold the 15<sup>th</sup> Governing Council in 2020.



- **Prototype Manufacturing of Solar Panels**

The main objective of this project is to train a world-class workforce of approximately 2000 youth who are competent in solar energy and related technologies, and to develop research and training facilities for prototype manufacturing of solar panels towards setting up a robust solar energy industry and a commercial-scale solar panel manufacturing facility in Sri Lanka.

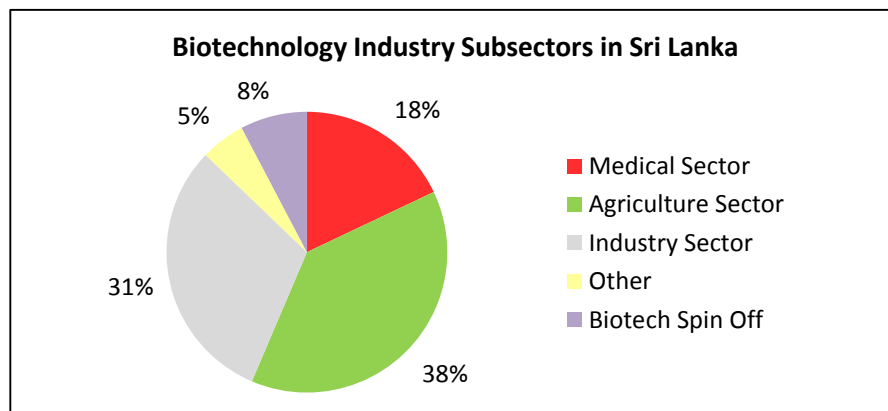
The Ministry was able to work with the Ministry of Skills Development and Vocational Training to develop a curriculum on solar energy and it is expected to train the students with hands on experience in collaboration with the private sector industries engaged in solar panel installation. On completion of the course a certificate equivalent to NVQ 4 will be provided for all trained students.

The Ministry has already having discussions with the local and international industries in setting up the solar panel industry in the country which will be a benchmarking progress in coming years. This project is being implemented with the total cost of LKR 240 Mn over a period of five years in collaboration with four universities namely Kelaniya, Ruhuna, Jaffna and Peradeniya. Required R & D facilities will be provided by the SLINTEC, NERDC and NIFS. During the reporting period, school awareness programmes with demonstration on solar energy were conducted for identified schools in Colombo districts. Curriculum development is in final stage with the support of Ministry of Skill Development & Vocational Training. Cabinet approval has been obtained to establish Project Management unit in University of Kalaniya and relevant appointments are being made.

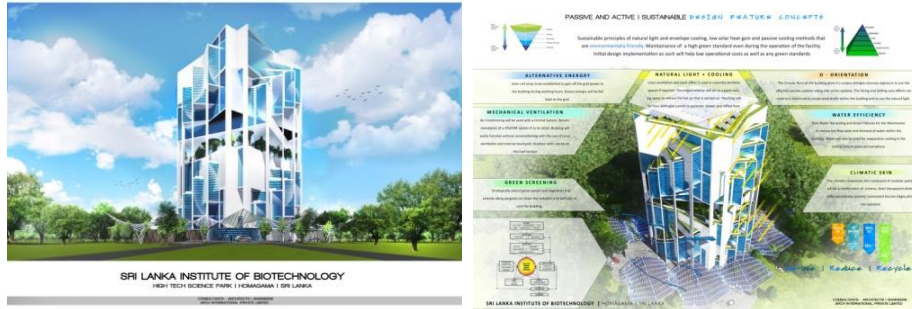


- **Establishment of Biotechnology Innovation Park**

This project consists of two main components namely; centralized biotechnology facility with state of the art modern technologies (proposed Sri Lanka Institute of Biotechnology-SLIBTEC) and Biotechnology Innovation Park. The SLIBTEC will be a public private company which will provide all laboratory and incubator facilities for biotechnology industries and the Biotechnology innovation park will be set aside for industries to establish their own manufacturing facility. The main objective of this Project is to develop an innovation culture to accelerate biotech industry via providing incubator facilities for inventors and to create employment opportunities for the biotechnology graduates/postgraduates and process/product engineers etc. This will also facilitate novel biotechnology industry to cater the global market needs and to develop a vibrant biotech SME culture in the country.



During the reporting period, a land has been acquired at Pitipana, Homagama and the Ministry was able to mobile the Consultant and the Architect to design the proposed SLIBTEC and is in the process of designing the laboratory building with the state of the art research facilities. Total estimated Cost of the Project is LKR 6850 Mn and will be running for five years.



Proposed Sri Lanka Institute of Biotechnology

- **Mechatronics enabled Economic Development Initiative (MEDI)**

Economies benefit from emerging technologies immensely by having high end technology embedded product design companies with required standards to meet global competition. These products will in turn contribute towards economic development of a country by having competitive business in the market. In recognizing this, an amount of Rs. Mn. 500 was allocated by the Treasury to establish a Product Design Engineering Park under the MEDI.

Overall Objective of this initiative is to increase our hi-tech exports and to increase the value addition to our local products. This Initiative has two components namely; Standards, Training, Prototyping and Test Facility (STPT) and Long-Term Loan Facility (LTLF). Through the STPT, it is intended to facilitate Product Design Engineering (PDE) companies to obtain international certification standards using structured development approaches, standards training, prototyping incubators and test facilities since most of them are safety critical systems and to avoid each PDE company spending huge cost on this. As such this STPT will be a fully government funded facility for PDE companies to develop concept prototypes, production prototypes and product certification.

The Long Term Loan Facility will be implemented through a banking system which will support PDE companies to obtain low interest with longer grace period loans so as to give them sufficient time develop products that meet global standards. Ministry has already initiated to establish the SPTF within the SLINTEC premises which will be implanted by the NERDC. Approval of the Cabinet of Ministers has already been sought to invite Request for Proposals (RFPs) to select a suitable bank to implement the LTLF.

This Project is a model that is similar to Japanese “Beans” project, India’s “tech Mahindra” and Italy’s Polomechatronica project”. NERDC has been assigned the responsibility of implementing the testing facility (SPTF) and the process of developing the business plan and the feasibility report.



- **Incubator facilities to support start ups**

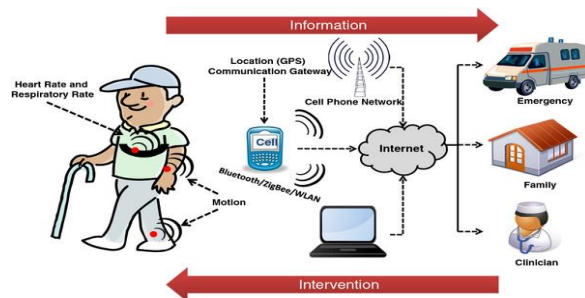
Incubators, which are taking root across the world, a variant of more traditional business incubation schemes, assist technology-oriented entrepreneurs in the start-up and early development stage of their firms by providing workspace, shared facilities and a range of business support services, In essence, incubators are home to angel investors, venture capitalists, and others who are able to mentor entrepreneurs. Many also offer tangible resources such as accounting assistance, office space and legal guidance. Having this business infrastructure in place allows the startup to focus on what matters most—the core business. The Ministry has been given treasury allocation to support startups realizing the importance of research commercialization and to develop country’s economy with technology based entrepreneurship. The Ministry is currently working with two universities namely; university of Ruhuna and Peradeniya and with the NERDC in setting up the Technology Incubators. All preliminary work related to procurement process to purchase the identified equipment to establish the incubation centre at NERDC has been completed. The incubator services will be opened to both industry and university to scale up their lab scale research. Ministry is implementing this Project in collaboration with SLIC.

- **Innovation Accelerator Funding Mechanism**

The Government allocated funding to introduce an Innovation Accelerator Funding Mechanism with a view to support innovations that has already developed a prototype and will be able to commercialize with a financial support. Most of the innovations of the country believed to be limited to lab scale as a result of huge investment on commercialization. In order to address this gap, this Ministry in collaboration with the SLIC has developed a guideline on utilizing the Accelerator funding mechanism with a detailed evaluation process. Action has already been taken to invite proposals from innovators so as to operationalize the funding mechanism. An expert committee has been established to evaluate the funding request in line with the guideline.

- **Establishment of the Institute of Genomic Medicine and Digital Health**

Personalized medicine where genomics and health care come together has not been supported in the past although it has a huge potential for hi-tech service exports. The establishment of this Institute, the first such Institute in Sri Lanka and in South Asian region would enable the establishment of a world-class Institute for Digital Health in the country that would address finding smart solutions to the most important healthcare issues specially Non Communicable Disease (NCDs) affecting the population of Sri Lanka and other emerging economies in general. It will also focus on identifying upcoming health issues based and genomic studies. The Ministry has already developed the concept paper and submitted to the Ministry of Health, Nutrition and Indigenous Medicine for their comments.





- **National Science Centre**

With a view to popularize science among all segments of the society, government funding was allocated to establish a world class state of the art Science Centre. The proposed location of the Science Centre would be in Pitipana, Homagama and the land has already been allocated by the Urbana Development Authority for this purpose. Currently, the Ministry is in the process of identification of different themes of the Science Centre and designing. It is envisaged to complete the proposed Science centre by 2020. Advisory and steering committee has been appointed.

### 3.4 Sri Lanka Planetarium

The total Capital Budget allocation made to the planetarium for 2017 was LKR 54 Mn and expenditure was LKR 36.834 Mn. The Planetarium Presentations, Outdoor Programmes, Astronomy Classes, Seminars and other activities were conducted in order to share new advancements and up-to date knowledge on astronomy with the general public.

#### 3.4.1 Planetarium Presentations

The planetarium shows including astronomy related 3-D films, “Introduction to the solar system” and presentations on “Today’s night sky” were conducted for school children and general public throughout the year 2017.

Table: Achievements for the Year 2017 of General Planetarium Presentations

Number of Shows	Number of Participants	Total Income (Rs. Mn)
466	218,345	11.899

Source: Sri Lanka Planetarium



A Planetarium Presentation

#### 3.4.2 Outdoor Programmes

Mobile Planetarium Shows for students in rural areas, Night Sky Observation camps at schools as well as planetarium premises were conducted by the Planetarium all over the country throughout the year to enhance the knowledge among astronomy interesting society. All these programmes were conducted free of charge, considering it as a social responsibility.

Table: Achievements for the Year 2017 of Outdoor Programmes

Outdoor Programmes	Achievements for the Year 2017	
	No. of Programmes	No. of Participants
Mobile Planetarium Shows	360	13,640
Night Sky Observation Camps	13	3,095

Source: Sri Lanka Planetarium



Mobile Planetarium Show



Night Sky Observation

### 3.4.3 Astronomy Classes & Seminars

“Astro- IT” course and “Astro Kids” program were successfully completed for 215 school children who showed great improvement in their knowledge on Astronomy and Space Science. 100 new opportunities to students were given by the Sri Lanka Planetarium in the year 2017.

The seminars for Astronomy Olympiad International Exam were conducted by the planetarium for more than 130 students and 54 students won medals including six gold medals from the exam.



“Astro- Kid” Programme

### **3.4.4 Other Activities**

A special program was conducted by the planetarium to celebrate the International Science Day and Science Week. Navy officers, scouts, teachers and students were gathered together to share their knowledge.

A special lecture on “The Cradle of Young and Massive Star” was held at the planetarium conducted by Dr. Elena Terlevich from the University of Sussex, Royal Greenwich Observatory and the Institute of Astronomy, Cambridge.

### **3.5 Sri Lanka Institute of Nanotechnology (SLINTEC)**

The total Capital Budget allocation made to the SLINTEC programme was LKR 1150 Mn and expenditure is LKR 414.506 Mn. Nanotechnology has seen a boom in development within Sri Lanka alone, due to the development of the Nanotechnology and Science Park. With the vision of building a world-class research and development center specializing in nanotechnology and advanced technology, since its opening SLINTEC has been able to attract local and international clientele to invest.

SLINTEC has also had a positive effect in mitigating the brain drain in Sri Lanka. Due to the availability of the high tech equipment in the Center of Excellence, SLINTEC has been able to attract 18 PhD-qualified scientists to return back to Sri Lanka and relocate. Therefore, the effects of this migration back to Sri Lanka can be felt within the next few years in terms of growth in R&D in nanotechnology.

SLINTEC has also been responsible in boosting the growth of nanotechnology in Sri Lanka. Due to the development of the Nanotechnology and Science Park, John Keells Holdings set up their R&D labs in the Park. In January 2017, John Keells filed a patent for a novel nanomaterial for energy storage, in result of its research endeavors. Therefore, SLINTEC has been partially responsible for stimulating the growth of nanotechnology research in the country.

#### **3.5.1 Main activities of SLINTEC during 2017**

SLINTEC has conducted a variety of activities in promoting research and development within Sri Lanka. A summary and snapshot of the types of activities conducted last year are below:

- Signing of four contract research projects with private sector companies (ABM Exide, Baur & Co., Analytical Instruments) and one development project (JF Packaging)
- Finalization of a 5 year long R&D pilot plant project with Laugfs Holdings to develop titanium dioxide coated nanoparticles for paint pigments
- Signing of three partners into the Nanotechnology and Science Park: John Keells Holdings, JL Morisons, CIC Holdings
- Opening of the SLINTEC state-of-the-art greenhouse funded by Kunming Rural Tech, China
- Launch of the SLINTEC Academy which offers an in-house PhD or MPhil program

### **3.5.2 Special activities undertaken to support the industrial and agricultural sector in 2017**

SLINTEC has undertaken several activities to promote R&D to private industry in several sectors. SLINTEC has a strong, in-house agricultural research arm due to the research and development of a nanotechnology based fertilizer which was created to act as a replacement to urea. In the year of 2017, 4 projects were initiated in the agriculture space. One of the clients included Baur & Co to develop two products in the fertilizer and post-harvest control space. The product developed as per the research was tested in SLINTEC's newly built greenhouse, developed for the purpose of testing agriculture related R&D activities. SLINTEC also engaged in agriculture-related projects with their partner, Hayleys Agriculture as well as other non-agriculture related companies such as Analytical Instruments and Sri Lanka Land Reclamation and Development Corporation who were diversifying towards agriculture based products.

In terms of industrial related activities, SLINTEC was closed to commercializing three long term projects with partners in the manufacturing sector (Orange, Laugfs and DSI). However, due to several factors, the projects were not taken to the commercial level. SLINTEC is closely working with other smaller manufacturing companies such as Dynawash and British Cosmetics to improve their process times as well as to add value to their current product ranges. In order to promote industry-led research, SLINTEC has teamed up with the Export Development Board to encourage companies to invest in reach with SLINTEC to value-add to their products for the export market.

### 3.6 Implementation of Budget Proposals of year 2017

Propo sal No.	Proposal	Implem enting Agency	Total Allocation (Rs. Mn)	Expendit ure (Rs. Mn)	Progress (In words)
137	Research on CKDu and other key NCDs	NSF	100	98.93	<ul style="list-style-type: none"> <li>• Work on 22 funded research projects is in progress. CKDu - 07, On Cancer Related - 07, On Diabetes - 02, Dengue – 06</li> <li>• Two Research Programme on Health Science (RPHS) Site visits were conducted on 18.12.2017 and 28.12.2017.</li> <li>• Progress reports of 20 research projects were received.</li> <li>• Progress review is due to be held at the end of Jan. 2018.</li> </ul>
216	Establish Innovation Accelerator Fund	SLIC	100	55.60	<ul style="list-style-type: none"> <li>• Relevant guideline to grant funding has been finalized with the consent of the Ministry of Finance. A team has been mobilized to develop documents and processes in relation to operationalization of Fund at Sri Lanka Inventors Commission, An Expert Committee has been established to evaluate the funding request in line with the guideline</li> </ul>
217	Establish a Bio Technology Innovation Park on PPP basis	COSTI	100	7.92	<ul style="list-style-type: none"> <li>• Cabinet approval has been obtained to implement the project by undertaking a feasibility study and business plan</li> <li>• Draft RFP is being discussed by the TEC to invite proposals form consultancy firms to undertake feasibility and business plan</li> <li>• The Project Manager (CECB), Architecture (Arch International) and Quantity surveyor (Cost Consultancy Pvt Ltd) have been mobilized to finalize the estimate for the proposed Sri Lanka Institute of Biotechnology- lab facility.</li> <li>• Acquired a suitable land for this project at Pitipana</li> <li>• Currently estimated cost of construction is about Rs. 20 Bn.</li> </ul>

<b>218</b>	Sri Lanka Institute of Nanotechnology	SLINTEC	250	116.90	<ul style="list-style-type: none"> <li>• Development of API (Active Pharmaceutical Ingredient) Pilot Plant is in progress.</li> <li>• The SLINTEC Academy started operations in September and 18 students have enrolled for the MPhil program. A sum of Rs. 19 million was released to meet the initial set up costs and operations.</li> </ul>
<b>219</b>	Establish center for Excellence in Genomic Science	Ministry	50	0	<ul style="list-style-type: none"> <li>• In line with the initial cabinet paper submitted by the Ministry, there is a need to submit a joint Cabinet Memo with the Ministry of Health. However, Ministry of Health has not responded so far despite several reminders.</li> </ul>
<b>220</b>	Expand Pharmaceuticals Lab at Industrial Technology Institute (ITI) Sri Lanka	ITI	150	60.0	<ul style="list-style-type: none"> <li>• Laboratory area was identified and renovation tender has been awarded &amp; job in progress. Rs 72.4 Mn worth assets purchased &amp; Purchase Order raised for Rs.63Mn. UPLC system received. Fully Completed renovation of old Building. Purchased PC's and finalized LIMS Software System</li> </ul>
<b>224</b>	Establish Product Design Engineering services Fund	COSTI	500	0	<ul style="list-style-type: none"> <li>• Approval of the Cabinet of Ministers has been obtained to invite proposals from Sri Lankan Banks to implement the Loan component of the Project. RFP has already been finalized.</li> <li>• NERDC has been assigned the responsibility of implementing the testing facility and is in the process of developing the business plan and the feasibility report</li> </ul>
<b>225</b>	Establish incubators in 5 districts in collaboration with Nenasala to support startups	SLIC	100	100	<ul style="list-style-type: none"> <li>• Proposals received from NERDC, Universities of Jaffna and Peradeniya have already been approved by the expert panel.</li> <li>• Funding has already been disbursed to commence the Incubator Centre at NERDC. More funding is needed to setup incubators at the universities.</li> <li>• All preliminary work related to procurement process to purchase the identified equipment to establish the incubator centre and renovation of building to set up the centre at the NERDC has completed.</li> </ul>

### 3.7 Audit and Management Committee Meeting

The Audit and Management Committee met four times during the year 2017. This is considered as the important forum to discuss the matter pertaining to the good governance. The audit committee comprises of senior officials of institutions come under the purview of Ministry and representatives from General Treasury & Auditor General's department.

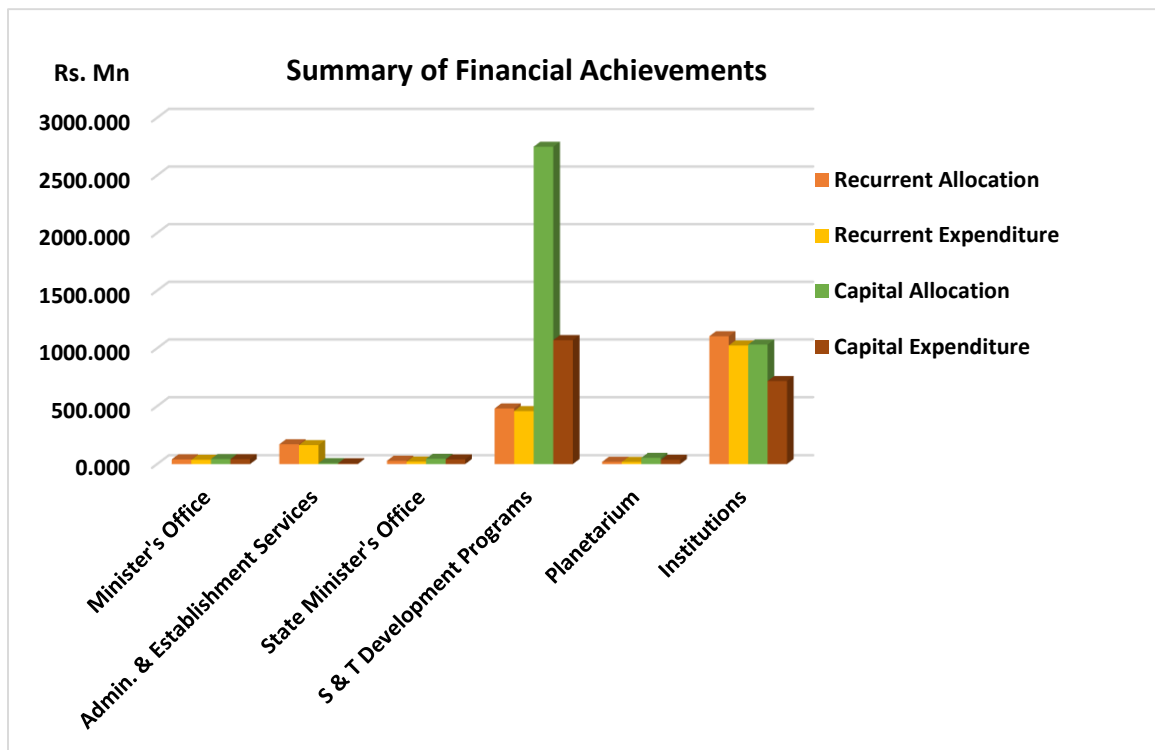
The audit committee inter alia engaged in the following activities during the financial year under review.

- Submission of the annual report to the Parliament.
- Review the progress of implementation of internal audit programmes of the Ministry and institutions.
- Review the response towards the internal audit observation and external audit reports.
- Review of the implementation arrangement for the recommendation made by Board of Survey.
- Implementation of procurement plan & Progress of Utilization of funds allocated for development activities.
- Comply with rules, regulations & procedure which are integral part of the good governance.

## 4. FINANCIAL ACHIEVEMENTS OF THE YEAR 2017

### 4.1 Summary of Financial Achievements of the Ministry and the Institutions

Description	Allocation		Expenditure	
	Recurrent (Rs. Mn)	Capital (Rs. Mn)	Recurrent (Rs. Mn)	Capital (Rs. Mn)
Minister's Office	40.800	43.600	37.293	42.419
Administration & Establishment Services	171.223	7.800	163.887	6.411
State Minister's Office	28.367	45.475	21.332	40.230
Science & Technology Development Programs	479.820	2748.473	457.374	1070.113
Sri Lanka Planetarium	19.150	54.000	18.072	36.834
Institutions	1104.000	1031.750	1023.943	716.667
<b>Total</b>	<b>1843.360</b>	<b>3931.098</b>	<b>1721.901</b>	<b>1912.674</b>



#### 4.2 Recurrent Expenditure of the Ministry

Ministry: Science, Technology and Research

Head No: 196

Category – Personal Emoluments & Other Recurrent

Description	Allocation (Rs. Mn)	Expenditure (Rs. Mn)	Balance (Rs. Mn)
<b>Minister's Office</b>			
Personal Emoluments	14.325	11.382	2.943
Other Recurrent	26.475	25.911	0.564
<b>Sub Total</b>	<b>40.800</b>	<b>37.293</b>	<b>3.507</b>
<b>Administration &amp; Establishment Services</b>			
Personal Emoluments	62.700	56.979	5.721
Other Recurrent	108.523	106.908	1.615
<b>Sub Total</b>	<b>171.223</b>	<b>163.887</b>	<b>7.336</b>
<b>State Minister's Office</b>			
Personal Emoluments	14.875	10.566	4.309
Other Recurrent	13.492	10.766	2.726
<b>Sub Total</b>	<b>28.367</b>	<b>21.332</b>	<b>7.035</b>



<b>Science &amp; Technology Development Programs</b>			
Personal Emoluments	411.278	397.585	13.693
Other Recurrent	68.542	59.789	8.753
<b>Sub Total</b>	<b>479.820</b>	<b>457.374</b>	<b>22.446</b>
<b>Planetarium</b>			
Personal Emoluments	9.500	8.580	0.920
Other Recurrent	9.650	9.492	0.158
<b>Sub Total</b>	<b>19.150</b>	<b>18.072</b>	<b>1.078</b>
<b>Total</b>	<b>739.360</b>	<b>697.958</b>	<b>41.402</b>

### 4.3 Recurrent Expenditure of the Institutions

Ministry: Science, Technology and Research

Head No: 196

Category – Personal Emoluments & Other Recurrent

Description	Allocation (Rs. Mn)	Expenditure (Rs. Mn)	Balance (Rs. Mn)
<b>Public Institutions</b>			
Arthur C Clarke Institute for Modern Technologies	130.000	129.295	0.705
National Institute of Fundamental Studies	188.000	187.677	0.323
Industrial Technology Institute	240.000	240.000	0
National Engineering Research and Development Centre of Sri Lanka	288.000	241.680	46.320
National Research Council	22.000	20.981	1.019
National Science Foundation	136.000	115.589	20.411
National Science and Technology Commission	30.000	24.869	5.131
Sri Lanka Accreditation Board	17.000	16.158	0.842
Sri Lanka Inventors Commission	53.000	47.694	5.306
<b>Total</b>	<b>1104.000</b>	<b>1023.943</b>	<b>80.057</b>

#### 4.4 Capital Expenditure of the Ministry

##### 4.4.1 Ministry: Science, Technology and Research

Head No: 196

Category: Rehabilitation and Acquisition

Description	Allocation (Rs. Mn)	Expenditure (Rs. Mn)	Balance (Rs. Mn)
<b>Minister's Office</b>			
Rehabilitation	1.600	0.742	0.858
Acquisition	42.000	41.677	0.323
<b>Sub Total</b>	<b>43.600</b>	<b>42.419</b>	<b>1.181</b>
<b>Administration &amp; Establishment Services</b>			
Rehabilitation	3.200	1.990	1.210
Acquisition	1.000	0.869	0.131
Capacity Building	3.600	3.552	0.048
<b>Sub Total</b>	<b>7.800</b>	<b>6.411</b>	<b>1.389</b>
<b>State Minister's Office</b>			
Rehabilitation	1.875	0.404	1.471
Acquisition	43.600	39.826	3.774
<b>Sub Total</b>	<b>45.475</b>	<b>40.230</b>	<b>5.245</b>
<b>Total</b>	<b>96.875</b>	<b>89.060</b>	<b>7.815</b>

##### 4.4.2 Ministry: Science, Technology and Research

Head No: 196

Category: Rehabilitation, Acquisition and other Capital Expenditure

Description	Allocation (Rs. Mn)	Expenditure (Rs. Mn)	Balance (Rs. Mn)
<b>S &amp; T Development Programmes</b>			
<b>1. Vidatha Programmes</b>			
Rehabilitation	3.300	3.123	0.177
Acquisition	19.200	18.212	0.988
Knowledge Transfer Programme	30.873	29.619	1.254
<b>Sub Total</b>	<b>53.373</b>	<b>50.954</b>	<b>2.419</b>
<b>2. Research &amp; Development Programme</b>			
S & T Popularization Programme	30.000	27.322	2.678
Scientific Training	10.000	9.943	0.057
S & T collaboration with other countries	20.000	19.700	0.300
Facilitation of Research Projects	15.000	14.824	0.176
<b>Sub Total</b>	<b>75.000</b>	<b>71.789</b>	<b>3.211</b>

<b>3. Nanotechnology</b>			
Furniture and Office Equipment	200.000	60.452	139.548
Equity Contribution	250.000	100.000	150.000
Infrastructure Development	600.000	169.126	430.874
Research and Development	100.000	84.928	15.072
<b>Sub Total</b>	<b>*1150.000</b>	<b>414.506</b>	<b>735.494</b>
<b>4. Implementation of R&amp;D Investment Framework</b>			
Research and Development	15.000	14.968	0.032
<b>Sub Total</b>	<b>15.000</b>	<b>14.968</b>	<b>0.032</b>
<b>5. Quality Assurance of Imported Products</b>			
Plant Machinery and Equipment	160.000	150.400	9.600
Buildings and Structures	25.000	0	25.000
<b>Sub Total</b>	<b>** 185.000</b>	<b>150.400</b>	<b>34.600</b>
<b>6. Coordinating Secretariat for Science Technology and Innovation (COSTI)</b>			
Investments	0.100	0.100	0
<b>Sub Total</b>	<b>0.100</b>	<b>0.100</b>	<b>0</b>
<b>7. Establishment of National Science center</b>			
Research and Development	300.000	102.000	198.000
<b>Sub Total</b>	<b>300.000</b>	<b>102.000</b>	<b>198.000</b>
<b>8. Porotype manufacturing of solar panels</b>			
Research and Development	20.000	2.050	17.949
<b>Sub Total</b>	<b>20.000</b>	<b>2.050</b>	<b>17.949</b>
<b>9. Planetarium</b>			
Rehabilitation	17.500	15.932	1.567
Acquisition	13.500	1.408	12.092
Other Capital Expenditure	1.500	0	1.500
Installation of a 4D Digital Projector	18.500	18.493	0.007
Capacity Building	1.000	1.000	0
International Cooperation for Science and Development	2.000	0	2.000
<b>Sub Total</b>	<b>54.000</b>	<b>36.833</b>	<b>17.166</b>
<b>Total</b>	<b>1852.500</b>	<b>843.600</b>	<b>1008.871</b>

\* **1150 Mn** - 1150 Mn consist of 900 Mn through the Capital Budget and 250 Mn through the Budget Speech

\*\***185 Mn** - 185 Mn consist of 15 Mn for SLSI through the Capital Budget and 170 Mn for ITI (150 Mn through the Budget Speech and 20 Mn through the Capital Budget)

#### 4.4.3 Ministry: Science, Technology and Research

Head No: 196

Category: Budget Proposals

Description	Allocation (Rs. Mn)	Expenditure (Rs. Mn)	Balance (Rs. Mn)
<b>Budget Proposals</b>			
1. Assist Research in Diabetes Dengue CKDu and Cancer	100.000	100.000	0
2. Establish Innovation Accelerator Fund	100.000	55.600	44.400
3. Establish a Bio Technology Innovation Park on PPP basis	100.000	7.926	92.074
4. Sri Lanka Institute of Nanotechnology	250.000	116.900	133.100
5. Establish center for Excellence in Genomic Science	50.000	0	50.000
6. Expand Pharmaceuticals Lab at Industrial Technology Institute (ITI) Sri Lanka	150.000	60.000	90.000
7. Establish Product Design Engineering services Fund	500.000	0	500.000
8. Establish incubators in 5 districts in collaboration with Nenasala to support startups	100.000	100.000	0
<b>Total</b>	<b>1350.000</b>	<b>440.426</b>	<b>909.574</b>

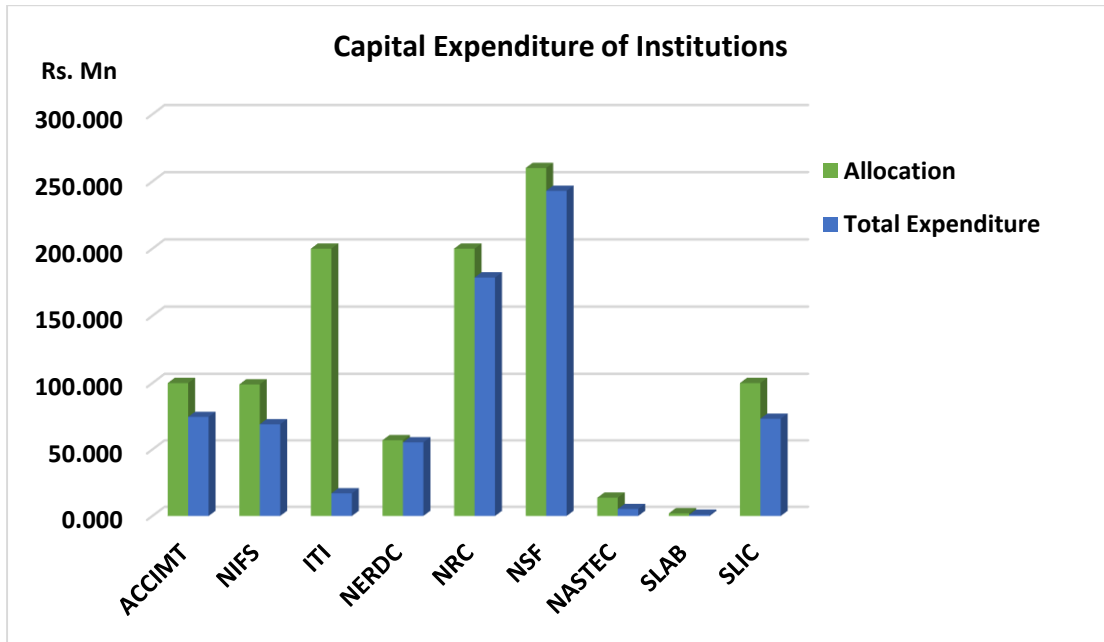
#### 4.4.4 Capital Expenditure of Institutions

Ministry : Science, Technology and Research

Head No : 196

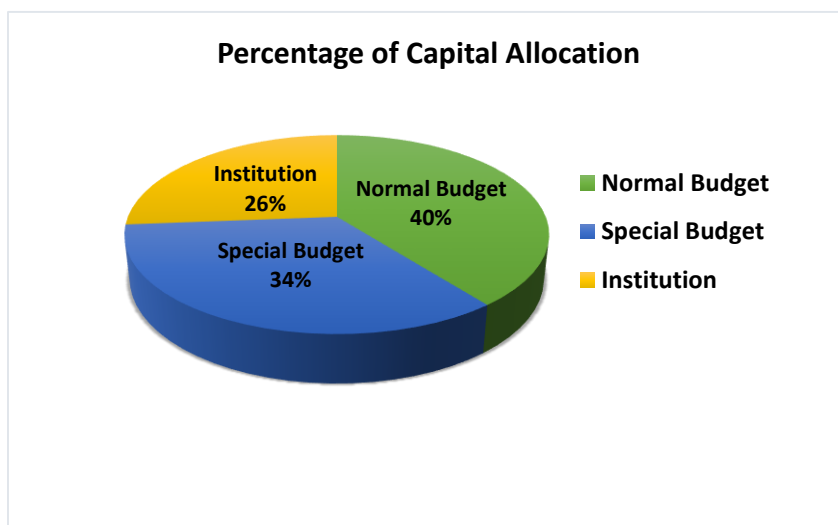
Category : Rehabilitation and Acquisition and other Capital Expenditure

Description	Allocation (Rs. Mn)	Expenditure (Rs. Mn)	Balance (Rs. Mn)
Arthur C Clarke Institute for Modern Technologies (ACCIMT)	100.000	74.518	25.482
National Institute of Fundamental Studies (NIFS)	99.000	68.978	30.022
Industrial Technology Institute (ITI)	200.000	17.000	183.000
National Engineering Research and Development Centre of Sri Lanka (NERDC)	57.000	55.357	1.643
National Research Council (NRC)	200.000	178.541	21.459
National Science Foundation (NSF)	260.000	243.000	17.000
National Science and Technology Commission (NASTEC)	13.750	5.229	8.521
Sri Lanka Accreditation Board (SLAB)	2.000	0.910	1.090
Sri Lanka Inventors Commission (SLIC)	100.000	73.134	26.866
<b>Sub Total</b>	<b>1031.75</b>	<b>716.667</b>	<b>315.083</b>



#### 4.5 Total Capital Allocation of the Ministry

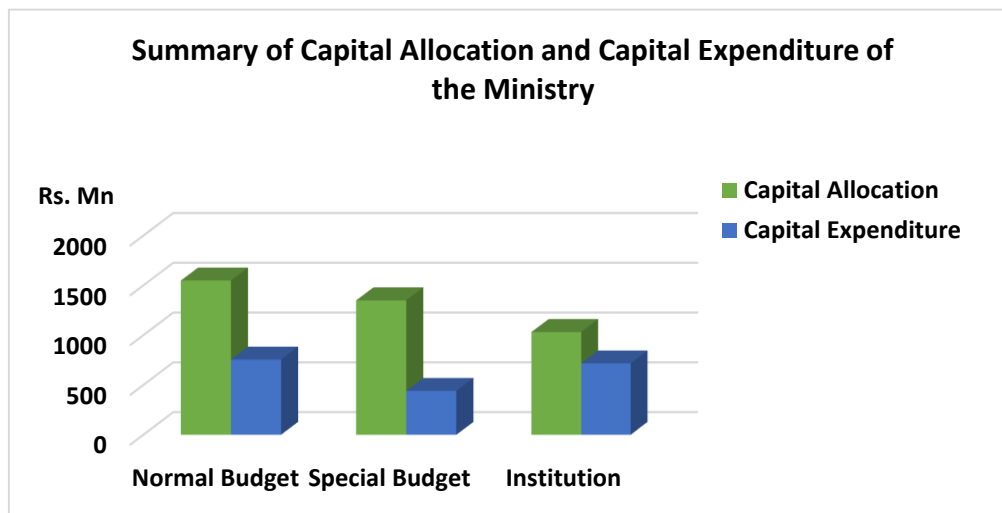
	Capital Allocation (Rs. Mn)
Normal Budget	1549.348
Special Budget	1350.000
Institution	1031.750
<b>Total</b>	<b>3931.098</b>





#### 4.6 Summary of Capital Allocation and Capital Expenditure of the Ministry

Description	Capital Allocation (Rs. Mn)	Capital Expenditure (Rs. Mn)
Normal Budget	1549.348	755.581
Special Budget	1350.000	440.426
Institution	1031.750	716.607
<b>Total</b>	<b>3931.098</b>	<b>1912.614</b>



#### 4.7 Advanced Accounts

Maximum Limits of expenditure of activities of the Government SLRs	Minimum Limits of Receipts of Activities of the Government SLRs	Maximum Limits of Debit Balance of the Activities of the Government SLRs
33,000,000	17,500,000	95,000,000

3 වන මහල, සෙත්සිරිපාය, 1 වන අදියර, බත්තරමුල්ල  
3<sup>rd</sup> Floor, Sethsiripaya, 1<sup>st</sup> Stage, Battaramulla  
3 වනු மாடி, செத்சிரிபாய், முதலாம் பிரிவு, பத்தரமுல்லை