2015

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வருடாந்த அறிக்கை

ANNUAL REPORT

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கைத்தொழில் தொழில்நுட்ப நிறுவனம்

INDUSTRIAL TECHNOLOGY INSTITUTE

Annual Report 2015

Industrial Technology Institute

Your Partner in Technological and Industrial Growth

Contents

ITI Quality Policy

"The management of the Industrial Technology Institute is unreservedly committed to maintain the ISO 17025 Quality Management System for the Testing and Calibration services and ISO 9000 Quality Management System for the entire Institute, in keeping with the National Quality Policy, thus providing customers with services of the highest professional standards.

All ITI staff has been made fully aware of the Quality Systems operated within the Institute and are therefore committed to provide services in keeping with the International Standards.

The entire staff of the Institute endeavors to achieve the highest level of customer satisfaction and continual improvement of services by meeting the requirements of the Quality Systems as per ISO 17025 for the Technical Services & ISO 9000 for Quality Management"

Act & Legislation

The Industrial Technology Institute (ITI) is a statutory board, which came into existence on 01 April 1998 by virtue of the Science and Technology Development Act No. 11 of 1994. ITI is the successor to the Ceylon Institute of Scientific and Industrial Research (CISIR), which was established in 1955. The ITI that operates as a market-oriented partner to its clients and stakeholders is a wholly owned Institute of the Sri Lankan Government with its own Board of Management and functions within the purview of the Ministry of Technology and Research.

Mandate

The Science and Technology Development Act No. 11 of 1994 that came into effect on 01 April 1998 describes our mandate as follows:

“The Technology Institute shall be demand driven. The object of the Technology Institute shall be to elevate the level of technology in Sri Lanka to the level required for rapid industrialization."

Vision

To be a centre of excellence in Scientific and Industrial Research for national development.

Mission

To conduct innovative R&D and provide internationally competitive technical services to accelerate industrial development for the benefit of the people of Sri Lanka.

as at 31st December 2015

Board of Management

Chairman

Mr. Niroshana Perera
Attorney-at-Law

Members

Dr. G A S Premakumara
Director General/ ITI Ex-officio

Dr. M H Somasiri Dayaratne
Monitoring and Evaluation Consultant
Formerly at the Ministry of Plan Implementation and UNDP

Mr. O M Jabeer
Treasury Representative

Mr. R M Gamage
Attorney-at-Law

Mr. M A Allam
Additional Secretary (Admin)
Ministry of Industries and Commerce

Prof. M J S Wijeratne
Senior Professor, Dep. Of Zoology & Env. Management
University of Kelaniya

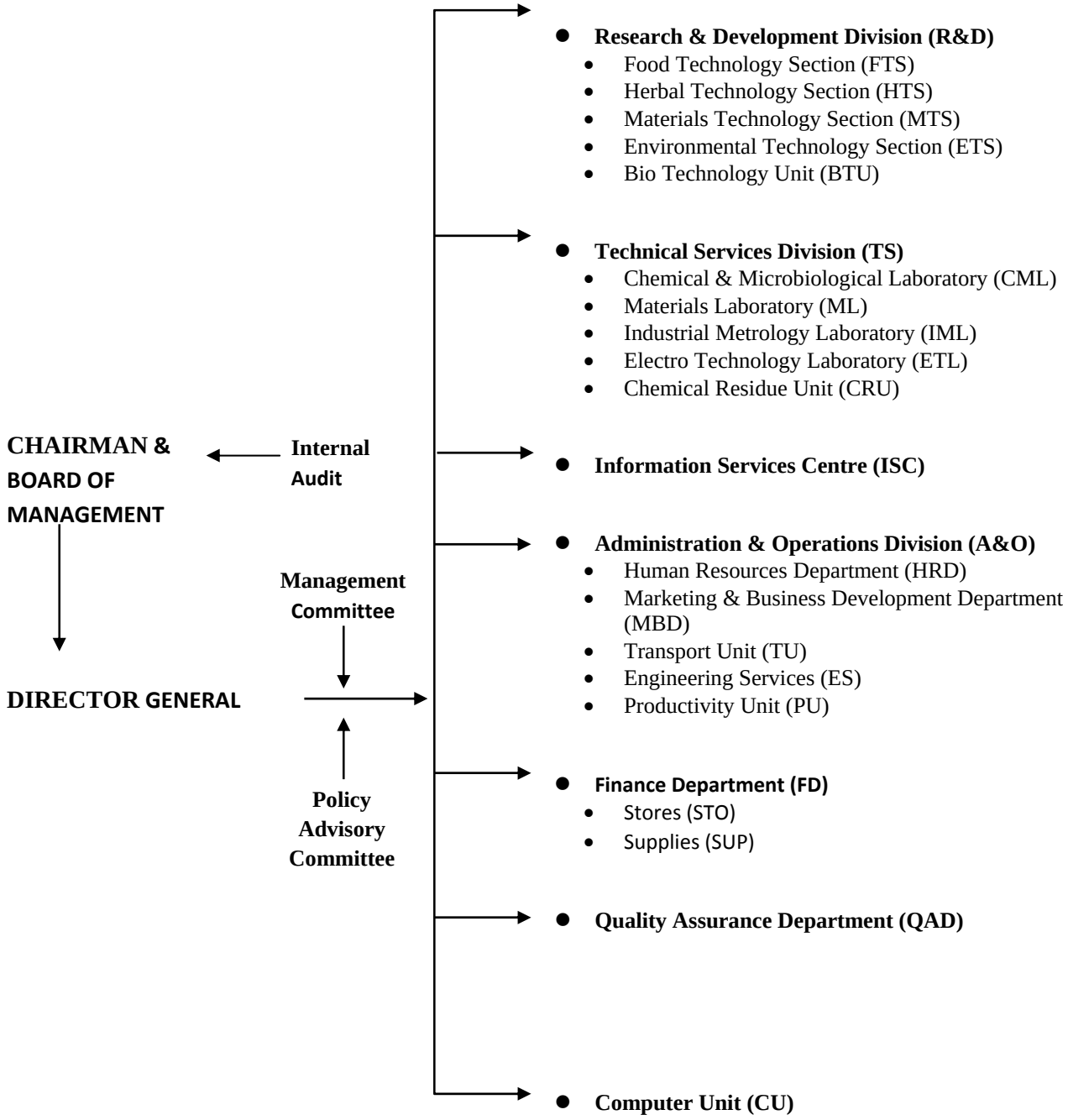
Prof. Eng. Dayantha Wijesekera
Chancellor, University of Vocational Technology

Mr. Rohan Fernando
Board Member

Secretary to the Board

Ms. Renuka Jayatilleke
Institute Secretary

Organizational Structure



as at 31st December 2015

Senior Management

DIRECTOR GENERAL
Dr. G A S Premakumara

ADDITIONAL DIRECTOR GENERAL, TECHNICAL SERVICES
Mr. A S Pannila

ADDITIONAL DIRECTOR GENERAL, RESEARCH & DEVELOPMENT
Dr. J K R R Samarasekera

ADDITIONAL DIRECTOR GENERAL, ADMINISTRATION & OPERATION
Mr. K A S P Kaluarachchi

RESEARCH & DEVELOPMENT

Dr. Ilmi G N Hewajulige
Senior Deputy Director
Food Technology Section

Dr. P Ranasinghe
Senior Deputy Director
Herbal Technology Section

Senior Deputy Director
Materials Technology Section
(Vacant)

Eng. Keerthi Fonseka
Senior Deputy Director
Environmental Technology Section

Head, Bio Technology Unit
(Vacant)

TECHNICAL SERVICES

Mr. J K A B Wijegunasekara
Senior Deputy Director
Chemical & Microbiological Laboratory

Dr. W M S Wijesinghe
Senior Deputy Director
Industrial Metrology Laboratory

Eng. R M Weerasinghe
Senior Deputy Director, Electro Technology Laboratory

Materials Laboratory
Senior Deputy Director
(Vacant)

QUALITY ASSURANCE DEPARTMENT
Mr. H P P S Somasiri
Senior Deputy Director

INFORMATION SERVICES CENTRE
Senior Deputy Director
(Vacant)

FINANCE DEPARTMENT
Mr Lalin Gunaratne
Senior Deputy Director

INTERNAL AUDIT
Chief Internal Auditor
(Vacant)

ADMINISTRATION & OPERATION

Ms. Hiranthi Kathriarachchi
Senior Deputy Director
Administration & Human Resources

Ms. Manori Wijemanne
Senior Deputy Director
Marketing & Business Development

Eng. A S Arachchie
Head
Engineering Services

INSTITUTE SECRETARY
Ms. A M K R Jayatilake

Chairman's Message

The year 2015 dawned reminding us that the Institute is stepping to celebrate its 60th Anniversary in driving the nation through technology. Further the year 2015 was another challenging year where many foundations were laid for new projects and steps were taken to complete certain projects that were initiated earlier.

The Institute initiated celebrating the 60th Anniversary with a pirith ceremony and an alms giving at the Institute in April 2015.

Another milestone in the achievements of ITI is the official launching of the LC/MS MS analytical instrument establishing the Chemical Residue Unit.

While continuing with the existing R & D projects, ITI started several new research projects, to name a few; Development of new rice bran oil extraction method for SMEs, Utilization of waste heat energy for dehydration of perishables and cereals, Developing a user friendly, cheap, dengue diagnostic kit and Identification of biologically active natural products from marine algal spices found in Sri Lankan waters.

An Engineer attached to the Engineering Services Section of ITI Mr Anura Sooriya Arachchi brought as honor to the institute by winning a Gold Medal at the 43rd International Exhibition of Inventions held in Geneva.

Institute income from business activities showed a remarkable increase of 16% from the last three years s of Rs 199.33mn to Rs 232.14mn in 2015, while the recurrent expenditure increased by Rs 56.87mn in 2015 compared to the 2014 figure of Rs 392.29mn.Out of the recurrent expenditure of Rs 56.87mn Rs 51.2mn was borne by the Institute as salary increments imposed by the Government

Testing & calibration services continued to be the leading income generation activity of the institute by contributing a share of 76 %(Rs 177.62mn) to the total generated income. Revenue from the Consultancy Services generated highest the income of Rs 19.39 compared to Consultancy Services income during the last 4 years. The consultancy services which contributed 8% to the generated income resulted in a remarkable increase of 64% in consultancy services compared to the previous year figure of Rs 11.82.The other revenue sources contributed 16% to enhance Institute revenue of Rs 232.14mn in 2015.

Dr Muditha Liyanagedera, while performing as the Director of NASTEC, continued to be the Acting Director General of ITI till end May 2015 followed by Mr S H Harischandra who was acting Director General of ITI until October 2015.

ITI as the Centre of Excellence to COMSATS Sri Lanka hosted the 18th Meeting of COMSATS Coordinating Council in May 2015 at Hotel Galadari, Colombo. The Honourable Minister for Higher Education & Research, Dr. Sarath Amunugama graced the occasion as the Chief Guest and inaugurated the meeting.

The International Symposium on Impacts of Extreme Atmospheric Events on Geo-Surface in Changing Climate was held in May 2015 where ITI played a major role as the joint organizer with COMSATS and International Center for Climate and Environment Sciences (ICCES), China.

The High Commissioner of Canada made a visit to the Dambulla project site of IDRC/CIFSRF/DFATD funded Enhanced preservation of fruits in South Asia project in July, to observed the activities of the project.

The GIZ – SME Development project which is a collaboration between ITI and Deutsche geselischaft fÜr internationale Zusammenarbeit GmbzH (GIZ) in order to increase the outreach of the transfer of technology developed by ITI to encourage establishment of SMEs by local entrepreneurs in the North, East and Uva was initiated.

The Bio Technology Unit of ITI, for the first time, signed an MOU with a leading Business Management School (Pvt) Ltd (BMS), in Sri Lanka to assist their students in Laboratory training.

The Hon. Minister Susil Premajayantha, paid a visit to ITI in the month of September (15.9.2015) after being appointed as the Minister for Research, Science and Technology.

Dr Sirimal Premakumara, was placed in the position of Director General of the ITI w e f 20th October 2015 fulfilling the request of many of the employees of ITI for a permanent Director General for the Institute.

Another important event in the 2015 diary of ITI was the Second Biennial Research Symposium held at BMICH on 16th November 2015 in the presence of Honourable Minister of Science, Technology and Research Mr Susil Premajayantha, the chief guest and Mr W.A. Wijewardena, former Deputy Governer of Central Bank of Sri Lanka as the Guest of Honour. Number of eminent scientists of ITI received certificates and awards for the outstanding performance

During the year 2015 ITI successfully filed ten applications for Patents and the Certificates are awaited.

The long awaited revisions to the Scheme of Recruitment (SOR) was attended to after many rounds of consultations and discussion with the staff and the unions and the revised SOR would be now submitted for the approval of the Department of Management Services.

The cadre requirement for the present year was to a greater extent completed.

The Herbal Technology Section of ITI continued their work in establishing herbal gardens in schools using the expertise available at the Herbal Technology Section of ITI which is a new concept initiated by ITI in order to introduce medicinal plants to school going children and to create an awareness among them on herbs and other medicinal and conventional plants of Sri Lanka. As a result of the efforts of ITI 08 herbal gardens were established during the year 2015.

Regarding the Modern Research and Development Complex (MRDC) at Malabe, the Administration Block, the Food Pilot plant and the five floors of the Bio Technology Building were completed. The Treasury approval was granted for a further Rupees 750 Mn for the completion of the remaining work required to shift a part of ITI to the MRDC, Malabe.

The Institute continues being unable to attract and retain quality staff, both scientists and non scientist; largely because government salaries and terms of employment for staff are not competitive. Nevertheless many initiatives like research allowance (even for projects funded by Treasury Grants) and distribution of research earnings and Royalty payments have been implemented but there are hurdles to overcome.

The Institute continued with its performance incentive scheme and incentive scheme for scientists. Employee relationships have been good.

ITI also maintained its international stature by providing services to laboratories overseas and by conducting training programmes on quality management in microbiological analysis for foreign scientists.

The Scientists of ITI attached to the Food Technology Section have assisted in the areas relating to quality measuring of food such as capacity building for food industry, technology transfer on special food products and entrepreneurship development in many parts of the country, including the North and East.

I take this opportunity to appreciate the co-operation extended by the highly qualified and experienced members of the Board of Directors.

This opportunity is also taken to thank Dr Muditha Liyanagedera, and Mr. S H Harischandra on behalf of the Board, for accepting the post of Acting Director General of ITI amidst their busy schedules and for their assistance extended to the Institute during their tenure as the Acting Directors General of the institute.

I also welcome Dr. Sirimal Premakumara as the Director General and as a Member of the Board of ITI and thank him for the cooperation extended after his appointment as the Director General of ITI.

I also thank the management and staff of the Institute for their efforts in not only helping to maintain ITI's position as the Technology provider to the nation and also their endeavors in building up confidence in industry on the capabilities of the Institute as a reliable research partner.

Niroshana Perera (Attorney At Law)
Chairman

Executive Report

The year 2015 is a landmark year for the Industrial Technology Institute (ITI) as it celebrates 60 years of service to the nation as the premier R&D institute in the country which was incepted as Ceylon Institute of Scientific and Industrial Research in 1955 to support the industrial development of the country. This institute, then known as CISIR, played a pivotal role in the S&T arena by conducting pioneering industrial research and development work, testing services and technology transfers to the industry.

In the year 2015 the functions of the Institute came under three different Ministries and two Chairmen to the board and two Acting Director Generals during the year as I was stepped down from the post of Director General since August 2014 and was attached to the Ministry of Technology and Research. I was reappointed as the Director General in October 2015.

The institute's achievements over the years are commendable. In this year, for the 1st time in the institute history, an International Gold medal was won at the 43rd International Inventors Exhibition and Competition in Geneva for the invention and development of a safe mechanized coconut husk feeder by the Engineering Services Section of ITI.

Technology Transfers

Two major technology transfers were carried out during the year; Technology for Banana fibre paper using waste banana stem and Filtration system to purify large quantities of water to an ice cream industry.

A body cream and a moisturizer with skin whitening and anti aging effects developed using Ceylon Cinnamon as main active ingredient is available to transfer the technology. A technology developed to extent the storage time of mangoes with pre harvest hexanal application and wax treatment is also available for commercialization. Assistance to upgrade SME with technology and technical know-how was organized throughout the year with UNDP, GTZ, OXFAM and Department of Ayurveda.

Technology Development

Branding of Ceylon Cinnamon by ensuring the quality by chemical finger printing using GC-MS was completed during the year and ITI now has the capability to carry out routine testing service to authenticate the true cinnamon by both genetic bar coding and by chemical fingerprinting methods. A pilot scale trails were carried out on a bait to manage fruit and melon flies using a parapheromone extracted from *Ocimum sanctum.* Further, research on Kithul sap continued leading to laboratory level development of kithual sugar from the sap to meet the global demand for palm sugars.

A microscopy based protocol for detection of adulteration in bees honey was developed and the SLS standard for bees honey is being revised based on this method.

During the year ITI initiated Proficiency Testing in Chemical Metrology for local laboratories. Testing services for PET bottles and hacksaws according to SLS specification were initiated.

Infrastructure Development

During the year a high end analytical instrument LC/MS-MS was purchased and became the first laboratory in Sri Lanka to obtain such instrument. This enabled the Technical Services division to produce more efficient and accurate test reports in trace level metal analysis. With the acquiring of high end state-of-the-art analytical equipment a separate unit for chemical residue analysis was started under technical services division.

Modern Research & Development Complex of ITI

Construction of Modern Research Complex at Chandrika Kumaranathunga Mawatha, Malabe continued with the expectation of starting operation in 2016.

Research Collaborations with International organizations

ITI maintained its collaborations with international organization in research activities. The 2nd phase of the Canadian Project, CIFSRF-IDRC to commercialize the products and postharvest management of mango and banana was initiated during the year. Collaboration was signed with Korean Institute of Ocean Science and Technology on a marine natural product research. A MoU was signed between ITI and International Centre for climate and Environment Sciences (ICCES) for establishment of a Climate Change Research Centre.

Symposiums, Seminars and Meetings

As the Commission on Science and Technology for Sustainable Development in the South (COMSATS) Centre of Excellence in Sri Lanka, ITI organized and hosted the 18th meeting of the COMSATS Coordinating Council in Colombo from 12th – 13th May 2015. A two day International Symposium on Impacts of Extreme Atmospheric events on Geo-surface in a changing climate was held from 14th – 15th May 2015 in Colombo.

Second Biennial Research Symposium was held from 16th – 17th November where more than 35 research papers on research work carried out by ITI researchers were presented. Two plenary lectures by Prof. L M V Tilekeratne from Department of Medicinal and Biological Chemistry, University of Toledo, USA and Dr. Mahesh Jayaweera from Department of Civil Engineering, University of Moratuwa were delivered during the technical sessions.

Awards, Publications, Patents and Recognition

ITI continued to gain recognition for the research carried out during past years, by winning four Presidential Awards for scientific publications and two National Research Council merit

awards. A National Award for Science and Technology achievements under the category Transfer of Technology to SMEs was also won for the development and commercialization of Omega-3 enriched chicken egg. Sri Lanka Association for Advancement of Science Postgraduate Research Award too was won by an ITI scientist.

The number of papers published in referred journals by ITI Scientists increased to 23 and contributed to a chapter of a book by CRC press. During the year, 25 research communications were presented at International scientific events while more than 60 research communications were done locally. Seven innovations were filled for patents.

Human Resources

During the year 6 Research Scientists / Engineers were recruited while 13 (including 5 on contract) resigned from service.

Employee Relations and welfare measures

The welfare activities of the Institute continued to develop employee interaction and good will among the staff and their families. The dawn of the New Year was celebrated on the 1st January with Kiribath and other sweetmeats. Seva Vanitha sub unit continued to donate book vouchers to purchase books and stationery for new school year.

Buddhist society conducted the customary two dharma sermons to commemorate Wesak and Posan poya and the annual blood donation campaign.

Financial Performance

Institute income from business activities showed a remarkable increase of 16% from the last three years s of Rs 199.33mn to Rs 232.14mn in 2015, while the recurrent expenditure increased by Rs 56.87mn in 2015 compared to the 2014 figure of Rs 392.29mn.Out of the recurrent expenditure of Rs 56.87mn Rs 51.2mn was borne by the Institute as salary increments imposed by the Government.
The Income/Recurrent expenses ratio showed a downward trend from 51% to 45% due to the additional salary cost borne by the institute.

The salary increment cost of Rs 51.2mn badly affected to the institute recurrent cost of the institute. If not for this increment of the salaries the Institute would have maintained the recurrent cost efficiently as the previous year (2014-Rs 393mn, 2015-Rs 398mn).

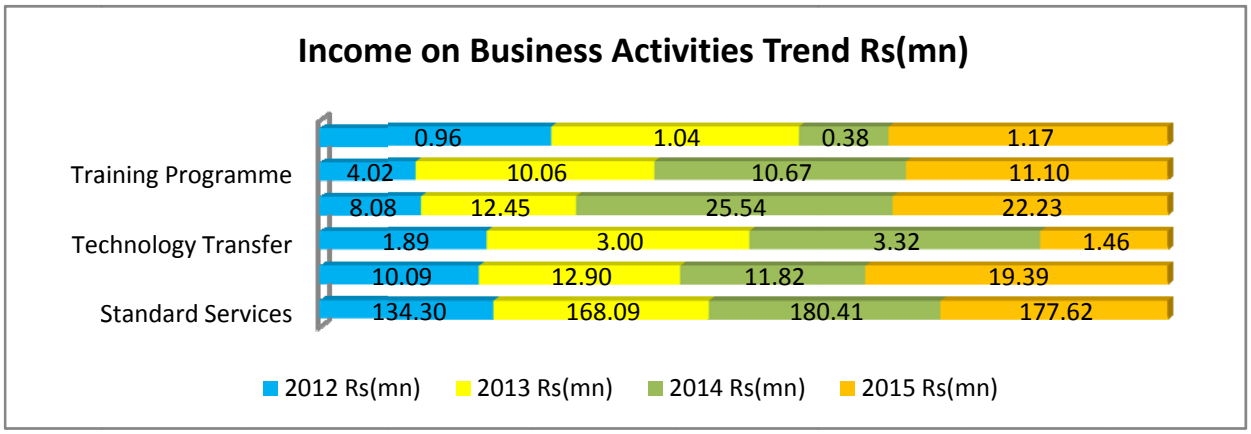
Testing & calibration services continued to be the leading income generation activity of the institute by contributing a share of 76 % (Rs 177.62mn) to the total generated income. Revenue from the Consultancy Services generated highest the income of Rs 19.39mn compared to Consultancy Services income during the last 4 years. The consultancy services which contributed 8% to the generated income resulted in a remarkable increase of 64% in

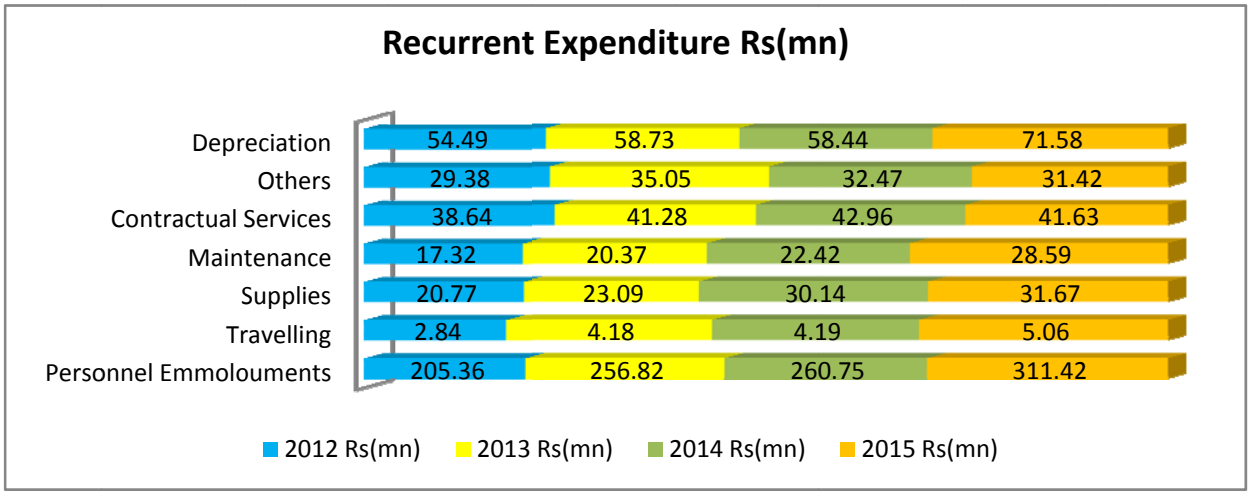
consultancy services compared to the previous year figure of Rs 11.82mn.The other revenue sources contributed 16% to enhance Institute revenue of Rs 232.14mn in 2015.

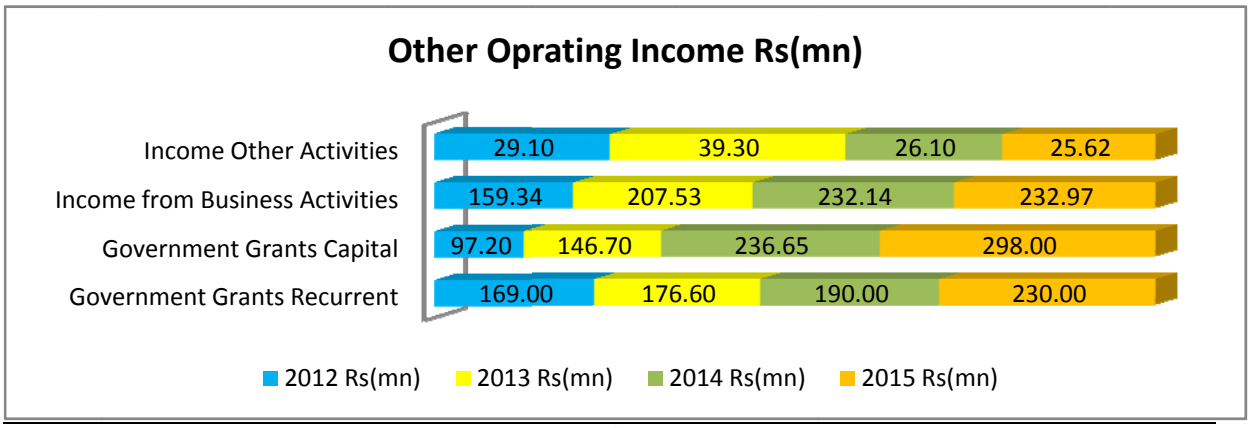
The performance based incentives were paid to the staff for the 12th consecutive year as the institute achieved overall income targets set for the year.

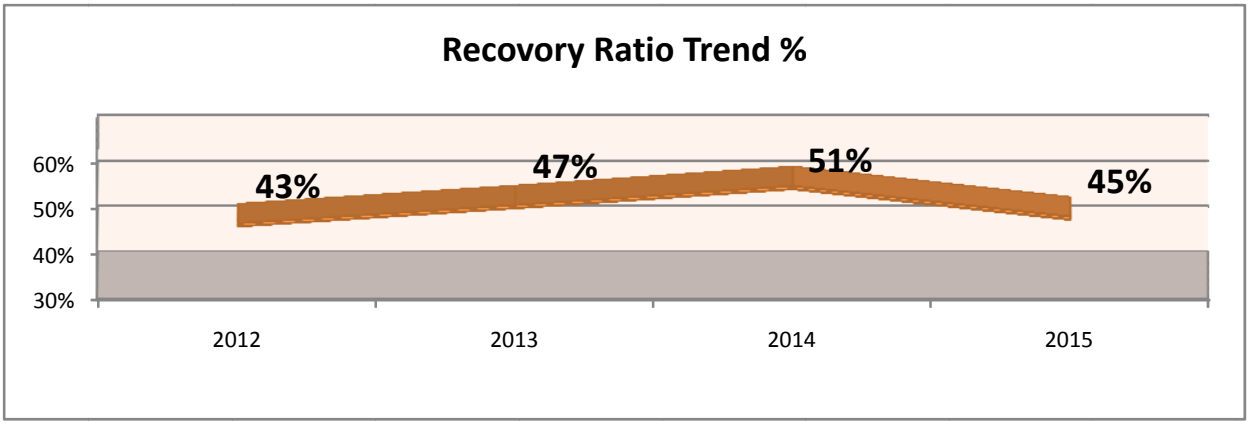
A recurrent grant of Rs 230mn was received in 2015 where Rs 190mn was received in 2014.

A capital grant of Rs 298mn was received in 2015 which represented Rs 102mn for institute activities and the balance of Rs 195.8mn for Modern Research Development Complex at Malambe. An increased of 24% in the capital grant for this year is noted.









Acknowledgements

I wish to express my sincere thanks to the Chairman and the Board of Management for their advice and direction in taking the institute forward. My thanks are also due to the Management Committee of the ITI for their support and for managing the institute affairs efficiently during the year. I wish to extend my sincere gratitude to the entire workforce for their contribution to achieve the set targets for the year.

The ITI wishes to express its appreciation to all of its clients for the confidence placed on the institute and we look forward to strengthening the relationship in the coming years.

The financial assistance from Ministries, National and International organizations are also gratefully acknowledged.

Dr. G A S Premakumara
Director General

Performance Highlights

Gold medal for coconut husk feeder

Sri Lanka exports best quality coconut fibre used for high quality brushes and twine, but until very recent the fibre extraction process was a job with high risk that required skill. The skilled workers sometimes lost their fingers or good part of the hand while inserting the husks into the traditional needle drum (Ceylon drums) coir extractor. High risk associated with the traditional coir extraction method violated industrial safety regulations and made the job less desirable for new entrants.

At ITI a mechanized husk feeder was developed and it is accident free and can be operated even by a non-skilled person. This single motor operated new husk feeder machine is economical in energy consumption simply designed that it could be fabricated even in a small workshop.

The inventor of the safe mechanized husk feeder, Engineer Anura Sooriya Arachchi of ITI has won the Gold Medal at the 43rd International Inventors Exhibition and Competition in Geneva 2015.

Red Clay water filter with more efficiency

Red clay water filter developed by ITI scientists is well known among the general public for its health benefits. It has already been distributed among people living in CKDU affected areas.

However, using a filter for a prolonged period of time may reduce the efficiency and the life time of the filter. Scientists of ITI have researched and identified the best method to regenerate the filter. Laboratory and pilot scale studies have been completed and the method will be in use in the near future.

Management of fruit and Melon flies

Fruit and melon flies cause heavy post harvest losses and economic loss. A team of researchers at ITI carried out a study to identify a natural method to manage the fruit fly damages. The study revealed a parapheromone mimic that extracted from *Ocimum sanctum* L. and developed it as a fruit fly bait. This work was done in collaboration with CIC and Department of Agriculture.

Establishment of new Chemical Residue Unit with the LC-MS/MS analytical instrument

The ITI launched the services of the Chemical Residue Unit with the acquisition of the high end analytical instrument, LC-MS/MS.

Chemical residues are the chemical substances that remain in a material after a process. It could be a remainder of a pesticide, additive or contaminant that has been added naturally, accidently, or deliberately into food, water, pharmaceuticals etc. These residues could cause harm to living beings and environment. The relevant authorities on food safety and health have established limits, guidelines and standards to minimize potential health risks and actions will be taken when the product violates the limits. Therefore it is essential to carry out an analysis and certify by the producer that the product is safe before it is goes to the consumer.

Establishment of this unit could produce more accurate and efficient service in analysis, giving very better service to its clients

National issues

Assessment of alcohol based industries

In 2015, ITI was involved in assessment of nine alcohol based industries as per the requirement of Exercise Department of Sri Lanka. This assessment supported the implementation of national level regulatory measures and sustainable development of cosmetic and related industries in the country

Technical Assistance to solve regulatory issues of essential oil industry

ITI assisted the Customs Department of Sri Lanka to resolve national level regulatory issues in essential oil industry. Expert technical assistance was provided to test imported sandalwood (*Santalum* spp) essential oil for the essential oil profile and yield. The test report issued by ITI test report facilitated the re-exportation of sandalwood oil.

Land slide monitoring in Southern Expressway

Sudden land slide in Southern Expressway between Kokmaduwa and Imaduwa caused inconvenience to users for two weeks. Further NBRO identified a potential danger to the

users and also the importance of land slide alarming system. Thus the ITI was invited to study the area and also to install a land slide early warning system. Installed early warning system is now in use.

Technology Transfers

Filtration system to purify large quantities of water

There is a high demand for filtration of water in large quantities from the food industries. However, the installation and maintenance costs of the available techniques such as reverse osmosis are extremely high.

A research team at ITI has developed a method which can remove unwanted ions in water using sand, pebbles, stones and fired clay. The developed technology with a capacity of 1000 L has been transferred to an ice cream industry which faced a problem with bade water taste due to the presence of some ions.

Moringa Products

Scientists at ITI have developed three products based on Moringa, a well known vegetable and an ingredient used in traditional medicine. Moringa leaf powder, Moringa tea and Skin whitening and anti-aging Murunga cream are the products with proven health benefits. Moringa leaf powder and tea have mainly demonstrated antioxidant and anti-diabetic properties while Murunga cream demonstrates skin whitening and anti-aging properties. Technical know-how of Moringa leaf powder has already been transferred to eTosh Global (Pvt.) Ltd., Colombo while the production technologies of other products are ready to be transferred.

Banana fibre paper

Research carried out on using waste banana stem for an economically valuable product resulted in many products such as banana fibre papers. Technology on banana fibre paper making was transferred to an entrepreneur in Embilipitiya. Another two banana fibre making units will be established in Dambulla and Jaffna in near future.

Technologies Ready to be Transferred

Skin whitening and anti-aging cream

ITI has developed a skin whitening and anti-aging cream and moisturizer with Ceylon cinnamon as the main active ingredient. Many relevant tests have been done on the product including functional properties such as antioxidant, skin whitening and anti-aging properties

Extension of storage life of mango

Mango is a seasonal fruit and during the season the post harvest loss is very high. However, to address this issue, ITI researchers developed technologies on pre-harvest hexanal application and wax treatment to extend the storage life of mango. After completing all the laboratory and pilot scale studies the technology is now ready to be transferred to interested entrepreneurs.

More Technologies to be transferred…

- Production of Glucose Syrup and High Protein Concentrates from Cassava
- Technology to identify pork and other meat
- Functional food products – yoghurts, bread, ready to serve beverage
- Fish soup cubes
- Tea based energy drink

Quality Infrastructure

ITI expanded its scope of laboratory accreditation to include new parameters

Several new parameters including cement testing and cosmetic testing were added to the scope of the SLAB accreditation. Two new microbiological parameters, Vibrio cholera, Parahaemolyticus were also added to the scope.

During the year, Cosmetics and Fats & Oils Laboratory successfully completed the assessment by SLAB expecting to gain accreditation for 29 chemical parameters for cosmetic products. Microbiological parameters, mesophilic bacteria, Staphylococcus aureus, and Pseudomonas in cosmetic products were also accredited.

With SWEDAC'S voluntary decision on withdrawing the accreditation outside the European Union at the end of the year, ITI transferred its accreditation scope with SWEDAC to the local accreditation board SLAB continuing its accreditation status for the 13th consecutive year.

ISO 9001:2008 Certification for ITI R & D Laboratories and ISC

The Food Technology, Herbal Technology, Environmental Technology, Material Technology laboratories and the Information Services Centre (ISC) continued to maintained its ISO 9001:2008 certification status for the 8th consecutive year.

Up-liftment of Chemical Metrology capacity of the country

Chemical Metrology is one of the emerging areas of analytical science and the present status of the chemical metrology in the country is very low. Therefore ITI took a leading role in the capacity building in this area and has initiated provision of Proficiency Testing (PT) programmes for the local laboratories. Three PT programmes were conducted in the year 2015. PT on cement testing was conducted successfully in the year 2015 and is now available as a regular programme. This was the first such programme in the country for cement testing.

DGR and MSDS reports for Industry

Dangerous Goods Regulations (DGR) reports and Material Safety Data Sheets (MSDS) reports are very important in international trade and most of the industries depend on ITI for the services. At the request of the customers, more than 60 MSDS reports and DGR reports were issued during the year.

Accelerating Industrial Technology Development

Constructed wetlands for water purification

Research Engineers at ITI have successfully completed the laboratory scale and pilot scale studies on man-made wetlands for treatment of waste water from dairy and other food related industries. Moving one step further, during 2015 the researchers have implemented the constructed wetland technology at the industrial scale as a trial at Malindu Dairy and Grand Arena Hotel.

Bio-active natural ingredients for industrial applications

A research project was started at ITI focusing on innovative approach to discover and develop bio-active natural ingredients, value addition and validating traditional claims to deliver potential therapeutic agents through specific model bioassays. Assays for antioxidant and enzyme inhibitory activities were carried out for extracts from selected plants. Several plants were selected based on the bio-activity. Fractionation and compound isolation from the extracts of the selected plants are in progress.

Development of Kithul Sugar with anti- Diabetic properties

Having being successful in developing a new method to increase Kithul sap production, scientists at ITI are now carrying out studies to produce Kithul sugar with anti-diabetic activity. During 2015, sugar crystallization method has been developed at laboratory level and evaluation of antioxidant activity and microbiological studies are in progress.

Branding Ceylon cinnamon

In the world market Ceylon cinnamon has to compete with Cassia which cannot be distinguished from true cinnamon by ordinary persons. Thus branding Ceylon cinnamon is important to ensure that the customers are not misguided. Branding has two aspects; one is authentication of cinnamon by genetic bar coding and the other is ensuring the quality of cinnamon by chemical finger printing. Earlier the bar coding Ceylon cinnamon was completed by a group of ITI scientists while the latter aspect has been completed during 2015. Chemical fingerprinting using GC-MS for Ceylon cinnamon has been completed and now the quality testing of cinnamon is available at ITI as a routine service.

Health promoting properties of Ceylon cinnamon

Coumarin is a fragrant organic compound found in plants and also a toxic to humans. Ceylon Cinnamon contains coumarin at very low level in comparison to Cassia. At ITI a research study was carried out to find out the variation of coumarin level in Ceylon cinnamon with variables such as plant maturity, cinnamon grades etc. The test method for coumarin testing has been established and validated and now the testing is available as a service to public.

Industrial application of natural fragrances of Sri Lankan flora

Endemic essential oil bearing plant samples have been collected from Sinharaja, Kanneliya, Nilgala and Ritigala forests and the oil was extracted. Plant samples have been submitted to National Herbarium for identification and authentication while each oil sample was analysed using GC-MS in an effort of identifying novel compounds. The study is in progress and ultimately this will pave the way to new perfume formulations.

Lactide Biopolymers for Healthcare Industry

Polymer based on lactic acid is of great importance to the healthcare industry as they are decomposed by hydrolysis in the human body into nontoxic metabolites. The main healthcare applications include: fracture fixation devices, surgical cord for inner lesions sutures, various implants and material for target therapy or controlled release of medications. Polylactide acid (PLA) polymers are not produced in Sri Lanka.

Industrial Technology Institute (ITI) carried out an investigative study to assess the possibility of producing these biodegradable plastics for the healthcare industry using PLA. The main objective of the project is to produce high density L-Poly Lactide polymers.

During 2015 low cost medium was optimized for the production of L-Lactic acid using an industrial fermenter.

Benchmarking for Competitiveness

Testing Brass and Copper for value addition

Exportation of materials such as brass and copper without value addition is prohibited in Sri Lanka. For regulatory purposes the Custom of Sri Lanka needs to ensure, when exporting, the said materials are value added or not. New test methods have now been developed by ITI for testing these metals and are being carried out as a test service.

Compliance testing

PET bottles and hacksaw testing as specified in SLS standards have been started at the ITI as new testing services. ITI is the only organization with the facilities to carry out all the specified tests in both SLS standard in Sri Lanka.

Infiltrometer for better measurements

Determination of the infiltration rate of the land is important in deciding effluent discharge on land. Standard test methods stipulate two ways of evaluating the infiltration rate, *i.e.* calculation using the soil hydrolic conductivity and using Double Ring Infiltrometer. Infiltration rate measurement is a standard service at ITI. Earlier it was done using the calculation method. After purchasing a infiltrometer now infiltration can be measured at an efficient rate.

New bioassays

New Bioassays were established at the Herbal Technology Section of ITI for R&D activities and for customized services. New assays available are in vitro screening of anti-lipidemic activities, anti- wrinkling and skin whitening activities of natural compounds or natural product extracts. These tests will be useful mainly in cosmetic development.

Thermal process validation

Thermal processing is one of the methods used in preservation of food and also to extend the shelf-life. Thermal process validation of acidified and low acidic canned food and shelf life evaluation of some food items were carried out during 2015. Accreditation of thermal process validation will be done in 2016.

Identification and authentication of plants, animals and bacteria

Bio Technology Unit of ITI carries out test services for identification and authentication of plants, animals and bacteria. DNA Barcoding of plant species, species identification, DNA sequencing, bacterial DNA isolation, bacterial strain characterization and identification of Tuna species in fish products are the specific services in identifying plant, animal and macteria.

Monitoring and Mitigating Pollution

Purifying agrochemical contaminated water using sunlight

Agrochemical packaging industry generates pesticide contaminated waste water. However, they are incapable of employing a proper efficient waste water treatment technology that enables the industry to comply with the prevailing disposal standard. At ITI a method has developed to use sun light to decontaminate waste water. In 2015 several substrates to use as the coating of the photo reactor were tested and identified an inorganic coating as the best for the pesticide waste water reactor surface. Once the project is completed the pesticide packaging industry will be immensely benefited.

Microbial bioremediation of petroleum contaminated soil and water

A research project was started with the view of developing a microbial remediation method to purify petroleum contaminated soil and water. As the first step, soil and water samples chronically contaminated with petroleum were collected and prevailing microbes in the samples were grown in culture media. From that a mix-culture of microbes that consume petroleum hydrocarbon were isolated.

Further studies are being carried out with these isolated microbes to identify the potential of using them for petroleum contaminated soil and water remediation.

Performance Assessment of wastewater treatment plant

Cargills Quality Dairies (Pvt) Ltd has requested Environmental Technology Section (ETS) to conduct performance assessment of wastewater treatment plant and soil water carrying capacity of the land for the application of treated wastewater. Accordingly ETS officers carried out the performance assessment and soil water carrying capacity of the land to be irrigated satisfactorily.

Construction supervision and commissioning of wastewater treatment plant

Environmental Technology Section undertook the construction supervision and commissioning of wastewater treatment plant at SMK Services Center. Low cost biological wastewater treatment method was implemented in this service centre further allowing them to reuse the treated wastewater for gardening and floor washing purposes.

Pre-environmental assessment of coal based AFBC boiler

Textured Jersey Lanka PLC which is one of the giant textile industries in Sri Lanka requested ETS to perform Pre-environmental assessment of coal based atmospheric fluidized bed combustion (AFBC) boiler installed at their premises in Seethawaka Export Processing Zone. As per the request team of experts at ETS inspected the site and provided them with required pre environmental assessment for the installation.

Air Dispersion Modeling

Environmental Technology Section has carried out Air Emission Prediction Based on Air Dispersion Model for Proposed Gas Turbine Power Plants (35 Mw X 3) at Kelanitissa. Moreover another study was carried out for combined cycle power plant at Kerawalapitiya. 'ISC-AERMOD View' software 'Version 8.5.1' developed by Lakes Environmental, USA, which is equivalent to 'USEPA ISC2' was utilized for this air dispersion modeling study.

Noise and Vibration control - Baseline noise and vibration data collection

Baseline data collection was carried out to monitor the existing noise and vibration level in wind power plant project site of CEB in Mannar. When completed there will be fifty wind turbines and 100 MW output. Twenty four hour noise and vibration monitoring was carried out at identified receptor points. These data will be useful in the decision making on location and other future activities.

Technology for Human Welfare and Socio-economic Upliftment

Iron fortification of rice seed by the soybean ferritin gene

Iron deficiency is a severe problem encountered around 30% of the world's population, especially in the third world countries. Most individuals suffering from iron deficiency are below the poverty line and depend on their food staples as the sole source of nutrition. Rice which is the staple food in Sri Lanka is deficient in iron. Increasing the iron content by genetic engineering may help to solve the problem of dietary iron deficiency. Ferritin is an iron storage protein which stores up to 4500 iron atoms in a central cavity. The objective of this study was to increase the overall iron content of rice by increasing its ferritin content through transformation of soybean ferritin gene to rice seeds.

Transgenic plants which can result in high ferritin have been prepared and confirmed. Detection of the amount of ferretin expressed in rice seeds, using protein bioassays are in progress.

Identifying pure bee's honey

Purity of bees honey is important in traditional medicine. However, the bees honey, mostly available in the local market are adulterated. A microscopy based protocol for adulterant detection in bees honey was set up by the ITI. SLS standard for bees honey is now being revised based on the scientific findings of this research project.

Increasing lysine content in rice seeds

Lysine is one of the eight essential amino acids needed for human growth and function. Rice, the predominant and the staple food in Sri Lanka is deficient in lysine and several other amino acids. As a result, protein deficiency disorders are particularly severe in countries where rice is the staple food. One way to address this problem is through enhancement of both lysine and total protein content in rice by genetic engineering. Therefore, the present study was carried out to increase both the lysine and total protein content of the rice seeds by introducing a pollen specific lysine rich gene, from potato (*Solanum tuberosum*) into rice seed under the control of a rice seed specific globulin promoter.

Preparation of Transgenic plants was successfully completed and confirmed by PCR based analysis. Detection of the amount of Lysine expressed in rice seeds, using protein bioassays are in progress.

Development of a PCR assay for the detection of Pork in meat as an adulterant

Increasing world population and the increasing demand for meat and meat products has led to the fraudulent substitution/ adulteration of high demand meat with cheaper ones. A recent scandal involving the adulteration of beef with horse meat was reported from the UK. Awareness of meat adulteration is necessary in food industry due to the food habits of individuals and their religious and cultural concerns. Towards prevention, methods need to be developed to detect adulteration.

At ITI a technique has developed to identify pork and other meat using bio technology and ready to transfer the technology.

Non-dairy prebiotics to ensure human health

At ITI studies are in progress to identify the prebiotic potential of Sorgum, Finger millet, Pearl millet and Banana which are grown in Sri Lanka. The project mainly focuses on the usage methods of the above mentioned crops as prebiotic sources in developing products for commercialization. At the moment a finger millet incorporated set yoghurt has been developed and further studies are progressing.

Market basket study

It is a known fact that most of the food that we consume are contaminated with various toxic chemicals residues and the presence of cosmetics which are not suitable for human usage. Several divisions of ITI got togather to investigate the present situation of the selected imported and local food items and cosmetics. Investigations on plaster of paris in flour, pesticide analyses of fruits and vegetables, quantification of active ingredient in paracetomol, identification of genetically modified food, testing for mercury content in fairness creams, toothpaste analysis and reusability of coconut oil are now in progress.

Capacity building of SMEs

Programmes to upgrade the technical know-how and knowledge on packaging and processing of foods, food labeling and quality control in food processing were conducted for the SME sector. Assistance for the programmes was given by the UNDP, GTZ, OXFAM and Department of Ayurveda.

Educating bus operators on horn noise

ITI participated in a programme organized by the CEA to create awareness among bus operators in Central Bus Stand, Colombo about horn noise and related rules and regulations. During the programme tests were performed to measure the horn noise of private and Transport Board busses. Bus operators were given necessary instructions to replace horns that do not fall into legal noise limitations.

Conferences, Seminars, Training Programs & workshops

The 18th Meeting of COMSATS Coordinating Council

The ITI as the COMSATS' Centre of Excellence in Sri Lanka hosted the meeting. The Honourable Minister for Higher Education & Research, Dr. Sarath Amunugama graced the occasion as the Chief Guest and inaugurated the meeting. The ceremony was attended by the COMSATS Council members and senior officials of ITI, representatives of the diplomatic missions of Pakistan, Nigeria, and Germany in Colombo; as well as universities, R&D institutions, ministries and government departments of the country.

International Symposium on Impacts of Extreme Atmospheric Events

A two-day International Symposium on 'Impacts of Extreme Atmospheric Events on Geo-Surface in a Changing Climate' was held on 14th - 15th May 2015, at Hotel Galadari, Colombo. The event was jointly organized by COMSATS and two of its Centres of Excellence, the Industrial Technology Institute (ITI), Sri Lanka, and the International Center for Climate and Environment Sciences (ICCES), China. The symposium was inaugurated by Mr. P. Ranepura, Secretary to the Ministry of Higher Education & Research.

A Memorandum of Understanding (MoU) between ITI and ICCES, for the establishment of the Climate Change Research Centre was also signed by Dr. Muditha Liyanagedara, Acting Director General ITI, and Prof. Zhaohui Lin, Director ICCES, China, during the inaugural session.

The fourth meeting of COMSATS' International Thematic Research Group (ITRG) on 'Climate Change and Environmental Protection' was held on 16th May 2015 at Industrial Technology Institute.

Second Biennial Research Symposium

The 2nd Biennial Research Symposium of ITI was held on 16th November 2015 at the BMICH, Colombo under the theme "Science, Technology and Innovations for a knowledge based Economy". The Honourable Minister of Science, Technology and Research, Mr Susil Premajayantha graced the occasion as the Chief Guest. The Guest of Honour, Mr W.A. Wijewardena, former Deputy Governor, Central Bank of Sri Lanka delivered the keynote address.

The Symposium was organized to share and disseminate the knowledge gained through research carried out by ITI Scientists. The outstanding performances of ITI researches were appreciated during the occasion.

The Technical Sessions were held on 17th November at the ITI Main Auditorium and S.F. Laurentius Auditorium where more than 35 research papers were presented. The Plenary Lectures by Prof. L. M. V. Tilekeratne, Professor, Department of Medicinal and Biological Chemistry, College of Pharmacy and Pharmaceutical Sciences, University of Toledo, USA and Dr. Mahesh Jayaweera, Senior Lecturer Department of Civil Engineering, University of Moratuwa, were delivered during the technical sessions.

Training Programs and Workshops

ITI while adhering to its functions and objectives, continued conducting workshops, seminars, training programmes for personnel from Small and Medium Enterprises, Vidatha Centres and Undergraduate and Graduate students providing a great service towards the economic development of the country.

During the year 2015, over 70 training workshops were organized and conducted in the fields of Materials, Food, Herbal, Environment and Biotechnology offering required know how for the initiation of small enterprises. Special Training workshops were conducted for Tea Research Institute, Rice Research Institute, Jafferjee Brothers, University of Kelaniya, Senapura Rehabilitation Camp, SLSI, and NIE at their request. A scientist from Canada, involved in IDRC project was trained for one month on project related technologies developed at ITI.

Training Undergraduate and Graduate Students

ITI continued to offer industrial training to undergraduates of universities and other educational institutes, with its qualified staff and well equipped laboratories. During the year, more than 100 undergraduate and post graduate students were trained in the fields of Food Technology, Material Technology, Herbal Technology, Metrology and Biotechnology.

Agreement with Business Management School

A Memorandum of Understanding (MoU) was signed between Industrial Technology Institute and the Business Management School (BMS) in July 2015 at the BMS premises. The MoU was signed by ITI Chairman Mr Niroshana Perera on behalf of ITI and by BMS

President W.A. Wijewardena on behalf of BMS. This Public Private Partnership will provide apprenticeship and training to BMS students, who are reading for the BSc (Hons) Degree in Biomedical Science/Biotechnology at ITI's well equipped laboratories.

Capacity Building & Productivity Development

Institute takes a keen interest to enhance the knowledge of its employees. During the year more than 25 employees were following postgraduate studies in different fields.

PhD Studies (Continuing)

- H.P.P.S.Somasiri - University of Colombo
  Thesis Title - Chemical characterization and authentication of *Caryota urens* (Kithul) sap and its products
- Ruwan Weerasighe - University of Colombo
  Thesis Title - Automated acid rain monitoring station
- C H Manoratne – University of Colombo
  Thesis Title - Synthesis and characterization of graphene and composites for application in lithium ion batteries
- Kaushalya Abeysekara - University of Colombo
  Thesis Title – Assessment of potential health benefits of Sri Lanka Cinnamon by studying selected bioactivity
- Hasitha Weeratunge - University of Colombo
  Thesis Title – Investigation on natural fragrances and other volatiles from Sri Lankan forests and their industrial applications
- Wasundara Divisekera - University of Colombo
  Thesis Title – Isolation, identification and characterisation of probiotics associated with finger millet and banana in Sri Lanka
- Sachindra Perera - University of Colombo
  Thesis Title - Validation and value addition of bio active natural ingredients for industrial applications
- Erandi Wijedeera – Osaka City University, Japan
  Thesis Title - Studies on chemical constituents of *Rabdosia japonica, Saussurea flexousa and Saussurea oligantha*
- Sherly Ranathunga – Academy of Science, China
  Atmospheric Physics

MPhil Studies (Continuing)

- L C D Nayanajith – University of Colombo
  Thesis Title - Synthesis and characterization of graphene and graphite oxide and composites for application in photovoltaic cells
- D S Samarasekera – University of Colombo
  Thesis Title - Development of a natural fiber based, “smart” packaging material to address the post harvest losses of Mangoes in Sri Lanka
- H C D P Colombage – University of Moratuwa
  Thesis Title - Road cut failure analysis of roads in hill side Sri Lanka using computational method
- M T V P Jayaweera – University of Colombo
  Thesis Title - Synthesis of graphene and graphene composites from natural graphite for gsensing and other applications
- Nisala Gunasekera - University of Colombo
  Thesis Title - Investigation of natural anti-senescence compounds; edible wax incorporated smart delivery system for the control release of anti-senescence agents as a tool in postharvest disease control and crop quality preservation
- Sachini Jayawardena - University of Colombo
  Thesis Title – Prebiotic and bioactive properties of Sri Lankan finger millet (*Eleusine coracana*) varieties

MSc Studies (Continuing)

- Ramya Wijesekara - University of Colombo
  Field of Study - Environment Management
- Sewani Gunarathne – Unversity of Peradeniya
  Field of Study – Environment Engineering
- R. P. Nilusha - University of Colombo
  Field of Study - Environment Management
- S. S. K. Madage – PGIA, University of Peradeniya
  Field of Study – Animal Science
- K. V. T. Gunawardhane - PGIA, University of Peradeniya
  Field of Study - Agriculture Engineering
- G. D. T. A. Pathiragoda – University of Colombo
  Field of Study – Applied Electronics
- R. A. D. S. Ranasinghe – University of Colombo
  Field of Study – Applied Electronics

- P. T. de Silva – University of Colombo
  Field of Study – Nuclear Science

MSc Studies (Completed)

- L D C Nayanajith - University of Peradeniya
  Field of Study – Nano Technology
  Thesis Title - Synthesis of graphene and graphite oxide and reduced graphite oxide from Kahatagaha graphite
- Kalika Kumarasinghe – University of Colombo
  Field of Study - Environmental Management
  Thesis Title – Ambient air shed quality management with new coal power plant installation

PG Diploma (Continuing)

- N. Geekiyanage - University of Colombo
  Field of Study - Library & Information Science
  Project Title – Problems and issues on using library automation systems by staff members in selected special libraries
- Roshani Fernando – University of Colombo
  Field of Study - Information Management
  Project Title – Use of social media in the ITI library to enhance sharing information with the stakeholders
- Inoka Pieris - University of Colombo
  Field of Study – Information Management
- Preethika Weerasinghe – University of Colombo
  Field of Study – Information

PG Diploma (Completed)

- Dineshka Priyangani - University of Colombo
  Field of Study- Manufacturing Management

Short term training/ Meetings/ Conferences (Foreign training)

- Ms. Theja Herath participated a APO training course on "Food safety and quality standards for market access" organized by APO, Islamabad, Pakistan (12th – 17th January)
- Dr. S. Chelvendran received training on "GC-MS operation and applications" at the Thermo Fisher India Pvt Ltd, Mumbai, India (2nd – 5th March)

- Dr. C Wijesiriwardena participated on the 2nd meeting on “Medicinal plant focal points of IORA RCSTT cum exhibition at CIMAP, Lucknow, India (18th – 19th March)
- Dr. Ilmi Hewajulige attended an advanced international training programme on “Global quality infrastructure for food safety” conducted by SWEDAC/SIDA, Sweden (26th April - 22nd May)
- Ms. Ramya Wijesekera participated in the International Expert workshop plan for water on desalination technologies organized by Indian Ocean Rim Association, Tianjin, China (4th – 10th May)
- Dr. Kalpa Samarakoon attended the international conference “World Aquaculture 2015” organized by World Aquaculture Society, Asia Pacific Chapter, Jeju Islands, South Korea (26th – 30th May)
- Mr. H P P S Somasiri, Dr. W M S Wijesinghe, Ms. Theja Herath, Mr.A A M T Adikari and Ms. Sachindra Perera participated on a seminar “Standardization officials of ASEAN countries of 2015” conducted by Jiangsu Inspection and Quarantine Institute of Quality (JISQ), Changzhou, China. (15th – 29th May)
- Dr. Neville Amunugoda participated an aid programme on “Capacity building for bamboo and rattan sustainable development” organized by INBAR & ICBR. (9th – 23rd June)
- Ms. Wasundara Divisekera participated in a fellowship program jointly organized by NAM – ICCBS Fellowship, University of Karachchi, Pakstan. (8th October 2015 – 8th April 2016)
- Dr. S. Chelvendran and Ms. Sachindra Perera received training on “HPLC applications” at Waters India Pvt Ltd., Bengalore, India (27th – 31st August)
- Mr. M S M Aroos, Ms. C N Vitharana, Ms. Sachini Jayawardena, Ms. K S P Karunadasa and Ms. Kalika Kumarasinghe participated on “Young leaders training program on economic administration” conducted by JICA Centre, Nagoya, Japan (15th November – 3rd December)
- Mr. R C L de Silva and Mr. Saman Weeraratne participated on a collaborative research on “Novel Mid Infra Red (MIR) / Fourier Transformation Infra Red Spectroscopic (FTIR) Method to quantify Genetically Modified Organisms (GMO) in food commodities

New Initiatives

Identifying GMO in food

International trade regulations require the confirmation of presence or absence of Genetically Modified (GM) ingredients in the food products. ITI has started a collaborative study with International Centre for Chemical and Biological Sciences in Pakistan on identifying GM foods. Feasibility tests carried out at the ITI has shown promising results on using FTIR to identify the GM foods from natural food even at trace levels. Further studies are in progress.

Portable test kit to identify dengue

Early diagnosis of dengue fever is a challenge due to similar clinical symptoms with other febrile diseases. Dengue is diagnosed by clinicians mainly based on symptoms. Other than clinical symptoms, haematological and ELISA investigation could also be used but there are draw backs such as sensitivity.

A new research project has been started at ITI to develop portable, user friendly, economical test kit with high sensitivity which could be purchased from over the counter of any pharmacy.

Identifying *Tragia involucrate*

Tragia involucrate (Walkahambiliya) is known for its wide usage in traditional medicine. Experimentally also it has shown many effects such as analgesic, wound healing, anti-inflammatory *etc*. However, there is another *Tragia* sp which is used as a substitute. At the outset phytochemical tests and TLC fingerprinting were carried out to compare the two species.

Development of rice bran oil extraction method for SMEs

Rice bran is a waste material from rice milling which has immense nutritional and health benefits. Thus the development of rice bran stabilization method and extraction of rice bran oil is economically important to the country. Studies have been started at ITI to develop rice bran stabilization methods that can be used at SME level.

Herbal drink and lozenge from *Aporosa lindleyana*

Studies are being carried out at ITI to produce a herbal drink and lozenge from young leaves of *Aporosa lindleyana* (Sin. Kebella) and to evaluate the bio activities of the product.

Antioxidant and anti-lipidaemic activities have been completed and once the anti-diabetic activity is evaluated, development of the products will be initiated.

New method for perishables and cereal dehydration for food

Heat pump system is mainly used in timber and laundry industries and very recently entered to the food industry also. This method could be further developed into low cost, high quality, environmental friendly method in food dehydration. At ITI the studies are being carried out to develop this dehydration method to be used in fruit, cereal and coconut drying.

Identification of indigenous probiotic lactic acid bacteria and yeast

All the dairy bacterial cultures, both starter and probiotic cultures, used in Sri Lanka are imported and repeatedly the cultures has to be imported as their propagation ability is blocked. At ITI, research is carried out to identify, characterize and isolate indigenous lactic acid bacteria and yeast strains and to prepare microbial profiles. The ultimate goal of the project is to develop them into starter cultures or probiotic cultures to be used in dairy industry.

Investigation of Sri Lankan Marine Algae

Sri Lankan marine algae are still an unexplored natural resource. The marine bio resources are reported for being nutritional, and known for the pharmaceutical and cosmoceutical activities. Studies on the bio activities of local marine algae have been started for the selected species

Noise measurement in recording studio

The Independent Television Network had set up two new recording studios in their new complex at Baththaramulla.

A request was made to ITI to test the sound level inside and the reverberation (echo) time. Based on the request testing was conducted using omini directional sound source to test the reverberation time inside both studios. With the omini directional sound source generation of impulse noise, testing reverberation time and transmission loss are possible.

International Collaborations

Enhance preservation of fruits in South Asia

The second phase of the CIFSRF-IDRC, Canada aided project, aiming commercialization of the products and services developed by the phase one was initiated during the year 2015. The commercialization sites have been selected and partners were identified for setting up banana fibre production units in Dambulla, Embilipitiya and Jaffna. A series of farmer training programmes were conducted in these areas to create awareness on proper postharvest management of mango and banana. Technology on banana fibre paper making was transferred to an entrepreneur from Embilipitiya.

Trials on "Hexanal Smart Delivery System" and "Enhanced Freshness Formula" showed promising results on shelf life and harvesting time of mangoes. H. E. Ms Shelley Whiting, the Canadian High Commissioner visited the project implementing site at the Ellawala Farm, Dambulla on 16th July 2015 to observe the activities of the ITI project team.

Novel cereal and fruit based probotics

The Indo-Sri Lanka joint research programme with ICRISAT, India on Ensuring human health, food and nutrition security through novel cereal and fruit base probiotics continued with studying properties of 3 varieties of finger millet. The flour from selected banana samples were blended with finger millet flour for product development.

Investigation of Sri Lankan Marine algae

The marine bio resources have been used for numerous research activities worldwide and their nutritional, pharmaceutical, cosmeceutical applications and production of energy sources are described as major prospective applications. Sri Lanka, even though enriched with marine resources, Sri Lankan marine algae are still an underexplored natural resource. This project, separation and characterization of biologically active natural products from selected marine algae found in Sri Lanka, was initiated with collaboration of Korean Institute of Ocean Science and Technology.

GIZ – SME Development Project

ITI continued to assist the SMEs in the North, East and Uva Provinces through the GIZ Project. the reviewed year, two awareness programmes in Jaffna and another in Manner were conducted while technology transfers on yoghurt and bottled drinking milk, jujubes and marshmallows, herbal plant

production, incense sticks and candle making were conducted at Ampara, Moneragala and Manner Districts.

Establishment of a Climate Research Centre

A Memorandum of Understanding was signed between International Center for Climate and Environment Sciences (ICCES), China and ITI on, Establishment of Climate Change Research Centre in Sri Lanka at the international symposium on “Impacts of Extreme Atmospheric Events on Geo-Surface in a Changing Climate” held on 14th -15th May 2015 at Hotel Galadari, Colombo, Sri Lanka. It has been jointly organized by the Industrial Technology Institute and COMSATS.

Corporate Awareness

Exhibitions

The Institute showcased its technology and services in several exhibitions around the country to popularize its products and services among general public and potential entrepreneurs. These include Footwear & Leather Fair, Kithulaka Waruna, Ayurveda Expo, Vidatha, etc. Two of the exhibitions were held in Batticaloa and Digamadulla giving the opportunity to publicize among rural population.

Public Awareness

Many public awareness programmes, mainly on food processing, herbal technology and materials technology were carried out by ITI. The target audience was SMEs in the country

Media Publicity for ITI Activities & Events

More than 75 articles on ITI and its activities were published in local newspapers such as Daily News, Daily Mirror, The Island, Sunday Observer, Sunday Times, Sunday Island, Dinamina, Lankadeepa, Diavina, Ada and in magazines such as Lanka Business Digest, during the reviewed year in print media.

In electronic media several programmes were telecast;

- Discussion on 'Food Poisoning' on ITN Doramadalawa Programme
- Low cost water filters on Rupawahini Ayubowan programme
- Health benefits of Sri Lankan Traditional Rice' on SLBC – Mihithalaya programme

Anti Diabetic properties of Sri Lankan rice and product development on SBS Radio, Australia

Visits from Schools, Universities and other Organizations

Students from more than 17 schools from various areas in the country and undergraduates from Universities visited ITI on educational purposes. Staff members demonstrated them the activities that are carried out at the ITI.

Information for Industry

The information Services Centre (ISC) continued to provide information to industry, academia and the general public through its inquiry and reference service. During the year, the Centre was reorganized into three main sections; Library, Training Unit and Information & Communication Unit and commenced to coordinate Institute's training seminars and update the website, while carrying out the customary library services.

Collection

The collection of books and other information materials were updated as a regular practice; considering the world R&D trends and industry requirements. The centre giving more consideration to the digital information sources continued to subscribe to Science Direct and Research4Life online journal databases, while updating ITI Knowledge Repository with publications of ITI researchers and Institute reports.

Information dissemination

The information dissemination through the information indexing and the automated library system to ITI employees and members continued during the year. A slight decrease in the usage of the library by graduate and undergraduate students, due the formation of a consortium among Universities was notice. During the period under review, 923 have used the library.

Reference facility is widely used by the public for technical information with the assistance of qualified staff at the centre. Monthly e.mail alerts on Selective Dissemination of Information service for ITI and outside members continued while the Current Awareness Bulletin with information on current acquisitions to the Information Services Centre were sent to other libraries and corporate members.

Seminars and workshops

With the reorganizing, the ISC initiated to coordinate Institute's workshops while continuing its own seminars and workshops. The ISC organized four seminars, Wheat Flour and Its Substitutes in Bakery, Industry Patent Writing and Licensing, Organic farming and Strategies for enhancing production of quality spices for local and export market for the current year.

Training library professionals and students

Ten students who follow the Diploma in Sri Lanka Library Association underwent their practical training at the ISC. Further students from Institute of Chemistry were also trained on the activities of a library and literature search at the ISC.

Awards and Recognition

Research carried out by ITI Scientists and Engineers received many awards and recognition locally and internationally.

Geneva International Invention Award

A Gold Medal was awarded to Mr Anura Sooriya Arachchi for the invention of "Safety coconut husk feeding mechanism to extract Bristol fibre from traditional fibre extraction processes" at the 43rd International Inventors Exhibition and Competition in Geneva 2015.

Presidential awards for scientific publication -2013 (awarded in 2015)

Certificates of recognition were awarded for highly rated scientific research as evaluated by peers and published in Science Citation Index (SCI) Journals

Dr G A S Premakumara	*Journal of Vector Borne Diseases* **50**: 278–284
	Journal of Cereal Science **58**(3): 451-456 *BMC Complementary and Alternative Medicine* 13 ARNT 275
Dr P N R J Amunugoda	*Food and Bioprocess Technology* **6**(7): 1720-1728
Dr R M Dharmadasa	*Industrial Crops and Products* **50**: 537 – 539 and 852 -856
Mr Kosala Samarasekera	*Industrial Crops and Products* **50**: 537 – 539

National Research Council (NRC) Merit Awards (awarded in 2015)

Dr. Kanchana Abeyesekera	*Journal of Cereal Science*, **58**(3): 451-456
Mr. C.H.Manoratne	*Journal of Experimental Nanoscience*, **8**(4): 1-18

National Awards for Science and Technology Achievements 2014 (awarded in 2015)

- The award under the category, Transfer of Technologies either developed or adapted to industry inclusive of SMEs for Developing and commercialization of Omega 3 enriches chicken egg was awarded to Mr. S.S.K. Madage, Ms Sriyani Rajapakse, Mr W U D Medis, Mr. R.A.P. Perera and Dr. (Ms) F.Y. Sultanbawa
- Sri Lanka Association for Advancement of Science (SLAAS) Postgraduate Research Award 2015. – Dr. Kanchana Abyesekera
- Best Oral Presentation Award - Department of Food Science & Technology, Faculty of Applied Sciences, Sabaragamuwa University of Sri Lanka. for the presentation on

Enhanced physicochemical and bioactive properties of two newly formulated red rice noodles in comparison to selected commercially available rice and wheat noodles. – Dr. Kanchana Abyesekera

- Best Poster Award - Department of Food Science & Technology, Faculty of Applied Sciences, Sabaragamuwa University of Sri Lanka. for the poster on Enhanced physicochemical and antioxidant properties of rice extracts added yoghurts in comparison to plain yoghurt. – Dr. Kanchana Abyesekera

Representation of ITI Officers at International Committees

Dr G A S Premakumara

- Editorial Board : International Journal of Herbal Practice and Technology
- Member: Coordinating council of The Commission on Science and Technology for Sustainable Development in the South (COMSATS)

Mr A S Pannila

- Member: World Association of Industrial and Technological Research Organization (WAITRO)

Dr Ilmi Hewajulige

- Member of the reviewers panel of the International Journal of Food Science and Technology- International refereed journal
- National Project Coordinator - IAEA/RCA - 5061 - Supporting Food Irradiation Technology to ensure the Safety and Quality of Meals for Immuno-compromised Patients and Other Target groups
- National Project Coordinator - IAEA /RCA- 5071- -Strengthening adaptive climatic strategies for food security through the use of food irradiation

Dr Iresha Kottegoda

- Member of the Reviewing Panel : Electrochemica Acta

Dr R M Dharmadasa

- Member of the Reviewing Panel : Journal of Ethnopharmacology

Representation of ITI Officers at National Committees

Dr G A S Premakumara

- Board of Directors: National Research Council
- Board of Directors: National Committee on Women
- Board of Directors: Mushroom Development & Training Centre, Sri Lanka Export Development Board
- Member: Advisory committee of EDB on Spice & allied products
- Board of Directors – CENTEC
- Board of Directors – Sri Lanka Atomic Energy Board

Dr Radhika Samarasekera

- Member: Presidential Task Force on Dengue Eradication
- Chairperson of drafting committee of formulating cosmetic standards - Sri Lanka Standards Institution

Dr Ilmi Hewajulige

- Chairperson of National Codex Committees of Food additives and Processed Fruits and Vegetables– Ministry of Health

Eng. K Fonseka

- Member - National Steering Committee (NSC) of the project on Enabling Activities to Review and Update the National Implementation plan for the Stockholm Convention on Persistent Organic Pollutants (POPS), Ministry of Environmental and Renewable Energy

Mr Sudarshana Somasiri

- Member - SLSI National Technical / Advisory Committee on Tea

Eng. Ms W J K D Ranpatige

- Member - National Steering Committee on ratification for Minimata Convention, CEA

Visiting lecturers in Universities / Technical Colleges / Institutes

Dr G A S Premakumara

- South Eastern University – Visiting lecturer on Applied Natural Products Chemistry for Chemistry Special Degree Course

Dr Ilmi Hewajulige

- University of Wayamba -. Visiting lecturer on Postharvest Technology and Quality Management
- National Institute of Education (NIE) - on Food Processing, Postharvest Management and Food Quality Management

Ms Udayani Binduhewa

- University of Sri Jayawardenepura - Visiting lecturer on Fruit and Vegetable Processing

Dr C Wijayasiriwardena

- University of Ruhuna – Visiting lecturer on Pharmacognosy
- Eastern University – Visiting lecturer on Medicinal Botany and Pharmacognosy
- Institute of Chemistry – Visiting lecturer on Cosmetic Sciences

Mr H Weeratunga

- University of Ruhuna – Visiting lecturer on Chromatographic Techniques

Eng (Ms) D M H Dissanayake

- National Institute of Occupational Safety and Health - Visiting lecturer on Chemical Waste Management

Ms Manori Wijemanne

- Institute of Supply Material Management – Visiting lecturer on Principles of Management.

Social, Welfare and Religious Activities

Seva Vanitha Unit

Seva Vanitha Unit of the Institute continued to provide services to the employees. Six projects were carried out during the year for the befit of the members.

- Distribution of schoolbooks for children of deserving employees.
- Sale of Oshani Linen at a discounted rate for employees.
- Sale of pens with ITI logo for employees.
- Eye Clinic, through National Eye Hospital for staff.
- Promotional sales during Avurudu and Chrismas.
- Lecture on "ආයුර්වේද රූපලාවන්‍ය ආලේපන භාවිතය,

The Annual General Meeting 2015 was held on 27th November at ITI Main Auditorium. Ms Sriyani Rajapakse was appointed as the Vice President. Ms Priyantha Vithanawasam was appointed as the Secretary.

Buddhist Society

- As in the previous years, year 2015 also began with the Pirith ceremony followed by kiri ithiraweema. After that the senior management of ITI together with the Chairman greeted all the staff members for the New Year.
- April 2015 is a memorable time for ITI as ITI celebrated its 60th Anniversary. Starting the celebration of the anniversary, all night Pirith Ceremony was held followed by alms giving at the Main Auditorium of ITI.
- Wesak in 2015 was celebrated in a grand manner. Wesak Dharmadeshanaya was held before Wesak day by Ven. Suyurumulle Sumanarathana Thera. Wesak lantern competition added colour to the celebrations and staff of all the divisions of ITI built many vibrant lanterns based on novel ideas. Further Wesak Dansela was also organized by the Buddhist Society of ITI.
- In June a rare opportunity of offering a Dana to Dalada Maligawa was received by the staff of ITI. Staff members who participated in Dana got a chance to visit the inner chamber of Dalada Maligawa to worship the sacred tooth relic.
- Poson dharmadeshanaya by Ven. Boralle Kovidha Thera was held at the Main Auditorium of ITI.
- Blood donation programme was held at ITI in August 2015 and more than 50 staff members donated blood.
- Staff members collected some essential items for children and donated them to Preethipura Children's Home and this is an annual event carried out by the Buddhist Society of ITI.

- Encouraging the children of staff members who are acing 5th Grade Scholarship, O/L and A/L examinations, past examination papers were distributed among them free of charge. Ending year 2015, presents were given to the children of staff members of ITI who passed the 5th Grade Scholarship examination and got selected to the universities.

Publications, Presentations & Patents

Publications in Refereed Journals

1. Abeysekera W.K.S.M., Premakumara G.A.S., Ratnasooriya W.D., Choudhary M.I, Dalvandi K. and Chandrasekharan N.V. (2015). Anti-diabetic related health food properties of traditional rice (*Oryza sativa* L.) in Sri Lanka. *Journal of Coastal Life Medicine*, **3**(10): 815-820.

2. Abeysekera W.K.S.M., Premakumara G.A.S., Dar A., Choudhary M.I., Ratnasooriya W.D., Kashif M., Mudassar, C., Ali, S.R. and Chandrasekharan, N.V. (2015). Growth inhibition and cytotoxicity in human lung and cervical cancer cell lines and glutathione S-transferase inhibitory activity of selected Sri Lankan traditional red rice (*Oryza sativa* L.) brans. *Journal of Food Biochemistry*, **39**: 585-593.

3. Dharmadasa, R.M., Abeywardhana, K.W., Abeysinghe, D.C., Aththanayake, A.M.L., Bandara J, Bandara. V.S. (2015). Determination of suitable agro climatic region and optimum harvesting stage by means of total phenolic content, total flavonoid content and total antioxidant capacity of *Ocimum tenuiflorum* L. (Lamiaceae) Grown in Sri Lanka. *World Journal of Agricultural Research*. **3**(5), 148-152.

4. Dharmadasa R.M, Abeysinghe D.C, Dissanayake D.M.N., Abeywardhane K.W., Fernando N.S. (2015). Leaf essential oil composition, antioxidant activity, total phenolic content and total flavonoid content of *Pimenta dioica* (L.) Merr (Myrtaceae): a superior quality spice grown in Sri Lanka. *Universal Journal of Agricultural Research*, **3**(2): 49-52.

5. Dharmadasa, R.M., Siriwardhane, D.A.S., Samarasinghe, K. S.H.C.S., Rangana S.H.C.S., Nugaliyadda, L., Indika Gunawardane, Aththanayake, A.M.L. (2015). Screening of two *Ocimum tenuiflorum* L. (Lamiaceae) morphotypes for their morphological characters, essential oil composition and fruit fly attractant ability. *World Journal of Agricultural Research*, **3**(1): 1-4.

6. Fonseka, H.R.D., Kulathunga, W.M.S.S.K., Peiris, A., Arawwawala, L.D.A.M. (2015). A review on the therapeutic potentials of *Ocimum sanctum* Linn: In the management of Diabetes Mellitus (Madhumeha). *Journal of Pharmacognosy and Phytochemistry*. **4**: 47–52.

7. Gunathilaka, N. and Karunaraj, P. (2015). Identification of sibling species status of *Anopheles culicifacies* breeding in polluted wáter bodies in Trincomlaee District of Sri Lanka. *Malaria Journal*, **14**: 214.

8. Hewageegana, H.G.S.P., Arawwawala, L.D.A.M., Dammaratana, I., Ariyawansa, H.A.S., Tissera, M.H.A. (2015). Development of a substitute oil for Vipadika skin disease (A case study). *American Journal of Clinical and Experimental Medicine*. **3**: 306-309.

9. Hewajulige I.G.N., Wijeratnam R.S.W., Perera M.G.D.S and Fernando S.A. (2015). Extending storage life of commercially important tropical fruits using bio-waxes. *Acta Horticulturae*, **1091**: 283-289.

10. Jayarathne, L., Bandara, A., Ng, W.J. and Weerasooriya, R. (2015). Fluoride adsorption on ɤ-Fe_2O_3 nanoparticles. *Journal of Environmental Health Science and Engineering*, **13**: 54-64.

11. Karunaratne, T.D.N., Sugataratana, K., Ariyawansa, H.A.S., Silva, H.A.D., Samarasingha, K., Arawwawala, L.D.A.M. (2015). Standardization of Sarasvatha Choorna: Used as a remedy for dementia. *American Journal of Clinical and Experimental Medicine*, **3**: 288-292.

12. Kottegoda,I. R. M., Gao, X., Nayanajith, L.C.D., Manorathne, C.H., Wang, J-Z., Liu, H-K. and Gosef, Y. (2015). Comparison of Few-layer Graphene Prepared from Natural Graphite through Fast Synthesis Approach. *Journal Material Science & Technology*, **31:** 907–912.

13. Kumaradharmasena L.S.P., Arawwawala, L.D.A.M., Fernando, P.I.P.K., Peiris, K.P.P., Kamal, S.V. (2015). Quality assessment of *Mustadi Taila*: An Ayurvedic oil as remedy for dental caries (*Krimi Danta*). *Journal of Pharmacognosy and Phytochemistry*. **4**: 21 – 24.

14. Luxmini. K.P.A.M.K, Dharmadasa. R.M, Samarasinghe, K. Muthukumarana. P.R.M. 2015.Comparative Pharmacognostic Study of Different Parts of *Withania somnifera*and its Substitute *Ruellia tuberosa*. *World Journal of Agricultural Research* **3**(1): 28-33.

15. Madage S. S. K., Medis W. U. D. and Sultanbawa Y. (2015) Fish silage as replacement of fishmeal in red tilapia feeds. *Journal of Applied Aquaculture*, **27**(2), 95-106.

16. Nilusha, R.T., Dissanayaka, D.M.H.S. and Fonseka, W.R.K. (2015). Preliminary study on nutrient removal of dairy wastewater by pilot scale subsurface horizontal flow constructed wetland planted with *Schoenoplectus grossus*. *International Journal of Recent Research in Interdisciplinary Sciences*, **2**(3): 38-44.

17. Perera, H.A.R.P., Karunagoda, K., Perera, P.K., Samarasingha, K., Arawwawala, L.D.A.M. (2015). *Phyllanthus niruru* Linn grown in Sri Lanka: Evaluation on phyto and physicochemical properties of the whole plant. *World Journal of Pharmacy and Pharmaceutical Sciences*. **4**: 1452- 1459.

18. Ranasinghe, R.L.D.S., Ediriweera, E.R.H.S.S., Wasalamuni, W.A.D.D., Arawwawala, L.D.A.M. (2015). Assessment of quality of *Dhanyamla*: A fermented cereal used in Ayurveda. *British Journal of Pharmaceutical Research*. **8**: 1-5.

19. Ranaweera, C. B., A. S. Vidanagamage, W. P. K. Abeysekara, A. R. N. Silva, A. K. Chandana, S. Premakumara, R. Pathirana, W. D. Ratnasooriya. (2015). *In vitro* effects of aqueous extracts of five Sri Lankan medicinal plants on human erythrocyte membrane stabilization activity. *International Journal of Recent Advances in Multidisciplinary Research*, **2**(6): 486-489.

20. Rathnayake R.M.D.H., Dharmadasa R.M., Abeysinghe D.C. (2015). Suitable maturity stage, type of cuttings and potting media for vegetative propagation of *Pogostemon heyneanus* Benth. *World Journal of Agricultural Research*. **39**(6): 203-207..

21. Ratnasooriya, W. D., Abeysekera, W. P. K. M., and Ratnasooriya, C. T. D. (2015). *In vitro* anti-lipase, cholesterol esterase and cholesterol micellization inhibitory activity of Sri Lankan low grown orthodox orange pekoe grade black tea (*Camellia sinensis* L.), Journal of Coastal Life Medicine, **3**(7): 570-574.

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23. Wijesinghe C. J and Wijeratnam R.S.W. (2015). A Liquid formulation for biological control of Anthracnose in Rambutan. *Acta Horticulturae*, **1091**: 117-123.

Books and Book Chapters

Vithanage, M., Wijesekara, S.S.R.M.D.H.R., Jayarathna, I.P.L., Prakash, A., Sharma, S. and Ghosh, A.K. (2015) Nanomaterials for landfill leachate treatment in the humid tropics; The Sri Lankan perspective. Hydronanotechnology: Emerging Frontiers, Ed. T. Pradeep and David E. Reisner. CRC (in Press)

Research Communications (International)

1. Abeysekera, W. P. K. M., Premakumara, G. A. S., Ratnasooriya W. D (2015). Glycemic regulatory properties of stem bark and leaf of Ceylon cinnamon (*Cinnamomum zeylanicum* Blume) *in vitro*. *Proceedings of the 8th International Research Conference*, General Sir John Kotelawala Defence University, Sri Lanka, p. 157.

2. Abeysekera, W. P. K. M., Premakumara, G. A. S., Ranasinghe, P., Abeysekera, W. K. S. M., Fernando, P. and Gunasekara, U. K. D. S. S.(2015). Mineral composition of dried leaf powder of *Moringa oleifera*Lam. (Murunga), *Proceedings of the 8th International Research Conference*, General Sir John Kotelawala Defence University, Sri Lanka, p. 190.

3. Amunugoda,P. N. R. J., Pitipanaarachchi, R., Jayawardana, S.A.S.and Walliwala, S. G., Niranjan R.W.M.U. (2015) Development of Ready To Serve Curry Leave Beverage, *Proceedings of 5th International Research Symposium on Engineering Advancements*, South Asian Institute of Technology and Medicine, pp. 281-282.

4. Hewageegana, H.G.S.P., Arawwawala, L.D.A.M., Dammaratana, I., Ariyawansa, H.A.S. and Tissera, M.H.A. (2015). Development of a substitute oil for Vipadika skin disease (A case study). *Proceedings of 3rd International Conference on Ayurveda, Unani, Siddha & Traditional Medicine (ICAUST 2015)*, Institute of Indigenous Medicine, Colombo, Sri Lanka. p. 256.

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9. Kumaradharmasena, L.S.P., Arawwawala, L.D.A.M., Fernando, P.I.P.K., Peiris, K.P.P., and Kamal, S.V. (2015). Standardization of *Mustadi Taila*: An Ayurvedic oil as remedy for *Krimi Danta* (Dental Caries). 8th National Conference of the Association of Shalaki (TAS) India (ENT, Ophthalmology, Dentistry), TASCON 2015, India. pp 48-49.

10. Kusumawathie, P.H.D., Jayasooriya, G.A.J.S.K., Gunathilaka, P.A.D.H.N., Hapugoda, M.D. and Abeyewickreme, W. (2015). Larvivorous potential of four fish species against dengue vectors in the Kandy District of Sri Lanka. *International Postgraduate Research Conference- IPRC 2015,* University of Kelaniya, Sri Lanka.p.146.

11. Munasinghe, M.M.E., Athapaththu, A.M.M.H., Abeyewickreme, W., Fernando, L.K. and Gunathilaka, P.A.D.H.N. (2015). Optimization of the cell culture media to obtain the most effective nutrient concentrations in the medium for the growth/maintenance of the Myeloma cells. *iPURSEInternational Research Symposium*, University of Peradeniya, Sri Lanka. p.234.

12. Nilusha, R.T., Dissanayaka, D.M.H.S. and Fonseka, W.R.K. (2015). Nutrient Removal of Dairy Wastewater by Pilot Scale Subsurface Horizontal Flow Constructed Wetland Planted With *Schelonoplectus grossus*, *Proceedings of the 1st International Symposium on Environment Management and Planning 2015*, Central Environmental Authority, Sri Lanka.p. 13.

13. Nilusha, R.T., Ranwala, S.W.,Fonseka, W.R.K., Dissanayaka, D.M.H.S. (2015). Plants for Constructed Wetlands - A Study of Wetland Plants Potential for Remediation of Dairy Wastewater,*Proceedings of the 1st International Symposium on Environment Management and Planning 2015*, Central Environmental Authority, Sri Lanka. p. 20.

14. Pallie, M.S., P.K. Perera., Goonasekara, C.L., Kumarasingha, K.M.N. and Arawwawala, M. (2015*).* Standardization of *Tragia involucrate*. *Proceedings of 8th International Research Conference*, General Sir John Kotelawala Defence University, Sri Lanka. p. 193.

15. Pallie, M.S., P.K. Perera., Goonasekara, C.L., Kumarasingha, K.M.N. Arawwawala, L.D.A.M. (2015*).* Evaluation of the diuretic activity of hot water extract of *Tragia involucrate* L. in healthy

male Wistar rats. *Proceedings of 3rd International Conference on Ayurveda, Unani, Siddha & Traditional Medicine (ICAUST 2015),* Institute of Indigenous Medicine, Colombo, Sri Lanka. p. 186.

16. Pallie, M.S., Perera, P.K., Goonasekara, C.L., Kumarasingha, K.M.N. and Arawwawala, L.D.A.M. (2015*).* Formulations and uses of *Tragia involucrate* L. with reference to Sri Lankan Pharmacopoeia. *Proceedings of 3rd International Conference on Ayurveda, Unani, Siddha & Traditional Medicine (ICAUST 2015),* Institute of Indigenous Medicine. p. 187.

17. Ranathunga, R.M.T.B., Gunathilaka, P.A.D.H.N., Kannangara, D.N., Abeyewickreme, W. and Hapugoda, M.D. (2015). Abundance and diversity of anopheline larvae in relation to physico-chemical parameters of breeding habitats in selected sites in Mannar, Sri Lanka. *iPURSE International Research Symposium,* University of Peradeniya, Sri Lanka. p.196.

18. Ranathunga, R.M.T.B., Gunathilaka, P.A.D.H.N., Kannangara, D.N., Abeyewickreme, W. and Hapugoda, M.D. (2015). Characterization of anopheline larval habitats and species composition of aquatic macro- invertebrates in Trincomalee Districts, Sri Lanka. *International Postgraduate Research Conference- IPRC 2015,* University of Kelaniya, Sri Lanka. p.134.

19. Rodrigo, W.W.P., Chandrasekharan, N.V. and Senaratne, S.G. (2015). Construction of a fusion cassette for the introduction of a lysine rich gene into rice (Oryza sativa L.) genome, University of Ruhuna, Sri Lanka, *Proceedings of the 2nd Ruhuna International Science and Technology Conference (RISTCON),*Sri Lanka. p.87.

20. Udayanga, N.W.B.A.L., Gunathilaka, P.A.D.H.N., Abeyewickreme, W., Najim, M.M.M., Iqbal, M.C.M. and Amarasinghe, U.S. (2015). Demographical characterization of dengue infected patients in Akurana Medial Officer of Health Area, Central Province of Sri Lanka. *2nd International Research Symposium on Multidisciplinary Research,* University of Sri Jayawardnapura, Sri Lanka.p.58.

21. Udayanga, N.W.B.A.L., Gunathilaka, P.A.D.H.N., Abeyewickreme, W., Najim, M.M.M., Iqbal, M.C.M. and Amarasinghe, U.S. (2015). Evaluation of the Spatial and Temporal Trends of Dengue Outbreaks in Akurana, Central province, Sri Lanka. *iPURSE International Research Symposium,* University of Peradeniya, Sri Lanka. p.205.

22. Udayanga, N.W.B.A.L., Gunathilaka, P.A.D.H.N., Iqbal, M.C.M., Kusumawathie, P.H.D. and Abeyewickreme, W. (2015). Emerging Spatio-Temporal Trends in Dengue Incidence in Poojapitiya Medical Officer of Health (MOH), Central province, Sri Lanka. *International Postgraduate Research Conference- IPRC 2015,* University of Kelaniya, Sri Lanka. p.140.

23. Wijegunasekera, J. K. A. B., Ranpatige D., Hewawasam V., Werahera S. M., Azmy S.A.M. and Weber R. (2015). PCB Inventory and Management Challenge & Progress in Sri Lanka. *36thInternational Symposium on Halogenated Persistence Organic Pollutants Dioxins 2015*, Sao Paulo, Brazil.

24. Wijegunawardana, N.D.A.D., Gunathilaka, P.A.D.H.N., Abeyewickreme, W., Gunawardene, Y.I.N.S. (2015). Establishment and maintenance of laboratory colonies of *Aedes albopictus* mosquitoes. *iPURSE International Research Symposium,* University of Peradeniya, Sri Lanka. p.204.

25. Wijegunawardana, N.D.A.D., Gunawardene, Y.I.N.S., Chandrasena, T.G.A.N., Dassanayake, R.S., Gunathilaka, P.A.D.H.N. and Abeyewickreme, W. (2015). Determination of appropriate positioning of the ovitraps for dengue mosquitoes surveillance. *International Postgraduate Research Conference- IPRC 2015,* University of Kelaniya, Sri Lanka. p.137.

Research Communications (Local)

1. Abeysekera W.K.S.M, Gunasekara U.K.D.S.S., Premakumara G.A.S., Ranasinghe P. and Abeysekera W.P.K.M. (2015). Antioxidant properties of 30 varieties of Sri Lankan traditional and improved rice. *Proceedings of the Annual Sessions of the Institute of Biology*, Sri Lanka. p. 51.

2. Abeysekera W.K.S.M, Gunasekara U.K.D.S.S, Premakumara G.A.S, Abeysekera W.P.K.M and Ranasinghe P, (2015). Antioxidant properties of brans of twenty nine rice (Oryza sativa L.) varieties of Sri Lanka, *Proceedings of the 35th Annual Sessions of Institute of Biology*, Sri Lanka, p. 51.

3. Abeysekera, W.P.K.M., Premakumara, G.A.S., Ratnasooriya W. D. Nitric oxide and superoxide radical scavenging activity of bark and leaf of Ceylon cinnamon (*Cinnamomum zeylanicum* Blume) *in vitro, Proceedings of the 35th Annual Sessions of the Institute of Biology*, Sri Lanka, p-50.

4. Abeysekera, W.P.K.M., Premakumara, G.A.S., Ratnasooriya, W.D (2015). Anti-cholinesterase activity of bark and leaf of Ceylon cinnamon (*Cinnamomum zeylanicum* Blume) *in vitro. Proceedings of the 71st Annual Sessions of Sri Lanka Association for the Advancement of Science*, Sri Lanka, p. 46.

5. Amunugoda P.N.R.J., Jayasinghe G.D.D.R., Pitipanaarachchi R and Hewajulige I.G.N. Development of ready-to-serve Aloe vera (*Aloe barbadensis* Mill) beverage. *Proceedings of the 71st Annual Sessions of Sri Lanka Advancement of Science*, Sri Lanka. Part I. p 111

6. Athurupana, S.K.M.R.A., Rajawardana, D.U, Madujith, T. (2015). Isolation and Identification of yeast strains from curd and screening for the possibility of industrial applications. Proceedings of Faculty of Agriculture Undergraduate Research Symposium (FAuRS-2015), University of Peradeniya, Sri Lanka, p.166.

7. Chandhrakanthan, M., Kathirgamanathar, S., Handunnetti, S.M. and Premakumara, G.A.S. (2015). Extracts of *Alpinia calcarata* (Lesser galangal) inhibits production of inflammatory

mediator - Nitric oxide in RAW 264.7 Murine macrophage. *Proceedings of the Young Scientist Forum Symposium*, pp. 37-40.

8. Chandhrakanthan, M., Kathirgamanathar, S., Handunnetti, S.M. and Premakumara, G.A.S. (2015). Evaluation of anti-inflammatory activity of *Alpinia calcarata* leaf extracts: An *in vitro* study. *Proceedings of the Seventh Annual Scientific Sessions*, Institute of Biochemistry, Molecular Biology and Biotechnology, p. 16.

9. Chandhrakanthan, M., Kathirgamanathar, S., Handunnetti, S.M.and Premakumara, G.A.S. (2015). *Alpinia calcarata* Rosc. rhizome extracts: A prospective inhibitor of inflammatory mediators, *Proceedings of the 8th International Research Conference*, General Sir John Kotelawala Defence University, Sri Lanka, p. 162.

10. Chandhrakanthan, M., Kathirgamanathar, S., Handunnetti,S.M. and Premakumara, G.A.S. (2015). Essential oils of *Alpiniacalcarata* Rosc. inhibits the *in vitro* generation of Reactive Oxygen Species in mouse macrophages. Second International Conference on Multidisciplinary Approaches, Faculty of Graduate Studies, University of Sri Jayewardenepura.

11. Dalukdeniya D.A.C.K., Sabaragamuwa R.S., Gunawardene K.V.T., Abeysekera W.K.S.M. and Premakumara G.A.S. (2015). Enhanced physicochemical and bioactive properties of two newly formulated red rice noodles in comparison to selected commercially available rice and wheat noodles. *Proceedings of the Annual Symposium of the Sabaragamuwa University*, Sri Lanka. p.2.

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14. Divisekara, D.M.W.D., Niyangoda, H.R.W.M.G.C. and Madage, S.S.K. (2015) Isolation, identification and characterization of cultural probiotic bacteria associated with fermented fish products. *Extended abstracts of papers ofNational Aquatic Resources Agency Scientific Sessions 2015*, p. 97-100.

15. Divisekera D.M.W.D., Samarasekera J.K.R.R., Hettiarachchi C., Gooneratne. J. and Gopalakrishnan S. (2015). Isolation and characterization of probiotics from Sri Lankan finger millet (*Elucine coracana*). 12th Asian Congress of Nutrition, Yokohama, Japan.

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acidilactici" from Sri Lanka finger millet variety (*Elucine coracana*). The Tri Annual Publication of the Institute of Chemistry Ceylon.

17. Fonseka, H.R.D., Kulathunga, W.M.S.S.K., Peiris, A., Arawwawala, L.D.A.M. (2015). Effets of *Ocimum sanctum* Linn (Heenmadurutala) in the management of Madhumeha (Diabetes Mellitus). *Proceedings of National Conference on Indigenous Systems of Medicine-2015*, Bandaranaike Memorial Ayurvedic Research Institute, Maharagama. p.28.

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40. Walliwala S. G., De Silva A. B. G. C. J., Amunugoda P. N. R. J., Jayasinghe G. D. D. R., Abeysekara W.K.S.M., Jayawardane T.M.D.A., Fernando I.M. (2015). Efficacy of microfiltration and thermal process technology for development of super health drinks. *Proceedings of the* 2nd *Biennial Symposium,* Industrial Technology Institute, p.10-11.

41. Weeratunge H. D., Ganegama S. K., Premakumara G. A. S. (2015). Chemical characterization of Ceylon cinnamon (*Cinnamomum zeylanicum* Blume) bark oils distilled from Galle and Ratnapura districts. *Proceedings of the* 2nd *Biennial Symposium,* Industrial Technology Institute, p.23-24.

42. Wijayasiriwardena C., Wasalamuni W. A. D. D. (2015). Comparative identification of wild and domesticated bees honey. *Proceedings of the* 2nd *Biennial Symposium,* Industrial Technology Institute, p.25.

43. Wilson Wijeratnam R.S., Gunasekera M. M. N. P., Gunathilaka R. M. S., Perera M. G. D. S., Hewajulige I. G. N. (2015). Improving quality of mango (*Mangifera indica)* var. Karthakolomban by postharvest application of new edible wax formulations. *Proceedings of the* 2nd *Biennial Symposium,* Industrial Technology Institute, p.12-13.

Posters

Jayaweera, H. Wijesekara, S. Wijebahu, P. Kumarathilaka, I.R.M. Kottegoda, S.R.D. Rosa, M. Vithanage (2015). Starch coated nano-zero valent iron embedded graphene composite for chromium (VI) removal from aqueous solution, poster presentation at*4th Nanotoday conference*, December in Dubai.

Pending Patents

1. I.R.M. Kottegoda**,** M.T.V.P. Jayaweera , W.L.N.C. Liyanage, C.P.H. Rajapaksha Preparation of graphene/TiO_2, graphene/SnO_2 and Graphene/Metal Oxide/Polyaniline nanocomposites for application in energy storage devices.Applied Patent No. LK/P/1/18303 (2015). Filed on 2015.07.06. *The Registry of Patents and Trade Marks, Sri Lanka.*

2. I.P.L. Jayarathna, J.T.S.T. Jayawardane, R.C.W. Arachchi, H.A.M.I.T. Hettiarachchi, I.R.M. Kottegoda. Regeneration method of red-clay filter for removal of fluoride from water.Applied Patent No. LK/P/1/18302 (2015). Filed on 2015.07.06. *The Registry of Patents and Trade Marks, Sri Lanka.*

3. I.R.M. Kottegoda**,** M.T.V.P. Jayaweera. Preparation of highly oxidized graphite oxide suitable for synthesis of high quality graphene and composites.Applied Patent No. LK/P/1/ 18301(2015). Filed on 2015.07.06. *The Registry of Patents and Trade Marks, Sri Lanka.*

4. I.R.M. Kottegoda, I.P.L. Jayarathna, J.T.S.T. Jayawardane, R.C.W. Arachchi, H.A.M.I.T. Hettiarachchi, H.C.D.P. Colombage. Fabrication of red-clay blocks for removal of fluoride, arsenic and cadmium contamination from water. Applied Patent No. LK/P/1/18250 (2015). Filed on 2015.05.26. *The Registry of Patents and Trade Marks, Sri Lanka.*

5. I.R.M. Kottegoda, J.T.S.T. Jayawardane, H.C.D.P. Colombage, M.T.V.P. Jayaweera. Purification of natural graphite for preparation of high quality graphite oxide as a value addition. Applied Patent No. LK/P/1/18248 (2015). Filed on 2015.05.26. *The Registry of Patents and Trade Marks, Sri Lanka*.

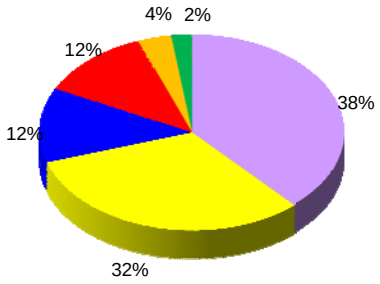
6. 6.I.R.M. Kottegoda, L.D.C. Nayanajith, C.H. Manoratne, M.T.V.P. Jayaweera, Preparation of graphene oxide and few layer graphene as a value addition to local graphite. Applied Patent No. LK/P/1/18157 (2015). Filed on 2015.03.16. *The Registry of Patents and Trade Marks, Sri Lanka.*

7. W.P.K.M Abeysekera, G.A.S Premakumara, P. Fernando, Cosmetic formulae with skin whitening and anti-aging effects. Applied Patent No. LK/P/18423. Filed on 2015.9.15. *The Registry of Patents and Trade Marks, Sri Lanka.*

Human Resources

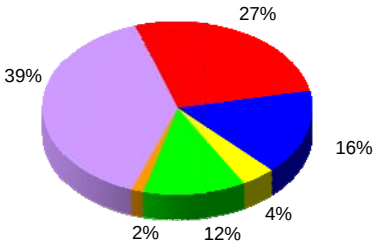
The total permanent staff of the institute was 343. This total comprised of 66% in the Technical divisions and 34% in support divisions. The Chemical & Microbiological Laboratory is the largest with almost 17% of the total staff.

Category-wise distribution of Staff



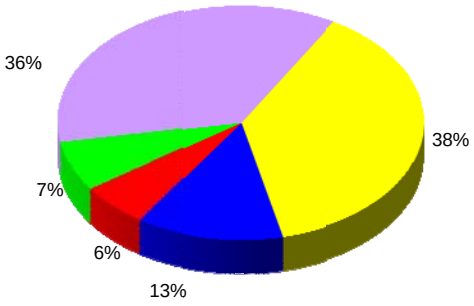
Technical	- 87
Research	- 72
Administrative & Clerical	- 28
Craftsmen (skilled, semi-skilled)	- 27
Management (5 with postgraduate & 5 without postgraduate)	- 8
Others (Aides, Helpers)	- 5

Division-wise Distribution of Staff



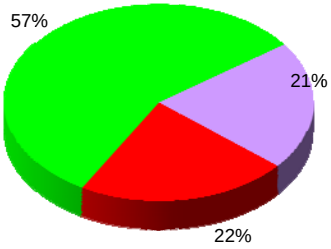
Technical Services AD(TS), CML, ML, IML, ETL,	- 135
Research & Development AD(R&D), FTS, HTS, MTS, ETS, BTU	- 92
Administration & Operation, HRD, FD, SUP, STO, MBD, TU, PU	- 55
ISC	- 14
Chairman, Director, IA, ES, CU	- 42
QAD	- 5

Category-wise distribution of Staff



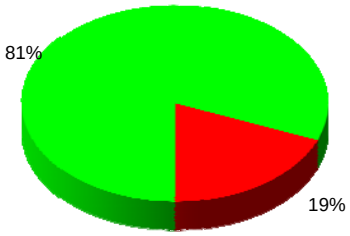
Administrative & Clerical	- 42
Others (Drivers, Helpers)	- 44
Technical	- 15
Research/Scientific	- 7
Management	- 8

Research Staff - *Educational Background*



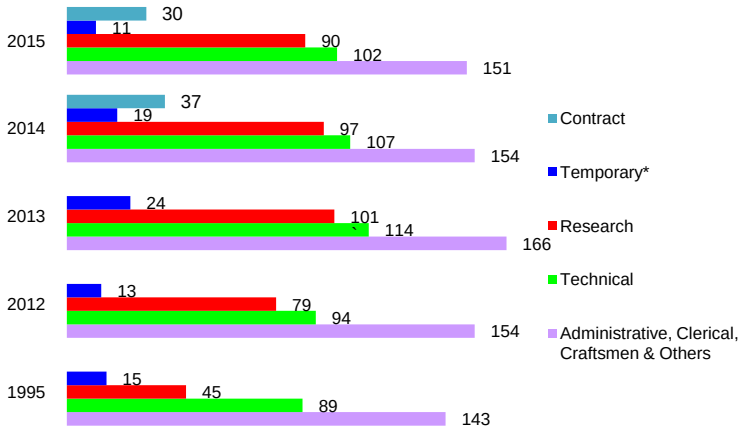
Bachelor's degree	- 51
MSc/MPhil/PG Diploma	- 19
Doctoral degree	- 20

Research Staff - - *Scientists / Engineers*

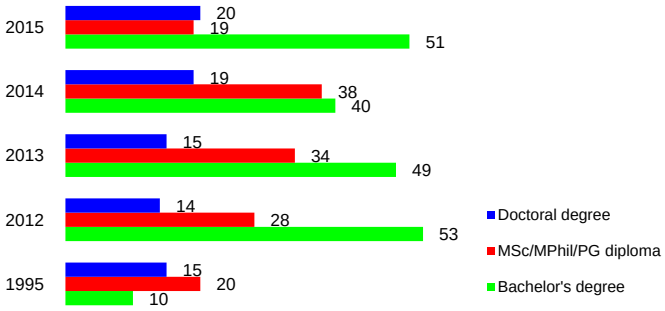


Scientists	- 73
Engineers	- 17

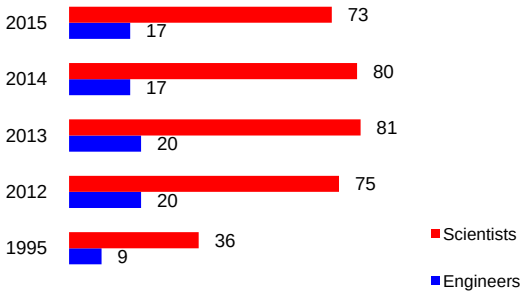
Staff Categories, 1995 - 2015



Educational Background, 1995-2015 of Research Staff



Scientist/Engineers, 1995-2015



Expertise of research staff

In the area of Agro and Food Technology the Institute has considerable expertise in food processing, post harvest technology, industrial microbiology, plant tissue culture, medicinal and aromatic plants and essential oils and spices. In the Materials field, ceramics, rubber, plastics and wood technology are areas in which we have developed expertise. In the Environmental area our strength lies in industrial pollution control – solid, air and water including waste water, energy and environmental monitoring including noise and vibration monitoring.

As one of the leading testing and measurement laboratories in the country, ITI has analytical expertise in chemical, microbiological and physical testing of a variety of samples. ITI is also one of the very few laboratories in the country that provide calibration and measurement services. Over the years our laboratory staff has also developed expertise in laboratory quality management systems. The Research staff also has expertise in information management and corporate management.

Executive Staff

as at 31st December 2015

Director General
G A S Premakumara
BSc(Colombo), PhD(Colombo), CBiol, MIBiol, MIChemC

Additional Director General, Research & Development
J K R R Samarasekera (Ms)
BSc(Hons)(Colombo),PhD(Rothamsted),CChem, MIChemC, MIBiol

Additional Director General, Technical Services
A S Pannila
BSc(Peradeniya), MPhil(Kelaniya), MIM(UK), MIP (SL), CPhys(SL)

Additional Director General, Administration & Operation
K A S P Kaluarachchi
BSc(B.Ad)(Spl)(Sri Jayewardenepura),CBA(ICASL), MAAT, Postgraduate Dip. in Mangement

RESEARCH & DEVELOPMENT

FOOD TECHNOLOGY SECTION

Senior Deputy Director, Food Technology Section/Research Fellow
I G N Hewajulige (Ms)
BSc(Hons)(Peradeniya),MPhil(Colombo), PhD(Colombo)

Principal Research Scientist

H M T Herath (Ms)
BSc(Hons)(Peradeniya),
MPhil (Sri Jayewardenepura),MIChemC

Senior Research Scientists

P N R J Amunugoda
BSc(Spl)(Peradeniya),PhD(Open University)

Research Scientists

S S K Madage
BSc (Peradeniya)

K V T Gunawardhana
BSc(Spl)(Hon)(Peradeniya)

E N Wijedeera (Ms)
BSc(Spl)(Peradeniya)

M M N P Gunasekera
BSc(Spl)(Hons)(Colombo)

A M C U Binduhewa (Ms)
BSc(Peradeniya),MSc(Sri Jayawardenapura)

D M W D Divisekara(Ms)
BSc (Bangalore),MSc (Bangalore)

W K S M Abeysekara (Ms)
BSc(Spl)(Hons)(Peradeniya),MSc(PGIA),PhD(Colombo)

W D W Samaranayake
BSc(Spl)Hons)(Sri Jayawardenepura)

D U Rajawardana (Ms)
BSc(Bangalore),MSc(Peradeniya)

S A S Jayawardene (Ms)
BSc.(Spl) (Sri Jayawardenepura)

R C Pitipanaarachchi (Ms)
Grad IChemC, BSc(Open University), MSc (Sri Jayewardenepura), CChem

Research Engineers

S G Walliwala (Ms)
BSc (Eng)(Moratuwa),MSc(Moratuwa)

A B G C J de Silva (Ms)
BSc (Eng)(Moratuwa)

Laboratory Technologists

G D S K Rajapakse (Ms)
LTCC (IChemC)

M G D S Perera (Ms)
LTCC(IChemC),Dip.Agri(Aquinas)

Technical Officers

D M K Aponso (Ms)
LTCC (IChemC)

W U D Medis
LTCC(ChemC)

HERBAL TECHNOLOGY SECTION

Senior Deputy Director, Herbal Technology Section

P Ranasinghe
BSc(Hons)(Peradeniya),MPhil(Colombo), PhD (Colombo),MIBiol

Research Fellow

R M Dharmadasa
BSc(Hons)(Ruhuna),MPhil(Sri Jayewardenepura), PhD (Sri Jayawardenepura,) MIBiol

Principal Research Scientists

C Wijesiriwardena
BSc(Bangalore),MSc(Gujarat),PhD(Gujarat Ayurved University)

S Chelvendran (Ms)
BSc(Spl)(Hons)(Jaffna),PhD(Peradeniya)

L D A M Arawwawala (Ms)
BSc(Hons)(Peradeniya),MSc(Sri Jayewardenepura), MPhil(Peradeniya),PhD(Kelaniya),MIBiol, AIChemC

Research Scientists

W P K M Abeysekera (Ms)
BSc(Spl)(Hons)(Colombo)PG Diploma (Colombo)

H D Weeratunga
BSc(Spl)(Colombo),MSc (Midway)

H D S M Perera (Ms)
BSc.(Spl)(Colombo)

U I Medawatta (Ms)
BSc(National University,Republic of Korea)

W A D D Wasalamuni (Ms)
BSc.(Spl)(Peradeniya)

Laboratory Technologist

P I P K Fernando (Ms)
LTCC (IChemC)

V S Bandara (Ms)
LTCC(Merit)(IChemC),Grad IChemC,MRSC(UK)

Administrative Officer

W S K Fernando (Ms)

MATERIALS TECHNOLOGY SECTION

Senior Deputy Director - Materials Technology Section/Principal Research Scientist
Vacant

Principal Research Scientist

I R M Kottegoda (Ms)
BSc(Colombo), MPhil(Sri Jayewardenepura), PhD(Colombo)

Research Scientists

L D C Nayanajith
BSc(Chem)(Hons)(Peradeniya)

C H Manoratne
BSc(Rajarata),MPhil(Peradeniya)

M D Y Milani (Ms)
BSc(Spl)(Colombo), MSc(Moratuwa)

K S P Karunadasa
BSc(Spl)(Hons)(Peradeniya)

I P L Jayarathne
BSc(Peradeniya),PhD(Peradeniya)

Research Engineer

H C D P Colombage
BSc(Eng)(Moratuwa)

J T S T Jayawardene
BSc(Eng)(Moratuwa)

ENVIRONMENTAL TECHNOLOGY SECTION

Senior Deputy Director, Environmental Technology Section/Principal Research Engineer
W R K Fonseka
BSc(Eng)(Hons)(Moratuwa),MSc(Delft)

Principal Research Engineer

N A T D D Gunasekera
BSc(Eng)(Moratuwa),Associate Member (IESL)

Senior Research Engineer

W J K D Ranpatige (Ms)
BSc(Eng)(Hons)(Moratuwa),PGDip(Moratuwa)

Senior Research Scientist

P Subramanium
BSc(Jaffna),PhD(UK)

Research Scientist

R T Nilusha (Ms)
BSc(Spl)(Sabaragamuwa)

E Y Fernando
BSc(Westminister),PhD (Westminister)

R D S S Ranatunga
BSc(Spl)(Sri Jayawardenepura),MPhil(Sri Jayawardenepura)

Research Engineers

W R L Wijesekera (Ms)
NDT(Che.Eng.Tech)(Moratuwa),ECE (Che.Eng)(UK)

D M H S Dissanayake (Ms)
BSc(Eng)(Hons)(Moratuwa),Msc(Moratuwa)

K A N Kumarasinghe (Ms)
BSc(Eng)(Peradiniya

Laboratory Technologist

J A P V Jayasinghe
NDT(Moratuwa)

Administrative Officer

S A G L Perera (Ms)

BIO TECHNOLOGY UNIT

Head, Bio Technology Unit
Vacant

Research Scientist

H H K Achala
BSc(Spl)(Colombo),MSc (Bio Tech)(Peradeniya)

K G W W Bandara
BSc.(Spl)(Colombo)

W W P Rodrigo (Ms)
BSc (Open University), BSc (Peradeniya), PhD(Colombo)

P A D H N Gunathilake
Bsc(Kelaniya),PhD(Kelaniya)

A M M H Athapattu(Ms)
Bsc(Colombo) ,PhD(Kelaniya)

OFFICE OF THE ADDITIONAL DIRECTOR RESEARCH & DEVELOPMENT

Research Scientist

N H Thantrigoda (Ms)
BSc (Bangalore),Msc(Colombo)

Senior Administrative Officer (Admin)

M A C P Perera (Ms)

TECHNICAL SERVICES

CHEMICAL & MICROBIOLOGICAL LABORATORY

Senior Deputy Director - Chemical & Microbiological Laboratory/Principal Research Scientist

J K A B Wijegunasekara
BSc(Spl)(Peradeniya),MPhil(Wales)

Principal Research Scientist

W A J Sajeewika Perera (Ms)
BSc(Spl)(Hons)(Kelaniya),MSc(Kelaniya)

M N A Mubarak
BSc(Spl)(Hons),MSc(Delft)

Senior Research Scientists

K S Weerakkody
BSc(Peradeniya), MSc(Kelaniya)

Research Scientists

S H S Karunaratne (Ms)
BSc(Bangalore),MSc(Kelaniya)

G V V Liyanaarachchi (Ms)
BSc(Spl)(Hons)(Colombo)

P S F Perera (Ms)
LTCC (IChemC),BSc(Peradeniya),MSc(Colombo)

M R P Dassanayake(Ms)
BSc(Spl)(Hons)(Sri Jayewardenepura)

S K Liyanage(Ms)
BSc(Kelaniya),MSc(Kelaniya)

G U Chandarasiri
BSc(Spl)(Hons)(Sri Jayawardenepura)

W D K Mahatantila (Ms)
BSc(Sabaragamuwa)MPhil(PGIS)PhD(Japan)

D A T W K Dissanayake
BSc(Spl)(Hons)(Peradeniya)

H P E de Zoyza (Ms)
BSc(Spl)(Sri Jayawardenepura) Prof. Diploma(CIM), Diploma in Quality Management (SLSI)

Laboratory Technologists

R P D C J Cooray (Ms)
LTCC(Merit)(IChemC)

Y A Pitawela (Ms)
LTCC(Hons)(IChemC)

P K G De Alwis (Ms)
LTCC(IChemC),LTCC Diploma(IChemC)

I Jayakody (Ms)
LTTC(IChemC),GIC(IChemC)

Senior Technical Officers

J M M Herath (Ms)
LTCC(IChemC)

R M S Ratnayaka (Ms)
LTCC(IChemC)

C K Wickramasinghe (Ms)
LTCC(IChemC)

Y M C Piyathilaka (Ms)
LTCC(IChemC)

Technical Officers

S P Hettiarachchi
LTCC(IChemC)

H A A Perera
LTCC(IChemC),Dip. in Management

H M K Pathirana
B Sc(Kelaniya)

H K Alahakoon
BSc(Open University),LTCC(IChemC)

C Vidyaratne
BSc(Open University)

Senior Administrative Officer (Admin)

B M S Delwala (Ms)

MATERIALS LABORATORY

Senior Deputy Director, Materials Laboratory
Vacant

Senior Research Engineer

A A M T Adikari
BSc(Hons)(Eng)(Moratuwa)

Research Engineer

C N Vitharana (Ms)
BSc(Hons)(Eng)(Moratuwa)

L P C Ranasinghe
BSc(Hons)(Eng)(Moratuwa)

K H R Sajeewani (Ms)
BSc(Moratuwa)

Laboratory Technologists

K Weeratunga
NDT (Moratuwa),DipPRI(SL)

K Silva (Ms)
LTCC(IChemC),BSc(Open University)

Senior Technical Officer

I Withana (Ms)
LTCC(IChemC)

INDUSTRIAL METROLOGY LABORATORY

Senior Deputy Director - Industrial Metrology Laboratory/Principal Research Scientist
W M S Wijesinghe
BSc(Hons)(Sri Jayewardenepura),MSc(USM, Malaysia),PhD.(UST, Korea) CPhys(SL), MIP(SL)

Senior Research Scientist

N P Liyanawaduge
BSc(Spl)(Hons)(Ruhuna), MPhil(Ruhuna), PhD (Peradeniya), MACS

Research Scientist

G D T A Pathiragoda (Ms)
BSc(Spl)(Hons)(Colombo)

M R Motha (Ms)
BSc(Spl)(Hons)((Sri Jayawardenepura)

R A D S D Ranasinghe
BSc(Spl)(Hons)(Sri Jayawardenepura), Dip. in Info. Tech(Colombo)

Technical Officer

T N P K Peiris
BSc (OUSL)

ELECTRO TECHNOLOGY LABORATORY

Senior Deputy Director - Electro Technology Laboratory/Principal Research Engineer
R M Weerasinghe
BSc(Eng)(Peradeniya),MSc (AIT -Thailand)

Senior Research Scientists

C M Kalansuriya
BSc(Hons)(Open University),M Phil(Colombo), LIP(SL)

Research Engineer

R P K Wijewardena
BSc(Eng)(Moratuwa)

Research Scientists

M S M Aroos
BSc(Spl)(Hons)(Kelaniya)

K A C Perera
BSc(Spl)(Hons)(Ruhuna)

Laboratory Technologist

R A S Dewapriya
NDT(Moratuwa)

S N W M Surasena
LTCC (IChemC),MIPRE,City & Guilds(London

Senior Technical Office

Technical Officer

L A M N Pushpakumara
BSc(Hon)(Peradeniya)

L D D C Jayaratne

OFFICE OF THE ADDITIONAL DIRECTOR TECHNICAL SERVICES

Senior Customer Liaison Officer

R N R Jayaratne
Bsc (Colombo) ,MPhil (Peradeniya)

Senior Administrative Officer(Admin)

Y Y W De Silva (Ms)

Administrative Officer (Admin)

P G P Jayawardene (Ms)

ADMINISTRATION & OPERATION

Institute Secretary

A M K R Jayatilaka (Ms)
Attorney-at-law & Notary Public, Post Attorney Dip. in Intellectual Property Law

Personal Assistant/ Secretary to Chairman

G Edirisuriyage (Ms)
Dip. In communicational skills

FINANCE DEPARTMENT

Senior Deputy Director Finance
D L C A Gunaratne
MBA Finance (Aus) ACMA, PG Dip BM, ACBA

Accountant

Mr. D N Weerakoon
HNDA, ICASL-Infor, CMA-DIP

Accounts Officers

R Malavipathirana (Ms)
IAB(London)

L K Lalitha (Ms)
IAB(London)

M H N Tissera (Ms)
BBMgt (Spl)(Accountancy)(Kelaniya), ICASL – FI

Accounts Officer/Stores Officer

H H Gurugamage (Ms)
ICASL(Strategic I)

Senior Administrative Officer (Admin)

W A Malani (Ms)

STORES

Stores Officer
J K A S L Jayasooriya

SUPPLIES

Senior Supplies Officer

M H K Dilrukshi (Ms)
Dip.(Mass communication)

Administrative Officers

B P N Peiris (Ms)
Dip. Sup Mat Man g

Ms. D L Gamlath
BSc(Spl) Public Management (Sri J'pura)

HUMAN RESOURCES DEPARTMENT

Senior Deputy Director – Administration & Human Resources

I H Kathriarachchi

BSc(Spl)(Sri J'pura),MBA(Colombo,)PDG in Inter Relations (BCIS),HNDA (Sri Lanka Tech. Coll.)

Senior Administrative Officers (HR)

I Kannangara (Ms)
PQHRM(IPM)

S M G A Samarakoon(Ms)
CCHRM(IPM)

Administrative Officer

L Ranaweera (Ms)

U A Thilakasiri
BLE (Colombo)

MARKETING & BUSINESS DEVELOPMENT DEPARTMENT

Senior Deputy Director, Marketing & Business Development

N G M Wijemanne (Ms)

BSc (Open University),MBA (Australian Inst. Business Administration)

Marketing Officer

Vacant

ENGINEERING SERVICES

Head, Engineering Services

A S Arachchi

BSc(Eng)(Moratuwa),PG Dip

Technical Officer

M S Mannapperuma

Premises Superintendent

W H R J Jayakody
NDT, Dip. Info. Tech (SLIT)

Administrative Officer (Admin)

K P R T Perera (Ms)

QUALITY ASSURANCE DEPARTMENT

Senior Deputy Director - Quality Assurance Department/Principal Research Scientist

H P P S Somasiri

BSc(Spl)(Peradeniya),MSc(Peradeniya),CChem, MIChemC

Research Scientist

D V A Nilukshi (Ms)
BSc(Spl)(Hons)(Sri Jayawardenepura)

S A M K Jayathilake
BSc(Spl)(Hons)(Sri Jayewardenepura)

H G T H Jayatunga (Ms)
BSc(Hons)(Kelaniya)

F H Salahudeen (Ms)
BSc(Spl)(Colombo)

PRODUCTIVITY UNIT

Technical Officer

M M C B Nawarathna
DLTC(IChemC)

INFORMATION SERVICES CENTRE

Senior Deputy Director

Vacant

Principal Research Scientists

P M Jayasinha (Ms)
GradIChemC, MPhil(Open University),CChem, MIChemC, ASLLA

Senior Research Scientists

K H T Abeysekara (Ms)
BSc(Spl)(Hons)(Kelaniya),MPhil(Kelaniya), MLS(Colombo)

Research Scientist

E M S Isanka (Ms)
BSc(Spl)(Hons)(Peradeniya),MSc(Colombo)

Librarian

N S Sangasinghe (Ms)
ASLLA

Assistant Librarian

W W P N Geekiyanage (Ms)
ASLLA

Senior Administrative Officer

G S M Senanayake (Ms)

Administrative Officer

R Kapurubandara (Ms)

COMPUTER UNIT

Laboratory Technologist

N K Alagoda (Ms)
NDT (Moratuwa

Computer Systems Administrator

S S Wickramasekara
Certificate (NAITA), Certificate (NIE)

INTERNAL AUDIT

Chief Internal Auditor

Vacant

Senior Internal Audit Officer

B M Roberts (Ms)
IABK (London), Dip.Com.based Acctg (Professional Accounting Institute, Colombo)

INDUSTRIAL TECHNOLOGY INSTITUTE (SUCCESSOR TO CISIR)

STATEMENT OF FINANCIAL POSITION AS AT 31ST DECEMBER, 2015

	NOTE	2015	2014
		Rs.	Rs.
ASSETS			
Current Assets	3		
Cash and Cash equivalents	3D	693,826,959	522,158,167
Trade and other receivables	3B	140,587,018	107,147,558
Inventories/Stocks	3A	14,460,049	11,816,643
Prepayments	3C	10,063,176	10,703,809
		858,937,202	651,826,177
Non-current Assets			
Property, Plant and Equipment	1	573,321,648	478,199,659
Other Assets (Work-in progress)	2	278,699,342	288,876,617
		852,020,990	767,076,276
Total Assets		1,710,958,192	1,418,902,453
LIABILITIES			
Current Liabilities	4		
Payables	4A	39,005,079	32,659,189
Accrued Expenses	4B	77,048,439	44,200,928
Provision for Gratuity	5C	5,617,542	28,409,557
		121,671,060	105,269,673
Non-Current Liabilities	5		
Payable	5A	9,236,128	24,174,687
Differed Income	5B	838,222,851	659,486,872
Provision for Gratuity	5C	98,606,865	60,229,918
		946,065,844	743,891,477
Total Liabilities		1,067,736,904	849,161,150
Total Net Assets		643,221,289	569,741,304
NET ASSETS / EQUITY	6		
Accumulated Fund	6A	462,580,533	385,380,906
Reserves - Donations	6B	51,798,327	55,517,968
Revaluation Surplus	6C	128,842,430	128,842,430
Total Net Assets / Equity		643,221,289	569,741,304

The Accounting policies on pages 05 to 07 and Notes on pages 08 to 32 form an integral part of these Financial Statement. The Board of Directors responsible for the preparation and presentation of these Financial Statements signed on their behalf of the Board of Directors.

Mr. D.L.C.A. Gunaratne	**Dr.G.A.S.Premakumara**	**Mr. Niroshana Perera**
(Senior Deputy Director - Finance)	**(Director General/CEO)**	**(Chairman)**

INDUSTRIAL TECHNOLOGY INSTITUTE

STATEMENT OF INCOME FOR THE PERIOD ENDED 31ST DECEMBER, 2015

ILLUSTRATING THE CLASSIFICATION OF EXPENSES BY NATURE

	NOTE	2015	2014
		Rs.	Rs.
Operating Revenue			
Recurrent Grant		230,000,000	190,000,000
Amortization of Government Grants - Depreciation	**5A1**	71,581,324	58,440,597
R & D Projects & HRD	**5A1**	14,832,538	17,091,229
Rehabilitation & Improvements	**5A1**	9,020,467	11,876,690
Income - Revenue	**7A**	232,992,325	232,144,090
- Other Income	**7B**	25,589,456	26,104,989
		584,016,109	535,657,594
Operating Expenses	**8**		
Personnel Emoluments	**8A**	311,402,840	260,748,814
Travelling	**8B**	5,062,304	4,191,021
Supplies and Consumable used	**8C**	31,676,951	30,136,066
Maintenance	**8D**	28,595,574	22,415,980
Contractual Services	**8E**	41,632,272	42,955,368
R & D Projects & HRD	**8F**	14,832,538	17,091,229
Depreciation	**8G**	71,581,324	58,440,597
Other Operating Expenses	**8H**	31,427,891	32,471,388
Rehabilitation & Improvements	**8I**	9,020,467	11,876,690
Disposal & write Offs		(2,470,416)	(401,688)
Damage & Losses		4,269	33,644
Total Operating Expenses		542,766,013	479,959,107
Surplus/(Deficit) from Operating Activities		41,250,096	55,698,487
Net Surplus / (Deficit) for the period		41,250,096	55,698,487

INDUSTRIAL TECHNOLOGY INSTITUTE (SUCCESSOR TO CISIR)

THE STATEMENT OF CHANGES IN EQUITY FOR THE YEAR ENDED

31st DECEMBER , 2015

	Accumulated Fund	Reserves Donations	Re-Valuation Surplus
	Rs.	Rs.	Rs.
Balance as at 01.01.2015 (Restated)	319,176,231	55,517,968	128,842,429
Changes in Equity for 2015			
Surplus for the period	41,250,096		
Amortizarion of Non - Current Assets Up to 2002	(598,794)		
Donation received during the year		12,211,913	
Amortization of Non - Current Donated		(15,931,555)	
Addition during the year (Capital Grant)	102,753,000		
Balance as at 31.12.2015	**462,580,533**	**51,798,326**	**128,842,429**

INDUSTRIAL TECHNOLOGY INSTITUTE (SUCCESSOR TO CISIR)

CASH FLOW STATEMENT FOR THE YEAR ENDED 31ST DECEMBER, 2015

	2015 (Rs.)	2014 (Rs.)
Cash Flow From Operating Activities		
Operating Surplus/(Deficit)	41,250,096	55,698,487
Depreciation	71,581,324	58,440,597
Profit/Loss on Property Disposal	(513,986)	-
Gratuity Provision	23,833,638	16,706,456
Incentive Provision	21,877,846	11,846,320
Provision for Audit Fee	724,485	792,157
Interest on Investments	(17,459,359)	(17,940,764)
Capital Grants Amortized	(95,434,329)	(87,408,516)
Operating Surpluss/(Deficit)	45,859,715	**38,134,737**
Change in Working Capital		
(Increase)/Decrease in Inventories	(2,643,406)	(2,204,085)
(Increase)/Decrease in Debtors	(33,439,460)	(38,980,291)
(Increase)/Decrease in Prepayments	640,633	(804,497)
(Decrease) /Increase in Payables-Non Current	(14,938,559)	(581,600)
(Decrease) /Increase in Payables-Current	6,345,890	12,963,988
(Decrease) /Increase Accrued Expenses	32,847,511	(11,314,204)
Cash Generated from operating Activities	34,672,324	**(2,785,951)**
Gratuity Paid	(8,248,705)	(8,070,361)
Net Cash Flow From Operating Activities	**26,423,620**	**(10,856,312)**
Cash Flow From Financing Activities		
Capital Grants Received	298,564,000	236,650,000
Interest Received	10,376,393	15,350,475
Net Cash Flow From Financing Activities	**308,940,393**	**252,000,475**
Cash Flow From Investing Activities		
Acquisition of Property Plant & Equipment - Purchases	(175,896,833)	(92,119,514)
Write Offes of PPE - Cost	9,244,132	-
Write Offes of PPE - Depreciation	(8,536,695)	-
Proceeds from sale of Assets	1,316,900	-
Other Assets (Work In Progress)	10,177,275	(42,579,019)
Net Cash Flow From Investing Activities	**(163,695,221)**	**(134,698,533)**
Net Cash Flow	171,668,792	106,445,630
Cash as at beginning of the year	251,932,167	145,486,537
Cash at the end of the year (Note - 22)	**423,600,959**	**251,932,167**

Note 1	**(0)**	
Note - 22	**2015**	**2014**
ITI Bank Accounts Balances		**Rs.**
BOC City Office Account No-000-0351-567	619,090	619,590
BOC Ind.sq. Account No. 000-2323-266	113,006,847	38,542,308
BOC Corporate Account No. 000-0001-680	151,862,176	137,342,268
BOC Ind.Sq. Account No. 000-2323-303	106,385,119	36,079,732
BOC Ind.Sq. Account No. 000-2872-735	36,020,110	31,512,515
Savings Bank Deposit	9,000	9,000
	407,902,342	**244,105,412**
Projects Bank Accounts Balances		
BOC Ind.Sq. Account No.000-2323-234 IDRC Project	6,744,994	1,881,718
BOC Ind.Sq. Account No. 000-6889-738 Bamboo Project	6,894,625	3,508,615
BOC Ind. Sq. Account No. 000-2876-229 Coir Project	1,177,917	1,177,917
BOC Ind.Sq. Account No.000-8174-439 EEPEx Project (Euro)	4,573	5,268
BOC Ind.Sq. Account No. 000-9283-122 EEPEx Project (LKR)	17,870	17,870
	15,698,617	**7,826,755**
TOTAL BALANCES	**423,600,959**	**251,932,167**

ACCOUNTING POLICIES AND SIGNIFICANT EVENTS – 2015

1. GENERAL

The Statement of Financial Position as at 31.12.2015 and the related Financial Statements have been prepared on the historical cost convention, in accordance with the Sri Lanka Public Sector Accounting Standards.

Retirement benefits to employees are provided according to the laid down statutory requirements. Institute's contribution for Provident Fund and Employees' Trust Fund is 15% and 3% respectively. Gratuity Provision is made according to the Gratuity Act No. 12 of 1983. This provision is not externally funded.

2. BASIS OF PREPARATION

The financial statements have been in accordance with the Sri Lanka Public Sector Accounting Standards for the year ended 31st December 2015.

3. ACCOUNTING FOR GOVERNMENT GRANTS

Recurrent Grant from the General Treasury has been recognized as revenue in the statement of financial performance. Since year 2003 Capital Grant has been shown under deferred income in conformity with the formats specified in Circular No. PED/19. Depreciation for the year is funded by amortizing the following.

Fund	**Depreciation for the year**
Differed Income	Non-Current Assets acquired after 2003
Government Grant - Capital	Non-Current Assets acquired before 2003
Donation & Grants	Non-Current Assets relating to Donations

4. ASSETS - BASIS OF THEIR VALUATION

4.1 Fixed Assets

Funds for acquisition of Fixed Assets are provided by the General Treasury.
Fixed Assets have been shown at cost, less depreciation. Assets are depreciated at the following rates:

Buildings	5%
Plant and Machinery	10%
Office Equipment and Furniture	5%
Vehicles	20%
Computers	33 1/3%
Library Books and Journals	5%
Software and Other Assets	33 1/3%

Depreciation in respect of motor vehicles, computers and software was 10% before the 1st of January 1999 and was revised to 20% and to 33.33% respectively after that date.

Depreciation is charged from the date of purchase until the date of disposal.

The Cost of MRDC-Administration Building has been Accounted as an Assets & depreciation made as per above rate. Cumulative depreciation up to 31.12.2014 has charged to accumulated profit.

4.1.1

Assets received as donations or purchased with Government Grant are amortized at the rates of depreciation referred above.

4.2 Debtors

Debtors and other recoverable are stated at the value estimated to be realized. The debtors consist of sundry trade debtors and the debts of ex-employees who are in breach of bonds and agreements.

4.3 Stocks

Stocks are shown at the Book Value. Stock issues are valued at the simple average basis.

4.4 Savings Bank Deposit Account

As per instructions given by Ministry of Finance & Policy Planning Fidelity Bonds invested with the Bank of Ceylon for Provision for Gratuity and 06 months Personal Emolument Cost. Fund Deposits for 06 months period showing as an other assets.

4.5 Deposits on accounts of Gratuity Provision

As per the statutory requirement an amount of Rs. 100 Million is kept in deposit account to meet the Gratuity obligations. This deposit is kept with the approval of the general treasury.

4.6 Crown Land

The Land occupied by the institute is referred as Crown land and belongs to the state.

5. LIABILITIES AND PROVISIONS

Current Liabilities are those which fall due for payments on demand or within one year from the Balance Sheet date.

5.1 Funds for ITI Chairman's Science Award Fund
This fund is externally invested.

6. INCOME AND EXPENDITURE ACCOUNT

Income and Expenditure are based on accrual accounting basis.

7. PROVISION FOR DOUBTFUL DEBTS

Full provision for doubtful debts is made on out standings for more than one year. However in cases of specific debts where it is considered that a higher provision is prudent such additional provision has also been made.

8. PROVISION ON GRATUITY

The provision on gratuity is made after completion of one year of service. Gratuity provision made as follows.

Total Gratuity obligation as of 31.12.2015	Rs. 104,224,407
Balance as of 01.01.2015	Rs. 88,639,474
Payment made during the year	Rs. 8,248,705
Transfer the Gratuity Fund to the Provision	Rs. 15,000,000
Provision made for year 2015	Rs. 8,833,638

9. LONG TERM RESEARCH AND DEVELOPMENT

There are more than sixty Research & Development Projects are in progress which is funded by the general treasury. Apart from Treasury grants there are funded projects sponsored by local agencies such as National Science Foundation (NSF) and National Research Council (NRC)

10. VIDHATHA PROGRAM/ HARITHA KADAMANDIYA

During the year under review number of employees of ITI participated in the Vidhatha Program conducted by the Ministry of Science & Technology, of which the cost was reimbursed by the Line Ministry.

11. Restatement of Error

During the 2015, the entity discovered that following item not accounted in 2014. Adjustments have made 2015.

Over provision Adjustment	12,294,368.00
MRDC Admin Block Accumulative Depreciation	16,670,084.00

Effect for surplus as follows…

Description	**Effect on 2014**
Reported Surplus	55,698,487.00
Over provision Adjustment	12,294,368.00
MRDC Admin Block Accumulative Depreciation	(16,670,084.00)
Restated surplus	**51,322,771.00**

The effect of the restatement of those financial statements is summarized below. There is no effect in 2015.

	Effect on 2014
Decrease in operating Expenses	12,294,368.00
Increase in surplus	12,294,368.00
Increase in Depreciation	16,670,084.00
Decrease in surplus	16,670,084.00

Schedule on Buildings, Plant Machinery & Lab Equipment, Furniture Fittings, Vehicles, Computer Equipment Library Books & Journals , Software & Other Assets as at 31.12.2015

NON -CURRENT ASSETS

NOTE - 01

	Buildings 5%	MRDC Building 5%	Plant Mach. & Lab Equip. 10%	Furni. Fittings & Office Equi. 5%	Vehicles 20%	Computer Equipment 33.33%	Library Book & Journals 5%	Soft Ware & Accessories 33 1/3%	Other Assets 33 1/3%	TOTAL
Cost										
Balance as at 01.01.2015	**231,443,791**	-	**740,669,306**	**54,251,282**	**74,184,006**	**53,917,450**	**78,848,973**	**13,581,898**	**4,512,594**	**1,251,409,300**
Additions	1,359,902	78,280,915	86,687,972	3,939,296		3,218,346	906,396	-		**174,392,827**
Donations				42,500	7,975,000	166,500				**8,184,000**
Donations - TG			1,504,006							**1,504,006**
Re-Valuation										
Disposal of Assets			(3,972,243)	(1,970,012)	(1,712,950)	(3,301,877)				**(10,957,082)**
Balance as at 31.12.2015	**232,803,693**	**78,280,915**	**824,889,042**	**56,263,066**	**80,446,056**	**54,000,419**	**79,755,369**	**13,581,898**	**4,512,594**	**1,424,533,051**
Less :										
Depreciation										
Balance as at 01.01.2015	**105,126,918**	**16,670,083**	**471,015,369**	**20,258,312**	**56,491,365**	**45,805,389**	**56,662,908**	**13,336,786**	**4,512,594**	**789,879,724**
Depreciation for 2015	10,916,445	3,914,046	40,152,840	2,195,151	6,668,813	5,237,658	2,256,597	239,774		**71,581,324**
Disposal			(3,667,716)	(1,567,102)	(1,712,950)	(3,301,877)				**(10,249,645)**
Balance as at 31.12.2015	**116,043,363**	**20,584,129**	**507,500,493**	**20,886,361**	**61,447,228**	**47,741,170**	**58,919,505**	**13,576,560**	**4,512,594**	**851,211,403**
Balance as at 31.12.2015	**116,760,329**	**57,696,786**	**317,388,548**	**35,376,705**	**18,998,828**	**6,259,249**	**20,835,864**	**5,338**	**-**	**573,321,648**

INDUSTRIAL TECHNOLOGY INSTITUTE (SUCCESSOR TO CISIR)
NOTES TO STATEMENT OF FINANCIAL POSITION AS AT 31ST DECEMBER 2015

	2015 Rs.	2014 Rs.
Other Assets (work in progress) - (Note - 2)		
Work in Progress - General	-	758,466
Working Progress - Modern R & D Complex, Malambe	-	268,774,498
ISO 17043 Accreditation status to ITI's PECMA PT scheme	-	167,684
NCE in Food Research , Technology and Food Safety	-	102,177
NCE for Chemical and Residual Analysis	-	102,177
NCE for Natural and Indigenous Knowledge based products	-	102,177
Treasury Grant Projects	-	18,869,439
	-	**288,876,617**

INDUSTRIAL TECHNOLOGY INSTITUTE (SUCCESSOR TO CISIR)
NOTES TO STATEMENT OF FINANCIAL POSITION AS AT 31ST DECEMBER 2015

	NOTE	2015 Rs.	2014 Rs.	
Current Assets (Note - 3)				
Consumable Stores				
Inventory - Chemical		**8,315,350**	6,073,098	
Inventory - Laboratory Ware		**4,408,034**	4,262,404	
Inventory - Mis. Supplies		**540,036**	619,587	
Inventory - Electronic Components		**6,013**	6,013	
Inventory - Stationery		**1,190,616**	855,541	
(Note - 3A)		**14,460,049**	**11,816,643**	
Purchase Advances - Local Supplies	**15A**	**340,659**	**1,028,458**	
Purchase Advances - Foreign Supplies	**15A**	**90,088,149**	**58,587,452**	
Sundry Debtors	**17**	**19,232,935**	**18,456,599**	
VAT Receivable		**196,393**	**235,301**	
Welfare Receivable		**456,250**	**251,250**	
Trade Debtors	**18A**	**4,832,098**	**3,155,105**	
Staff Advances	**20**	**19,946,401**	**21,091,261**	
Deposits	**21**	**3,313,437**	**3,310,467**	
Funded Projects	**23**	**2,180,696**	**1,031,665**	
Obsolete Assets for Disposal				
(Note - 3B)		**140,587,018**	**107,147,558**	3,068,277.17
Pre-payments **(Note - 3C)**	**19**	**10,063,176**	**10,703,809**	
Fidelity Bonds (LCs), Gratuity Obligation & Reserve for Working Capital (Over 06 months)		110,000,000	110,000,000	
Fidelity Bonds (LCs), Gratuity Obligation & Reserve for Working Capital		160,226,000	160,226,000	
Cash & Bank Balance	**22**	**423,600,959**	**251,932,167**	
(Note - 3D)		**693,826,959**	**522,158,167**	

INDUSTRIAL TECHNOLOGY INSTITUTE (SUCCESSOR TO CISIR)
NOTES TO STATEMENT OF FINANCIAL POSITION T AS AT 31ST DECEMBER 2015

	NOTE	2015 Rs.	2014 Rs.
Current Liabilities (Note - 4)			
Trade Creditors	**18B**	**1,763,821**	**2,231,855**
Sundry Creditors	**15B**	**5,390,594**	**2,031,335**
Tender & Security Deposits	**24**	**676,378**	**553,998**
VAT Payable		**2,475,723**	**2,475,723**
Staff Group Medical Insurance Empolyee Control A/C		**1,148,438**	**951,385**
Funded Projects	**23**	**27,550,126**	**24,414,894**
(Note - 4A)		**39,005,079**	**32,659,189**
Accrued Expenses **(Note - 4B)**	**25**	**77,048,439**	**44,200,928**
Provision for Gratuity **(Note - 5C)**	**26**	**5,617,542**	**28,409,557**
Non-Current Liabilities			
Provision for Gratuity **(Note - 5C)**	**26**	**98,606,865**	**60,229,918**
Reserves - Bond Defaulters		7,817,765	7,817,765
Science Award Fund (Originated by Prof. Vijaya Kumar)		346,588	331,067
Staff Activity Fund		1,051,710	1,005,790
Kasper Unit Fund		20,065	20,065
Gratuity Fund		-	15,000,000

INDUSTRIAL TECHNOLOGY INSTITUTE (SUCCESSOR TO CISIR)
NOTES TO FINANCIAL POSITION AS AT 31.12.2015

		2015		2014	
Amortization of Government Capital Grants (5A1)				**Rs.**	**Rs.**
(A/C - 604440-70700)					
Depreciation	:- Non-Current Assets Upto 2002	598,794		2,853,612	
	Non-Current Assets 2003 Onwards	55,050,974		39,779,365	
	Non-Current Assets Donated	15,931,555	71,581,324	15,807,619	58,440,597
R & D Projects & HRD	:- Treasury Granted	4,449,409		6,418,217	
	Research & Development	3,349,962		4,426,671	
	HRD - Training	1,352,495		976,572	
	Library Science Directory	5,680,673	14,832,538	5,269,769	17,091,229
Rehabilitation	:- Building & Structure	3,097,544		6,264,697	
& Improvement	Plant Machinery and Equipment	5,205,363		4,418,129	
	Improvement of Vehicles	31,000		22,600	
	Improvement of Other Capital Assets	686,561	9,020,467	1,171,263	11,876,690
			95,434,329		**87,408,516**
Differed Income (Note - 5B)				**Rs.**	**Rs.**
Government Contribution - Capital - 2003 Onwards)					
(A/C - 300102-29755 & A/C - 300104)					
Balance as at 01.01.2015		721,315,830		615,242,074	
Additions during the year-Capital Grant for MRDC		195,811,000		236,650,000	
			917,126,830	(61,828,959)	790,063,115
Schedule Adjustment					
Amortization (Depreciation of Non-Current Assets)		(55,050,974)		(39,779,365)	
Amortization (Research & Development- Accreditation)		(3,349,962)		(4,426,671)	
Amortization (Treasury Granted Project Expenditure)		(4,449,409)		(6,418,217)	
Amortization (Rehabilitation Expenditure)		(9,020,467)		(11,876,690)	
Amortization (HRD)		(1,352,495)		(976,572)	
Amortization Library Science Directory- Annual Sub		(5,680,673)		(5,269,769)	
			(78,903,980)		(68,747,284)
Balance as at 31.12.2015			**838,222,851**		**721,315,830**
Accumulated Fund (Note - 6A)		**2015**		**2014 (Restated)**	
Government Contribution Capital - Upto 2002 and		**Rs.**	**Rs.**	**Rs.**	**Rs.**
Income & Expenditure Account Balance)					
(A/C - 300101-30000 & A/C - 300300-30400)					
Government Contribution Capital Upto 2002 - 01.01.2015		343,043,640		374,140,376	
Income & Expenditure Account - 01.01.2015		(23,867,409)	319,176,231	(79,565,896)	294,574,480
Additions during the year- Capital Grant for ITI			102,753,000		
Schedule Adjustment					
	Over Provision Adjustment			12,294,368	
	MRDC Admin Bldg. Cum. Dep			(16,670,084)	(4,375,715)
Amortization - Capital		(598,794)		(2,853,612)	
Surplus for the period of 2015		41,250,096		55,698,487	
			40,651,302		52,844,875
Balance as at 31.12.2015			**462,580,533**		**343,043,640**
			421,330,437		
			41,250,096		

INDUSTRIAL TECHNOLOGY INSTITUTE (SUCCESSOR TO CISIR)
DONATIONS AND GRANTS AS AT 31ST DECEMBER, 2015

NOTE - 6B

Donations	Balance 01.01.2015	Additions during the year	Amortizations during the year	Balance 31.12.2015 Rs.
UNIDO - AID	2,748,901		1,468,770	1,280,132
Capital Reserves	1,523,209			1,523,209
ADB Donation	8,977,373		1,122,172	7,855,201
GMBH	25,875		25,875	-
Donation-Ensilage Tank	456,683		456,683	-
Gift from JICA - FP 42	58,989		7,374	51,616
Gift from MHIM - FP 36	4,734		592	4,142
Gift from CARP FP 48	3,600		450	3,150
Gift from TVEC	23,313		2,914	20,399
Japanese 2KR Project	5,465,081		4,681,912	783,169
Gift from UNDP	1,890,577		630,192	1,260,385
Gift from UNDO PROJECT	204,379		68,126	136,253
Int.Atomic EA Donation	2,837,689		567,538	2,270,152
NSF Tsunami Project	3,940		985	2,955
NSF - Accessories to SEM	666,000		111,000	555,000
ICBR Int.Centre for Bamboo ration	1,357,058		271,411	1,085,647
Ministry of rural industries & self	25,579		5,116	20,463
Common Fund commodities	798,370		493,308	305,063
Treasury Grant Vehicle Cab (MOTR)	3,803,279	7,975,000	2,124,890	9,653,388
Donation to BTU	1,567,504		195,938	1,371,566
Treasury Grant Vehicle Car (CHOGAM)	7,832,932		1,630,000	6,202,932
Treasury Grant Vehicle Car & Van	4,041,458		808,735	3,232,723
Gift from Lion Brewary	11,201,444		1,120,451	10,080,993
NRC Waters-HPLC	-	3,500,000	137,123	3,362,877
NSF Donation	-	527,913	-	527,913
Dept. of Ayurweda	-	209,000	-	209,000
TOTAL	**55,517,968**	**12,211,913**	**15,931,555**	**51,798,326**

INDUSTRIAL TECHNOLOGY INSTITUTE (SUCCESSOR TO CISIR)
REVALUATION BALANCE AT AT 31.12.2015

Note -6C

	2015	2014
2008 Re-Valuation	**Rs.**	**Rs.**
Plant Mach. & Lab Equipment	26,950,099	26,950,099
Furni. Fittings & Office Equip.	6,404,627	6,404,627
Computer Equipment	(7,197,654)	(7,197,654)
	26,157,073	**26,157,073**
2009 Re-Valuation		
Buildings	102,685,357	102,685,357
	128,842,430	**128,842,430**

INDUSTRIAL TECHNOLOGY INSTITUTE (SUCCESSOR TO CISIR)

NOTES TO STATEMENT OF INCOME

FOR THE REPORTING PERIOD ENDED 31ST, DECEMBER 2015

	2015		2014		2013	
Revenue (Note - 7A)			**Rs.**	**Rs.**	**Rs.**	**Rs.**
Income -Standard Services	162,127,408		166,332,624		139,917,710	
Less: Refund	341,075	161,786,333	417,075	165,915,549	400,253	139,517,457
Income -Consultancy Service		19,397,893		11,823,188		12,903,090
Income-Technology Transfer		1,463,507		3,319,001		3,000,748
Income-Contract Projects	22,333,815		25,668,038		19,289,010	
Less:-Sub Contract Projects	93,904	22,239,910	128,316	25,539,722	6,842,413	12,446,597
Income-Customised Services		15,840,934		14,496,894		28,575,904
Income-Training		11,092,297		10,672,783		10,056,250
Royalty Received		1,171,451		376,952		1,036,822
		232,992,325		**232,144,090**		**207,536,869**
Other Income (Note - 7B)						
Other Operating Income						
Income-Library	228,469		222,017		378,004	
Income - Other / General	7,387,642	**7,616,111**	6,636,631	**6,858,647**	6,650,218	**7,028,222**
Other Non Operating Revenue						
Interest on Staff Loan	914,093		860,337		801,765	
Interest on Investments (Working Capital,Gratuvity, LC Dposit)	13,254,314		17,940,764		30,701,649	
Contribution from Projects	371,190		191,420		702,358	
Income - % of Consultancy Fee	18,000		18,000		81,458	
Exchange Gain & losses	2,901,761		235,820	**19,246,342**	727,427	**33,014,657**
Profit/(Loss) Sale of Assets	513,986	**17,973,344**		-		(747,293)
		25,589,456		**26,104,989**		**39,295,586**

INDUSTRIAL TECHNOLOGY INSTITUTE (SUCCESSOR TO CISIR)
NOTES TO STATEMENT OF INCOME
FOR THE REPORTING PERIOD ENDED 31ST, DECEMBER 2015

	2015	2014	2013
Personnel Emoluments (Note - 8A)		Rs.	Rs.
Salaries & Wages	224,293,878	181,949,064	159,780,432
Casual Wages	2,074,493	2,678,236	2,424,908
Other Allowances			776,790
R & D Allowances	9,494,405	9,420,957	1,566,750
Employee Provident Fund	30,154,389	25,141,608	21,916,371
Employee Trust Fund	6,030,878	5,029,567	4,382,682
Provision for Gratuity	8,833,638	16,706,456	19,300,277
Overtime	4,666,792	4,828,355	2,702,475
Honorarium - G.B. Members	403,023	327,109	413,446
Medical Reimbursement	2,153,684	2,138,091	1,938,539
Provision for Incentive (PBIS)	10,450,000	3,066,003	9,354,897
Salary for Ministry Officers			-
Provision for Incentive (PF-380)	11,427,846	8,780,317	31,998,330
Staff Group Medical Insurance	1,419,815	683,052	264,036
	311,402,840	**260,748,814**	**256,819,933**

Travelling (Note - 8B)			
Travelling - Local	1,420,193.64	1,950,205	1,433,875
Travelling - Foreign	3,329,034.90	1,557,652	2,068,220
Travelling - Pool Transport	313,075.25	683,164	679,570
	5,062,304	**4,191,021**	**4,181,665**

INDUSTRIAL TECHNOLOGY INSTITUTE (SUCCESSOR TO CISIR)

NOTES TO STATEMENT INCOME

FOR THE REPORTING PERIOD ENDED 31ST, DECEMBER 2015

	2015	2014	2013
Supplies and Consumable used (Note - 8C)	**Rs.**	**Rs.**	**Rs.**
Chemicals	10,513,397	11,174,495	6,731,762
Labware	9,802,342	6,549,968	3,453,940
Electronic Components	1,805	176,754	48,965
Stationery	2,151,613	2,454,563	2,362,751
Other Supplies	2,122,385	2,774,953	3,170,279
Other / CRR	80,264	95,192	199,996
Safety Measures	341,976	209,793	249,835
Uniforms - Watchers, Drivers, Etc.	1,044,627	155,308	982,609
Welfare Including Sports	233,115	322,970	313,800
Gas	46,359	113,397	33,361
Fuel	5,339,069	6,108,673	5,545,029
	31,676,951	**30,136,066**	**23,092,327**
Maintenance (Note - 8D)			
Buildings & Premises	6,395,659	6,156,132	5,575,932
Plant &Machinery	11,024,028	6,594,721	5,282,240
Furniture & Equipments	1,997,477	1,210,826	1,898,869
Library Books	8,472		89,316
Laboratory ware	39,408	550,076	346,263
Computer	3,688,942	2,751,399	2,684,187
Canteen	37,114	61,256	20,955
Generator	199,817	243,395	169,954
Vehicles	5,204,657	4,847,096	4,299,080
Mobile Lab	-	1,080	2,000
	28,595,574	**22,415,980**	**20,368,798**
Contractual Services (Note - 8E)			
Electricity charges	27,722,094	29,402,081	29,395,039
Telephone & Internet charges	5,707,353	5,671,485	4,283,647
Postage Expenses	516,036	446,620	470,456
Rate & Taxes	1,682,604	1,682,604	1,682,604
Security Services charges	4,536,930	4,493,628	4,105,352
Water charges	1,467,254	1,258,950	1,340,320
	41,632,272	**42,955,368**	**41,277,417**

INDUSTRIAL TECHNOLOGY INSTITUTE (SUCCESSOR TO CISIR)
NOTES TO STATEMENT INCOME
FOR THE REPORTING PERIOD ENDED 31ST, DECEMBER 2015

	2015	2014
Projects & HRD (Note - 8F)	**Rs.**	**Rs.**
TG Expenditure	4,449,409	6,418,217
Research & Development (Accreditation)	3,349,962	4,426,671
HRD - Training	1,352,495	976,572
Library Science Directory Annual Sub	5,680,673	5,269,769
	14,832,538	**17,091,229**
Depreciation & Amortisation Expenses (Note - 8G)		
Buildings	14,830,491	10,868,428
Plant & Machinery	40,152,840	33,631,325
Furniture & Equipments	2,195,151	1,925,692
Computers	5,237,658	4,631,379
Vehicles	6,668,813	4,668,304
Software	239,774	298,443
Library Books	2,256,597	2,417,027
	71,581,324	**58,440,597**
Rehabilitation Expenditure (Note - 8I)		
Rehabilitation of Building and Structures	3,097,544	6,264,697
Rehabilitation of Plant Machinery and Equipments	5,205,363	4,418,129
Rehabilitation of Improvement of Vehicles	31,000	22,600
Rehabilitation of Improvement of Other Capital Assets	686,561	1,171,263
	9,020,467	**11,876,690**

INDUSTRIAL TECHNOLOGY INSTITUTE (SUCCESSOR TO CISIR)
NOTES TO STATEMENT INCOME
FOR THE REPORTING PERIOD ENDED 31ST, DECEMBER 2015

	2015	2014
Other Operating Expenses (Note - 8H)	**Rs.**	**Rs.**
Staff Training Expenses	1,075,345	1,876,003
Sampling Charges	2,931,775	3,274,900
Subsistance charges	2,221,900	2,139,088
Subscription Expenses - Local / Foreign/Other	858,550	399,889
Laboratory Membership Fee (Local)	2,966,356	2,517,373
Honorarium Expenses	378,955	313,136
Medical Examination Fee (New Recrits)	20,240	211,000
Entertainment Expenses	116,893	106,855
Insurance Expenses	999,735	525,233
Printing Charges	187,302	615,561
News Papers & Subs.	80,906	82,071
Audit Fees	724,485	792,157
Legal Fee	184,500	16,120
Bank Charges	147,188	10,444
Credit Card Commission	86,821	62,248
Advertising	526,825	918,914
Publication - Annual Reports	321,124	27,868
Promotional & Publicity	284,574	1,520,092
Economic Tax	587,211	455,710
National Building Tax	4,697,687	4,645,035
Survey Fee - Board of Survey	234,585	185,673
Incidental Expenses	-	1,935
Patency & Consultancy Fee	257,675	209,520
Expenditure for Costing Assignment	-	294,808
Productivity Expenditure	2,700	9,175
Expenditure- Standard Services	2,280,175	1,980,237
Expenditure -Consultancy Services	608,585	985,981
Expenditure -Technology Transfer	43,872	55,071
Expenditure -Contract Project	2,816,584	1,716,257
Expenditure -Customised Services	428,912	321,536
Expenditure -Training	1,147,878	3,416,195
Royalty Expenses	400,712	
R & D & TS General Expenditure	151,696	
Clearing Charges	74,436	54,351
Annual Research Symposium R & D	714,242	-
International Symposium/conference	615,835	
Exhibition Expenses (ITI)	145,067	171,148
Exhibition/Vidatha/Divi Neguma	386,933	1,911,510
60th Anniversary Expenses	229,494	-
COMSAT Meeting expenses	797,410	-
Stamp Duty	46,750	63,100
Provident Fund Stationeries	70,505	52,865
Donations		118,000
Miscellaneous Expenditure	132,224	223,313
CENTEC Expenditure -% Contribution	443,248	191,014
	31,427,891	32,471,388

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கணக்காய்வாளர் தலைமை அதிபதி திணைக்களம்
AUDITOR GENERAL'S DEPARTMENT

මගේ අංකය எனது இல. My No. } TEC/A/ITI/1/15/25 මගේ අංකය உமது இல. Your No. } දිනය திகதி Date } 16 February 2017

The Chairman,
Industrial Technology Institute

Report of the Auditor General on the Financial Statements of the Industrial Technology Institute for the year ended 31 December 2015 in terms of Section 14(2) (c) of the Finance Act, No. 38 of 1971.

The audit of financial statements of the Industrial Technology Institute for the year ended 31 December 2015 comprising the statement of financial position as at 31 December 2015 and the income statement, 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 my direction in pursuance of provisions in Article 154(1) of the Constitution of the Democratic Socialist Republic of Sri Lanka read in conjunction with Section 13(1) of the Finance Act, No. 38 of 1971 and Section 40 of Part vii of the Science and Technology Development Act, No. 11 of 1994. My comments and observations which I consider should be published with the Annual Report of the Institute in terms of Section 14(2)(c) of the Finance Act, appear in this report . A detailed Report in terms of Section 13(7)(a) of the Finance Act, was furnished to the Chairman of the Institute on 22 December 2016.

1.2 Management's Responsibility for the Financial Statements

The 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, පොල්දූව පාර, බත්තරමුල්ල, ශ්‍රී ලංකාව, . - இல. 306/72, பொல்துவ வீதி, பத்தரமுல்லை, இலங்கை. - No. 306/72, Polduwa Road, Battaramulla, Sri Lanka
+94-11-2887028-34 +94-11-2887223 oaggov@sltnet.lk www.auditorgeneral.gov.lk

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 the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the Institute's preparation and fair presentation of the 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 Institute'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 the financial statements. Sub-sections (3) and (4) of Section 13 of the Finance Act, No. 38 of 1971 give discretionary powers to the Auditor General to determine the scope and extent of the audit.

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

1.4 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

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 Industrial Technology Institute as at 31 December 2015 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

2.2.1 Accounting Deficiencies

The following observations are made.

(a) The Board of Directors had decided to repay a sum of Rs.13,279,398 to the European Union in the year 2014 to settle the loss sustained due to non-implementation of a project according to the agreement, commenced under the financial aid of the European Union. However, action had not been taken to make the necessary provisions in the financial statements even up to the year under review.

(b) The profit generated by the sale of fixed assets had been understated by Rs.230,988 in the income statement and the cash flow statement.

(c) Even though provisions had not been made by the previous years financial statements for the money payable, the annual subscription amounting to Rs.1,081,924 for the year 2013 had been made to an international organization during the year under review. Action had not been taken to make adjustments retrospectively in that connection.

(d) In the cash flow statement presented for the year under review, the interest income received in cash had been understated by Rs.744,659 under the financial activities and the receipts of capital grants had been overstated by Rs.7,975,000 under the investment activities.

2.2.2 Unexplained Differences

The following observations are made.

(a) According to the confirmations received from the Department of Inland Revenue for the period from the year 2000 to the year 2009, although the payable Value Added Tax was Rs.10,475,428, it was Rs.2,475,723 according to the financial statements. Nevertheless, action had not been taken to make adjustments by identifying the difference of Rs.8,286,705.

(b) In comparing the values of five items of fixed assets and the stock of consumable goods with the values stated in the Physical Stock Verification Report and the financial statements, differences of Rs.40,280,486 and Rs.639,461 were observed respectively.

2.3 Accounts Receivable and Payable

The following observations are made.

(a) The dishonoured cheques and other debtors from 01 to 05 years included in the financial statements were Rs.70,185, and Rs.2,697,331 respectively. Action had not been taken to settle those balances even during the year under review.

(b) Provisions of Rs.7,030,873 had been made in the year 2009 for the salaries in arrears payable to the officers who had left the service and the officers remaining in service and a sum of Rs.6,980,352 out of that had remained unpaid even by 31 of the year under review.

2.4 Non-compliance with Laws, Rules, Regulations and Management Decisions

The following instances of non-compliance were observed during the course of audit.

	Reference to Laws, Rules, Regulations etc.	Non-compliance
(a)	Section 11 of the Finance Act, No. 38 of 1971	A sum totalling of Rs.240,226,000 had been invested in fixed deposits by 31 December of the year under review without the approval of the Minister in charge of the subject.
(b)	Establishments Code of the Democratic Socialist Republic of Sri Lanka. Section 9:1 of Chapter II	Without the approval of the Cabinet of Ministers, a retired officer had been appointed as a Technical Assigning Consultant for a period of one year and a sum of Rs.793,990 had been paid as allowances for the year under review.
(c)	Finance and Planning Circular No.MOFP/ERD/2011/1 dated 21 April 2011.	Without making aware of the Department of External Resources, a Korean project valued at Rs.2,443,833 had been commenced during the year under review.
(d)	Section 7.4.5 of the Public Enterprises Circular No. PED/12 of 02 June 2003.	Computer accessories and software valued at Rs.13,581,898 and other assets valued at Rs.4,512,594 had not been physically verified.

(e)	Public Finance Circular No. 380 of 19 January 2000	
	(i) Section 01	Although incentive cannot be paid for the discharge of normal duties as specified in the Act, sums of Rs.11,427,864 and Rs.7,597,411 had been paid as incentives for the year under review and the preceding year respectively..
	(ii) Section 7.1	Even though 10 per cent to 25 per cent of the consultancy services income after deducting the direct costs, should be retained by the Institute and remitted the balance once in 03 months to a Special Fund of the Treasury, it had not been so done.
(g)	Management Services Circular No.02/2014 dated 14 February 2014. Paragraph 06 (iii)	Although it had been specified that the additional researches should be carried out in a manner not to disturb the regular duty in order to obtain the research grants, a research grant amounting to Rs.9,494,405 had been paid during the year under review by taking into consideration a research conducted under the normal duties of the Institute.

3. Financial Review

3.1 Financial Results

According to the financial statements presented, the operations of the Institute for the year ended 31 December of the year under review had resulted in a surplus of Rs.26,282,796 as compared with the corresponding surplus of Rs. 55,698,487 for the preceding year thus indicating a deterioration of Rs.29,415,691 in the financial result of the year under review as compared with the preceding year. Although the Government contribution on the recurrent expenditure had increased by

Rs.40,000,000 , the above deterioration was mainly attributed to the increase in the employees remuneration and the depreciation by Rs.65,654,026 and Rs.13,140,727 respectively.

Analysis of the financial results of the year under review and four preceding years revealed that, the surplus of Rs.59,318,986 of the year 2011 had decreased to Rs.22,628,443 by the year 2012. Nevertheless, the increase in the surplus commenced in the year 2013 was Rs.55,698,487 in the year 2014, but it had decreased to Rs.26,282,796 again by the year 2015. When taking into consideration the employees remuneration and the depreciation for the non-current assets, the contribution of the Institute was Rs.359,862,461 in the year 2011 and it had suffered a certain drawback in the year 2012. However, after experiencing a continuous increase during the subsequent years, it had been Rs.434,404,485 during the year under review.

3.2 Analytical Financial Review

According to the financial statement presented, the current ratio of the year under review and the preceding year was 6.16 and 5.15 and the quick ratio was 6.04 and 5.03 respectively. The increase in the current assets during the year under review was due to the retention of money for the construction activities of the building complex, Malambe.

4. Operating Review

4.1 Performance

According to the Science and Technology Development Act, No. 11 of 1994, the main object of the Industrial Technology Institute was to elevate the level of technology in Sri Lanka to the level required for rapid industrialization and the performance of the following functions had been entrusted to the Institute.

(a) To support industry by discovering new processes and methods for improving product quality technical processes and methods used in industry, undertaking on contract, testing, investigation and research, providing technical services and consultancies and engaging in activities connected with technology transfers, the adaptation of technologies and the development of new technologies.

(b) To conduct research with a view to accelerating industrial technology development.
to collect, process, and disseminate information on "shelf technology" .

(c) To undertake training of persons in areas related to the experience of the Technology Institute.

(d) To collaborate in the survey and monitoring of environmental pollution and to recommend remedial measures to mitigate such pollution

(e) To co-operate with government departments and institutions, universities technical colleges and other bodies in demand driven research.

Although 69 researches, for which patent right could have been obtained had been conducted during the period of past 5 years, it was revealed in the course of test check carried out on the fulfilment of the above activities that neither the patent right had been obtained nor the technology transfers had been carried out for 60 researches.

4.2 Management Activities

The following observations are made.

(a) Due to the reasons such as failure to complete the Water Testing Project carried out in Chunnakam area within the prescribed time, failure to take action in keeping with the requirements of the customers and the submission of an incomplete report, the clients had refused to settle a sum of Rs.3,053,680 to the Institute.

(b) Although the first stage of the Building Complex, Malambe (Agro Food Technology Building) had been completed at a cost of Rs.832,250,000 under a project of the Ministry in the year 2014, action had not been taken to vest that building in the Institute.

4.3 Personnel Administration

The following observations are made.

(a) The approved cadre of the Institute was 392 and the actual care was 373. Although the number of vacancies stood at 56, permanent appointments had been given for 07 officers exceeding the approved limit relating to 03 posts.

(b) Without the approval of the Department of Management Services in terms of the Public Administration Circular No.25/2014 dated 12 November 2014, 30 employees had been recruited on contract basis. Even though there were 05 employees in excess for 2 posts of secondary level, 19 employees from among the employees recruited on contact basis had been recruited to the secondary level.

(c) Action had been taken to create 12 posts of Senior Deputy Director by following the provisions specified in the Letter No.DMS/E2/24/7/173/2 dated 21 June 2010 of the Department of Management Services. Although cadre had been approved by the Letter No.DMS/B1/62/14 dated 17 May 2012 of the Department of Management Services, action had been taken to pay the allowances entitled to those officers for the year under review deviating from the directives specified therein.

4.4 Idle and Underutilized Assets

The following observations are made.

(a) A balance totalling Rs.1, 820,645 of 03 bank current accounts and 01 savings account had remained idle for over a period of 05 years.

(b) Even though over 05 years had elapsed after the completion of constructions of the Administrative building at Malabe by incurring an expenditure of Rs.78,280,915, it had been closed without utilizing for any administrative purpose.

4.5 Uneconomic Transactions

The following observations are made.

(a) Even though a sum of Rs.350,000 had been paid to a private institution for the introduction of a permanent costing method for fixing prices on technical and research services supplied by the Institute, pricing had been made as before without following the new method thus observing it as a fruitless expenditure.

(b) The Institution had got the accreditation of its laboratories done through an internationally recognized institution to obtain international recognition and the same purpose had been got done again through the Conformity Assessment Institution and as such a sum of Rs. 3,349,962 had been overspent to get the accreditation valued at Rs.1,714,509.

4.6 Delayed Project

The following observations are made.

(a) Although 09 projects valued at Rs.11.2 million commenced under the capital provisions of the Treasury in the years 2013,2014 and 2015 due to be completed by 31 December of the year under review, action had not been taken to complete them as at that date.

(b) Although it had been planned to commence a small and medium scale Enterprise Development Project under the financial contributions amounting to Rs.03 million and Rs.07 million of the Institute and a foreign Non-Governmental Organizations respectively in the year 2014 and to be completed in the year 2015 and a sum of Rs.2,114,279 had been spent for that project, action had not been taken to complete that project even by August 2016.

5. Accountability and Good Governance

5.1 Action Plan

The following observations are made

(a) Although the Institute had prepared an Action Plan for the year under review, it had not been prepared including the implementing time frame and the expected output or results of those activities in terms of paragraph 04(3) of the Public Finance Circular No. 01/2014 dated 17 February 2014.

(b) In the preparation of the Action Plan for the year under review, a sum of Rs.20 million had been allocated for the research and development projects. As it had not been specified in the Action Plan as to what purposes the above allocation was made, it was not possible to compare the performance with the Action Plan.

5.2 Budgetary Control

Variances between the budgeted and the actual income and expenditure ranging from 31 per cent to 831 per cent were observed in the budget of the year under review, thus indicating that the Budget had not been made use of as an effective instrument of management control.

5.3 Internal Audit

The post of Chief Internal Auditor remained vacant since the year 2014 and only two officers were serving in the Internal Audit Division and therefore, it had not been possible to carry out an adequate audit in taking into consideration the scope of the Institute.

5.4 Unresolved Audit Paragraphs

In terms of Directive No.16 of the Committee on Public Enterprises held on 30 May 2011, a sum of Rs.7,810,032 recoverable from 18 officers who breached the

conditions of the foreign scholarships agreements had not been recovered even by 30 April 2015.

6. Systems and Controls

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

Area of Systems and Control	Observations
(a) Fixed Assets Control	Existence of underutilized assets.
(b) Procurement	(i) Not taking action according to the Guidelines.
	(ii) Delays in the issuance of Goods Received Notes and the delay in making entries in the inventory after the goods were received by the stores.
(c) Internal Audit	Failure to take action to avoid the weaknesses pointed out by the Internal Audit Division.
(d) Research and Construction Project control.	Failure to complete the research projects and construction projects within the prescribed period and not maintaining the documents relating to the projects safely.
(e) Control of Consultancy Services payments.	The approval of the Chief Executive Officer of the Institute had not been obtained before the supply of consultancy services.
(f) Salaries and Allowances	Failure to pay salaries and allowances according to the prescribed salary category.

H.M. Gamini Wijesinghe
Auditor General

AUDITOR-GENERAL'S REPORT ON THE FINANCIAL STATEMENTS OF THE INDUSTRIAL TECHNOLOGY INSTITUTE FOR THE YEAR ENDED 31ST, DECEMBER 2015 IN TERMS OF SECTION 14.2 (C) OF THE FINANCE ACT NO. 38 OF 1971 AND COMMENTS OF THE INSTITUTE

Reference of the Auditor-General's Report	Comments of the Auditor-General's Report	Comments of the Industrial Technology Institute
2.2	**Comments on Financial Statements**	In year 2014, it was the decision of the Board of Directors to discuss on the matter and to make payments according to the progress of the project. Accordingly, on the matters arose on the discussion had with the Sri Lankan Branch of the European Union, a request was made from the main office of European Union to do away with certain payments and to request to make the rest in instalments. The matter was reported to the Board of Management, and the decision was to make one instalment and to make a decision after a further detail study. The instalment was made accordingly, and making a provision was not necessary.
2.2.1	**Accounting Deficiencies**	
	The following observations are made.	
(a)	The Board of Directors had decided to repay a sum of Rs. 13,279,398 to the European Uninon in the year 2014 to settle the loss sustained due to non-implementation of a project according to the agreement, commenced under the financial aid of the European Union. However, action had not been taken to make the necessary provisions in the financial statements even up to the year under review.	
(b)	The profit generated by the sale of fixed assets had been understated by Rs.230,988 in the income statement and the cash flow statement.	Action has been taken to make necessary adjustements in the Revised Financial Statements.
(c)	Even though provisions had not been made by the previous years financial statements for the money payable, the annual subscription amounting to Rs. 1,081924 for the year 2013 had been made to an international organization during the year under review. Action had not been taken to make adjustments retrospectively in that connection.	This amount will be adjusted to the Accumulated Fund at the next financial year.
(d)	In the Cash Flow statement presented for the year under review, the interest income received in cash had been understated by Rs. 744,659 under the financial actifvities and the receipt of capital grants had been overstated by Rs. 7,975,000 under the investment activities.	Action will be taken to rectify this matter in the future Cash Flow Statement.

Reference of the Auditor-General's Report	Comments of the Auditor-General's Report	Comments of the Industrial Technology Institute
2.2.2.	**Unexplained Differences** The following observations are made.	
(a)	According to the confirmations received from the Department of Inland Revenue for the period from the year 2000 to the year 2009, although the payable Value Added Tax was Rs. 10,475,428, it was Rs. 2,475,723 according to the financial statements. Nevertheless, action had not been taken to make adjustments by identifying the difference of Rs. 8,286,705.	Discussions had been made with the Department of Inland Revenue with a view to rectify the tax payable and the matter has now been referred to the Tax Recovery Rectification Commission.
(b)	In comparing the values of five items of fixed assets and stock of consumable goods with the values stated in the Physical Stock Verification Report and financial statements, differences or Rs. 40,280,486 and Rs. 639,461 were observed respectively.	The difference of Rs. 3,450 between the Physical Verification reports and the Stock Ledger had occurred due to the following reasons. At the installation of Software for Stocks in year 2007, when feeding the opening stock balances variance had occurred. Insertion of certain direct stock item purchases to the Stock Ledger.
2.3.	**Accounts Receivable and Payable** The following observations are made.	
(a)	The dishonoured cheques and other debtors from 01 to 05 years included in the financial statements were Rs. 70,185 and Rs. 2,697,331 respectively. Action had not been taken to settle those balances even during the year under review.	Letters of confirmation of balances had been sent in many occasions for the balances of dishonoured cheques and other debtor balances that had been reflected in accounts from many years. No response had been received from related parties. Therefore the approval of the Board of Management has been received to write off the balances from the books of accounts . Action will be taken to write off once the approval of the Ministry of Finance is being received.

Reference of the Auditor-General's Report	Comments of the Auditor-General's Report		Comments of the Industrial Technology Institute
(b)	Provision of Rs. 7,030,873 had been made in the year 2009 for the salaries in arrears payable to the officers who had left the service and the officers remaining in service and a sum of Rs. 6,980,352 out of that had remained unpaid even by 31 of the year under review.		Provision of a sum of Rs. 7,030,873 had been made from year 2009 for salaries to be paid to employees in service and for employees who had been retired as per circular dated 22, September 2006. During the past few years payments had been made by a considerable amount. At the discussions had with the Human Resource Department it was informed that action would be taken to pay arrears.
2.4.	**Non-compliance with Laws, Rules, Regulations and Management Decisions** The following instances of non-compliances were observed during the course of audit.		
	Reference to Laws, Rules Regulations etc,.	**Non-Compliance**	
(a)	Section 11 of the Finance Act No. 38 of 1971	A sum totaling of Rs. 240,226,000 had been invested in fixed deposits by 31, December of the year under review without the approval of the Minister in charge of the subject.	This fund was invested for provision of gratuity as per Sri Lanka Accounting Standards, for deposits related to opening of Letters of Credit for foreign purchases with the approval of the Line Ministry and for Working Capital as per Public Enterprise Circular No. 56.
(b)	Establishment Code of the Democratic Socialist Republic of Sri Lanka Section 9:1 of Chapter II	Without the approval of the Cabinet Ministers, a retired officer had been appointed as a Technical Assigning Consultant for a period of one year and a sum of Rs. 793,990 had been Paid as allowances for the year Under review.	As this appointment was not an extension of service granted to this officer, approval of the Cabinet of Ministers was not necessary. He was made retired at the completion of the specified service period. Considering the expertise the officer had in the field of work and the relationship had with the trade, the Board of Management approved to appoint him as a Consultant for a project carried out by GIZ and ITI with a view to carry out the project successfully

Reference of the Auditor-General's Report	Comments of the Auditor-General's Report		Comments of the Industrial Technology Institute
(c)	Finance and Planning Circular No. MOFP/ERD/2011/1 Dated 21, April 2011	Without making aware of the Department of External Resources, a Korean project valued at Rs. 2,443,833 had been commenced during the year under review.	This Korean Project was obtained by a Research Scientists on his own competitive capabilites. A sum of US $ 18,135 had been remitted to the Institute according to an Agreement entered into with the relevant foreign institution as an allocation for expenditure.
(d)	Section 7.4.5 of the Public Enterprises Circular No. PED/12 Of 02, June 2003	Computer accessories and software valued at Rs. 13,581,898 and other assets valued at Rs. 4,512,594 had not been physically verified.	Agreed. Assets valued at about Rs. 1043 Mn. had been physically verified and Computer Software valued at Rs. 13.5 Mn. were not verified due to a practical difficulty while other assets totaling to Rs. 4.5 Mn were not covered within the scope of annual physical verification as the item involved are of semi permanent nature with small values.
(e)	**Public Finance Circular No. 380 of 19, January 2000**		
	(i) Section 01	Although incentive cannot be paid for the discharge of normal duties as specified in the Act, sum of Rs. 11,427,864 and Rs. 7,597,411 had been paid as incentives for the year under review and the preceding year respectively.	Considering the practical difficulties in obtaining prior approval for Consultancy Services, approval of the Board of Management has been obtained for all relevant Consultancy Services at the end of the year. Income which could be considered as Consultancy Service Income as per Public Finance Circular No. 380 has been considered for this purpose. Provision has been made on an estimated allocation for this payment. All payments have been made with the approval of the Board of Management.

Reference of the Auditor-General's Report	Comments of the Auditor-General's Report		Comments of the Industrial Technology Institute
	(ii) Section 7.1	Eventhough 10 per cent to 25 per cent of the consultancy services income after deducting the direct costs, should be retained by the Institute and remitted the balance once in 03 months to a Special Fund of the Treasury, it had not been so done.	Treasury grant is provided to the Institute considering the financial deficit based on the Cash Flow Statement prepared monthly. At this instance only the balance will be granted after reconciling all Income and Expenditure account balances. Action will be taken to remit to the Treasury after a further study.
(f)	Management Services Circular No. 02/2014 dated 14, February 2014. Paragraph 06(iii)	Although it had been specified that the additional researches should be carried out in a manner not to disturb the regular duty in order to obtain the research grants, a research grant amounting to Rs. 9,494,405 had been paid during the year under review by taking into consideration a research conducted under the normal duties of the Institute.	Officers who receive Research Allowances are involved in providing Consultancy Services, research activities on Contract Projects, Customized Services, Technology Transfers and conducting Training Programmes etc,.
3.	**Financial Review**		
3.1.	According to the financial statements presented, the operations of the Institute for the year ended 31, December of the year under review had resulted in a surplus of Rs. 26,282,796 as compared with the corresponding surplus of Rs. 55,698,487 for the preceding year thus indicating a deterioration of Rs. 29,415,691 in the financial result of the year under review as compared with the preceding year. Although the Government contribution on the recurrent expenditure had increased by Rs. 40,000,000, the above deterioration was mainly attributed to the increase in the employees remuneration and the depreciation by Rs. 65,654,026 and Rs. 13,140,727 respectively.		Contents noted.

Reference of the Auditor-General's Report	Comments of the Auditor-General's Report	Comments of the Industrial Technology Institute
3.1 (contd)	Analysis of the financial results of the year under review and four preceding years revealed that, the surplus of Rs. 59,318,986 of the year 2011 had decreased to Rs. 22,628,443 by the year 2012. Nvevertheless, the increase in the surplus commenced in the year 2013 was Rs. 55,698,487 in the year 2014, but it had decreased to Rs. 26,282,796 again by the year 2015. When taking into consideration the employees remuneration and the depreciation for the non-current assets, the contribution of the Institute was Rs. 359,862,461 in the year 2011 and it had suffered a certain drawback in the year 2012. However, after experiencing a continuous increase during the subsequent years, it had been Rs. 434,404,485 during the year under review.	Contents noted.
3.2.	**Analytical Financial Review**	
	According to the financial statement presented, the current ratio of the year under review and the preceding year was 6.16 and 5.15 and the quick ration was 6.04 and 5.03 respectively. The increase in the current assets during the year under review was due to the retention of money for the construction activities of the building complex, Malambe.	Contents noted.
4.	**Operating Review**	
4.1.	**Performance**	
	According to the Science and Technology Development Act No. 11 of 1994, the main object of the Industrial Technology Institute was to elevate the level of technology in Sri Lanka to the leve required for rapid industrialization anhd the performance of the following functions had been entrusted to the Institute.	

Reference of the Auditor-General's Report	Comments of the Auditor-General's Report	Comments of the Industrial Technology Institute
(a)	To support industry by discovering new processes and methods for improving product quality technical processes and methods used in industry, undertaking on contract, testing, investigation and research, providing technical services and consultancies and engaging in activities connected with technology transfers, the adaption of technologies and the development of new technologies.	These activities are being carried out even at present.
(b)	To conduct research with a view to accelerating industrial technology development. To collect, process, and disseminate information on "shelf technology".	These activities are being carried out even at present
(c)	To undertake training of persons in areas related to the experience of the Technology Institute.	These activities are being carried out even at present
(d)	To collaborate in the survey and monitoring of environmental pollution and to recommend remedial measures to mitigate such pollution.	These activities are being carried out even at present
(e)	To co-operate with government departments and institutions, universities, technical colleges and other bodies in demand driven research.	
	Although 69 researches, for which patend right could have been obtained had been conducted during the perod of past 5 years, it was revealed in the course of test check carried out on the fulfillment of the above activities that neither the patent right had been obtained nor the technology transfers had been carried out for 60 researches.	Obtaining Patent right is not relevant to all completed projects and action has been taken to obtain Patent Rights for necessary completed Projects.

Reference of the Auditor-General's Report	Comments of the Auditor-General's Report	Comments of the Industrial Technology Institute
4.2	**Management Activities**	
	The following observations are made.	
(a)	Due to the reasons such as failure to complete the Water Testing Project carried out in Chunnakam area within the prescribed time, failure to take action in keeping with the requirements of the customers and the submission of an incomplete report, the clients had refused to settle a sum of Rs. 3,053,680 to the Institute.	It was unable to complete the water testing project of the Chunnaka area of Jaffna within the stipulated time period as the Institue sub contracted to get soil samples experienced a technical problem in piercing the limestone layer. The contract had been taken over from them and had handed over to the Geological Survey and Mines Bureau. We cannot take the total responsibility for the delay, as this is beyond the control of our Institute. Report submitted by the Electricity Board has been handed over to a professional committee of the Central Environment Authority to carry out a study. Hence it is our view that the Electricity Board has not rejected the relevant report.
(b)	Although the first stage of the Building Complex, Malambe (Agro Food Technology Building) had been completed at a cost of Rs. 832,250,000 under a project of the Ministry in the year 2014, action had not been taken to vest that building in the Institute.	Initial action necessary to acquire has been taken.
4.3.	**Personnel Administration** The following observations are made.	
(a)	The approved cadre of the Institute was 392 and the actual cadre was 373. Although the number of vacancies stood at 56, permanent appointments had been given for 07 officers exceeding the approved limit relating to 03 posts.	

Reference of the Auditor-General's Report	Comments of the Auditor-General's Report	Comments of the Industrial Technology Institute
(b)	Without the approval of the Department of Management Services in terms of the Public Administration Circular No. 25/2014 dated 12, November 2014, 30 employees had been recruited on contract basis. Even though there were 05 employees in excess for 2 posts of secondary level, 19 employees from among the employees recruited on contract basis had been recruited to the secondary level.	According to the service requirements employees were recruited on contract basis. As it was essential to deliver efficient services, request was made to the Department of Management Services to recruit additional staff. As there was a delay in getting a reply to recruit additional staff, to justify the requirement of relevant departments the Board of Management taken action to extend the services of the employees on contract basis from every six months. When employees on contract basis were absorbed to the permanent cadre as per the Public Administration Circular No. 25/2014 of 12, November 2014, approved cadre of certain categories have been exceeded.
(c)	Action had been taken to create 12 posts of Senior Deputy Director by following the provisions specified in the Letter No. DMS/E2/24/7/173/2 dated 21, June 2010 of the Department of Management Services. Although cadre had been approved by the Letter No. DMS/B1/62/14 dated 17, May 2012 of the Departement of Management Services, action had been taken to pay the allowances entitled to those officers for the year under review deviating from the directives specified therein.	As per the Scheme of Recruitment of 22, May 2012, approved by the Department of Management Services, approval has been granted for 12 Senior Deputy Directors (Technical Services). (copy of the extract of the SOR is attached hereto). Thereby employees who are on HM 2-1 and HM 1-3 are eligible to apply for these posts. Relevant appointments for the above have been made by following the Scheme of Recruitment.
4.4.	**Idle and Underutilized Assets**	
	The following observations are made.	Account bearing No. 567-0351-000 is in the names of Industrial Technology Institute and few Institutions of producers of Ceramic based products related to CENTEC Project. This project was not functioned actively for few years and a written request has been made to get these funds to the Project which is functioning actively at present.
(a)	A balance totaling Rs. 1,820,645 of 03 Bank Current Accounts and 01 Savings Account had remained idle for over a period of 05 years.	

Reference of the Auditor-General's Report	Comments of the Auditor-General's Report	Comments of the Industrial Technology Institute
4.4. (Contd..)		Account bearing No. 229-2876-000 is the account maintained for the Coir Project. The balance of this account should be transferred to the Coconut Development Board. Accounts bearing Nos. 439-8174-000 and 122-9283-000 belong to the EEPEX Project which has been abandoned at present.
(b)	Even though over 5 years had lapsed after the completion of constructions of the Administrative Building at Malabe by incurring an expenditure of Rs. 78,280,915, it had been closed without utilizing for any administrative purpose.	Shifting to this building complex took place in the beginning of year 2017. Administrative and Operational and Research and Development functions are in place.
4.5.	**Uneconomic Transactions** The following observations are made**.**	
(a)	Even though a sum of Rs. 350,000 had been paid to a private institution for the introduction of a permanent costing method for fixing prices on technical and research services supplied by the Institute, pricing had been made as before without following the new method thus observing it as a fruitless expenditure.	The costing method was introduced for the Standard Services carried out by the Institute. Officers from those sections were referred to carryout the costing system.
(b)	The Institution had got the accreditation of its laboratories done through an internationally recognized institution to obtain international recognition and the same purpose had been got done again through the Conformity Assessment Institution and as such a sum of Rs. 3,349,962 had been overspent to get the accreditation valued at Rs. 1,714,509.	As the International recognition for all countries are not been done similarly and as the accreditation is being done in two methods, receiving accreditation certificates from both institutions gain a high recognition for our testing service reports. These accreditations are important to gain trust and attraction of the Clients too.

Reference of the Auditor-General's Report	Comments of the Auditor-General's Report	Comments of the Industrial Technology Institute
4.6.	**Delayed Project** The following observations are made.	
(a)	Although 09 projects valued at Rs. 11.2 million commenced under the capital provisions of the Treasury in the years 2013, 2014 and 2015 due to be completed by 31 December of the year under review, action had not been taken to complete them as at that date.	An extension has been obtained for this project which was due to be completed by 31, December 2015. Physical and Financial progress of this project is in a satisfactory level at present.
(b)	Although it had been planned to commence a small and medium scale Enterprise Development Project under the financial contribution amounting to rs. 03 million and Rs. 07 million of the Institute and a foreign Non-Governmental Organizations respectively in the year 2014 and to be completed in the year 2015 and a sum of Rs. 2,114,279 had been spent for that project, action had not been taken to complete that project even by August 2016.	This project was delayed due to various reasons. The reasons were reviewed by the GIZ Project Office, and action has been taken to continue the project by now. Accordingly, action has been taken to conduct promotional and technology assignment programmes by now.
5.	**Accountability and Good Governance**	
5.1.	**Action Plan** The following observations are made.	
(a)	Although the Institute had prepared an Action Plan for the year under review, it had not been prepared including the implementing time frame and the expected output or results of those activities in terms of paragraph 04(3) of the Public Finance Circular No. 01/2014 dated 17 February 2014.	Action will be taken to prepare the rectified Action Plan for year 2017 according to the relevant circular and will be sent to the Line Ministry.

Reference of the Auditor-General's Report	Comments of the Auditor-General's Report	Comments of the Industrial Technology Institute
(b)	In the preparation of the Action Plan for the year under review, a sum of Rs. 20 million had been allocated for the research and development projects. As it had not been specified in the Action Plan as to what purposes the above allocation was made, it was not possible to compare the performance with the Action Plan.	Action will be taken to make provisions separately for each activity in future.
5.2.	**Budgetary Control** Variances between the budgeted and the actual income and expenditure ranging from 31 per cent to 831 per cent were observed in the budget of the year under review, thus indicating that the Budget had not been made use of as an effective instrument of management control.	Action has been taken to act according to the Budget in the current year as much as possible. Steps will be taken to improve the status.
5.3.	**Internal Audit** The post of Chief Internal Auditor remained vacant since the year 2014 and only two officers were serving in the Internal Audit Division and therefore, it had not been possible to carry out an adequate audit in taking into consideration the scope of the Institute.	Post of Chief Internal Audior was advertised on 12, October 2014 in the Newspaper to call applications from suitable candidates and applications were received without fulfilling requirements as per the scheme of recruitment. Therefore, with a view to get the performance of the Chief Internal Auditor with responsibility and efficiently, Senior Internal Audit Officer was appointed with effect from 01, February 2015. Post was advertised again on 20, December 2015, and applications received were without the requirement of the Scheme of Recruitment same as in the previous occasion. Post has been advertised for the third time on 21, August 2016. Internal Audit Division Cadre consists of 05 members and action will be taken to fill the vacancies.

Reference of the Auditor-General's Report	Comments of the Auditor-General's Report		Comments of the Industrial Technology Institute
5.4.	**Unresolved Audit Paragraphs** In terms of Directive No. 16 of the the Committee on Public Enterprises held on 30, May 2011, a sum of Rs. 7,810,032 recoverable from 18 officers who breached the conditions of the foreign scholarships agreements had not been recovered even by 30, April 2015.		The amount of Rs. 4,020,392 is related to 15 to 20 years period. Although action has been taken to recover the amounts from the officers concerned, it was a failure as the officers have lef the country. Most of the Sureties of the above officers too had left the country and some are not alive. This matter was discussed at the COPE Meeting held on 30, June 2011, action will be taken either to write off from the books or to get the amounts recovered. With regard to the officer breached the agreement valued at Rs. 3,789,640, necessary action is being taken with the Attorney General's Department.
6.	**Systems and Controls** Deficiencies in systems and controls observed during the course of audit were brought to the notice of the Chairman of the Institute from time to time. Special attention is needed in respect of the following areas of control.		
	Area of Systems and Control	**Observations**	
(a)	Fixed Assets Control	Existance of underutilized assets.	Noted to improve these systems continuously.
(b)	Procurement	(i) Not taking action according to Guidelines	Noted to improve these systems continuously
		(ii) Delays in the issuance of Goods Received Notes and the delay in making	

	entries in the inventory after the goods were received by the Stores.		
Reference of the Auditor-General's Report	Comments of the Auditor-General's Report		Comments of the Industrial Technology Institute
(c)	Internal Audit	Failure to take action to avoid the weaknesses pointed out by the Internal Audit Division	Noted to improve these systems continuously
(d)	Research and Construction Project control	Failure to complete the research projects within the prescribed period and not maintaining the documents relating to the project safely.	Noted to improve these systems continuously
(e)	Control of Consultancy Service Payments	The approval of the Chief Executive Officer of the Institute had not been obtained before supply of consultancy services.	Noted to improve these systems continuously
(f)	Salaries and Allowances	Failure to pay salaries and allowances according to the prescribes salary category.	Noted to improve these systems continuously
	Sgd. H.M. Gamini Wijesinghe Auditor General		Sgd. Niroshana Perera - Attorney at Law Chairman - ITI