

Atomic Energy Authority,  
60/460, Baseline Road,  
Orugodawatta,  
Wellampitiya.  
28.07.2014.

The Hon. Minister of Technology and Research,  
The Ministry of Technology and Research  
Colombo.

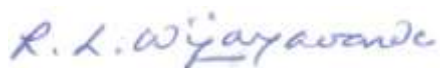
Dear Sir,

**Annual Report of the Atomic Energy Authority for the period**  
**1<sup>st</sup> January 2012- 31<sup>st</sup> December 2012**

In terms of section 34 (1) of the Atomic Energy Authority Act. No19 of 1969, I have the honour to submit the Annual Report of the Atomic Energy Authority for the year 2012, together with

- a. A copy of the Statement of Financial Performance
- b. A copy of the Statement of Financial Position
- c. Auditor General's Report

Thanking you  
Yours faithfully,



Chairman,  
Atomic Energy Authority

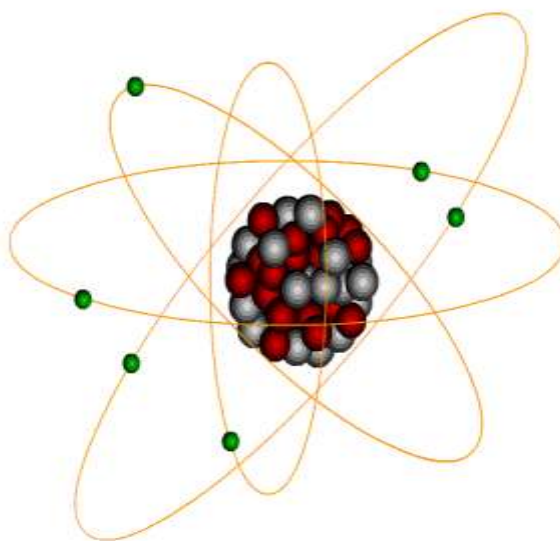
# **Annual Report of the Atomic Energy Authority for the year -2012**

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(For the period 1<sup>st</sup> January to 31<sup>st</sup> December 2012)

# **ANNUAL REPORT- 2012**

## **ATOMIC ENERGY AUTHORITY**



**“FOCAL POINT FOR PEACEFUL APPLICATIONS OF NUCLEAR TECHNOLOGY FOR A PROSPEROUS SRI LANKA.....”**

No. 60/460, Baseline Road, Orugodawatta,  
Wellampitiya  
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# **ABOUT US**

The Atomic Energy Authority (AEA) of Sri Lanka was established by the Atomic Energy Authority Act No.19 of 1969.

## **OUR VISION**

The vision of the AEA is, to be a centre of excellence, with emphasis on national relevance and international recognition, for activities related to peaceful applications of nuclear technology with due consideration to safety.

## **OUR MISSION**

- Facilitation of the utilization of nuclear technology to its maximum potential with reference to quality and quantity in a cost effective manner, for socio-economic development of the country; and
- Implementation of a regulatory program conforming to international standards on radiation safety, to ensure protection of workers, public and the environment from potentially harmful effects of ionizing radiation.

## **BOARD OF MANAGEMENT**

The AEA is managed by a Board of Management appointed in terms of Section 2 (2) of the Atomic Energy Authority Act No. 19 of 1969. The Members of the Board of Management from January to December 2012 were:

**Dr. Ranjith L. Wijayawardana (Chairman)**

B.Sc. (Hons.) in Physics- 1<sup>st</sup> Class, M.Sc. in Physics, PhD in Experimental High Energy Physics (USA) (Senior Lecturer, Department of Physics, University of Peradeniya)

**Prof. W.Abeyewickreme (Board Member)**

B.Sc. in Applied Science, SJP, B.Sc. (Mahidol University, Bangkok), PhD (Liverpool University, England) (Professor in Parasitology, Department of Parasitology, Faculty of Medicine, University of Kelaniya)

**Prof. B.M.A.Oswin Perera (Board Member)**

BVSc (Ceylon), PhD (Glasgow) (Formerly Professor, Department of Farm Animal Production and Health, University of Peradeniya)

**Eng. (Mr.) M.G.A. Goonetilleke (Board Member)**

BSc. (Eng), GradIEAust, MBA (SJP), MIE (SL), C Eng., Dip-Int Affairs (BCIS), MIEEE (Director (Technical), Ministry of Power and Energy)

**Dr.N.J. Abeygunawardena (Board Member)**

MBBS, MD (Radiology)  
(Consultant Radiologist)

**Prof. Janitha Abeywickrema Liyanage (Board Member)**

BSc(sp.) Hon in Chemistry, PhD in Chemistry, Department of Chemistry, University of Kelaniya

**Mr. R. Uduwawala (Board Member)**

B.Sc.Sp.(Physics), Master of Organizational Leadership (Monash University)  
Director, Dept. of National Budget, Ministry of Finance and Planning

**Mr. Pasan Gunasena (Board Member)**

Attorney -at-Law

During the period under review the Board held 11 meetings. Matters pertaining to operational activities, staff matters, finance and administration were presented to the Board for policy decisions. The Board also reviewed the physical and financial progress of the Authority.

## Senior Management

| NAME                                           | TITLE                                                                                           | QUALIFICATION                                                                                  |
|------------------------------------------------|-------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| Mr. J.M.A.C. Jayasinghe                        | Executive Director<br>01.01.2012- 30.06.2012                                                    | B.Sc. (Colombo),<br>M.Sc. (UNSW)                                                               |
| Mr. H.G.P. Karunaratne                         | Head, International and<br>Human Resources Division                                             | B.Ed. Colombo<br>DBM (NIBM)                                                                    |
| Mr. D.G.L.Wickramanayake                       | Head, Industrial Applications<br>Division & Acting Director<br>From 15.09.2012 to<br>31.12.2012 | B.Sc., M.Sc. (Colombo)<br>M.Sc. (UK)                                                           |
| Mr. C. Kasige                                  | Head , General Scientific<br>Division                                                           | B.Sc. (Peradeniya)<br>M.Sc. (Colombo)                                                          |
| Mr. H.L. Anil Ranjith                          | Head, Radiation Protection<br>Division                                                          | B.Sc., M.Sc. (Colombo)                                                                         |
| Mr. M.M.P. Wijsekera                           | Head, Finance & Supplies<br>Division                                                            | Licentiate Certificate of<br>ICASL, DBM (NIBM)                                                 |
| 1.Ms.M.C.S. Seneviratne<br>2.Mr. Vajira Waduge | Head, Life Science Division                                                                     | 1.B.Sc<br>(SriJayawardenepura),<br>M.Sc. (Colombo)<br>2. B.Sc. (Peradeniya)<br>M.Sc. (Colombo) |

## Executive Summery

It is with great pleasure that I present the annual report of the Atomic Energy Authority (AEA) for the year 2012. Staff strength has been increased compared to the previous years and existing cadre as at 31.12.2012 was 112.

Approval of the Cabinet of Ministers has been granted to draft a new Act for Atomic Energy on 22-06-2011 to further strengthen the existing regulatory activities carried out by the AEA, meeting international requirements. A new Act was drafted by the AEA technical committee appointed for this task incorporating latest international requirements on radiation protection, nuclear security, transport safety and radioactive waste management. International Atomic Energy Agency (IAEA) has provided an expert mission and held 02 day workshop with stakeholders to discuss the appropriateness of the draft. Some amendments agreed with the IAEA expert and stakeholders were incorporated to the draft. The draft was submitted to the Legal Draftsman for review and on the request of the Legal Draftsman's Department; the AEA Technical committee had several discussions with Legal Draftsman's Department lawyers to explain the scientific basis of the draft. The review of the draft by Legal Draftsman is completed and the draft was received by the AEA on 19<sup>th</sup> October 2012. The draft has been submitted to the Attorney General's Department for approval. It is expected to submit the bill to Parliament before end of March 2013.

The activities of the AEA during the year 2012 are reported under the areas

- (a) Radiation Protection,
- (b) Programs of the International Atomic Energy Agency (IAEA),
- (c) Nuclear Instrumentation,
- (d) Non-Destructive Testing,
- (e) Radiation Processing
- (f) Nuclear Analytical Services,
- (g) Isotope Hydrology
- (h) Information Services and
- (i) Manpower Development

The AEA continued to provide radiation protection services to the state and private sector organizations to achieve safety norms by performing regular inspections of premises that use radiation sources and radioisotopes. The users who possess radioisotopes or irradiation apparatus (including medical X-rays) have to obtain a licence from AEA and in 2012, 278 such licences were issued. Import/ export of radioactive materials have to be carried out with the approval of AEA and 474 such authorizations were issued in the year 2012. Inspection of premises that use radiation and radioactive material is also a responsibility of the AEA and the number of such inspections carried out was 140. In addition 63 approvals were provided for Irradiation room plans after they complied with the recommendations given by the AEA.

Radiation monitoring instruments which belong to AEA and external institutions were calibrated and the number was 65. The number of radiation workers monitored by the occupational exposure monitoring program (Personal monitoring program) in the country was 900. Software and hardware maintenance/ performance testing of computers and IT and network related services to AEA were 112. Repair of nuclear instruments/ reinstallation of software performance testing are also a responsibility of the GSD and the number of such services was 48.

In the industrial sector, 130 NDT inspection services were provided for the effective functioning of Industrial Systems, enabling greater productivity. In addition 210 personnel were trained in NDT. Work continued with respect to the establishment of the National Centre for NDT.

The number of samples analyzed for radioactivity was 7000.

Manpower development is an essential component for the socio-economic development of Sri Lanka. With the assistance of the IAEA and the Japanese and Korean Governments, the AEA continued to develop technical capabilities of the scientists by providing expert services (17numbers), fellowships and scientific visits (03 numbers), short term foreign training and seminars for local scientists (110 numbers). In-house human resource development was also promoted through courses conducted for administrative and support staff of AEA.

## **1. Audit and Management Committee Report 2012**

The Audit and Management Committee is constituted in accordance with PED Circular No.55 dated 14.12.2010 issued by the Department of Public Enterprises, of the Ministry of Finance and Planning.

The Audit and Management Committee of the Atomic Energy Authority for the year 2012 consisted of following members.

- a) Mr. R. Uduwawala.(Treasury Representative) Chairman of the Audit and Management Committee.
- b) Prof. J. Abeywickrema Liyanage. Member
- d) Dr. N.J. Abeygunawardena. Member
- e) Prof. B.M.A.O. Perera Alternative Member

Above four members are Non-Executive Directors of the Atomic Energy Authority and possess a wide range of experience in Scientific, Finance and Administration Fields.

Internal Auditor acts as the Secretary of the Audit and Management Committee.

Mr. K .G. P. W. Gamage, the representative of the Auditor General attended for above meetings as an observer.

### **1.1 Meeting of the Committee.**

The Committee fulfilled the requirements of the circular issued by the Department of Public Enterprises in conducting Audit and Management Committee meetings. In the Financial year 2012, four meetings were held on following dates.

14<sup>th</sup> February 2012

15<sup>th</sup> May 2012

30<sup>th</sup> July 2012 and

18<sup>th</sup> December 2012.

### **1.2 Scope of the Committee**

Having considered the objectives defined in the Public Enterprise Circular No .PED 55 dated 14.12.2010 and in the 'Guideline for Good Governance' of the Department of Public Enterprise, the Audit Committee made maximum effort to achieve the following objectives.

- a) To review the continuing impartiality of the internal auditors and their effectiveness.
- b) To address relevant issues concerning raised by the Internal Auditor according to the Internal Audit Plan on a regular basis.
- c) To assist the Board in the task of overseeing to ensure that financial reporting is done in compliance with relevant Sri Lanka Accounting and Auditing Standards and other applicable legal requirements.



- d) To assist the Board to ensure that all relevant rules and regulations and circulars issued by the government are complied with continuously reviewing and monitoring, making recommendations to the Board on non compliance.
- e) To review the internal audit/External audit reports, Management Letters and the recommendations of COPE, and help the Board to take remedial actions.
- f) To assist the Board to introduce and implement adequate internal control system.
- g) To report its recommendations to the Board of Directors soon thereafter the meeting, along with the minutes to facilitate taking corrective measures.

### **1.3 Activities of the Audit Committee during 2012**

1. The Audit Committee reviewed and approved the Annual Internal Audit Plans for the year 2012.
2. The Committee reviewed the Implementation of recommendations of the previous committee meetings. The Committee specially reviewed,
  - Progress in the preparation of Inventory for Scientific Equipment.
  - Progress in implementing a software solution for accounting and controlling income and debtors.
  - advised to strengthen the control procedures to overcome deficiencies in vehicles maintenance
  - Accounting Deficiencies
  - Progress of maintaining stock records related to laboratory consumable and other consumable.
3. Reviewed the Internal Audit Report related to payment vouchers and cash /purchase advance payment and recommended implementation of proper advance payment control procedure as suggested by the AEA Chairman to avoid repetition of deficiencies.
4. Audit Committee recommended that as per the government financial regulations, a committee should be appointed to obtain recommendation to write –off / provision for bad debts.
5. Reviewed the Internal Audit report related to Disposable Items and Committee informed to report remedial actions that have been taken on deficiencies and the progress achieved.
6. Committee recommended to request of staff to fill vacancies of the Internal Audit Division to strengthen the Internal Audit Division.
7. Noted deficiencies mentioned in the internal audit report and instructed to prepare a guideline for Overtime and Weekend payments in compliance with Establishment Code and relevant Circulars.
8. Committee noted deficiencies mentioned in the internal audit report and instructed that accounting procedure of the cash/cheques receipts should be more transparent and this should be supervised by the immediate supervisor.
9. Audit Committee noted the replies which have been given for queries mentioned in the Auditor **General's Report for the year 2011** and following recommendations were made.

- All the replies to queries were reviewed again and recommended necessary changes / corrections to be incorporated. Committee also recommended that amended replies to be submitted to the Auditor General.
- Regarding the query on “Reliance on Internal Audit and Reliance on other’s work” Committee advised to recruit two officers from the graduate scheme by requesting through the Ministry of Power and Energy

**10.** Committee members instructed to obtain clarifications in writing Commissioner of the EPF regarding the correction to be made to the present EPF contribution ratio. The AEA Board has decided to apply new EPF ratio with effect from 26<sup>th</sup> May 2011. (Date of the COPE meeting held and the recommendation were made accordingly).

Mr. R. Uduwawala.  
Chairman of the Audit and Management Committee

## **Division of Radiation Protection**

### **2.1 Development of Regulatory Infrastructure**

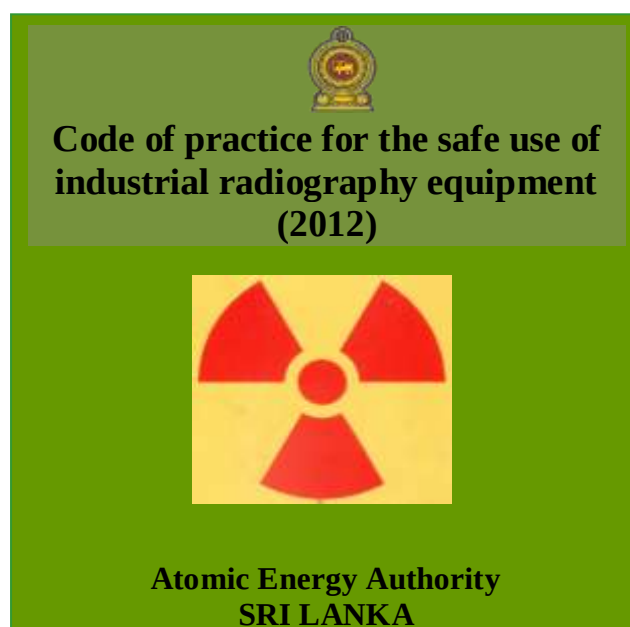
#### **2.1.1 New Act for Atomic Energy**

- Approval of the Cabinet of Ministers has been granted to draft a new Act for Atomic Energy on 22-06-2011 to further strengthen the existing regulatory activities carried out by the AEA meeting international requirements. A new Act was drafted by the AEA technical committee appointed for this task  
incorporating latest international requirements on radiation protection, nuclear security, transport safety and radioactive waste management. International Atomic Energy Agency (IAEA) has provided an expert mission and held 02 day workshop with stakeholders to discuss the appropriateness of the draft. Some amendments agreed with the IAEA expert and stakeholders were incorporated to the draft. The draft was submitted to the Legal Draftsman for review and at the request of Legal Draftsman’s Department; the AEA Technical committee had several discussions with Legal Draftsman’s Department lawyers to explain the scientific bases of the draft.

The review of the draft by Legal Draftsman is completed and the draft was received by the AEA on 19<sup>th</sup> October 2012. The draft has been submitted to Attorney General’s Department for approval. It is expected to submit the bill to Parliament before end of 2013.

#### **2.1.2 Code of Practice on Industrial Radiography**

- Final version of the code of practice on Safety of Industrial Radiography was prepared by the Division of Radiation Protection and it is expected to print 500 copies to be distributed to licence holders to strengthen the knowledge of regulatory requirements and individual safety of workers.



**Fig: 2.1 Front page of the Code of Practice**

### **2.1.3 National Plan of Radiological Emergency Preparedness and Response**

- A national plan on Radiological Emergency Response and Planning (Rad Plan) was drafted by the AEA. This plan was discussed with the officers of the Disaster Management Centre. One day workshop was held with the stakeholders to review the draft. The final draft of the Rad Plan is being prepared incorporating comments of the stakeholders.

### **2.2 Upgrading of Central Waste Storage Facility**

- Central waste Storage facility at AEA was refurbished installing new steel doors, grills and security systems under the technical assistance of US GTRI programme. This facility now conforms to the International requirements for storage of radioactive sources



**Fig: 2.2 Central Waste Storage Facility at AEA**

## **2.3 Regulatory Activities**

### **2.3.1 Radiological Emergency Response Programme**

- The Atomic Energy Authority in collaboration with the Disaster Management Centre has installed 5 Nuclear Disaster Early Warning Systems (EWS) in

coastal belt of Sri Lanka stretching from West to North facing the State of Tamilnadu of India. These EWS have been installed at SL Navy bases in Kalpitiya, TalaiMannar, Delft, Kankasanthurai and Colombo, and at the second stage, two monitoring stations will be established in Trincomalee and Galle Navy Bases. These monitoring stations will provide data on current radiation levels at these locations so that any increase of radiation level can be easily detected to take early action to protect public.

- These instruments installed at these locations are received under the IAEA TC Project SRL/9/009.
- Saphymo, GmbH, Germany, the manufacturer of the above radiation detection instruments conducted a training programme for assembling, testing, maintenance, software application of Nuclear Disaster Early Warning System (EWS) from 16<sup>th</sup> – 20<sup>th</sup> July 2012. 07 AEA officers and technicians attended this training.
- An awareness programme was conducted for 08 SL NAVY officers on 19<sup>th</sup> July 2012 from different navy bases where these instruments are installed. This programme included demonstration of EWS functions, minor maintenance and operation.
- Tri-partite Memorandum of Understanding was signed by the AEA, SL NAVY and Disaster Management Center at the Ministry of Power and Energy on 28<sup>th</sup> June 2012 in order to assure the involvement of above three organizations.
- AEA officers installed the EWS Remote Monitoring Stations at Kalpitiya, Thalaimannar, Delft and Kankasanthurai Bases from 2<sup>nd</sup> – 4<sup>th</sup> August 2012.
- Preliminary arrangements were made to establish another two monitoring stations at Trincomalee and Galle Bases. Two officers from AEA visited these bases to select locations on 20/09/2012 and 9/10/2012.
- Environmental radiation levels were measured in 70 locations covering Jaffna, Mannar, Chilaw, Puttalam, Galle, Hambantota, Monaragala, Batticaloa, Trincomalee, Ratnapura, Ampara, and Gampaha District, for the establishment of radiation base-line data since it is one of the main requirements for the establishment of the effective radiological response programme,
- 07 Emergency Response Groups in different subject areas were appointed to initiate effective response activities in case of a Radiological Emergency. In house training programmes were conducted for the above teams.

### 2.3.2 Implementation of Physical Protection Programme

Activities on this area which are listed below were carried out under Global Threat Reduction Initiative project funded by the US Department of Energy.

- Cabinet approval was obtained to sign an agreement with US DOE to implement a radiation source security programme in Sri Lanka.



**Fig: 2.3 Securing Open Sources**

- Train the trainer training course on “Radiological Security Incident Response” was conducted from January 23<sup>rd</sup>- 27<sup>th</sup>, for response forces in Sri Lanka. The purpose of this training was to train the trainers of the response forces, to initiate training on radiological safety and security of the other members of the response forces through their routine training programmes. There were 35 participants.
- A seminar on “Radiological Security Incident Response “ was conducted on 08<sup>th</sup> May 2012 for high level officials in Police ,Armed forces and some hospitals. The purpose of this seminar was to increase the awareness of above personnel on Nuclear and Radiological terrorism and radiological Security Incident Response. There were 30 participants.



**Fig: 2.4 Training of Police and STF Officers**

- A training course on “Radiological Security Incident Training “was conducted from 10<sup>th</sup> to 13<sup>th</sup> July for officials of cancer treatment unit at Tellippalai, Jaffna and cancer unit at General hospital, Anuradhapura and the senior police

officers in Anuradhapura and Jaffna Police divisions. There were 30 participants.

### 2.3.3 Assessments of facilities / Authorizations granted

|                                                       |   |     |
|-------------------------------------------------------|---|-----|
| No. of inspections conducted                          | = | 140 |
| No. of licences issued                                | = | 278 |
| No. of Import / Export authorizations issued          | = | 474 |
| No of Irradiation rooms approved with recommendations | = | 63  |

## 2.4 Training and Awareness Programmmes

- Conducted a National Training Course on Radiation Protection in Diagnostic and Interventional Radiology for Government Radiographers from 9-12 October 2012. There were 40 participants.
- Conducted a Radiation Protection Awareness Seminar for general workers of Mineral sand Corporation at Pulmudai since this corporation generates radioactive mineral while mining and processing of Ilmanite sand for rare earth extraction. There were 200 participants.
- One day school seminar was conducted on Nuclear Science and its applications to the G.C.E. Advanced Level students at Mahinda Rajapaksha Maha Vidyalaya, Homagama on 08<sup>th</sup> March 2012.
- One day school seminar was conducted on Nuclear Science and its applications for the G.C.E. Advanced level students at Mathugama Ananda Sasthralaya, Matugama on 12<sup>th</sup> September 2012.
- Training course was conducted on Radiation Protection for service providers using Ionizing Radiation



**Fig: 2.5 Annual Training Programme for Radiographers**

## 2.5 Waste Management

- On the request of Sri Lanka Customs, a consignment of steel utensils was checked for radioactive contamination and necessary approval was given to re export the consignment as it was found to be radioactive.
- Two old Cobalt-60 sources located at Horticultural Research and Development Centre were brought to Colombo after packing, to meet International Transport Regulations to be sent to India for disposal. Another high activity source located at AEA was also packed to be sent to India for disposal. The Funds to send these sources to India were provided by the US GTRI project.
- Shipment of Radioactive sources imported from Schlumberger oilfield Eastern Ltd, was stored temporarily at AEA storage facility until the sources were transported to Manner for oil extraction work. The AEA charged a payment from the above Company for this service.
- 02 Moisture gauges with radioactive sources used at Kumagai Gumi Company Ltd, was brought to AEA and stored at AEA Central Waste Storage Facility.
- 02 Moisture gauges with radioactive sources used at China Harbour Engineering Company Ltd, was brought to AEA and stored at AEA Central Waste Storage Facility.
- 01 Lightning arrestor with radioactive sources used at the Ceylon Biscuits Ltd, was brought to AEA and stored at AEA Central Waste Storage Facility.
- 24 no of Smoke Detectors used at the BSWC Lanka (Pvt) Ltd, was brought to AEA and stored at AEA Central Waste Storage Facility.
- Arrangements were made to receive 11 no of radioactive sources which were not used, stored at the Ceylon Tobacco Company



**Fig: 2.6 Transferring Sources to Transport Container**

## 2.6 Income Generation

|                                             |                     |
|---------------------------------------------|---------------------|
| Licence, inspection and room plan approvals | = Rs. 5,070,198.52  |
| Import / Export Charges                     | = Rs. 305,425.52    |
| Training of Personnel                       | = Rs. 542,723.36    |
| Waste and source storage charges            | = Rs. 4,384,204.80  |
| Total Income                                | = Rs. 10,302,552.20 |

## 3. International Cooperation Division

The Authority functions as the national focal point for the International Atomic Energy Agency (IAEA) and coordinates preparation of National Project Concepts online using PCMF (Project Concept Management Framework). PCMF is a web based internet platform where Member States are advised to submit national and regional projects using this internet platform. During the period nine numbers of National Technical Cooperation Project Concepts were formulated with the assistance of other National Institutions. Preparation of the National Project Concepts was done according to the Country Programme Framework (CPF) and national strategic planning documents such as Mahinda Chinthanaya Forward Vision. The project concepts were up-loaded to the IAEA – PCMF for upstream Planning for 2014/2015, biennium project cycle and five numbers of projects which are tabulated below have been selected to be implemented in the above cycle.

|    | <b>Project Title</b>                                                                                                                          | <b>Institute</b>                                                     |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|
| 01 | Strengthening radiation protection in diagnostic radiology, audit and promoting safe use of medical radiation in Sri Lanka                    | National Hospital of Sri Lanka, Ministry of health Sri Lanka         |
| 02 | Establishment of National Centre for Nuclear Agriculture (NCNA)                                                                               | Atomic Energy Authority of Sri Lanka                                 |
| 03 | Establishment of National Centre for Marine Pollution Control                                                                                 | Marine Environment Protection Authority (MEPA)                       |
| 04 | Strengthening Nuclear Medicine procedures for radionuclide therapy to improve clinical outcome of cancer patients and chronic joint diseases  | Nuclear Medicine Unit, Faculty of Medicine, University of Peradeniya |
| 05 | Technical support for smooth, safe and sustained operation of the First Government owned multipurpose Gamma Irradiation facility in Sri Lanka | Atomic Energy Authority of Sri Lanka                                 |

The Authority has updated its data-bases containing information on areas of applications relevant to national research establishments, health-care facilities and industrial establishments to facilitate invitation of nominations and project concepts for IAEA programmes. The list was prepared, according to the field of activity of IAEA. During the period AEA has received 110 requests from national institutions to trained officers in IAEA, RCARO, and MEXT Programmes out of these request 69 Sri Lankan officers were accepted by above institute and they were carried.



During the period a list of National Resource Institutes was also prepared. The Authority was able to obtain training opportunities for 122 nos. of Sri Lankan Scientists and Researchers. The selected officials were trained at institutions of excellence in the fields of industry, medicine, agriculture, in Member States of the IAEA where radiation technology is used.

Arrangements are being made to further develop the list of national resource centers and include in the CPF during the process of review and revision of the CPF.

Arrangements are being made for improvement of facilities to manage and utilize information related to IAEA Technical Cooperation (TC) Programmes with the use of IAEA web based platform to monitor and submission of TC Projects. The PCMF web base was further utilized for submission of project concepts and TCPRIIDE was used for project monitoring and to obtain information relevant for various purposes, at AEA. The web based internet platform is widely used for the Technical Cooperation Programmes. IAEA In touch internet platform is used for uploading of fellowship and scientific visit applications and IAEA encourages using this platform to upload applications of training, meetings and workshop etc of the IAEA.

### **3.1 Systematic implementation of the Technical Cooperation Projects**

IAEA has approved 08 new projects to be implemented during the period 2012/2013. During the period 2012, there were 15 active projects, 60 active regional projects and international projects.

The Authority has achieved more than 90% of implementation rate at the end of 2012 on overall implementation of the TC projects. The Authority provided logistic support to University of Peradeniya, Anti Malaria Campaign, Ceylon Electricity Board, Geological Survey & Mines Bureau and General Hospital Jaffna to obtain Technical Cooperation support for TC projects.

### **3.2 Hosting of IAEA Events in Sri Lanka**

The Authority hosted following two IAEA events and the authority arranged logistic and local administrative arrangements to conduct these international events.

1. RAS/5/055 - IAEA/RCA First Coordination Meeting on Improving Soil Fertility, Land Productivity and Land Degradation Mitigation in Colombo, Sri Lanka from 27-31 August 2012.
2. RAS/7/024 - IAEA/RCA Regional Training Course on Application of Stable Isotopes (Carbon – 13, Nitrogen - 15 and Oxygen - 18) and Trace Elements as Tracers of Biogeochemical Change in the Marine Environment in Colombo, Sri Lanka from 21-30 November 2012.

### **3.3 Coordination of IAEA Fellowships and Scientific Visits in Sri Lanka**

The IAEA has selected the Department of Animal Science, Faculty Agriculture, University of Peradeniya for scientific visits and fellowships for three numbers of participants from Nepal and these were coordinated by the authority.

### **3.4 Organization of a Local Seminar**

On the request received from Ministry of Power & Energy the authority organized a seminar for Scientists, Engineers & Academics on Nuclear Applications on 05 October 2012 at the Sri Lanka Foundation Institute.

### **3.5 Coordination of Bilateral Discussions with the IAEA Member States**

The authority coordinated delegations to India and Pakistan which was a result of the bilateral discussions held with the above member states during the 55<sup>th</sup> IAEA General Conference.

## **4. Activities of the General Scientific Division (GSD)**

### **4.1 NUCLEAR INSTRUMENTATION PROGRAMME**

It is an essential pre- requisite to maintain nuclear instruments in proper operating condition, for the optimum utilization of nuclear technology, for socio economic development of the country. As such General Scientific Division (GSD) provides necessary services in maintaining nuclear instruments.

#### **4.1.1. Maintenance of Nuclear Electronic Equipment/Services**

- a. Maintenance services: Repair of nuclear instruments/reinstallation of software/performance testing carried out by the GSD in 2012 were 15
- b. The number of software and hardware maintenance of Computers and IT, network related services to AEA were 112.
- c. **Advice and consultation work on development Activities/services:**  
Nuclear Instrumentation Expert Group of the GSD took the responsibility of installation, calibration and maintenance part on Nuclear Early Warning System of the country. 5 Remote detector stations at Norochholei, Thaleimanna, Delft, KKS and Colombo were installed in this year.  
In the Central Station, System calibration, server maintenance, data monitoring and analyzing the results were carried out regularly.

#### **4.1.2. Training**

- a. One week training course on "QA/QC of Nuclear Instruments" was organized with the participation of several technical persons from Universities, Hospitals and other institutes.
- b. 02 University students completed their research activities in the nuclear instrumentation laboratory of GSD in the year 2012

### **4.2 Development activities:**

With the advancement of technology and non-availability of detailed technical information of instruments, it is not possible to repair modern equipment without the

support of the suppliers/manufacturers. Since these sophisticated equipment cannot be repaired at component level and replacement of electronic circuit boards is costly, development of simple equipment and use of such equipment, when appropriate, would be much beneficial to developing countries.

GSD is involved in a project on designing low cost radiation measuring equipment. A prototype radiation monitor has been designed and fabricated. Performance tests of this instrument have been done. This has to be tested in the field conditions.

#### **4.3 Secondary Standards Dosimetry Laboratory**

Establishment and maintenance of radiation metrology standards are essential for disseminating metrology standards for radiation measurements in areas such as radiation therapy, diagnostic & radiation protection.

The Secondary Standard dosimetry laboratories in general provide link with International measurement systems to disseminate metrology standards for accurate measurements in areas mentioned above.

It is mandatory that every institution where radiation is used, should obtain personal monitoring service from AEA, for occupational exposure control and dosimetry calibration services regularly, to calibrate their radiation monitoring devices / instruments, to ensure the radiation safety of the workplace/workers.

Maintenance of a Secondary Standard dosimetry laboratory is essential for implementation of Radiation Protection Programme in the country, to ensure the radiation safety of workers, public and the environment, to measure that accurate radiotherapy doses are delivered to cancer patients, and thereby obtain quality radiological images with minimum patient dose. Considering the above facts, the Atomic energy Authority (AEA) has established a Secondary Standard Dosimetry Laboratory (SSDL) for provision of dosimetry calibration (Gamma radiation) services.

The SSDL possesses basic equipment, which have been calibrated against the International standard traceable to the primary standard at Bureau of the International Weight & Measure (BIPM) in France. These equipments are well maintained and the Quality Management System of SSDL has been established in compliance with ISO 17025 and implemented, in order to ensure the accuracy and traceability of results to international measurement system of units. Continual development of capabilities is necessary to adopt the current development in this field. This laboratory has been accredited.



**Fig No.4.1: SSDL for calibration of radiation**

#### Services/work:

1. Radiation dosimetry calibration services were provided to several private and government institutes in the year 2012. The number of radiation monitoring instruments calibrated was 65.
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4. Radiation dosimetry calibration services were provided to several private and government institutes in the year 2012. The number of radiation monitoring instruments calibrated was 65.
5. 900 TLDs were irradiated for quality assurance of Personal Monitoring program for measurement of occupational exposure.
6. Therapy calibration service was provided to Cancer Unit, Maharagama and Teaching Hospital Anuradhapura for calibration of the therapy level instruments.
7. Necessary Irradiation and calibration work at Teaching Hospital Anuradhapura was carried out to verify the accuracy of clinical beam and established the dose rate of clinical Co-60 beam for treatment.
8. Arrangements were made with IAEA for the verification of the accuracy of the clinical beam used for therapy (for cancer treatment) at the therapy centres in the country.
9. Regular Maintenance of Reference and ancillary equipment and maintenance of reference radiation standards at SSDL were carried out.
10. Arrangements have been made to obtain an X-ray system for the protection level and diagnostic level calibration, through IAEA TC project, on cost sharing basis.
8. Periodic tests were performed to verify the stability and accuracy of reference standards at SSDL.
9. Continual improvement of Quality Management System of SSDL is being carried out
10. Necessary arrangements were made to get IAEA assistance to verify the accuracy and traceability of SSDL results.

#### 4.4. ICTA Applications:

1. New 4MB broadband Data line facility was established to improve the internet access.
2. Maintenance of the Website and network was carried out by the Head of the division with the assistance of the other members of the division who are involved in other activities too.
3. Development of a new website for AEA ([www.aea.gov.lk](http://www.aea.gov.lk)) has been completed with the assistance of the Information and Communication Technology Agency (ICTA) through its e-Sri Lanka program.
4. IT services (operating system installation, troubleshooting of Computers hardware and other software to rectify the problems) were done.

Installation of a new linux based Email server was placed at the AEA premises to create and configure all AEA staff email accounts for aea.gov.lk domain. This new sever was unsuccessful due to the IP blacklist of the IP address due to lack of software security.

It was tried to reduce the cost incurred to ICT in this connection.

Now email service under gov.lk domain name has been obtained from a private institution, to provide email communication for staff members of the AEA at a reasonable cost. All necessary arrangements/configurations/set-up at all AEA computers used for email accounts/communications are completed now.

#### **4.5 Personal Monitoring Service for monitoring of occupational exposure from ionizing radiation:**

The main objective of this program is to ensure the radiation safety of radiation workers in the country.

The Atomic Energy Regulations make it mandatory, for all users of radioactive materials and irradiating apparatus, to be monitored by personal monitoring devices, approved by the Atomic Energy Authority. The General Scientific Division provides a personal monitoring service to monitor occupational ionizing radiation exposures, to radiation workers island-wide, using thermo-luminescent dosimeter<sup>™</sup> (TLDs).



**Fig No.4.2: TLD Service**

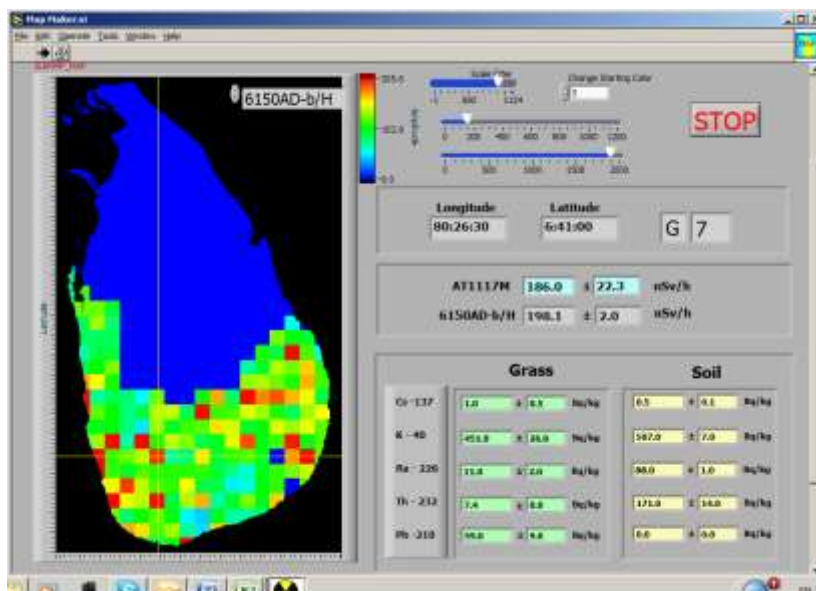
Number of Personnel Monitored for occupational exposure to Ionizing Radiation Monthly/Bi- Monthly is 1098.

Quality Management system is being developed to obtain accreditation for this laboratory.

#### **4.6 Environmental Radiation Monitoring Programmes in Sri Lanka - work carried out in 2012 by GSD.**

##### **4.6.1 Baseline Environmental Radioactivity Measurements**

Environmental Radiation Monitoring, for the establishment of Baseline data, on environmental radiation, is being carried out. This is a project carried out by GSD in collaboration with the Radiation Protection Division and Life Science Division. Dose rate measurements of collected soil/grass samples at 64 locations were completed in 2012. So far out of the 400 locations (400 locations have been selected to represent the whole country) measurements of 189 have been completed. A software program has been developed to visualize the data on Sri Lanka Map.



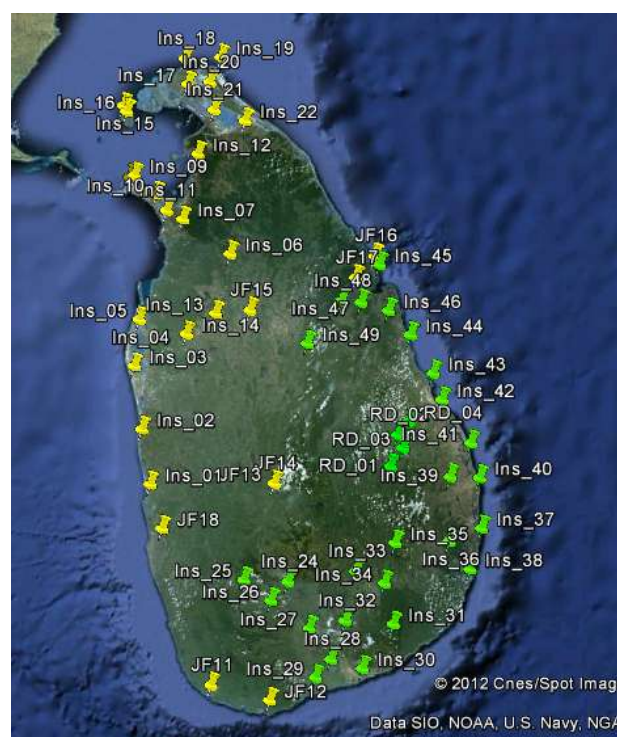
**Fig. No. 4.3:** Shaded areas in the map denote locations where radioactivity/ radiation levels are measured.

#### 4.6.2 In- situ Gamma Measurements

Instrumentation support and expert knowledge were provided by the GSD under the guidance of IAEA TECDOC -1092 for system calibration, data acquisition in the field, to carry out in-situ gamma spectroscopy measurements. Out of the 61 locations, measurements have been completed in 31 locations in the year 2012 to cover Balangoda, Ratnapura, Abilipitiya, Hambantota, Katharagama, Wellavaya, Pothuwil , Ampara, Batticalo, Tricomalee and Kanthale areas.

GSD also provides expert knowledge to analyze all the spectrums and data reporting.

Spectrum analysis and data reporting

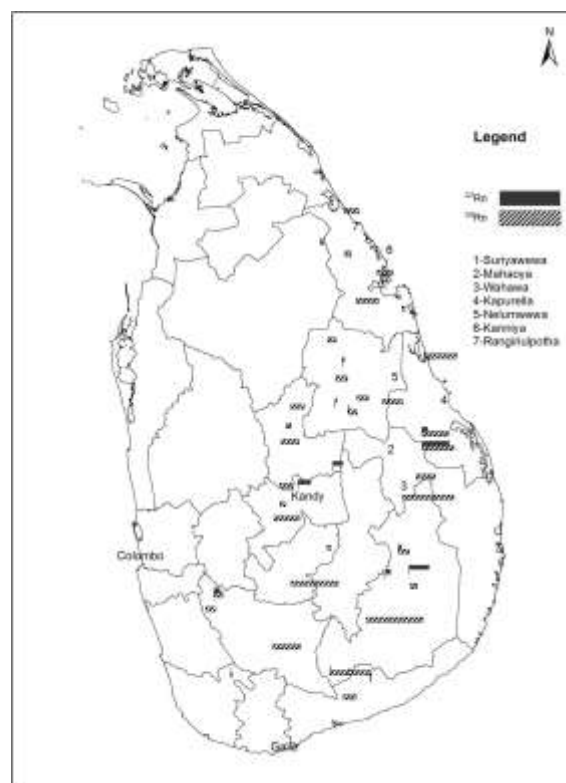


**Fig No. 4.4:** In 2011& 2012 in-situ analysis was carried out in 30 & 31 locations respectively.

#### 4.7 Radon Monitoring Programme in Sri Lanka –

For the implantation of the Radon measuring programme in Sri Lanka, assistance from Nuclear Institute of Radiological Science (NIRS) and the University of Tokyo Japan has been obtained. This programme is being carried out in collaboration with the Institute of Fundamental studies (IFS).

Outdoor Radon/ Thoron levels at 49 locations were measured, using the CR39 track detector (passive method), around hot water springs and suspected geological mini plate boundaries and conducted in-situ gamma measurements near hot water springs, at Mahaoya, Wahava and Kapurulla



**Fig No.4.5: Distribution of Outdoor Radon/ Thoron levels at measured 49**

One week expert mission was arranged under the Japan MEXT research exchange program to strengthen the activities of this program. (Prof. Thakeshi Iimoto, University of Tokyo visited AEA from 02<sup>nd</sup> -07<sup>th</sup> Sep. 2012)

Active Radon monitoring method with RAD7 and WLx instruments was tested around hot water springs, at Pulmudai area and gathered information to purchase radon monitoring equipment, to be used for the active method of measurement, suitable to the country.

#### 4.8 Thorium resources finding project –

Mapping the dose rate distribution pattern of selected NORM (Naturally Occurring Radioactive Material) areas was continued in the year 2012, 12 in-situ gamma measurements were conducted on Calido Beach NORM area at Kaluthara and measured variation of gamma dose rate distribution from Panadura to Beruwala coastal strip.



## High Background Areas in Sri Lanka



**Fig No.4.6 High Radiation Background areas**

## 5. Non Destructive Testing (NDT)

NDT section launches its activities in three directions.

1. NDT Manpower Development Programme
2. Provision of NDT Services
3. Development activities.

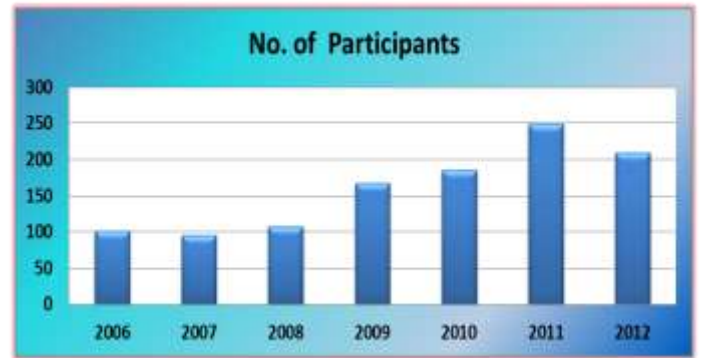
### • NDT Manpower Development Programme:

NDT section of the AEA annually conducts training programmes on NDT and as a result, a number of private and public sector organizations were able to establish NDT laboratories or upgrade existing facilities in their respective organizations. Further it also has created employment opportunities in Sri Lanka and abroad as the certificates issued by the AEA has international recognition. The training courses are conducted according to a syllabus approved by the IAEA and the International Standards Organization (ISO).

**210** personnel participated in NDT training courses and workshops during 2012 and an income of **Rs 3,608,528.00** (Including Tax) was generated from same.



| Year | No. of Participants |
|------|---------------------|
| 2006 | 101                 |
| 2007 | 95                  |
| 2008 | 107                 |
| 2009 | 168                 |
| 2010 | 186                 |
| 2011 | 249                 |
| 2012 | 210                 |



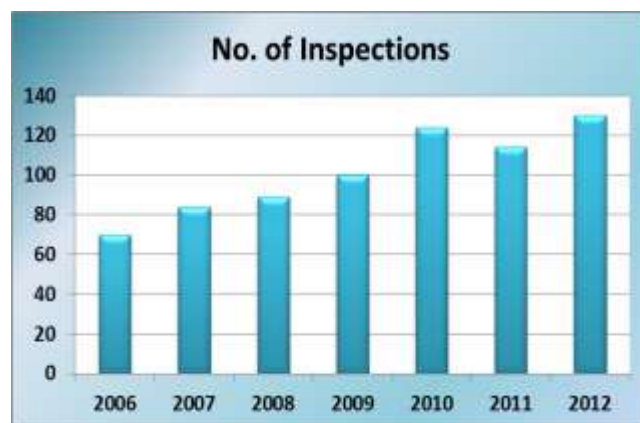
**Fig: 5.1 Number of participants who participated in Training Courses**

- **Provision of NDT Services:**

AEA provides NDT inspection services to industry in order to detect defects in machinery and metallic components to ensure industrial safety and to improve industrial productivity.

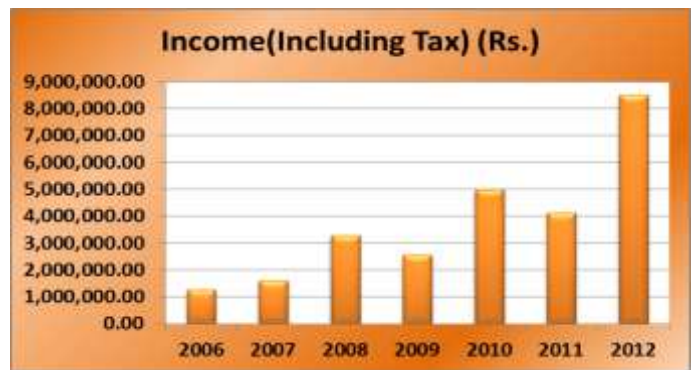
AEA provided **130** NDT inspection services to industries in 2012 and an income of **Rs 8,507,067.16** (Including Tax) was generated from the same.

| Year | No. of Inspections |
|------|--------------------|
| 2006 | 70                 |
| 2007 | 84                 |
| 2008 | 89                 |
| 2009 | 100                |
| 2010 | 124                |
| 2011 | 114                |
| 2012 | 130                |



**Fig No. 5.2: No. of Inspections**

| Year | Income<br>(Including Tax) (Rs.) |
|------|---------------------------------|
| 2006 | 1,280,846.60                    |
| 2007 | 1,613,998.70                    |
| 2008 | 3,291,833.61                    |
| 2009 | 2,563,970.58                    |
| 2010 | 4,985,180.23                    |
| 2011 | 4,131,592.25                    |
| 2012 | 8,507,067.16                    |



**Fig: 5.3 Income generated from NDT Inspections**

**Total income generated from the NDT programme in 2012 is Rs. 12,115,595.16 (Including Tax).**

| Year | Total Income<br>(Including Tax) (Rs.) |
|------|---------------------------------------|
| 2006 | 1,934,477.85                          |
| 2007 | 2,265,617.45                          |
| 2008 | 4,916,228.61                          |
| 2009 | 4,663,219.94                          |
| 2010 | 7,270,198.63                          |
| 2011 | 6,586,538.65                          |
| 2012 | 12,115,595.16                         |



**Fig. 5.4.1 Total Income**

**Fig 5.4.2 Total Income**

- **Development activities:**

- a) **Establishment of CBNDT:**

The AEA established the Certification Body for qualification and certification of Non-destructive Testing personnel (CBNDT) conforming to requirements of the ISO 9712, “Non-destructive testing – qualification and certification of personnel” and ISO/IEC 17024, “conformity assessment – General requirements for bodies operating certification of persons”.

The objective of this CBNDT is the development of policies and principles regarding the content and functioning of a certification system for qualification and certification of NDT personnel. Accreditation process of this CBNDT is almost completed.

**b) Establishment of a National Centre for NDT (NCNDT):**



**Fig: 5.5 Proposed NDT Centre**

The main objective of the NCNDT project is to develop the present NDT Section of the AEA to a National Centre with the title “National Centre for Non-Destructive Testing (NCNDT)” under the umbrella of AEA, in a separate location by 2014. This Centre is planned to have well equipped accredited laboratories as per international accepted standards providing all kinds of Non Destructive, Semi-Destructive and Destructive Testing services along with related Mechanical and Chemical Testing in Civil Engineering, as such this Centre can be competitive with the regional NDT service providers. It will increase the incorporation of NDT methods including concrete testing techniques into the production process and create skilled professional in the field as per international standards with a view to enhance the quality and productivity in industrial sector in the country.

NCNDT will coordinate with Building Regulators, Industry Regulators, Insurance Providers, Overseas Employment Agencies, Welding Specialists, NDT Society of Sri Lanka, and International Committee for NDT etc. Final intention of the project will be to reach break-even within a few years and to become a non-loss making entity with pride and commitment.

Some of the techniques planned to establish and provide services are common NDT Methods (RT,UT,MT,PT and ET), Leak Testing, Vibration Monitoring, Acoustic Emission, Stress and Strain Gauging, Thermography, Digital Radiography, Tomography and Phased array UT, Visual Testing, Welder Qualification Test, Concrete Testing, Mechanical and Chemical testing related to NDT. In addition training, qualification and certification of NDT personnel in all the above techniques is another objective of this Centre. All these techniques and activities are to be accredited as per international acceptable Standards.

The construction work of the main laboratory building of this centre (Block A) is in progress. The piling stage was completed and foundation stage has been

initiated. It is planned to complete the construction by October 2013 and to initiate commercial operation of this NCNDT by 01<sup>st</sup> quarter of 2014.



**Fig: 5.6 Work In Progress at the NDT Site**

In addition IAEA assistance in the form of equipment, expert services and training is being provided through TC Project No. SRL 1007- for strengthening of NDT through establishment of a National Centre for NDT (NCNDT). Following two expert missions were received through this TC project.

1. Expert mission to conduct revision training course on Magnetic Particle Testing- Level 3 by IAEA expert Dr. Abd. Nassir Bin Ibrahim (MALAYSIA).



**Fig 5.7 The NDT staff with the expert**



2.The expert mission to assist the AEA to prepare quality manual and standard operating procedures for accreditation of AEA – NDT Inspection body as per ISO 17020 by Dr. Asghar Ali Khan, an IAEA expert and a former Senior Scientist (PAKISTAN).



**Fig5.8 Local NDT Staff with Dr. Asghar Ali Khan**

## **6. Radiation Processing**

6.1 Title of the Project: “Supporting Radiation Processing of Natural Polymers for Agricultural and environmental remediation”

Project No.: RAS/8/109

Target of the Project: Development of Green Radiation Processed Products for Agricultural Environmental & Industrial Applications.

### **Contribution of Radiation Processing Section**

Radiation Processing Section has developed a new formulation of natural plant growth promoter and fungicide from oligochitosan in acidic medium using gamma radiation. From the developed bulk sample, different treatment combinations were tested on the crop types of tomato, okra, capsicum and rice varieties to determine the most effective treatment combination, towards the tested parameters of each crop type, compared to the control treatment. The tested treatment combinations are as follows.

T1: Seed treatment by 300ppm mixture (Oligochitosan and chitosan fungicide) + spraying of 600ppm mixture (Oligochitosan and chitosan fungicide)

T2: Seed treatment by 300ppm Oligochitosan Type 03+ alternative spraying of 300ppm Oligochitosan Type 03 and 600 ppm chitosan fungicide

T3: Department of Agriculture recommendation (Control)

T4:Seed treatment by 300ppm mixture of Oligochitosan and chitosan fungicide + alternative spraying of 600ppm mixture of Oligochitosan and chitosan fungicide and 600 ppm chitosan fungicide

In order to determine the effectiveness of each treatment, farmer field trials were carried out during the year 2012, under the collaborative research project (IAEA/RCA Project RAS/8/109) with the participation of following institutions of the Department of Agriculture;

1. Horticultural Research and Development Institute (HORDI), Gannaoruwa, Peradeniya
2. Rice Research and Development Institute (RRDI), Batalagoda, Ibbagamuwa
3. Regional Rice Research and Development Centre (RRRDC), Bombuwela

#### **Achieved Milestones of This Research Work:**

##### Horticultural Research and Development Institute (HORDI), Gannaoruwa, Peradeniya

Seed treatment were carried out spraying different mixtures of oligochitosan and chitosan fungicide in order to find the most suitable and effective application(s) of oligochitosan towards tomato, okra and capsicum plantations. Out of the tested treatments, Treatment 1(T1), Treatment 2(T2) and Treatment 4(T4) were selected as the most suitable treatments for spraying compared to Treatment 3(T3).

##### Tomato (variety: Padma, Thilina)

The objective of this study was to determine the effect of chitosan on disease control, yield and fruit quality of Tomato.

Seed treatments were carried out by spraying a mixture of oligochitosan and chitosan fungicide in different treatments (T1, T2) to the tomato varieties; Padma and Thilina on disease control, yield and fruit quality of Tomato. The spraying was carried out in seven day intervals at two different famer locations (Bandarapola- Farmer Field & HORDI- research field). Data were collected on Disease severity index, Disease incidence and Yield components.

It was concluded that,

- All treatments are equally effective on controlling the disease severity of bacteria wilt and tomato late blight diseases compared to the control.
- Treatment T1 (new formulation) increased yield of tomato compared to the yield obtained by T3(DOA recommended)
- Both treatments (T1 & T2) are equally effective in controlling disease severity.
- Both treatments (T1 & T2) are equally effective in increasing tomato yield.



**Fig 6.1: tomato plant without chitosan application**



**Fig 6.2 :tomato plant with chitosan application**

### **Capsicum**

The objective of this study was to determine the effect of chitosan on disease control, yield and fruit quality of Capsicum.

Seed treatment was carried out by spraying a mixture of oligochitosan and chitosan fungicide in different treatment (T1, T2) to find the affectivity of tested treatments on capsicum in disease control, increasing yield and fruit quality.

The spraying was carried out in seven day intervals at two different farmer locations (Bandarapola- Farmer Field & HORDI- research field). Data were collected on Disease severity index (Anthracnose infection), and Yield components.

It was concluded that,

- All treatment (T1 & T2) are equally effective on yield parameters of Capsicum
- All treatment (T1 & T2) are equally effective on seed germination and disease control(Anthracnose infection)
- Chitosan treatment are superior on increasing yield parameters of capsicum than DOA recommendation



**Fig 6.3: oligochitosan treated capsicum plantation**



**Fig 6.4: chitosan treated capsicum plant**

### **Okra**

The objective of this study was identification of effectiveness of chitosan on pest control, plant growth promotion and yield of okra.

Seed treatment were carried out by spraying a mixture of oligochitosan and chitosan fungicide in different treatment (T1,T2,T4) on variety Haritha, in controlling the pest, plant growth promotion and increasing the yield of okra. The spraying was carried out in seven day intervals at two different farmer locations (Bandarapola- Farmer Field & HORDI- research field; Sri Lanka). Data were collected on Disease severity index (Powdery Mildew Disease), and Yield components.

It was concluded that,

- All the treatment (T1,T2,T4) are equally effective on yield parameters of okra
- T1 (commercial formulation) is superior in controlling Powdery Mildew Disease than other treatments and pesticide application(T3)



**Fig 6.5: Powdery Mildew Disease of**



**Fig 6.6: Healthy okra plant**



### **Commercialization of Chitosan Derivatives**

From the results obtained from farmer field trials, the new formulation of oligochitosan can be used as growth promoter and plant protector for horticultural crops especially for tomato, okra and capsicum. Radiation processing Section is arranging necessary actions to commercialize this product.



**Fig 6.7: Sample Growth Promoter products**

### **Rice (Varieties: Bg 352,Ld 356, Bg 300 )**

The objective of this study was to determine the impact of irradiated Chitosan on growth, pest and disease resistant and grain yield of Rice in different fields of the country.

### **Regional Rice Research & Development Institute(RRRDC), Bombuwela**

RRRDC, Bombuwela conducted farmer field trials on the following diseases.

- Rice leaf Blast (*Pyricularia grisea*)
- Rice sheath blight disease (*Rhizoctonia solani* )
- Grain discolouration disease (*Fusarium, Cuvularia, Helminthosporium*)

Field experiments were carried out in different treatment combinations along with controls in locations at RRRDC, Bombuwela, Farmers' field , Kiulawatta applying chitosan oligomer (600 ppm) for three application times as 3,6,9 weeks after sowing. Growth parameters (Plant height, Root length, number of effective Tillers, Plant dry weight), Percentage of grain discolouration and Grain Yield were tested.

### **Rice Research Development Institute(RRDI), Bathalagoda**

RRDI, Batalagoda conducted farmer field trials on identifying the effectiveness and appropriate application rate of oligochitosan on rice cultivation in farmer fields and to identify the effect of oligichitosan on germination and seedling growth of rice in parachute nurseries. Oligochitosan (3%) was applied in farmer field trials and Growth related characters (Plant height, Plant dry weight, Days to 50% heading, Number of tillers) Yield & yield components and Pest & Disease records were obtained.

The results of both institutions revealed that the tested oligochitosan treatments are equally beneficial as the recommended treatments by Department of Agriculture. Hence, these treatments can be substituted by chemical treatments which are widely using in rice cultivation since according to the information, these chemicals are one of the main sources of severe health issues which are reported from many agricultural regions of the country.

### **Dragon Fruit**

In-vitro studies on the pathogen species of stem spot disease revealed that the oligochitosan derivative: “Super Plant Protector” is capable of inhibiting the *Botryosphaeria dothidea* the responsible pathogen for stem spot disease. Based on these studies and pot experiments the capability of the new formulation was identified. AEA signed a Memorandum of Understanding (MoU) with Dragon Fruit Wagakaruwange Sangamaya for pilot scale testing of this developed product.



**Fig 6.8: Chairman, AEA and Executive Director (Marketing & Operations), Dragon Fruit Wagakaruwange Sangamaya Mr.Jayantha Gamage are signing the MoU at the occasion**  
Therefore, large scale production of the oligochitosan derivative was carried out to distribute the “Super Plant Protector” among the Dragon Fruit growers attached to Dragon Fruit Wagakaruwange Sangamaya for pilot scale testing where the initial field locations are in Kalurata and Ratnapura districts. Field investigations are now being carried out before recommending to the Dragon Fruit growers around the country.



**Fig :6.9 Large scale production of chitosan derivative at Radiation Processing**

## **Publications under this Project**

1. Mithrasena Y.J.P.K., Silva J.N. , Adikari A.A.W.P., Gunawardena U.K.D.N., Kulatunga S.S. , De Silva K.R.C. and Dissanayaka. C.K. (2010) Management of Sheath blight disease causal organism *Rhizoctonia solani* in rice by using irradiated Chitosan., *Fifth Asian Biotechnology and Development Conference* 15-17 December 2010, Sri Lanka. 41p
2. Mithrasena Y.J.P.K., Silva J.N. , Kulatunga S.S. , De Silva K.R.C. , Dissanayaka C.K. and Wijesundera R.L.C.(2011) Use of irradiated chitosan to manage the important rice diseases in Sri Lanka, *International conference on Biotechnology for Better tomorrow.* 6-9 February, 2011, India. 26p
3. Mithrasena, Y.J.P.K., Silva J.N, Gunawardana U.K.D.N., Kulathunga S.S., De silva K.R.C & Dissanayaka C.K.(2012) use of irradiated Chitosan to manage rice grain discolouration disease in Sri Lanka. Sri Lanka- India conference on agro biotechnology for sustainable development 42p.

## **6.2 Establishment of a Multi purpose Gamma Irradiation Facility (MGIF)**

Embedded parts of Gamma Irradiator pool were received and IAEA expert; Dr. Manfred Frenzel, team of local consultants from the University of Moratuwa and AEA officers carried out the inspection of EPs collaboratively.

Samples of EPs were collected by ITI for further testing. Also as per the directions given by the Experts, AEA carried out further tested and inspection of EPs.

A discussion was held on the modifications proposed for the Irradiation facility, with representatives of AEA, CECB, ITI, SYMEC, IAEA and University of Moratuwa with the Project Director.

Pool EPs were placed on the foundation under the supervision of SYMEC Engineers facilitating the Civil Contractor to continue with construction of the building.

Scientific Officers were recruited for the staff of MGIF as a Quality Controller, a Microbiologist and a Food Technologist. Newly recruited staff were provided relevant training programmes at SLSI, ITI followed by the orientation programme conducted by AEA.

In order to ensure the quality of construction work, PMU, AEA, CECB and Sierra addressed the team of supervisors and tradesmen at the site.

The AEA members also attended the Steering Committee meetings held at the Ministry of Technology and Research (MOTR) and at these meetings issues which arised with respect to the project were discussed. Also AEA members also participated for the progress review meetings held at the PMU and discussions were carried out relevant to the progress.

A special meeting was held at the Ministry of Technology & Research to make those who are concerned aware on the progress of the construction work and the benefit of the project on 08<sup>th</sup> June 2012 with Management Services Department, Department of Treasury, Senior Officers of the Ministry, Ministry of Power & Energy (AEA Board representative who is also a representative of Power & Energy Ministry) and staff member of the Atomic Energy Authority (Chairman, Executive Director, Head- Industrial Application division and Head, radiation Processing Section) participate in this meeting .

A meeting on price escalation meeting was held at the Ministry of Technology & Research, which was chaired by the Secretary. Representative of Symec Engineers (India) Pvt. Ltd. was also participated. Special committee was appointed for the matter of price escalation and it was discussed among the committee.

A negotiation meeting was held at the Ministry, chaired by the Secretary of the Ministry of Technology and Research with Mr. Chamapkvas; representative of Symec Engineers (India) Pvt. Ltd.

Special team representing AEA, CECB, Sierra, and MoTR visited Symec, India in order to inspect machineries to be installed in the MGIF (2012.10.22-2012.10.29)

Two operators were recruited for the MGIF.

An expert mission was carried out with the objective of improving knowledge relevant to the field of Dosimetry and its practical applications among scientific staff of MGIF and to accomplish this aspect IAEA expert; Dr. Takuji Kojima visited Sri Lanka and completed the mission.

Another expert mission was conducted by the IAEA expert; Dr. S. Sabharwal and under mentioned objectives were accomplished through the mission.

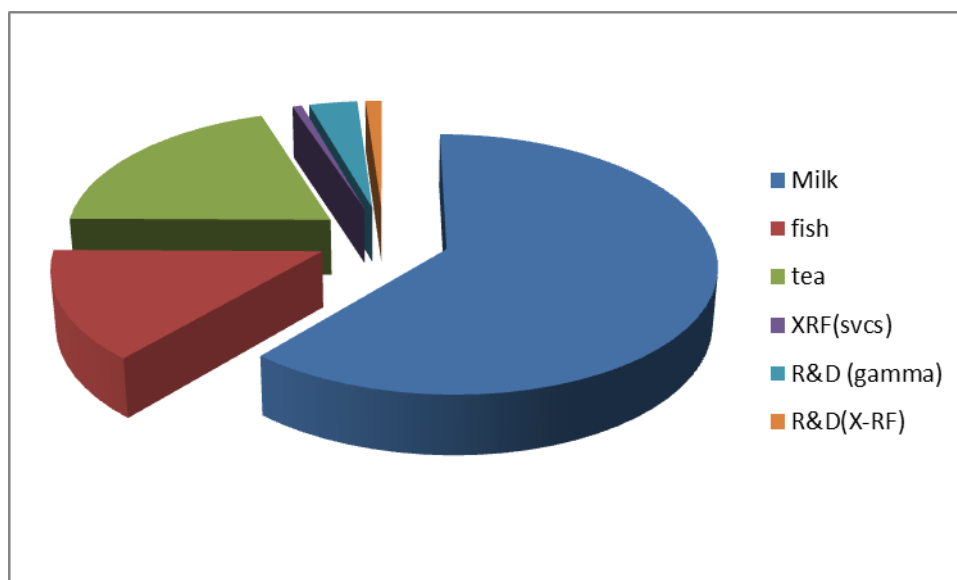
- Reviewing the Status of the present project
- Formulating the activities to be implemented in extension of the project
- Planning the project activities in the next cycle 2014-2015

Awareness programme for the local industrialists who are involved in medical products manufacturing and exporting, food manufacturing and exporting etc. was being arranged with the assistance of IAEA expert; Dr. Iwona Kaluska. This was arranged mainly with the objectives of increasing the number of customers for the MGIF and to make aware local industrialists about the irradiation technology and its wide applications.

## **7. LIFE SCIENCES DIVISION (LSD)**

LSD is mainly responsible for establishing nuclear and associated analytical facilities at the Atomic Energy Authority and to make use of nuclear analytical technology for the socio-economic development activities in the country. The Division is mainly comprised of three main units, namely, Nuclear Analytical Services unit, Health and Environment studies unit and Nuclear Agriculture unit. The LSD provides its services to the import & export sector, industrial sector, research and academic institutes using nuclear and

associated analytical methodologies. LSD has analyzed over 7000 samples received from above sectors in the year 2012, contributing to the needs of the customers while generating an income of Rs32 million. The income generated by the LSD is almost 70% of the total income generated by the AEA in 2012. Currently the LSD provides its services through three major Nuclear Analytical Laboratories; Low Level Counting Laboratory for Gamma spectrometry, Low Level Counting Laboratory for alpha spectrometry and X-ray Fluorescence (XRF) analytical laboratory. The LSD was able to increase its scientific staff from 09 to 12 in 2012 aiming to introduce new applications of nuclear science and technology.

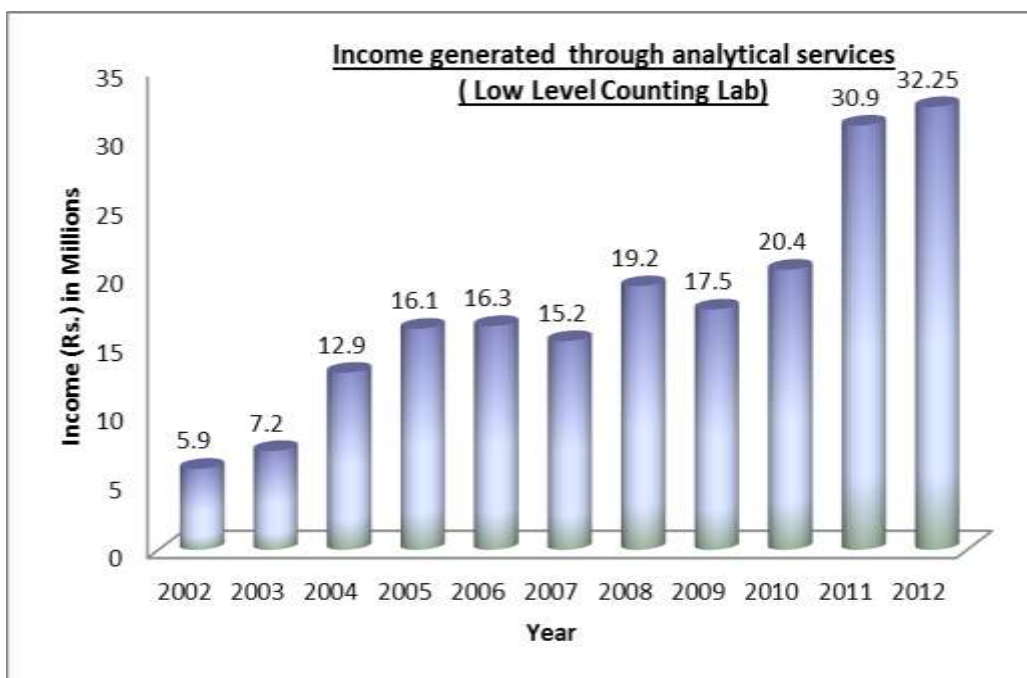


**Fig: 7.1 Income of LSD**

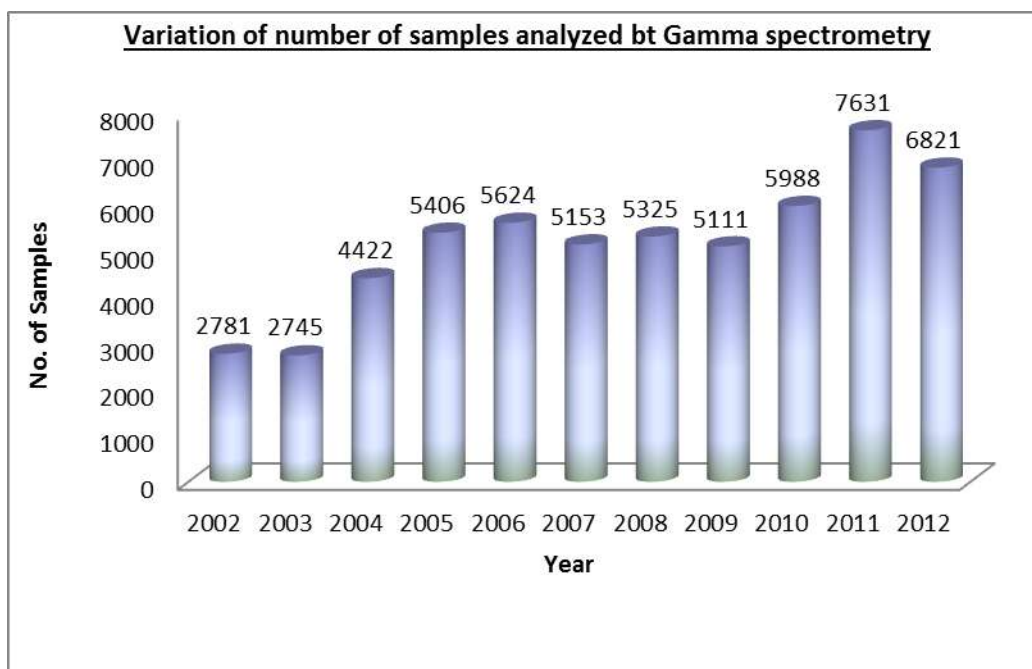
## **7.1 Nuclear Analytical Services**

### **7.1.1 Analytical Services by Gamma spectrometry,**

LSD has provided analytical services to import and export sector, local industries and R&D institutes by testing more than 7000 samples in the year 2012. The samples included, milk products and fish imported for granting approval to release these consignments to the market and to export , tea and coconuts to be exported, some specific items from the industrial sector and R&D samples. The main purpose of testing food samples was to verify whether these are contaminated due to radioactivity. The income generated through these analytical services in 2012 was Rs 32 million.



**Fig: 7.2 Income generated by the Low Level Counting Lab**



**Fig: 7.3 Variation of number of Samples analyzed by Gamma Spectroscopy**

### **7.1.2 Research and Development activities using Gamma spectrometry**

- a) Monitoring of Environmental Radioactivity levels was continued in collaboration with other Divisions of the AEA. The purpose of this activity is to establish the national baseline levels for radioactivity present in the environment and to prepare a radioactivity map for Sri Lanka.

Altogether, 58 samples of soil and vegetation samples collected from different locations in the country have been analyzed for the existing radionuclides in the samples.

b) Marine Environmental Monitoring Programme for possible radioactivity contamination after the accident of the Fukushima Nuclear Power Plant.

A special programme was initiated after the Nuclear Power Plant accident which took place in Japan on 11<sup>th</sup> March 2011. This project was commenced by AEA in collaboration with other national institutes such as Marine Environment Protection Authority (MEPA), National Aquatic Resources Agency (NARA), etc. These samples (sediment and sea water) collected from marine and coastal environment around Sri Lankan sea were analyzed for radioactivity levels. This activity has been systematically done in line with the work plan prepared for the regional project RAS/7/021 initiated by IAEA, in order to assess the possible impact of Fukushima NPP accident. Sea sediments and sea water samples were collected from Beruwala, Trincomalee, Mannar, Kalpitiya and Mt Lavenia values of the radioactivity levels are now areas are.



**7.4 Collection of samples**





**Fig: 7.5 Testing of samples at the LSD lab**

c) The LSD tested several samples of Mineral sand and Coal ash received from industries (Pulmodai & Norochcholai) and rain water (Rathuwessa) for occupational health and environmental issues.

### **7.1.3. Analytical Services and R&D activities by XRF/TXRF Technique**

#### **Analytical Services by XRF/TXRF Techniques**

XRF services for analysis of heavy metals were provided to government and commercial sector institutes, as per their requirements. Income generated through this activity was Rs. 120,990.00 including VAT. (Unfortunately the XRF/TXRF facility became malfunctioning in the first half of 2012 and analytical services were interrupted. Laboratory was unable to provide analytical services continuously to customers as there was no back up system. However, the XRF analytical facility is in working order now.

#### **7.1.4 R&D activities by XRF/TXRF Techniques**

Most of the R&D activities conducted using XRF technique was interrupted in 2012 due to the problem associated with the above analytical instrument. However, the instrument has been repaired and is being used at present.

Air Pollution Monitoring Program is continued in collaboration with Central Environmental Authority and Department of Meteorology. New sampling location was established at Meteorological station in Katugastota to monitor air pollution levels in Kandy area. Sampling

is done twice a week and samples are sent to AEA for analysis by XRF technique. This programme is supported by the regional project of IAEA/RAS/7/023; "Supporting Sustainable Air Pollution Monitoring Using Nuclear Analytical Technology". The research study on the concentration levels of essential and potentially toxic elements in rice and major food items used by Sri Lankans has been resumed after the TXRF instrument was repaired.

## **7.2 QA/QC Program**

### **ISO Accredited Laboratory**

ISO 17025-accreditation is the highest level of quality attainable by a testing laboratory. Low Level Counting Lab is an accredited testing laboratory, operating in conformity with ISO/IEC 17025:2005 international Standards. These standards are universally recognized as the highest level of quality attainable by a testing laboratory.

The LSD is in the process of accrediting its analytical laboratories and further strengthening the Quality System through the continuous participation in QA/QC programmes conducted locally as well as internationally. The laboratories are participating in internal and external quality audits, regular assessments conducted by the Sri Lanka Accreditation Board (SLAB), and proficiency testing exercises conducted by IAEA. The LSD has demonstrated both the technical competency and management system requirements necessary to consistently deliver technically valid test results through the participation in Proficiency Testing programmes conducted by IAEA.

The Sri Lanka Accreditation Board (SLAB) has extended the scope of Accreditation for LLC Lab with effect from 27.12.2011 till 27<sup>th</sup> Dec 2012 based on performance of the laboratory. New scope of accreditation has been extended to "Performing Nuclear Analytical Testing for Product categories such as soil / sediments, water, milk powder, vegetative samples (Tea, Coconut and plant seeds) and other metrics (Fish, Processed Food Items, Pharmaceuticals, Mineral Sands).

Re-assessment of the Quality System of LLC lab was done during 05<sup>th</sup> -06<sup>th</sup> of Dec.2012 and SLAB has further recommended to renew the accreditation granted to the laboratory, once the corrective actions have been completed for non-conformities raised during the last re-assessment.

## **7.3 Establishment of Alpha Spectrometry**

The establishment of alpha spectrometry laboratory has been completed using limited resources available. Radiochemical separation procedures for U-238, Th-232, and Po-210

have been established. The radiochemical separation procedure for Polonium in soil/sediment was established. Newly appointed scientific officers were trained in radiochemical separation techniques and alpha spectroscopy.

The limited instruments available for alpha spectrometry are the major constraints to develop activities in this field. The necessary equipment has been requested for further development of Alpha spectrometric analysis work. The lab participated in two Proficiency Tests (PT) to validate the methods for alpha analysis.

#### **7.4 Nuclear Agriculture**

The AEA is in the process of introducing “Nuclear Agriculture” to Sri Lanka through agricultural institutes. The LSD is currently using the Radio cesium technique to study soil erosion problem in selected sites. The AEA has taken an initiative to establish a National Centre for Nuclear Agriculture (NCNA) in Sri Lanka. A project proposal has been prepared and submitted to IAEA seeking their assistance to establish an NCNA in Sri Lanka.

#### **7.5 Awareness Programmes-2012**

Following awareness programmes were conducted by the LSD in 2012

1. National Executive Management Seminar on “The Use of Nuclear and Isotopic Techniques in Marine Pollution Management” Jointly Organized by Atomic Energy Authority(AEA) and Marine Environment Protection Authority (MEPA)- on 10th Jan 2012 at AEA
2. National Seminar ; “Has the Recent Nuclear Power Plant Accident happened in Japan affected our Marine Environment?”, organized under the Regional Project Marine Benchmark study on the possible impact of the Fukushima radioactive releases in the Asia-Pacific Region- 27<sup>th</sup> Feb 2012
3. Customer Awareness Program for Importers of Chilled Fish/ Canned Fish after Fukushima Nuclear Power Plant Accident , 30th May 2012
4. Workshop on ‘Nuclear Technology for Agriculture- Way Forward’ 26-27 April 2012
5. National Seminar: Application of X-ray Fluorescence Technique (XRF) in the field of cultural heritage studies, at the Atomic Energy Authority, on 16<sup>th</sup> July 2012.
6. Customer Awareness Program for Importers of Milk based Foods to Sri Lanka, 30th July 2012

Provision of Training Opportunities to Graduate and Undergraduate students:

LSD Provided training opportunities to undergraduate students from different universities during their vacation periods. Thus students were supported to carry out their vacation, training themselves at LSD. The postgraduate students were also given opportunities to make

use of the available research facilities at LSD. Three postgraduate students are carrying out their research activities under the supervision of the staff of the LSD.

### Research Projects

**Title1:** Comparative study of two different methods of analysis for Cs-137 radioisotope in Sea-water; (collaborative research with University of Peradeniya):

#### **Objective:**

At present Sri Lanka has no baseline level of Radioactivity data for Cs-137 in sea water, since a suitable analytical procedure has not been established yet. The conventional methods are tedious and difficult due to the problems associated with handling bulk samples. (100-400 liters of sea water has to be brought from the sea to the lab and these have to be prepared in the lab using extensive amounts of chemicals). The present research activity concentrates on two different methods of analysis on trial to establish the most appropriate technique to be followed by AEA, in the future, for establishing the necessary data base. The database will be useful in serving as baseline data for Cs-137 radionuclide concentration in seawater of marine and coastal environment, of Sri Lanka.

#### **Title2:**

Investigation of heavy metal exposure of persons from different professions (carried out by AEA and University of Colombo)

#### **Objectives:**

To determine heavy metal contents in scalp hair from different professionals (welders, mechanics, painters, police traffic control officers, three wheeler drivers) to investigate the possible association between heavy metals exposure with different professions.

#### **Title3:**

Determination of Cesium-137 and Cesium-134 radioactivity levels in fish consumed by Sri Lankans, after the Nuclear Power Plant accident occurred in Fukushima, Japan.  
(Collaborative research work between AEA and University of Colombo)

#### **Objective:**

The objective is to determine the levels of radioactivity in local and imported fish coming to the consumer market in Sri Lanka and to evaluate whether there was any significant contribution due to the radioactivity released from the Fukushima Nuclear Power Plant accident happened in Japan in 2011.

### **7.6 Recent Scientific Publications ( in 2012)**

- The Experience of accreditation and proficiency testing schemes in Isotopic RMs at Atomic Energy Authority, Sri Lanka. – IAEA BERM 13 International Symposium, Vienna, June 2012.
- Elevated levels of whole blood nickel in a group of Sri Lankan women with

endometriosis: A case control study, Printed in India

- Establishment of a  $^{137}\text{Cs}$  Reference Inventory for The Assessment of Soil Erosion in Uma Oya Catchment in Sri Lanka - for poster presentation and full paper submitted for symposium proceedings to the International Conference on Managing Soils for Food Security and Climate Change Adaptation and Mitigation 23-27 July 2012, Vienna, Austria
- PT testing results for 4 radioactive samples were submitted to AQCS/IAEA on March 2012 and the report will be received to LLC within December 2012.
- Baseline Radioactivity of soil in Sri Lanka (SLAAS -2012)  
By M.C.S. Seneviratne, P.D. Mahakumara, T.N. Attanayake, Viraj Edirisinghe, K.S.S. Kumara, K.K.P.I.K. Kadadunna, Janitha Edirininghe, Gayan Perera, H.M.N.L. Handagiripathira, V.A. Waduge
- The Experience of accreditation and proficiency testing schemes in isotopic RMs at Atomic Energy Authority, Sri Lanka. – IAEA BERM 13 International Symposium, June 2012.  
By M.C. Shirani Seneviratne, Thilaka Attanayake, V.A.Waduge, Lakmali Hadagiripathira, Sissara Sanjeewa
- Determination of Cesium – 137 and Cesium – 134 radioactivity levels in fish consumed by Sri Lankans after recent Nuclear Power Plant accident occurred in Fukushima, Japan (SLASS- 2012).  
V.A.Waduge, E.C.J.Perera, T.N. Attanayake, P.R.T. Cumaranatunga, M.C.S. Seneviratne, D.P.Dissanayake

## 8. Isotope Hydrology Section

### 8.1 Completed Projects

#### **Project Title:**

An Investigation on the Trends of Water Quality Deterioration in North-western Limestone Aquifer System in the Puttalam Region-Sri Lanka based on Isotope Technique.

This project was successfully concluded and the source of groundwater quality deterioration and the groundwater recharge mechanism in Puttalam area were determined using isotope techniques. This study was carried out in collaboration with the Water Resources Board. The assistance of the International Atomic Energy Agency (IAEA) under Regional Cooperative Agreement (RCA) program – RAS/8/108 for Asia Pacific region was obtained for this study. Under the above program, an IAEA expert mission was obtained to interpret the isotope data.

Dr Azam Tasneem from PINSTECH, Pakistan visited Sri Lanka for the above purpose during April 2012.



**Fig: 8.1 Hydrology Group at Work**



**Fig: 8.2 Staff of the Hydrology Section**

## **8.2. Ongoing Projects**

### **8.2.1. Isotope Study at proposed Broadlands hydropower project area**

Isotope Study at the proposed Broadlands Hydro Power Project, Polpitiya - Kithulgala

Isotope studies are being carried out at the above site to see any changes in the surrounding waters with the completion of the whole project. This study would cover natural isotopes (stable and radioactive) and chemical analysis (major ions & other basic water quality parameters) in groundwater, surface water and rainwater samples collected in the project area. This study is being carried out on the request of the Ceylon Electricity Board (CEB). Water samples are being collected by the CEB staff bimonthly and they are sent to the AEA laboratories for analysis.



**Fig:8.3 Field visit at Broadlands hydropower project area**

### 8.2.2. Investigation of ground water recharge mechanism in Jaffna Penninsula using Isotope Techniques

This Project is being carried out in collaboration with the Water Resources Board. Assistance of the International Atomic Energy Agency (IAEA) would be obtained for this project under IAEA/ RCA Project RAS/ 7 / 022. Sampling was started in September 2012 and will be continued for another 1-2 years.



**Fig: 8.4 Collection of Samples at the Site**  
water sector

### 8.2.3. Influence of rainfall variations on hard rock aquifers: An assessment using combined hydro-meteorological and isotope techniques in the North central province, Sri Lanka.

This work will be the initial step for determining the influence of rainfall variations on groundwater in different aquifer systems in Sri Lanka. As the first step, Kalaoya and Ambanganga basins were selected and other river basins are to be investigated in the future. This information will be beneficial for the policy makers in the water sector for planning future groundwater extraction work in the country.



**Fig: 8.5 Research Work in progress**



**Fig: 8.6 Sample Collection at the site**

### 8.2.4. Determining Isotope indices of North-East monsoon rain

Determining isotope variations in rain, throughout the country, representing North-East, South-West monsoons and inter-monsoon is essential for any groundwater study as baseline information. As such this project was initiated and collection of rainwater in Northeast monsoon affected areas was started. Set-ups to collect rain samples (Twenty in number) were installed at different location in Eastern, North Central, Central and North Western provinces. These stations will be operated for next 2 years.





**Fig: 8.7 AEA research group at the site**

### **8.2.5. Investigation of the water leakage at Bogala Graphite Mine**

This project was initiated with the request of Earth Sciences Department, University of Moratuwa. Four undergraduates were involved in this project and currently Bogala Graphite Mines Ltd continues the sampling for further investigations.



**Fig: 8.8 Carrying out research work at Bogala Graphite Mine**

### **8.3. Establishment of National Centre for Isotope Hydrology**

Hon'ble Minister, Power & Energy proposed to establish the above National Centre at Samanalawewa dam site. The Ceylon Electricity Board (CEB) has agreed to hand over a part of the old project office building for the above purpose. AEA officials visited Samanalawewa to check the suitability of the building for the said purpose. Project proposal has already been submitted to the Department of National Planning. Currently AEA is planning to renovate/repair the building to shift the Isotope Hydrology Laboratory there.





Fig: 8.9 Proposed new Site for the Hydrology Lab

#### 8.4. Other activities in 2012

- (a) Water sample analysis for isotopes (for the above projects and also on customer requests)
- (b) Training Personnel ( one undergraduate and one NITA trainee)

#### Summary of Water Sample Analysis for Isotopes in 2012

| Project                              | Collaborative Institute                            | Samples Received |            | Number of Samples Analyzed |           |
|--------------------------------------|----------------------------------------------------|------------------|------------|----------------------------|-----------|
|                                      |                                                    | Stable isotopes  | Tritium    | Stable isotopes            | Tritium   |
| Puttalam – Sea water intrusion study | Water Resources Board & AEA                        | 32               | 30         | 31                         | 11        |
| GNIP                                 | AEA / IAEA                                         | 12               | 12         | 09                         | 1         |
| Broadlands Hydro Power Project       | CEB                                                | 76               | 75         | 64                         | 3         |
| Bogala Graphite Mine - Leakage test  | University of Moratuwa & Bogala Graphite Mines Ltd | 140              | 55         | 138                        | 31        |
| Panama groundwater study             | Dept. Of Geology-U of Peradeniya                   | 29               | 16         | 29                         | 15        |
| Ampara Hot Springs                   | AEA                                                | 20               | 14         | 20                         | -         |
| Bolgoda Lake Study                   | Life Science Div.-AEA                              | 06               |            | 06                         |           |
| IAEA Proficiency Test                | IAEA                                               |                  | 03         |                            | 03        |
| Jaffna groundwater study             | Water Resources Board & AEA                        | 47               | 34         | 47                         | -         |
| Matale- Springs study                | NBRO                                               |                  |            |                            |           |
| Kalaoya and Ambanganga basins        | AEA / Dept. Of Geology-U of Peradeniya             | 155              | 155        | 80                         | 25        |
| <b>Total</b>                         |                                                    | <b>517</b>       | <b>394</b> | <b>424</b>                 | <b>89</b> |

## **9. Information Services**

### **9.1 International Nuclear Information System (INIS)**

The AEA is the focal point of INIS maintained by IAEA. The scientific community of Sri Lanka has been informed about this system and can make use of it to obtain information on current developments in their respective fields.

### **9.2 Current Awareness Programmes**

#### **9.2.1 Exhibitions, lectures and Training Courses**

Atomic Energy Authority (AEA) participated in DayeteKirule-2012 held at Oyamaduwa, Anuradhapura presenting an attractive stall. School Children and general public visited this stall to get knowledge on peaceful applications of nuclear technology. This exhibition was held from 4<sup>th</sup> to 12<sup>th</sup> February 2012. The stall of the AEA presented many exhibits including a model of a Nuclear Power Plant and an X-ray facility.

A series of lectures on Nuclear Science component of the A/L Physics syllabus stored in Compact Disks designed by AEA were given to A/L students who requested them at a nominal price.

The opinion of those who visited the AEA stall was requested, for and against "Nuclear Power for Electricity Generation using a ballot box. The number of those who voted for were 800 while 600 voted against the "Use of Nuclear Power for Electricity Generation in Sri Lanka".

AEA also participated in many school exhibitions

#### **9.2.2 Seminars, Lectures, Training Courses and Workshops**

- Conducted the National Training Course on Radiation Protection in Diagnostic and Interventional Radiology for Government Radiographers from 9-12 October 2012. There were 40 participants.
- Conducted a Radiation Protection Awareness Seminar for general workers of Mineral Sand Corporation at Pulmudai since this corporation generates radioactive mineral while mining and processing of Ilmanite sand, for rare earth extraction. There were 200 participants.
- One day school seminar was conducted on Nuclear Science and its applications for the G.C.E. Advanced Level students at Mahinda Rajapaksha Maha Vidyalaya, Homagama on 08<sup>th</sup> March 2012.
- One day school seminar was conducted on Nuclear Science and its applications for the G.C.E. Advanced level students at Mathugama Ananda Sasthralaya, Matugama on 12<sup>th</sup> September 2012.

- Training course on Radiation Protection for service providers using Ionizing Radiation was also held.



**Fig: 9.1 Annual Training Programme for Radiographers**

- Train the trainer training course on “Radiological Security Incident Response” was conducted from January 23<sup>rd</sup>- 27<sup>th</sup>, for response forces in Sri Lanka. The purpose of this training was to train the trainers of the response forces, to initiate training on radiological safety and security of the other members of the response forces through their routine training programmes. There were 35 participants.
- A seminar on "Radiological Security Incident Response" was conducted on 08<sup>th</sup> May 2012 for high level officials in Police, Armed Forces and Officers in some hospitals. The purpose of this seminar was to increase the awareness of above personnel on Nuclear and Radiological terrorism and radiological Security Incident Response. There were 30 participants.



**9.2 Seminar for Police and Cadet Officers, in progress**

- One week training course on "QA/QC of Nuclear Instruments" was organized with the participation of several technical persons from Universities, Hospitals and other institutes.
- On the request received from the Ministry of Power & Energy the Authority organized a seminar for Scientists, Engineers & Academics on Nuclear Applications on 05<sup>th</sup> October 2012 at the Sri Lanka Foundation Institute.
- A National Executive Management Seminar on “The Use of Nuclear and Isotopic Techniques in Marine Pollution Management” Jointly Organized by Atomic Energy Authority(AEA) and Marine Environment Protection Authority (MEPA)- on 10th Jan 2012 at AEA
- A National Seminar ; “Has the Recent Nuclear Power Plant Accident happened in Japan affected our Marine Environment?”, (organized under the Regional Project Marine Benchmark study) and the possible impact of the Fukushima radioactive releases in the Asia-Pacific Region- 27<sup>th</sup> Feb 2012
- Customer Awareness Program for Importers of Chilled Fish/ Canned Fish after Fukushima Nuclear Power Plant Accident , 30th May 2012
- Workshop on ‘Nuclear Technology for Agriculture- Way Forward’ from 26<sup>th</sup> -27<sup>th</sup> April 2012
- National Seminar: Application of X-ray Fluorescence Technique (XRF) in the field of cultural heritage studies, at the Atomic Energy Authority, on 16<sup>th</sup> July 2012.
- Customer Awareness Program for Importers of Milk based Foods to Sri Lanka, 30th July 2012
- A seminar on Nuclear Power for A/L students at the Prince of Wales College at Moratuwa.
- A series of Seminars were also held parallel to Deyate Kirula-2012, in Anuradhapura district.

### 9.3. Youth Nuclear Society of Sri Lanka (YNNS)

“Raising the awareness on the benefits of Nuclear Technology, through programme carried out using Mass Media, Workshops, Seminars etc. is the objective of this society. The table below describes the activities of the society in the year 2012.

| Date                                                | Topic                | Venue                      | Remarks                                                                                                                                                                |
|-----------------------------------------------------|----------------------|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 04 <sup>th</sup> -10 <sup>th</sup><br>February 2012 | “Deyata Kirula 2012” | Oyamaduwa,<br>Anuradhapura | Conducted the Quiz & Speech Competition among A/L Students on the theme of “Benefits of Nuclear Science & Technology”.<br>Students from Department of Applied Science, |

|                                                 |                                                                                                               |                                                                                 |                                                                                                                                            |
|-------------------------------------------------|---------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
|                                                 |                                                                                                               |                                                                                 | Rajarata conducted the Programme. With the assistance of YNNS                                                                              |
| 05 <sup>th</sup> April 2012                     | Third Annual General Meeting                                                                                  | Atomic Energy Authority                                                         | Prize Giving to the Winners of Essay competition,<br>Felicitated the Journalists, who contributed articles on Nuclear Science & Technology |
| 22 <sup>nd</sup> -24 <sup>th</sup> June 2012    | “Future Minds 2012 ”                                                                                          | Sirimavo Bandaranayake Convention Center, Colombo 07                            |                                                                                                                                            |
| 05 <sup>th</sup> - 11 <sup>th</sup> August 2012 | International Youth Nuclear Congress IYNC - 2012                                                              | Charlotte, USA                                                                  | Mr. Malinda Ranaweera, President, YNSS represented the occasion on behalf of YNSS, Sri Lanka                                               |
| 10 <sup>th</sup> October 2012                   | Peaceful applications of Nuclear Science/ Electricity Generation using Nuclear Power                          | Royal College, Colombo 07                                                       | A/ L Mathematics & Bio-Science Students                                                                                                    |
| 23 <sup>rd</sup> October 2012                   | Digital Video Conference Programme with NAYGN (North American Young Generation Network in Nuclear Technology) | Distance Learning Centre,<br>SLIDA,<br>Malalasekara Mawatha,<br><br>Colombo 07. | Mr. Duncan Robinson, President, NAYGN and Ms. Christine Csizmadia,<br><br>Executive Member,<br>NAYGN participated as Speakers.             |
| 30 <sup>th</sup> October 2012                   | Electricity Generation using Nuclear Power                                                                    | Navy Headquarters, Colombo 01                                                   |                                                                                                                                            |
| 01 <sup>st</sup> November 2012                  | Peaceful applications of Nuclear Science/ Electricity Generation using Nuclear Power                          | Sangamiththa College, Galle                                                     | For A/ L Mathematics & Bio-Science Students                                                                                                |

1. Created the Web page- [http:// ynssl.wordpress.com](http://ynssl.wordpress.com)
2. Also created the Face book Group - “ Youth Nuclear Society of Sri Lanka (YNSS) ”

**Participation of AEA Officials in Foreign Seminars / Training Programmes / Workshops / Meetings**  
**January - December 2012**

| Se. No. | No    | Name of the Officer        | Post                                                          | Name of the Programme                                                                                            | Period                   | Country                     | Sponsoring Institute |
|---------|-------|----------------------------|---------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|--------------------------|-----------------------------|----------------------|
| 1.      | 12/03 | Mr. A. Jayalath,           | Senior Scientific Officer, Radiation Protection Division, AEA | Second Regional Coordinating Meeting (RCM) under TC Project RAS/9/057.                                           | 13.02.2012<br>17.02.2012 | Safat, Kuwait               | IAEA                 |
| 2.      | 12/04 | Mrs. D.C.K.K. Dissanayake  | Senior Scientific Officer, Life Sciences Division, AEA        | International Symposium on Managing Soils for Food Security and Climate Change Adaptation and Mitigation         | 23.07.2012<br>26.07.2012 | Vienna, Austria             | IAEA and AEA         |
| 3.      | 12/05 | Mr. T.M.R. Tennakoon       | Head, NDT Section, AEA.                                       | IAEA/RCA Final Progress Review Meeting of RAS/8/110 Combining with Project Planning Meeting of RAS/1/013         | 27.02.2012<br>02.03.2012 | Shanghai, China             | IAEA                 |
| 4.      | 12/06 | Mr. T.H.S. Shantha         | Senior Scientific Officer, Radiation Protection Div., AEA.    | Regional Radiological Security Partnership Review Meeting on Radioactive Source Security                         | 18.01.2012<br>20.01.2012 | Bohol, Philippines          | IAEA                 |
| 5.      | 12/06 | Mr. K.N.R. Fernando        | Senior Scientific Officer, Radiation Protection Div., AEA.    | Regional Radiological Security Partnership Review Meeting on Radioactive Source Security                         | 18.01.2012<br>20.01.2012 | Bohol, Philippines          | IAEA                 |
| 6.      | 12/10 | Mr. H.L. Anil Ranjith      | Head, Radiation Protection Div., AEA.                         | Regional Meeting on Transparency and Involvement of the Interested Parties in the Regulatory Process (RAS/9/059) | 05.03.2012<br>09.03.2012 | Vienna, Austria             | IAEA                 |
| 7.      | 12/12 | Mr. J.M.A.C. Jayasinghe    | Executive Director /CEO, AEA.                                 | IAEA – Asia and the Pacific National Liaison Officers Meeting (RAS/0/062)                                        | 21.02.2012<br>24.02.2012 | Vienna, Austria             | IAEA                 |
| 8.      | 12/12 | Mr. H.G.P. Karunarante     | Head, HRD & International Div., AEA                           | IAEA – Asia and the Pacific National Liaison Officers Meeting (RAS/0/062)                                        | 21.02.2012<br>24.02.2012 | Vienna, Austria             | IAEA                 |
| 9.      | 12/16 | Mrs. A.S.M.T.N. Attanayake | Technical Assistant, Life Sciences Division, AEA              | IAEA/RCA Regional Training Course on Use of Quality Management System for New Entrant (RAS/7/021)                | 16.04.2012<br>20.04.2012 | Jeju-do, Republic of Korea. | IAEA                 |

**Participation of AEA Officials in Foreign Seminars / Training Programmes / Workshops / Meetings**  
**January - December 2012**

| Se. No. | No    | Name of the Officer          | Post                                                                    | Name of the Programme                                                                                                                                                       | Period                   | Country                | Sponsoring Institute  |
|---------|-------|------------------------------|-------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|------------------------|-----------------------|
| 10.     | 12/19 | Mr. T.H.S. Shantha           | Senior Scientific Officer,<br>Radiation Protection<br>Division,<br>AEA. | Regional Meeting on Nuclear Power<br>Safety Levels                                                                                                                          | 07.05.2012<br>09.05.2012 | Vienna,<br>Austria     | IAEA                  |
| 11.     | 12/21 | Mrs. T.N. Attanayake         | Technical Assistant,<br>Life Sciences Division,<br>AEA                  | 13 <sup>th</sup> International Symposium on<br>Biological and Environmental<br>Reference Materials (BERM 13)                                                                | 25.06.2012<br>29.06.2012 | Vienna,<br>Austria     | IAEA                  |
| 12.     | 12/22 | Mr. V.A. Waduge              | Head,<br>Life Science Division,<br>AEA                                  | Seminar on International Scientific<br>Spring                                                                                                                               | 05.03.2012<br>09.03.2012 | Islamabad,<br>Pakistan | Govt. of<br>Sri Lanka |
| 13.     | 12/23 | Mr. H.L. Anil Ranjith        | Head,<br>Radiation Protection<br>Division,<br>AEA                       | Meeting of Points of Contact for the<br>IAEA Illicit Trafficking Database<br>(ITDB) Programme,                                                                              | 24.07.2012<br>26.07.2012 | Vienna,<br>Austria     | IAEA                  |
| 14.     | 12/28 | Mr. D.G.L.<br>Wickramanayake | Head,<br>Industrial Applications Div.,<br>AEA.                          | 34 <sup>th</sup> Meeting of National RCA<br>Representatives                                                                                                                 | 17.04.2012<br>20.04.2012 | China.                 | Govt. of<br>Sri Lanka |
| 15.     | 12/31 | Mr. Chandana Seneviratne     | Scientific Officer,<br>NDT Section,<br>AEA                              | <b><u>NDT Inspection</u></b><br>Non-Destructive Testing (NDT) X-<br>Ray Test on a Newly Constructed<br>Board, Republic of Maldives<br>(Generation of Income through<br>NDT) | 05.04.2012<br>08.04.2012 | Maldives               | Govt. of<br>Sri Lanka |
| 16.     | 12/34 | Mr. V.A. Waduge              | Head,<br>Life Sciences Division,<br>AEA                                 | IAEA/RCA Annual Project Review<br>Meeting of RAS/7/021                                                                                                                      | 06.08.2012<br>10.08.2012 | Dalat,<br>Vietnam      | IAEA                  |
| 17.     | 12/37 | Mr. S.S.K. Kolambage         | Scientific Officer,<br>Radiation Protection<br>Division,<br>AEA         | IAEA Regional Training Course on<br>Effective and Sustainable<br>Regulatory Control Radiation<br>Sources                                                                    | 15.10.2012<br>19.10.2012 | Jakarta,<br>Indonesia  | IAEA                  |



**Participation of AEA Officials in Foreign Seminars / Training Programmes / Workshops / Meetings**

**January - December 2012**

| <b>Se. No.</b> | <b>No</b> | <b>Name of the Officer</b>    | <b>Post</b>                                                   | <b>Name of the Programme</b>                                                                                                                                                                             | <b>Period</b>            | <b>Country</b>       | <b>Sponsoring Institute</b>   |
|----------------|-----------|-------------------------------|---------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|----------------------|-------------------------------|
| 18.            | 12/38     | Mr. K.K.P.I.K. Kadadunna      | Senior Scientific Officer, Radiation Protection Division, AEA | Technical Meeting of INES National Officers                                                                                                                                                              | 16.07.2012<br>20.07.2012 | Vienna, Austria.     | IAEA                          |
| 19.            | 12/41     | Mr. E.A.N.V. Edirisinghe      | Scientific Officer, Industrial Applications Div., AEA         | IAEA/RCA Initial Project Coordination Meeting (RAS/7/022)                                                                                                                                                | 16.07.2012<br>19.07.2012 | Vienna, Austria      | IAEA                          |
| 20.            | 12/43     | Ms. H.N.N.L. Handagiripathira | Scientific Officer, Life Sciences Division, AEA               | IAEA/RCA Project Planning and Coordination Meeting (RAS/7/023)                                                                                                                                           | 09.07.2012<br>13.07.2012 | Kajang, Malaysia     | IAEA                          |
| 21.            | 12/46     | Mr. D.G.L. Wickramanayake     | Head, Industrial Applications Division, AEA                   | RCA/IAEA Project Planning and Coordination Meeting on Building Technological Capacity for Food Traceability and Food Safety Control Systems through the Use of Nuclear Analytical Techniques (RAS/5/062) | 07.08.2012<br>10.08.2012 | Fuzhou, China        | IAEA                          |
| 22.            | 12/48     | Mr. K.R.C. de Silva           | Scientific Officer, Radiation Processing Section, AEA         | IAEA/RCA Regional Executive Management Meeting for Policy Makers and End-Users on Green Radiation Processing for Agricultural, Environmental and Industrial Applications (RAS/8/109)                     | 27.08.2012<br>31.08.2012 | Ho Chi Minh, Vietnam | IAEA                          |
| 23             | 12/50     | Mr. U.K.K.H. de Silva,        | Senior Scientific Officer, Radiation Protection Division, AEA | Workshop on Establishing a National Strategy for Education and Training in Radiation, Transport and Waste Safety                                                                                         | 24.07.2012<br>26.07.2012 | Bangkok, Thailand    | IAEA                          |
| 24.            | 12/57     | Mr. V.A. Waduge               | Head, Life Sciences Division, AEA                             | “European Conference on X-ray Spectroscopy” (EXRS 2012), Atominsitute of University of Vienna, Austria                                                                                                   | 18.06.2012<br>22.06.2012 | Vienna, Austria.     | University of Vienna, Austria |

**Participation of AEA Officials in Foreign Seminars / Training Programmes / Workshops / Meetings**  
**January - December 2012**

| Se. No. | No    | Name of the Officer     | Post                                                             | Name of the Programme                                                                                                                                                                                                       | Period                   | Country                            | Sponsoring Institute |
|---------|-------|-------------------------|------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|------------------------------------|----------------------|
| 25.     | 12/59 | Mr. V.A. Waduge         | Head,<br>Life Sciences Division, AEA                             | Invitation to RCA Project Planning and Coordination Meeting (RAS/7/024)                                                                                                                                                     | 21.08.2012<br>24.08.2012 | Vienna,<br>Austria                 | IAEA                 |
| 26.     | 12/60 | Mr. A. Jayalath         | Senior Scientific Officer,<br>Radiation Protection Division, AEA | Regional Training Course on ERR-Method for Application of GSR-2 on Developing a National Capability for Response to Nuclear or Radiological Emergencies (RAS/9/068)                                                         | 23.09.2012<br>27.09.2012 | Abu-Dhabi,<br>United Arab Emirates | IAEA                 |
| 27.     | 12/61 | Mr. R.M.M.P. Ranaweera, | Technical Assistant,<br>Radiation Processing Section, AEA.       | International Youth Nuclear Congress                                                                                                                                                                                        | 05.08.2012<br>11.08.2012 | Charlotte, USA                     | Govt. of Sri Lanka   |
| 28.     | 12/62 | Dr. R.L. Wijayawardana  | Chairman,<br>AEA                                                 | 56 <sup>th</sup> Annual Regular Sessions of the International Atomic Energy Agency (IAEA) General Conference                                                                                                                | 17.09.2012<br>21.09.2012 | Vienna,<br>Austria                 | Govt. of Sri Lanka   |
| 29.     | 12/62 | Mr. H.G.P. Karunaratne  | Head,<br>HRD & International Cooperation Division, AEA           | 56 <sup>th</sup> Annual Regular Sessions of the International Atomic Energy Agency (IAEA) General Conference, 17-21 September 2012 and the 40 <sup>th</sup> RCA General Conference Meeting, 14 <sup>th</sup> September 2011 | 14.09.2012<br>21.09.2012 | Vienna,<br>Austria                 | Govt. of Sri Lanka   |
| 30.     | 12/75 | Mr. K.R.C. de Silva     | Scientific Officer,<br>Radiation Processing Section, AEA         | RCARO/KAERI Regional Workshop on Radiation Application Technology                                                                                                                                                           | 08.10.2012<br>19.10.2012 | Daejeon,<br>Republic of Korea      | IAEA                 |
| 31.     | 12/85 | Mrs. S.S. Kulatunge     | Head,<br>Radiation Processing Section, AEA                       | FNCA Workshop on “Radiation Processing of Natural Polymers”                                                                                                                                                                 | 02.10.2012<br>05.10.2012 | Almaty,<br>Kazakhstan              | IAEA                 |

**Participation of AEA Officials in Foreign Seminars / Training Programmes / Workshops / Meetings**

**January - December 2012**

| <b>Se. No.</b> | <b>No</b> | <b>Name of the Officer</b>           | <b>Post</b>                                                                                  | <b>Name of the Programme</b>                                                                                                  | <b>Period</b>                                | <b>Country</b>                             | <b>Sponsoring Institute</b> |
|----------------|-----------|--------------------------------------|----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|--------------------------------------------|-----------------------------|
| 32.            | 12/06     | Mr. K.N.R. Fernando                  | Senior Scientific Officer,<br>Radiation Protection Division,<br>AEA                          | Regional Workshop on Nuclear<br>Security Awareness: Infrastructure                                                            | 02.07.2012<br>04.07.2012<br><b>Postponed</b> | Kuala Lumpur,<br>Malaysia.                 | IAEA                        |
| 33.            | 12/45     | Mr. C. Kasige                        | Senior Deputy Director,<br>General Scientific Division,<br>AEA.                              | International Conference on Radiation<br>Protection in Medicine – Setting the<br>Safe for the Next Decade                     | 03.12.2012<br>07.12.2012                     | Bonn,<br>Germany                           | IAEA                        |
| 34.            | 12/55     | Mr. K.K.P.I.K.<br>Kadadunna          | Senior Scientific Officer,<br>Radiation Protection Division,<br>AEA                          | Nuclear Administration course                                                                                                 | 26.11.2012<br>14.12.2012                     | Vienna,<br>Austria                         | IAEA                        |
| 35.            | 12/55     | Mr. K.N.R. Fernando                  | Senior Scientific Officer,<br>Radiation Protection Division,<br>AEA                          | Nuclear Safety Seminar                                                                                                        | 22.10.2012<br>16.11.2012                     | Vienna,<br>Austria                         | IAEA                        |
| 36.            | 12/68     | Mr. P. S. Shanka<br>Paranahewage     | Senior Scientific Officer,<br>Life Science Division,<br>AEA                                  | Interregional Training Course on<br>Uranium Production from Phosphate<br>Rocks (RAS/7/021)                                    | 10.12.2012<br>14.12.2012                     | Amman,<br>Jordan                           | IAEA                        |
| 37.            | 12/72     | Mrs. S. S. Kulatunga                 | Senior Deputy Director,<br>MGIF,<br>AEA                                                      | IAEA/RCA Final Progress Review<br>Meeting of RAS/8/109 Combining with<br>Project Planning Meeting of<br>RAS/1/014 (RAS/8/109) | 05.12.2012<br>09.12.2012                     | Jakarta<br>Indonesia                       | IAEA                        |
| 38.            | 12/74     | Mrs. H. M. N. L.<br>Handagiripathira | Senior Scientific Officer,<br>Life Science Division,<br>AEA                                  | IAEA/RCA Regional Training Course<br>on Assessment of Radiological Risks at<br>Basic Level (RAS/7/021)                        | 12.12.2012<br>23.12.2012                     | Bangkok<br>Thailand                        | IAEA                        |
| 39.            | 12/75     | Mr. K. R. C. De Silva                | Scientific Officer,<br>Radiation Protection Division<br>AEA                                  | RCARO/KAERI Regional Workshop<br>on Radiation Application Technology                                                          | 08.12.2012<br>19.12.2012                     | Kaeri, Da<br>ejeon<br>Republic<br>of Korea | IAEA                        |
| 40.            | 12/77     | Ms. I.A.N.D. Thilakaratne            | Scientific Officer,<br>Isotope Hydrology Section,<br>Industrial Applications Division<br>AEA | IAEA/RCA Regional Training Course on<br>Environmental Isotope Techniques Applicable<br>to Groundwater Studies (RAS/7/022)     | 03.12.2012<br>07.12.2012                     | Manila,<br>Philippines                     | IAEA                        |

**Participation of AEA Officials in Foreign Seminars / Training Programmes / Workshops / Meetings**

**January - December 2012**

| <b>Se. No.</b> | <b>No</b> | <b>Name of the Officer</b> | <b>Post</b>                                                              | <b>Name of the Programme</b>                                                                                                                                                            | <b>Period</b>            | <b>Country</b>                | <b>Sponsoring Institute</b> |
|----------------|-----------|----------------------------|--------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-------------------------------|-----------------------------|
| 41.            | 12/81     | Mr.M.A.K. Jayathilaka      | Scientific Officer,<br>Non Destructive Testing Section,<br>AEA           | IAEA/RCA Regional Training Course on Application of Digital Radiography and computed Tomography to metal, Automotive ,Aviation, Oil and Chemical Industries (RAS/1/013)                 | 22.10.2012<br>26.10.2012 | Daejeon,<br>Republic of Korea | IAEA                        |
| 42.            | 12/81     | Mr. C. Senaviratne         | Scientific Officer,<br>Non Destructive Testing Section,<br>AEA           | IAEA/RCA Regional Training Course on Application of Digital Radiography and computed Tomography to metal, Automotive ,Aviation, Oil and Chemical Industries (RAS/1/013)                 | 22.10.2012<br>26.10.2012 | Daejeon,<br>Republic of Korea | IAEA                        |
| 43             | 12/84     | Mr. Anil Ranjith           | Senior Deputy Director,<br>Radiation & Protection<br>Regulation Division | IAEA Technical meeting on the Implementing Guide on Threat Assessment and Risk-Informed Approach for Implementation of Nuclear and other Radioactive material out of Regulatory Control | 03.12.2012<br>07.12.2012 | Vienna,<br>Austria            | IAEA                        |
| 44             | 12/86     | Dr. R. L. Wijayawardana    | Chairman,<br>AEA                                                         | Regional Workshop on Building a National Position on a New Nuclear Power Programme. (RAS/2/016)                                                                                         | 11.12.2012<br>14.12.2012 | Bangkok,<br>Thailand          | IAEA                        |
| 45             | 12/87     | Ms. T. G. S. Sanjeevani    | Scientific Officer,<br>Life Science Division,<br>AEA                     | IAEA/RCA Regional Training Course on quality Assurance of Fingerprint and Source Apportionment                                                                                          | 26.11.2012<br>30.11.2012 | Yogyakarta,<br>Indonesia      | IAEA                        |

**Participation of AEA Officials in Foreign Seminars / Training Programmes / Workshops / Meetings**

**January - December 2012**

| <b>Se. No.</b> | <b>No</b> | <b>Name of the Officer</b> | <b>Post</b>                                                                      | <b>Name of the Programme</b>                                                                                                                                                                                | <b>Period</b>            | <b>Country</b>         | <b>Sponsoring Institute</b> |
|----------------|-----------|----------------------------|----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|------------------------|-----------------------------|
| 46             | 12/93     | Mr. U. W. W. H. De Silva   | Senior Scientific Officer,<br>Radiation Protection & Regulation Division,<br>AEA | Regional meeting on self-Assessment against specific safety Guide No 16 Establishing the Safety Infrastructure for a Nuclear Power Programme (RAS/9/059)                                                    | 27.11.2012<br>29.11.2012 | Vienna,<br>Austria.    | IAEA                        |
| 47             | 12/95     | Mr. S. Paranehewage        | Scientific Officer,<br>Life Science Division<br>AEA                              | IAEA/RCA Regional Training Course on application of stable Isotopes (carbon - 13,Nitrogen -15,and Oxygen -18 ) and trace Elements as Tracers of biogeochemical change in the marine Environment (RAS/7/024) | 19.11.2012<br>30.11.2012 | Colombo,<br>Sri Lanka. | IAEA                        |
| 48             | 12/95     | Ms. I. Dissanayake         | Technical Assistant,<br>Life Science Division<br>AEA                             | IAEA/RCA Regional Training Course on application of stable Isotopes (carbon - 13,Nitrogen -15,and Oxygen -18 ) and trace Elements as Tracers of biogeochemical change in the marine Environment(RAS/7/024)  | 19.11.2012<br>30.11.2012 | Colombo,<br>Sri Lanka. | IAEA                        |
| 49             | 12/95     | Ms. R. W. D. Madusha       | Scientific Officer,<br>Life Science Division<br>AEA                              | IAEA/RCA Regional Training Course on application of stable Isotopes (carbon - 13,Nitrogen -15,and Oxygen -18 ) and trace Elements as Tracers of biogeochemical change in the marine Environment(RAS/7/024)  | 19.11.2012<br>30.11.2012 | Colombo,<br>Sri Lanka. | IAEA                        |
| 50             | 12/95     | Ms. S. Sanjeewani,         | Scientific Officer,<br>Life Science Division<br>AEA                              | IAEA/RCA Regional Training Course on application of stable Isotopes (carbon - 13,Nitrogen -15,and Oxygen -18 ) and trace Elements as Tracers of biogeochemical change in the marine Environment(RAS/7/024)  | 19.11.2012<br>30.11.2012 | Colombo,<br>Sri Lanka. | IAEA                        |

**Participation of AEA Officials in Foreign Seminars / Training Programmes / Workshops / Meetings**  
**January - December 2012**

| Se. No. | No     | Name of the Officer       | Post                                                                            | Name of the Programme                                                                                                                                                                                                                                     | Period                   | Country                                                       | Sponsoring Institute |
|---------|--------|---------------------------|---------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|---------------------------------------------------------------|----------------------|
| 51      | 12/98  | Dr. R. L. Wijayawardana   | Chairman,<br>AEA                                                                | Bilateral Consultation on Exchange of Information related to Nuclear Safety and Cooperation between Bhabha Atomic Research Centre (BARC) of India and the Atomic Energy Authority of Sri Lanka                                                            | 11.10.2012<br>13.10.2012 | India                                                         | Gov. of SL           |
| 52      | 12/98  | Mr. Anil Ranjith          | Senior Deputy Director,<br>Radiation & Protection<br>Regulation Division<br>AEA | Bilateral Consultation on Exchange of Information related to Nuclear Safety and Cooperation between Bhabha Atomic Research Centre (BARC) of India and the Atomic Energy Authority of Sri Lanka                                                            | 11.10.2012<br>13.10.2012 | India                                                         | Gov. of SL           |
| 53      | 12/99  | Ms. Tilaka Nanda          | Technical Assistant, ,<br>Life Science Division,<br>AEA                         | IAEA/RCA Workshop on Extrapolation of Soil Fallout Radionuclides (FRN) Based In Information on land Degradation status from Files to Landscape Level and on Preparation of standard operating procedures for Laboratories and Field Sampling. (RAS/5/055) | 10.12.2012<br>21.12.2012 | Henan Normal University, Xinxiang City, Henan Province, China | IAEA                 |
| 54      | 12/101 | Mrs. S. S. Kulathunga     | Senior Deputy Director,<br>MGIF.<br>AEA                                         | MGIF-quality Assurance Inspection of the Irradiator Machinery Manufactured by the SYMEC Engineering PVT Ltd                                                                                                                                               | 22.10.2012<br>24.10.2012 | India                                                         | IAEA                 |
| 55      | 12/102 | Mr. R. M. M. P. Ranaweera | Technical Assistant,<br>Radiation Processing Section,<br>AEA                    | The International Centre for Theoretical Physics (ICTP)-IAEA School 01) "Nuclear Energy Management"                                                                                                                                                       | 05.11.2012<br>23.11.2012 | Trieste, Italy.                                               | Gov. of SL           |

**The IAEA Fellowships and Scientific Visits Awarded**  
**January - July 2012**

| <b>No</b> | <b>Fellowship No.</b> | <b>Name, Designation &amp; Institute</b>                                                   | <b>Field of Fellowships / Scientific Visits</b>                                                                           | <b>Country</b>   | <b>Duration</b>          |
|-----------|-----------------------|--------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|------------------|--------------------------|
| 01<br>.   | SRL12002              | Mr. H.M.N.R. Bandara,<br>Administrative Officer,<br>International Cooperation Div.,<br>AEA | Technical Cooperation Among<br>Developing Countries (TCDC)                                                                | Vienna, Austria  | 21.05.2012<br>05.07.2012 |
| 02<br>.   | SRL12008<br>12/39     | Ms. M.D. Kalpage,<br>Scientific Officer,<br>Life Sciences Division,<br>AEA                 | Group Fellowship (one month) on<br>Agricultural Water Management to<br>Support Crop Production in Asia and<br>the Pacific | Vienna, Austria. | 23.07.2012<br>17.08.2012 |

**Other Officials for the Participation in Foreign Seminars / Training Programmes / Workshops / Meetings**  
**January - December 2012**

| <b>Se. No.</b> | <b>No</b> | <b>Name of the Officer</b>      | <b>Post</b>                                                                                   | <b>Name of the Programme</b>                                                                                                 | <b>Period</b>            | <b>Country</b>         | <b>Sponsoring Institute</b> |
|----------------|-----------|---------------------------------|-----------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|--------------------------|------------------------|-----------------------------|
| 1.             | 12/01     | Mr. C. Weerasekera,             | Engineering Manager (Inspection), Refinery Division, Ceylon Petroleum Corporation, Kelaniya.  | IAEA/RCA Regional Training Course on Capacity Building for Enhanced Gamma Scanning of Industrial Process Columns (RAS/8/111) | 20.02.2012<br>24.02.2012 | Bangkok, Thailand.     | IAEA                        |
| 2.             | 12/02     | Dr. M.A.Y. Ariyaratne,          | Consultant Oncologist, National Cancer Institute, Maharagama.                                 | FNCA FY 2011 Workshop on Radiation Oncology (RAS/6/053)                                                                      | 10.01.2012<br>13.01.2012 | Suzhou, China.         | IAEA                        |
| 3.             | 12/07     | Dr. (Mrs.) S.P. Weerasinghe,    | Consultant Oncologist, National Cancer Institute, Maharagama.                                 | IAEA/RCA Training Course on Image Based Radiotherapy (Uro-genital) (RAS/6/053)                                               | 05.03.2012<br>09.03.2012 | Maebashi, Gunma, Japan | IAEA                        |
| 4.             | 12/07     | Mr. Dilan Fernando,             | Medical Physicist, National Cancer Institute, Maharagama.                                     | IAEA/RCA Training Course on Image Based Radiotherapy (Uro-genital) (RAS/6/053)                                               | 05.03.2012<br>09.03.2012 | Maebashi, Gunma, Japan | IAEA                        |
| 5.             | 2/07-I    | Dr. Shanthi Wilson,             | Deputy Director (R&D), Industrial Technology Institute, 363, Bauddhaloka Mawatha, Colombo 07. | IAEA/RCA Final Progress Review Meeting of Project RAS/5/050, Combining with Project Planning Meeting RAS/5/057               | 26.03.2012<br>30.03.2012 | Hanoi, Vietnam         | IAEA                        |
| 6.             | 12/08     | Dr. (Mrs.) E.R.S.P. Edirimanna, | Research Officer, HORDI, Gannoruwa, Peradeniya.                                               | IAEA/RCA Project Planning and Coordination Meeting (RAS/5/056)                                                               | 10.04.2012<br>13.04.2012 | Vienna, Austria.       | IAEA                        |
| 7.             | 12/09     | Dr. (Mrs.) D.K.K. Nanayakkara   | Lecturer, Nuclear Medicine Unit, University of Peradeniya, Peradeniya.                        | IAEA/RCA Initial Project Coordination Meeting (RAS/6/061)                                                                    | 19.03.2012<br>23.03.2012 | Chiang, Mai, Thailand  | IAEA                        |



**Other Officials for the Participation in Foreign Seminars / Training Programmes / Workshops / Meetings**  
**January - December 2012**

| <b>Se. No.</b> | <b>No</b> | <b>Name of the Officer</b>    | <b>Post</b>                                                                                            | <b>Name of the Programme</b>                                                                                                                  | <b>Period</b>            | <b>Country</b>              | <b>Sponsoring Institute</b> |
|----------------|-----------|-------------------------------|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-----------------------------|-----------------------------|
| 8.             | 12/16     | Mr. R.N. Priyadarshana        | Assistant Manager,<br>Marine Environmental Protection Authority,<br>Baseline Road, Dematagoda.         | IAEA/RCA Regional Training Course on Use of Quality Management System for New Entrant (RAS/7/021)                                             | 16.04.2012<br>20.04.2012 | Jeju-do, Republic of Korea. | IAEA                        |
| 9.             | 12/17     | Dr. (Ms.) D.K.A. Perera,      | Consultant Clinical Oncologist,<br>National Cancer Institute,<br>Maharagama.                           | IAEA/RCA Project Planning Meeting (RAS/6/065)                                                                                                 | 11.06.2012<br>15.06.2012 | Seoul, Republic of Korea.   | IAEA                        |
| 10.            | 12/22     | Dr. Janitha A. Liyanage,      | AEA Board Member.                                                                                      | Seminar on International Scientific Spring                                                                                                    | 05.03.2012<br>09.03.2012 | Islamabad, Pakistan.        | IAEA                        |
| 11.            | 12/25     | Mr. S.D.M. Chinthaka          | Senior Lecturer,<br>Department of Chemistry,<br>University of Sri Jayewardenepura                      | MEXT The Nuclear Researchers Exchange Programme – 2012                                                                                        |                          | Japan                       | MEXT                        |
| 12.            | 12/32     | Dr. W.K.B.N. Prame            | Deputy Director (Geology),<br>Geological Survey & Mines Bureau,<br>569, Epitamulla Road,<br>Pitakotte. | INT/2/015 – International Planning and Coordination Meeting with Focus on “Uranium Exploration and Production Priorities Outlook” (INT/2/015) | 26.06.2012<br>29.06.2012 | Espoo, Finland.             | IAEA                        |
| 13.            | 12/33     | Dr. (Mrs.) D.K.K. Nanayakkara | Senior Lecturer,<br>Nuclear Medicine Unit,<br>Faculty fo Medicine,<br>University of Peradeniya.        | IAEA/RCA Project Coordination Meeting and Task Force Meeting (RAS/6/063)                                                                      | 02.07.2012<br>06.07.2012 | Quezon City, Philippines    | IAEA                        |
| 14.            | 12/35     | Mrs. J.S.A. Arachchi,         | Research Officer,<br>UN & MA Division,<br>Ministry of External Affairs,<br>Colombo 01.                 | Topical Meeting on Sensitizing the Member States on the Integrated Nuclear Security Support Plans (INSSPs)                                    | 06.06.2012<br>08.06.2012 | Vienna, Austria.            | IAEA                        |
| 15.            | 12/35     | Mr. W.D.A.S. Wijayapala,      | Vice Chairman,<br>Ceylon Electricity Board,<br>540, Colombo 02.                                        | Topical Meeting on Sensitizing the Member States on the Integrated Nuclear Security Support Plans (INSSPs)                                    | 06.06.2012<br>08.06.2012 | Vienna, Austria.            | IAEA                        |

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| <b>Se. No.</b> | <b>No</b> | <b>Name of the Officer</b> | <b>Post</b>                                                                                                                                                                             | <b>Name of the Programme</b>                                                                                                                                                         | <b>Period</b>            | <b>Country</b>          | <b>Sponsoring Institute</b> |
|----------------|-----------|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-------------------------|-----------------------------|
| <b>16.</b>     | 12/36     | Mr. H.G.R.S. Gamini        | Therapist,<br>National Cancer Institute,<br>Maharagama.                                                                                                                                 | Regional Training Course on QUATRO Auditors, Group I, East Asia (RAS/6/070)                                                                                                          | 02.07.2012<br>06.07.2012 | Jakarta, Indonesia      | IAEA                        |
| <b>17.</b>     | 12/36     | Mr. K.V.A.W. Kumara        | Senior Medical Physicist,<br>National Cancer Institute,<br>Maharagama.                                                                                                                  | Regional Training Course on QUATRO Auditors, Group I, East Asia (RAS/6/070)                                                                                                          | 02.07.2012<br>06.07.2012 | Jakarta, Indonesia      | IAEA                        |
| <b>18.</b>     | 12/36     | Dr. N. Jeyakumarana        | Director,<br>Teaching Hospital, Jaffna.                                                                                                                                                 | Regional Training Course on QUATRO Auditors, Group I, East Asia (RAS/6/070)                                                                                                          | 02.07.2012<br>06.07.2012 | Jakarta, Indonesia      | IAEA                        |
| <b>19.</b>     | 12/44     | Mr. G.R.H.U. Somapriya     | Electrical Engineer,<br>Ceylon Electricity Board,<br>Protection Development Section,<br>Kent Road, Colombo 09.                                                                          | Workshop on Fundamentals of Security for Nuclear Facilities and Materials,                                                                                                           | 11.06.2012<br>15.06.2012 | London, United Kingdom. | IAEA                        |
| <b>20.</b>     | 12/47     | Dr. C.P. Wickramasinghe    | Veterinary Investigatin Officer,<br>Veterinay Investigation Centre,<br>Hambantota.                                                                                                      | IAEA First Coordination Meeting for Technical Cooperation on Supporting Early Warning Response and Control of Transboundary Animal Diseases (RAS/5/060)                              | 03.07.2012<br>06.07.2012 | Lanzhou, China          | IAEA                        |
| <b>21.</b>     | 12/47     | Dr. A. Arulkanthan         | Senior Lecturer in Veterinary Pathobiology & Head,<br>Department of Veterinay Pathobiology<br>Faculty of Veterinary Medicine & Animal Science,<br>University of Peradeniya, Peradeniya. | IAEA First Coordination Meeting for Technical Cooperation on Supporting Early Warning Response and Control of Transboundary Animal Diseases (RAS/5/060)                              | 03.07.2012<br>06.07.2012 | Lanzhou, China          | IAEA                        |
| <b>22.</b>     | 12/48     | Dr. R.G.S.A.S. Rajapakse,  | Research Officer,<br>Horticultural Research & Development Institute,<br>Gannoruwa, Peradeniya.                                                                                          | IAEA/RCA Regional Executive Management Meeting for Policy Makers and End-Users on Green Radiation Processing for Agricultural, Environmental and Industrial Applications (RAS/8/109) | 27.08.2012<br>31.08.2012 | Ho Chi Minh, Vietnam.   | IAEA                        |

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| <b>Se. No.</b> | <b>No</b> | <b>Name of the Officer</b>     | <b>Post</b>                                                                                        | <b>Name of the Programme</b>                                                                                                                                                  | <b>Period</b>            | <b>Country</b>           | <b>Sponsoring Institute</b> |
|----------------|-----------|--------------------------------|----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------|-----------------------------|
| 23.            | 12/49     | Ms.S.N.C.W.M.P.S.K. Hulugalla  | Medical Physicist, Teaching Hospital, Kurunegala.                                                  | IAEA/RCA Regional Training Course on Radiotherapy Techniques with Emphasis on Imaging and Treatment Planning (RAS/6/038)                                                      | 03.09.2012<br>07.09.2012 | Beijing, China           | IAEA                        |
| 24.            | 12/49     | Ms. A.S. Munasinghe            | Medical Physicist, Cancer Unit, Teaching Hospital, Galle.                                          | IAEA/RCA Regional Training Course on Radiotherapy Techniques with Emphasis on Imaging and Treatment Planning (RAS/6/038)                                                      | 03.09.2012<br>07.09.2012 | Beijing, China           | IAEA                        |
| 25.            | 12/53     | Dr.(Ms)D.K.K. Nanayakkara,     | Senior Lecturer, Nuclear Medicine Unit, Faculty of Medicine, University of Peradeniya, Peradeniya. | IAEA/RCA Project Coordination Meeting in Quezon, City, Philippines (Project Coordination Meeting: - Task Force Meeting) (RAS/6/063),                                          | 02.07.2012<br>06.07.2012 | Quezon City, Philippines | IAEA                        |
| 26.            | 12/54     | Dr. M.K.A.P. Madawala          | Counsultatn Oncologist, Teaching Hospital, Kurunegala.                                             | IAEA/RCA Training Course on Image Based RT for Head and Neck and Breast (RAS/6/053)                                                                                           | 01.10.2012<br>05.10.2012 | Mumbai, India            | IAEA                        |
| 27.            | 12/54     | Mr. P.D.A. Fernando            | Medical Physicist, National Cancer Institute, Maharagama.                                          | IAEA/RCA Training Course on Image Based RT for Head and Neck and Breast (RAS/6/053)                                                                                           | 01.10.2012<br>05.10.2012 | Mumbai, India            | IAEA                        |
| 28.            | 12/56     | Dr. (Mrs.) W.M.N.D. Paranagama | Director, Cancer Control Programme, Colombo 05.                                                    | World's Cancer Leader Summit & Congress, Montieal,                                                                                                                            | 26.08.2012<br>30.08.2012 | Canada                   | IAEA                        |
| 29.            | 12/58     | Mr. J.H.J.K. de Silva          | Medical Physicist, Cancer Unit, General Hospital, Badulla.                                         | Strengthening the Transfer of Experience Related to Occupational Radiation Protection of the Nuclear Industry and Other Applications Involving Ionizing Radiation (RAS/9/064) | 15.10.2012<br>19.10.2012 | Kajang, Malaysia         | IAEA                        |

**Other Officials for the Participation in Foreign Seminars / Training Programmes / Workshops / Meetings**  
**January - December 2012**

| <b>Se. No.</b> | <b>No</b> | <b>Name of the Officer</b> | <b>Post</b>                                                                                               | <b>Name of the Programme</b>                                                                                                                                        | <b>Period</b>            | <b>Country</b>                     | <b>Sponsoring Institute</b> |
|----------------|-----------|----------------------------|-----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|------------------------------------|-----------------------------|
| <b>30.</b>     | 12/60     | Mr.T.W.K.I. Pushpakumara   | Assistant Director (Emergency Operation),<br>Disaster Management Centre,<br>Vidya Mawatha,<br>Colombo 07. | Regional Training Course on ERR-Method for Application of GSR-2 on Developing a National Capability for Response to Nuclear or Radiological Emergencies (RAS/9/068) | 23.09.2012<br>27.09.2012 | Abu-Dhabi,<br>United Arab Emirates | IAEA                        |
| <b>31.</b>     | 12/62     | Prof. W. Abeyewickreme     | AEA Board Member                                                                                          | 56 <sup>th</sup> Annual Regular Sessions of the International Atomic Energy Agency (IAEA) General Conference                                                        | 17.09.2012<br>21.09.2012 | Vienna,<br>Austria                 | Govt. of Sri Lanka          |
| <b>32.</b>     | 12/62     | Mr. M.G.A. Goonatilaka     | AEA Board Member                                                                                          | 56 <sup>th</sup> Annual Regular Sessions of the International Atomic Energy Agency (IAEA) General Conference                                                        | 17.09.2012<br>21.09.2012 | Vienna,<br>Austria                 | Govt. of Sri Lanka          |
| <b>33.</b>     | 12/65     | Prof. Y.R.P. Hettige       | Senior Lecturer,<br>Department of Electrical Engineering,<br>University of Moratuwa.                      | International Training Course on Safeguard and Security for Newcomers (INR/2/013)                                                                                   | 08.10.201<br>12.10.2012  | Helsinki,<br>Finland               | IAEA                        |
| <b>34.</b>     | 12/90     | Dr.(Mrs.) S.P. Weerasinghe | Consultant Oncologist,<br>National Cancer Institute,<br>Maharagama.                                       | 5 <sup>th</sup> Global Summit on International Breast Health and Cancer Control                                                                                     | 03.10.2012               | Vienna,<br>Austria                 | IAEA                        |
| <b>35.</b>     | 12/51     | Mr. A. H. Dilip Kumar      | Senior Medical Physicist<br>Teaching Hospital<br>Karapitiya                                               | Group Scientific Visit on Radiation Protection in Diagnostic and Interventional Radiology                                                                           | 07.11.2012<br>13.11.2012 | Udine,<br>Italy                    | IAEA                        |
| <b>36.</b>     | 12/67     | Mr.D.M.D.O.K. Dissanayake  | Senior Lecturer,<br>Department of Earth Resource Engineering,<br>University of Moratuwa                   | Interregional IAEA-CYTED-UNECE Workshop on Recent Developments in Evaluation of Uranium & Thorium Resources                                                         | 15.10.2012<br>18.10.2012 | Lisbon,<br>Portugal                | IAEA                        |
| <b>37.</b>     | 12/67     | Dr. W.K.B.N. Prame         | Deputy Director (Geology),<br>Geological Survey & Mines Bureau,<br>569, Epitamullad Road,<br>Pitakotte.   | Interregional IAEA-CYTED-UNECE Workshop on Recent Developments in Evaluation of Uranium & Thorium Resources                                                         | 15.10.2012<br>18.10.2012 | Lisbon,<br>Portugal                | IAEA                        |

**Other Officials for the Participation in Foreign Seminars / Training Programmes / Workshops / Meetings**  
**January - December 2012**

| <b>Se. No.</b> | <b>No</b> | <b>Name of the Officer</b>   | <b>Post</b>                                                                          | <b>Name of the Programme</b>                                                                                     | <b>Period</b>            | <b>Country</b>                 | <b>Sponsoring Institute</b> |
|----------------|-----------|------------------------------|--------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------------|-----------------------------|
| <b>38.</b>     | 12/68     | Mr. A. M. M. Rathnayake      | Geologist,<br>Geological Survey & Mines Bureau                                       | Interregional Training Course on uranium production from phosphate Rocks (INT/2/015)                             | 10.12.2012<br>14.12.2012 | Amman,<br>Jordan               | IAEA                        |
| <b>39.</b>     | 12/68     | Dr. H. M. T. G. A. Pitawala  | Senior Lecturer<br>Dept.of Geology,<br>University Of Peradeniya                      | Interregional Training Course on uranium production from phosphate Rocks (INT/2/015)                             | 10.12.2012<br>14.12.2012 | Amman,<br>Jordan               | IAEA                        |
| <b>40.</b>     | 12/68     | Dr. H. A. Dharmagunawardhana | Senior Lecturer,<br>Dept.of Geology,<br>University of Peradeniya.                    | Interregional Training Course on uranium production from phosphate Rocks (INT/2/015)                             | 10.12.2012<br>14.12.2012 | Amman,<br>Jordan               | IAEA                        |
| <b>41.</b>     | 12/69     | Mrs.I.K.Warshamana           | Research Officer,<br>National Plant Quarantine<br>Services,Katunayake.               | IAEA/RCA Workshop on Best Practice for Phytosanitary Applications of food Irradiation (RAS/5/057)                | 22.12.2012<br>26.12.2012 | Jeongeup,<br>Republic of Korea | IAEA                        |
| <b>42.</b>     | 12/69     | Dr.H.M.H.D.B Herath          | Deputy Director,<br>Environmental & Occupational Health,<br>Min.of Health,Colombo 10 | IAEA/RCA Workshop on Best Practice for Phytosanitary Applications of food Irradiation (RAS/5/057)                | 22.12.2012<br>26.12.2012 | Jeongeup,<br>Republic of Korea | IAEA                        |
| <b>43.</b>     | 12/70     | Dr.M.A.Y.Ariyaratne          | Consultant Oncologist, National Cancer Institute,<br>Maharagama                      | IAEA/RCA Training Course on Stereotactic Body Radiotherapy : Basic Concepts and Early Implementation (RAS/6/065) | 03.12.2012<br>07.12.2012 | Singapore                      | IAEA                        |
| <b>44.</b>     | 12/70     | Mr.W.V.A.W.Kumara            | Medical Physicist,<br>National Cancer Institute,<br>Maharagama                       | IAEA/RCA Training Course on Stereotactic Body Radiotherapy : Basic Concepts and Early Implementation(RAS/6/065)  | 03.12.2012<br>07.12.2012 | Singapore                      | IAEA                        |

**Other Officials for the Participation in Foreign Seminars / Training Programmes / Workshops / Meetings**  
**January - December 2012**

| <b>Se. No.</b> | <b>No</b> | <b>Name of the Officer</b>      | <b>Post</b>                                                                                                        | <b>Name of the Programme</b>                                                                                                                                                           | <b>Period</b>            | <b>Country</b>             | <b>Sponsoring Institute</b> |
|----------------|-----------|---------------------------------|--------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|----------------------------|-----------------------------|
| 45.            | 12/74     | Mr.Pandula T.Kirinde Arachchige | Lecturer,<br>Dept.of Limnology,Fac.of Fisheries & marine Sciences & Technology,<br>University of Ruhuna,<br>Matara | IAEA/RCA Regional Training Course on Assessment of Radiological Risks at Basic Level (RAS/7/021)                                                                                       | 12.12.2012<br>23.12.2012 | Bangkok<br>Thailand        | IAEA                        |
| 46.            | 12/76     | Prof. M.P. Dias,                | Senior Lecturer,<br>Dept.of Electrical Engineering,<br>University of Moratuwa                                      | Regional meeting on Successful Launching of Nuclear Power Programme (RAS/2/016)                                                                                                        | 29.10.2012<br>09.11.2012 | Seoul<br>Republic of Korea | IAEA                        |
| 47.            | 12/77     | Mr. G.R.R. Karunaratne          | Assistant General Manager (Hydrology),<br>Water Resources Board.                                                   | IAEA/RCA Regional Training Course on Environmental Isotope Techniques Applicable to Groundwater Studies (RAS/7/022)                                                                    | 03.12.2012<br>07.12.2012 | Manila,<br>Philippines     | IAEA                        |
| 48.            | 12/80     | Mr.W.T.U.S.De.Silva             | Assistant Director,<br>Geological Survey & Mines Bureau,<br>Pitawotte                                              | Interregional Training Course on Uranium Deposit models and Exploration (INT/2/015)                                                                                                    | 12.11.2012<br>16.11.2012 | Beijing,<br>China.         | IAEA                        |
| 49.            | 12/80     | Prof.R.L.R.Chandrajith          | Dept.of Geology.,<br>Univercity of Peradeniya.                                                                     | Interregional Training Course on Uranium Deposit models and Exploration (INT/2/015)                                                                                                    | 12.11.2012<br>16.11.2012 | Beijing,<br>China.         | IAEA                        |
| 50.            | 12/82     | Ms.R.N.I.Perera                 | Research Officer,<br>HORDI,<br>Department of Agriculture,<br>Gannoruwa.                                            | IAEA/RCA Regional Training Course on Application of molecular markers to mutation focus on traits Contributing to Better Adaptation (Biotic and Abiotic Stress Resistance) (RAS/5/056) | 15.10.2012<br>19.10.2012 | Perth,<br>Australia        | IAEA                        |

**Other Officials for the Participation in Foreign Seminars / Training Programmes / Workshops / Meetings**  
**January - December 2012**

| <b>Se. No.</b> | <b>No</b> | <b>Name of the Officer</b>     | <b>Post</b>                                                                                           | <b>Name of the Programme</b>                                                                                                                                                                       | <b>Period</b>            | <b>Country</b>       | <b>Sponsoring Institute</b> |
|----------------|-----------|--------------------------------|-------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|----------------------|-----------------------------|
| 51.            | 12/82     | Ms.H.P.Anusha                  | Research Officer,<br>Grain Wegume & oil Crops<br>Research & Development<br>Centre, Angunawolappksa    | IAEA/RCA Regional Training Course on<br>Application of molecular markers to<br>mutation focus on traits Contributing to<br>Better Adaptation (Biotic and Abiotic<br>Stress Resistance) (RAS/5/056) | 15.10.2012<br>19.10.2012 | Perth,<br>Australia  | IAEA                        |
| 52.            | 12/86     | Dr.W.Abeyewichreme             | Chairman,<br>Ceylon Electricity Board                                                                 | Regional Workshop on Building a<br>National Position on a New Nuclear<br>Power Programme. (RAS/2/016)                                                                                              | 11.12.2012<br>14.12.2012 | Bangkok,<br>Thailand | IAEA                        |
| 53.            | 12/88     | Dr.D.K.K.Nanayakkara           | Senior Lecture,<br>Nuclear Medicine Unit,<br>Faculty of Medicine,<br>Univesity of Peradeniya          | IAEA/RCA Regional Training Course on<br>Imaging in Ischemic Heart Disease and<br>Cardiac Failure (RAS/6/063)                                                                                       | 10.12.2012<br>14.12.2012 | Yangon,<br>Myanmar   | IAEA                        |
| 54.            | 12/89     | Dr.Janitha<br>Abeyewickrema    | Board Member,<br>AEA                                                                                  | Regional meeting on Supporting Nuclear<br>Education and Training through E-<br>learning (RAS/0/064)                                                                                                | 10.12.2012<br>13.12.2012 |                      | IAEA                        |
| 55.            | 12/90     | Dr. (Mrs.)<br>S.P.Weerasinghe, | Consultant Oncologist,<br>Community Physician,<br>National Cancer Institute,<br>Maharagama.           | 5 <sup>th</sup> Global Summit on International<br>Breast Health and Cancer Control                                                                                                                 | 03.10.2012<br>05.10.2012 | Vienna,<br>Austria   | IAEA                        |
| 56.            | 12/90     | Dr. (Ms.) C. Vithana,          | Consultant Oncologist,<br>Community Physician,<br>National Cancer Control<br>Programme,<br>Colombo 05 | 5 <sup>th</sup> Global Summit on International<br>Breast Health and Cancer Control                                                                                                                 | 03.10.2012<br>05.10.2012 | Vienna,<br>Austria   | IAEA                        |
| 57.            | 12/92     | Dr.Thushari<br>Hapuarachchi    | Consultant Oncologist,<br>Teaching Hospital,<br>Anuradapura.                                          | IAEA/RCA Training Course on Basic<br>Concepts of 3D Image-Gutted<br>Brachytherapy for Cervical Cancer<br>(RAS/6/062)                                                                               | 10.12.2012<br>14.12.2012 | Mumbai,<br>India     | IAEA                        |

**Other Officials for the Participation in Foreign Seminars / Training Programmes / Workshops / Meetings**  
**January - December 2012**

| <b>Se. No.</b> | <b>No</b> | <b>Name of the Officer</b> | <b>Post</b>                                                                                                     | <b>Name of the Programme</b>                                                                                                                                                                                | <b>Period</b>            | <b>Country</b>                | <b>Sponsoring Institute</b> |
|----------------|-----------|----------------------------|-----------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-------------------------------|-----------------------------|
| 58.            | 12/92     | Mrs.D.P.De.Silva,          | Medical Physicist,<br>Teaching Hospital,<br>Karapitiya.                                                         | IAEA/RCA Training Course on Basic Concepts of 3D Image-Guided Brachytherapy for Cervical Cancer (RAS/6/062)                                                                                                 | 10.12.2012<br>14.12.2012 | Mumbai,<br>India              | IAEA                        |
| 59.            | 12/94     | Mr.C.R.K.Gamage            | Deputy Engineering Manager (Inspection),<br>Ceylon Petroleum Corporation,<br>Refinery,<br>Sapugushund,Welaniya. | IAEA/RCA Regional Training Course on Monte Carlo Simulations for CT.RPT,SPECT and Design of Radiotracer Experiments (RAS/1/012)                                                                             | 03.12.2012<br>07.12.2012 | Daejeon,<br>Republic of Korea | IAEA                        |
| 60.            | 12/95     | Dr.Mahendra Deeyandalla    | Senior Lecturer,<br>University of Kelaniya                                                                      | IAEA/RCA Regional Training Course on application of stable Isotopes (carbon - 13,Nitrogen -15,and Oxygen -18 ) and trace Elements as Tracers of biogeochemical change in the marine Environment (RAS/7/024) | 19.11.2012<br>30.11.2012 | Colombo,<br>Sri Lanka.        | IAEA                        |
| 61.            | 12/95     | Ms.Imalka Madumali         | Marine Environment Officer,<br>Marine Environment Protection Authority                                          | IAEA/RCA Regional Training Course on application of stable Isotopes (carbon - 13,Nitrogen -15,and Oxygen -18 ) and trace Elements as Tracers of biogeochemical change in the marine Environment (RAS/7/024) | 19.11.2012<br>30.11.2012 | Colombo,<br>Sri Lanka.        | IAEA                        |
| 62.            | 12/95     | Dr.R.A.Maithreepala        | Senior Lecturer,Fac.of Fisheries & Marine Biology,<br>University of Ruhuna                                      | IAEA/RCA Regional Training Course on application of stable Isotopes (carbon - 13,Nitrogen -15,and Oxygen -18 ) and trace Elements as Tracers of biogeochemical change in the marine Environment (RAS/7/024) | 19.11.2012<br>30.11.2012 | Colombo,<br>Sri Lanka.        | IAEA                        |



**Other Officials for the Participation in Foreign Seminars / Training Programmes / Workshops / Meetings**  
**January - December 2012**

| <b>Se. No.</b> | <b>No</b> | <b>Name of the Officer</b>    | <b>Post</b>                                                                                 | <b>Name of the Programme</b>                                                                                                                                                                                                                                                   | <b>Period</b>            | <b>Country</b>                                                                     | <b>Sponsoring Institute</b> |
|----------------|-----------|-------------------------------|---------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|------------------------------------------------------------------------------------|-----------------------------|
| 63.            | 12/96     | Dr.D.K.K.Nanayakkara          | Senior Lecturer,<br>Fac.of Medicine , Nuclear<br>Medicine Unit,<br>University of Peradeniya | Interregional Training Course on Quality<br>Management Audits in Nuclear medicine<br>Practices (QUANUM) master's Course :<br>Train the Trainers INT/6/056 Supporting<br>quality Management Audits in Nuclear<br>Medicine Practices (QUANUM)<br>(INT/6/056)                     | 05.11.2012<br>09.11.2012 | Bangkok,<br>Thailand                                                               | IAEA                        |
| 64.            | 12/98     | Prof.K.K.Y.W.Perera           | Senior Consultant,<br>Ministry of Power and<br>Energy,<br>Colombo 07                        | Bilateral Consultation on Exchange of<br>Information related to Nuclear Safety and<br>Cooperation between Bhabha Atomic<br>Research Centre (BARC) of India and the<br>Atomic Energy Authority of Sri Lanka                                                                     | 11.10.2012<br>13.10.2012 | India                                                                              | Gov. of<br>SL               |
| 65.            | 12/98     | Mr.R.J.Gunawardana,           | Additional Secretary (tech),<br>Ministry of Power and<br>Energy, Colombo 07                 | Bilateral Consultation on Exchange of<br>Information related to Nuclear Safety and<br>Cooperation between Bhabha Atomic<br>Research Centre (BARC) of India and the<br>Atomic Energy Authority of Sri Lanka                                                                     | 11.10.2012<br>13.10.2012 | India                                                                              | Gov. of<br>SL               |
| 66.            | 12/99     | Mr. Chandrapala<br>Gameralage | Natural Resources<br>Management Centre,<br>Department of Agriculture                        | IAEA/RCA Workshop on Extrapolation<br>of Soil Fallout Radionuclides (FRN)<br>Based In Information on land<br>Degradation status from Files to<br>Landscape Level and on Preparation of<br>standard operating procedures for<br>Laboratories and Field Sampling.<br>(RAS/5/055) | 10.12.2012<br>21.12.2012 | Henan<br>Normal<br>University,<br>Xinxiang<br>City,<br>Henan<br>Province,<br>China | IAEA                        |

**Other Officials for the Participation in Foreign Seminars / Training Programmes / Workshops / Meetings**  
**January - December 2012**

| <b>Se. No.</b> | <b>No</b> | <b>Name of the Officer</b> | <b>Post</b>                                                                                    | <b>Name of the Programme</b>                                                                             | <b>Period</b>            | <b>Country</b>           | <b>Sponsoring Institute</b> |
|----------------|-----------|----------------------------|------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|--------------------------|--------------------------|-----------------------------|
| 67.            | 12/100    | Dr. L. Watawana,           | Senior Lecturer,<br>Nuclear Medicine Unit,<br>Faculty of Medicine,<br>University of Peradeniya | IAEA/RCA Training Course on quality<br>Reporting of Hybrid Imaging Procedures<br>in Oncology (RAS/6/061) | 19.11.2012<br>23.11.2012 | Vienna,<br>Austria       | IAEA                        |
| 68.            | 12/105    | Prof. W.<br>Abeyewickrema, | Faculty of Medicine,<br>University of Kelaniya                                                 | RAF 5065/9002/01-Second Coordination<br>and Consultative Meeting                                         | 29.10.2012<br>02.11.2012 | Victoria,<br>Seychelles. | IAEA                        |

**The IAEA Fellowships and Scientific Visits Awarded**  
**January - July 2012**

| <b>No</b> | <b>Fellowship No.</b> | <b>Name, Designation &amp; Institute</b>                                                           | <b>Field of Fellowships / Scientific Visits</b>                                                                           | <b>Country</b>   | <b>Duration</b>          |
|-----------|-----------------------|----------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|------------------|--------------------------|
| 01.       | SRL12008<br>12/39     | Mr. M.H.J.P. Gunaratne,<br>Temporary Lecturer<br>Faculty of Agriculture,<br>University of Rajarata | Group Fellowship (one month) on<br>Agricultural Water Management to<br>Support Crop Production in Asia and<br>the Pacific | Vienna, Austria. | 23.07.2012<br>17.08.2012 |

**IAEA Expert Assistance**  
**January – December 2012**

| <b>No</b> | <b>Project No. &amp; Title</b>                                                                                                                   | <b>Name and Nationality</b>         | <b>Field of Specialty</b>                                                                                                                                                                 | <b>Institution</b>                                                                                                             | <b>Duration</b>          |
|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| 01.       | RCA Project RAS/7/019<br>“Demonstration of the use of environmental isotope techniques in identifying Pollution Sources”                         | Dr. Riffat Mahmood<br>(Pakistan)    | Use of Nuclear Techniques for Monitoring of Marine Pollutions and Carbon 14 Studies                                                                                                       | Atomic Energy Authority<br>Marine Environment<br>Protection Authority<br>(MEPA)                                                | 09.01.2012<br>13.01.2012 |
| 02.       | Technical Cooperation Project SRL/5/043<br>“Technical Support for the Establishment and Operation of a Multi-Purpose Gamma Irradiation Facility” | Dr. Manfred Frenzel<br>(Germany)    | On Inspection and Certification of the parts to be embedded in the gamma irradiator facility constructing in Sri Lanka                                                                    | Mrs. S.S. Kulatunge, SDD, MGIF , Senior Scientific Officer, General Scientific Division of Atomic Energy Authority             | 22.10.2012<br>24.10.2012 |
| 03.       | TC Support 2012/2013                                                                                                                             | Mr. Mohammed Munim Awais (Pakistan) | In order to meet the counterparts of the new IAEA TC projects which are to be implemented in 2012-2013 cycle in Sri Lanka and to finalise the implementation plans of the above projects. | Mr. H.G.P. Karunaratne (National Liaison Officer to IAEA TC), SDD, International Cooperation Division, Atomic Energy Authority | 2012.08.01<br>2012.08.05 |
| 04.       | Supporting Energy Planning and a Pre-Feasibility Study for Nuclear Power and Human Resources Development in Nuclear Power Engineering SRL/2/008  | Mr. ATHAR Ghulam Rasul              | Support national training course on Energy Demand Analysis and Projections                                                                                                                | Eng. (Mrs.) A.D. Thilakarathne, Deputy General Manager (Transmission & Generation Planning), CEB.                              | 19.03.2012<br>30.03.2012 |
| 05.       | MEXT Nuclear Researchers Exchange Programme in Japan                                                                                             | Prof. Iimoto Takeshi                | Radon/ Thoron monitoring in air and water in Sri Lanka.                                                                                                                                   | Mr. P.D. Mahakumara, Senior Scientific Officer, General Scientific Division Atomic Energy Authority                            | 02.09.2012<br>07.09.2012 |

**IAEA Expert Assistance**  
**January – December 2012**

| <b>No</b> | <b>Project No. &amp; Title</b>                                                                                                                  | <b>Name and Nationality</b>            | <b>Field of Specialty</b>                                                                                     | <b>Institution</b>                                                                                                                                               | <b>Duration</b>          |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|---------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| 06.       | Strengthening of Non Destructive Testing (NDT) through the Establishment of an Accredited National Centre for NDT SRL/1/007                     | Mr. Abd. Nassir Bin Ibrahim (Malaysia) | To conduct Magnetic Particle Testing Level 3 training course                                                  | Mr. T.M.R. Tennakoon, Senior Deputy Director / Project Director, NCNDT of the Atomic Energy Authority                                                            | 10.12.2012<br>14.12.2012 |
| 07        | Strengthening of Non Destructive Testing (NDT) through the Establishment of an Accredited National Centre for NDT SRL/1/007                     | Mr. Asghar Ali Khan (Pakistan)         | To advice on accreditation of NDT laboratory on common NDT methods                                            | Mr. T.M.R. Tennakoon, Senior Deputy Director / Project Director, NCNDT of the Atomic Energy Authority                                                            | 03.12.2012<br>07.12.2012 |
| 08        | Supporting Energy Planning and a Pre-Feasibility Study for Nuclear Power and Human Resources Development in Nuclear Power Engineering SRL/2/008 | Mr Ahmed Irej Jalal (Pakistan)         | To review the status of the IAEA Technical Cooperation Project SRL/2/008                                      | Mr. Buddhika Samarasekara, Chief Engineer (Generation Planning), Generation Planning Unit, Transmission and Generation Planning Branch, Ceylon Electricity Board | 06.12.2012<br>07.12.2012 |
| 09        | RAS/7/021                                                                                                                                       | Mr. Ronald Szymczak (German)           | To Assist National Project Team in Sri Lanka to Plan and Conduct a National Marine Radiation Monitor          | Mr. V. Waduge, SDD, Life Science Division, Atomic Energy Authority                                                                                               | 27.02.2012<br>02.03.2012 |
| 10        | RAS/9/055                                                                                                                                       | Mr. Sanjay Saini                       | Radiation Protection in Diagnostic Radiology                                                                  | Dr. A.S. Pallewatte, Consultant Oncologist, Dept of Radiology, NHSL.                                                                                             | 09.01.2012<br>12.13.2012 |
| 11        | Supporting a Feasibility Study Using the Sterile Insect Techniques (SIT) for Integrates Control of Mosquitoes SRL/5/044                         | Miss. Soliban Sharon, AUS              | Provide assistance in the adult mosquito rearing in order to optimize egg production & identify blood sources | Dr. S.L. Deniyage, Anti Malaria Campaign                                                                                                                         | 09.07.2012<br>13.07.2012 |

**IAEA Expert Assistance**  
**January – December 2012**

| <b>No</b> | <b>Project No. &amp; Title</b>                                                                                                                         | <b>Name and Nationality</b> | <b>Field of Specialty</b>                                                                                             | <b>Institution</b>                                                 | <b>Duration</b>          |
|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|-----------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|--------------------------|
| 12        | Supporting Energy Planning and a Pre-Feasibility Study for Nuclear Power and Human Resources Development in Nuclear Power Engineering SRL/2/008        | Mladen Zeljiko              | Support for conducting a national training course on WASP                                                             | Ceylon Electricity Board                                           | 24.09.2012<br>05.10.2012 |
| 13        | Supporting Energy Planning and a Pre-Feasibility Study for Nuclear Power and Human Resources Development in Nuclear Power Engineering SRL/2/008        | Mr. STRUBEGGER, Manfred     | Support for conducting a national training course on IAEA's energy planning model                                     | Ceylon Electricity Board                                           | 09.07.2012<br>20.07.2012 |
| 14        | MEXT Nuclear Researchers Exchange Programme in Japan                                                                                                   | Dr. Kojima                  | Multipurpose Gamma Irradiation Facility                                                                               | Mrs. S.S. Kulatunge, SDD, MGIF , Atomic Energy Authority           | 12.11.2012<br>16.11.2012 |
| 15        | Operating the Operation of a Gamma Irradiation Facility for Preservation of Food, Sterilization of Medical Products and Quarantine of Fruits SRL/5/043 | Mr. SABHARWAL, Sunil        | Radiation Processing Facilities and Applications                                                                      | Mrs. S.S. Kulatunge, SDD, MGIF , Atomic Energy Authority           | 28.11.2012<br>30.11.2012 |
| 16        | Supporting a Feasibility Study Using the Sterile Insect Techniques (SIT) for Integrates Control of Mosquitoes SRL/5/044                                | LEES, Rosemary Susan UK     | Establishing mosquito surveillance system to collect baseline data needed for the project and reviewing progress made | Dr. S.L. Deniyage, Anti Malaria Campaign                           | 10.12.2012<br>14.12.2012 |
| 17        | Upgrading Nuclear Medicine Diagnostic Imaging Facilities at University of Peradeniya SRL/6/032                                                         | DONDI, Maurizio             | Upgrading Nuclear Medicine Diagnostic Imaging Facilities at University of Peradeniya                                  | Dr. D.K.K.Nanayakkara Faculty of Medicine University of Peradeniya | 24.09.2012<br>28.09.2012 |

# **FINANCIAL STATEMENTS 2012**

**ATOMIC ENERGY AUTHORITY**

## **Principal Activities and Nature of Operation of the Atomic Energy Authority**

Atomic Energy Authority (AEA) of Sri Lanka was established by the Atomic Energy Authority Act No.19 of 1969.

### **Our Vision**

The vision of the AEA is, to be a center of excellence, with emphasis on national relevance and international recognition, for activities related to peaceful applications of nuclear technology with due consideration to safety.

### **Our Mission**

Facilitation of the utilization of nuclear technology to its maximum potential with reference to quality and quantity in a cost effective manner, for socioeconomic development of the country; and Implementation of a regulatory program conforming to international standards on radiation safety, to ensure protection of workers, public and the environment from potentially harmful effects of ionizing radiation.

### **Principle Activities of the AEA**

1. Providing Scientific Services
2. Conducting Man power Development programs
3. Demonstrating the applications for nuclear technology to potential users
4. Undertaking Research & Development in areas of national relevance
  - i. Ensuring that all uses of radiation and radioisotopes are carried out according to international standards.

## **BOARD OF MANAGEMENT**

The AEA is managed by a Board of Management appointed in terms of Section 2 (2) of the Atomic Energy Authority Act No. 19 of 1969. The Members of the Board of Management from January to December 2012 were:

### **Dr. Ranjith L. Wijayawardana (Chairman)**

B.Sc. (Hons.) in Physics- 1<sup>st</sup> Class, M.Sc. in Physics, PhD in Experimental High Energy Physics (USA) (Senior Lecturer, Department of Physics, University of Peradeniya)

### **Prof. W.Abeyewickreme (Board Member)**

B.Sc. in Applied Science, SJP, B.Sc. (Mahidol University, Bangkok), PHD (Liverpool University, England) (Professor in Parasitology, Department of Parasitology, Faculty of Medicine, University of Kelaniya)

### **Prof. B.M.A.Oswin Perera (Board Member)**

BVSc (Ceylon), PhD (Glasgow) (Formally Professor, Department of Farm Animal Production and Health, University of Peradeniya)

### **Eng. (Mr.) M.G.A. Goonetilleke (Board Member)**

BSc. (Eng), GradIEAust, MBA (SJP), MIE (SL), C Eng. Dip-Int Affairs (BCIS), MIEEE (Director (Technical), Ministry of Power and Energy)

### **Dr.N.J. Abeygunawardena (Board Member)**

MBBS, MD (Radiology)  
(Consultant Radiologist)

### **Prof. Janitha Abeywickrema Liyanage (Board Member)**

BSc.(sp.) Hons in Chemistry, PhD in Chemistry, Professor in Chemistry, Department of Chemistry, University of Kelaniya

### **Mr. R. Uduwawala (Board Member)**

B.Sc.Sp.(Physics), Master of Organizational Leadership (Monash University)  
Director, Dept. of National Budget, Ministry of Finance and Planning

### **Mr. Pasan Gunasena (Board Member)**

Attorney-at-Law



During the period under review the Board held 11 meetings. Matters pertaining to operational activities, staff matters, finance and administration were presented to the Board for policy decisions. The Board also reviewed the physical and financial progress of the Authority.

### Senior Management

| Name                                            | Title                                                                                        | Qualification                                        |
|-------------------------------------------------|----------------------------------------------------------------------------------------------|------------------------------------------------------|
| Mr. J.M.A.C. Jayasinghe                         | Executive Director<br>01.01.2012 -30.06.2012                                                 | B.Sc. (Colombo),<br>M.Sc. (UNSW)                     |
| Mr. H.G.P. Karunaratne                          | Head, International and Human<br>Resources Division                                          | B.Ed. Colombo<br>DBM (NIBM)                          |
| Mr. D.G.L.Wickramanayake                        | Head, Industrial Applications<br>Division & Acting Director<br>From 15.09.2012 to 31.12.1012 | B.Sc., M.Sc. (Colombo)<br>M.Sc. (UK)                 |
| Mr. C. Kasige                                   | Head, General Scientific<br>Division                                                         | B.Sc. (Peradeniya)<br>M.Sc. (Colombo)                |
| Mr. H.L. Anil Ranjith                           | Head, Radiation Protection<br>Division                                                       | B.Sc., M.Sc. (Colombo)                               |
| Mr. M.M.P. Wijesekera                           | Head, Finance & Supplies<br>Division                                                         | Licentiate Certificate of<br>ICASL, DBM (NIBM)       |
| 1.Ms. M.C.S.Seneviratne<br>2. Mr. Vajira Waduge | Head, Life Science Division                                                                  | 1B.Sc (SJP ),Msc (Col.)<br>2.B.Sc. (Per) M.Sc.(Col.) |

### Review by the Chairman

It is with great pleasure that I present the annual report of the Atomic Energy Authority (AEA) for the year 2012. AEA was able to fill the cadre positions as per the new structure during the year under review. Previous cadre 87 was increased up to 112 at the end of the year 2012. With this increased cadre, AEA continued to work towards its goals of providing benefits to the Sri Lankan community using nuclear technology.

Approval of the Cabinet of Ministers has been granted to draft a new Act for Atomic Energy on 22-06-2011 to further strengthen the existing regulatory activities carried out by the AEA meeting international requirements. A new Act was drafted by the AEA technical committee appointed for this task incorporating latest international requirements on radiation protection, nuclear security, transport safety and radioactive waste management. International Atomic Energy Agency (IAEA) has provided an expert mission and held 02 day workshop with stakeholders to discuss the appropriateness of the draft. Some amendments agreed with the IAEA expert and stakeholders were incorporated to the draft. The draft was submitted to the Legal Draftsman for review and on the request of the Legal Draftsman's Department; the AEA Technical committee had several discussions with Legal Draftsman's Department lawyers to

explain the scientific bases of the draft. The review of the draft by Legal Draftsman is completed and the draft was received by the AEA on 19<sup>th</sup> October 2012. The draft has been submitted to the Attorney General's Department for approval. It is expected to submit the bill to Parliament before end of March 2013.

Corporate Plan for the period 2012 -2016 was prepared & submitted to the Auditor General & Department of National Budget.

The activities of the AEA during the year 2012 are reported under the areas

- (a) Radiation Protection,
- (b) Programs of the International Atomic Energy Agency (IAEA),
- (c) Nuclear Instrumentation,
- (d) Non-Destructive Testing,
- (e) Radiation Processing
- (f) Nuclear Analytical Services,
- (g) Isotope Hydrology
- (h) Information Services and
- (i) Manpower Development

The AEA continued to provide radiation protection services to the state and private sector organizations to achieve safety norms by performing regular inspections of premises that use radiation sources and radioisotopes. The users who possess radioisotopes or irradiation apparatus (including medical X-rays) have to obtain a license from AEA and in 2012, 278 such licenses were issued. Import/ export of radioactive materials have to be carried out with the approval of the AEA and 474 such authorizations were issued in the year 2012. Inspection of premises that use radiation and radioactive material is also a responsibility of the AEA and the number of such inspections carried out was 140. In addition 63 approvals were provided for Irradiation room plans after they complied with the recommendations given by the AEA.

Radiation monitoring instruments which belong to AEA and external institutions were calibrated and the number was 65. Personal Monitoring Service is carried out by AEA for the protection of radiation workers and 1098 radiation workers were monitored monthly/ bimonthly to monitor their occupational exposure. The number of TLDs issued for quality assurance of occupational exposure monitoring program of radiation workers (Personal monitoring program) in the country were 900. Software and hardware maintenance/ performance testing of computers and IT and network related services to AEA were 112. Repair of nuclear instruments/ re installation of software performance testing are also a responsibility of the GSD and the number of such services was 48.

In the industrial sector 130 NDT inspection services were provided for the effective functioning of the machinery used, enabling greater productivity. In addition 210 personnel were trained in NDT. Work continued with respect to the establishment of the National Center for NDT.

The number of samples analyzed for radioactivity was 7000.

Manpower development is an essential component for the socio-economic development of Sri Lanka. With the assistance of the IAEA and the Japanese and Korean Governments, the AEA continued to develop technical capabilities of the scientists by providing expert services, fellowships and scientific visits, short term foreign training and seminars for local scientists. In-house human resource development was also promoted through courses conducted for administrative and support staff of AEA.

## **Financial Highlights**

### **Net Income Earned from the external customer services provided in 2012 & 2011**

**Rs.Million**

|    | <b>Income Source</b>                         | <b>2012</b>  | <b>2011</b> |
|----|----------------------------------------------|--------------|-------------|
| 01 | License/Radiation Protection Services        | 11.5         | 5.6         |
| 02 | Nuclear Instrumentation/Personal Monitoring  | 1.6          | 1.28        |
| 03 | Non Destructive Testing Inspections/Training | 11.0         | 6.12        |
| 04 | Nuclear Analytical Services                  | 32.6         | 31.7        |
| 5  | Radiation Processing Services                | 0.24         |             |
|    | <b>Total</b>                                 | <b>56.84</b> | <b>44.7</b> |

Total income had been increased over 25% in 2012 when compare to the previous year. I wish to thank the Members of the Board, Senior Management and the workforce of AEA for their co-operation, in carrying out the above programs successfully.

**Dr. R.L.Wijewardane**

**Chairman**

**ATOMIC ENERGY AUTHORITY**  
**STATEMENT OF FINANCIAL PERFORMANCE**  
**FOR THE YEAR ENDED 31ST DECEMBER -2012**

|                                         |              | <b>Value in Rs.</b> |                     |
|-----------------------------------------|--------------|---------------------|---------------------|
|                                         | <b>Notes</b> | <b>2012<br/>Rs.</b> | <b>2011<br/>Rs.</b> |
| Revenue                                 | <b>3</b>     | 71,791,442          | 54,413,369          |
| Other Income                            | <b>4</b>     | 57,817,522          | 45,584,452          |
| <b>Total Income</b>                     |              | 129,608,964         | 99,997,821          |
| Wages, Salaries and Employee Benefits   | <b>5</b>     | (63,666,997)        | (39,951,324)        |
| Administrative & Operational Cost       | <b>6</b>     | (31,517,685)        | (24,698,813)        |
| Other Recurrent Expenditure             | <b>7</b>     | (12,862,864)        | (8,070,156)         |
| Depreciation & Amortization Expenditure | <b>8</b>     | (31,711,770)        | (23,979,744)        |
| <b>Total Expenditure</b>                |              | (139,759,317)       | (96,700,038)        |
| <b>Income Over Expenditure</b>          |              | <b>(10,150,353)</b> | <b>3,297,783</b>    |

**ATOMIC ENERGY AUTHORITY**  
**STATEMENT OF FINANCIAL POSITION**  
**AS AT YEAR ENDED 31st DECEMBER -2012**

|                                       | Notes | 2,012<br>Rs.              | Value in Rs.<br>2011<br>Rs. |
|---------------------------------------|-------|---------------------------|-----------------------------|
| <b><u>ASSETS</u></b>                  |       |                           |                             |
| <b><u>Current Assets</u></b>          |       |                           |                             |
| Cash and Cash equivalent              | 9     | 512,524                   | 4,210,110                   |
| Receivables                           | 10    | 11,735,965                | 12,408,133                  |
| Inventories                           | 11    | 3,592,254                 | 4,527,649                   |
| Prepayments                           | 12    | 3,381,265                 | 2,496,515                   |
| Other Current Assets                  | 13    | 25,710,672                | 44,932,680                  |
|                                       |       |                           | 1,197,039                   |
|                                       |       |                           | 24,839,446                  |
| <b><u>Non - Current Assets</u></b>    |       |                           |                             |
| Work In Progress                      | 14    | 56,715,006                | 1,559,884                   |
| R & D On-Going Projects               | 15    | 6,045,787                 | 2,755,199                   |
| Infrastructure ,Plant & Equipment     | 16    | 150,171,229               | 130,051,884                 |
| Land & Building                       | 17    | 177,195,275               | 176,038,117                 |
| Other Long Term Assets                | 18    | 9,417,746                 | 9,417,746                   |
| Unusable Items                        | 19    | 31,850                    | 31,850                      |
|                                       |       | 399,576,892               | 319,854,680                 |
|                                       |       | <b>444,509,572</b>        | <b>344,694,127</b>          |
| <b>Total Assets</b>                   |       |                           |                             |
| <b><u>Current Liabilities</u></b>     |       |                           |                             |
| Payable                               | 20    | (16,305,166)              | (5,092,945)                 |
| <b><u>Non Current Liabilities</u></b> |       |                           |                             |
| Retirement Benefit Obligations        | 21    | (21,541,848)              | (15,434,480)                |
| <b>Total Liabilities</b>              |       | (37,847,014)              | (20,527,425)                |
| <b>Total Net Assets</b>               |       | <b><u>406,662,557</u></b> | <b><u>324,166,702</u></b>   |
| <b>EQUITY AND LIABILITIES</b>         |       |                           |                             |
| <b><u>Capital &amp; Reserves</u></b>  |       |                           |                             |
| Government Grant - Capital            | 22    | 386,512,677               | 296,442,665                 |
| Accumulated Fund                      | 23    | 91,692,087                | 88,268,268                  |
| Deficit                               | 25    | (71,542,207)              | (60,544,231)                |
| <b>Total Net Assets/Equity</b>        |       | 406,662,557               | 324,166,702                 |
|                                       |       | <b><u>406,662,557</u></b> | <b><u>324,166,702</u></b>   |

The Board of Directors is responsible for the preparation and presentation of these Financial Statements, the Accounting Policies and notes and integral part of these Financial Statements.

ATOMIC ENERGY AUTHORITY

**Consolidated Cash Flow statement for the Year Ended 31-December 2012**

Value in Rs.

|                                                                | 2012                 | 2011                |
|----------------------------------------------------------------|----------------------|---------------------|
| <b><u>CASH FLOW FROM OPERATING ACTIVITIES</u></b>              |                      |                     |
| Cash Received from Customers                                   | 66,486,000           | 51,490,000          |
| Cash paid to Suppliers                                         | (54,018,176)         | (38,316,774)        |
| Cash paid to employees                                         | (55,657,000)         | (38,988,000)        |
| Cash paid to Authority members                                 | <u>(337,000)</u>     | <u>(237,000)</u>    |
| <b>Net Cash Flow from Operating Activities</b>                 | <b>(43,526,176)</b>  | <b>(26,051,774)</b> |
| <b><u>CASH FLOW FROM INVESTING ACTIVITIES</u></b>              |                      |                     |
| Acquisition of Plant, Machinery & Equipment                    | (103,237,644)        | (62,220,226)        |
| Sale of Vehicle                                                |                      | 1,847,804           |
| Funds Transfer to the Treasury                                 | -                    | <u>(1,847,803)</u>  |
| <b>Net Cash Flow from Investing Activities</b>                 | <b>(103,237,644)</b> | <b>(62,220,225)</b> |
| <b><u>CASH FLOW FROM FINANCIAL ACTIVITIES</u></b>              |                      |                     |
| Receipt of Recurrent Grant                                     | 39,987,000           | 30,000,000          |
| Receipt of Loan Capital & Interest                             | 3,768,000            | 3,749,000           |
| Payment of Loan                                                | (2,627,000)          | (2,873,000)         |
| Receipt of Capital Grant                                       | <u>101,925,000</u>   | <u>61,073,000</u>   |
| <b>Net Cash Flow from Financial Activities</b>                 | <b>143,053,000</b>   | <b>91,949,000</b>   |
| <b>Net Increase/Decrease in Cash &amp; Cash equivalent</b>     | <b>(3,710,820)</b>   | <b>3,677,001</b>    |
| <b>Cash &amp; Cash equivalent at the beginning of the year</b> | <b>4,209,792</b>     | <b>530,058</b>      |
| Cash at Bank                                                   | 4,207,000            | 530,056             |
| Stamp Stock                                                    | 2,792                | 2                   |
| <b>Cash &amp; Cash equivalent at the end of the year</b>       | <b>512,524</b>       | <b>4,209,792</b>    |
| Cash at Bank                                                   | 496,180              | 4,207,000           |
| Stamp Stock                                                    | 16,344               | 2,792               |

**ATOMIC ENERGY AUTHORITY**  
**Statement of Changes in Net Assets**  
**For the year ended 31st December 2012**

|                                     | <b>Capital<br/>Grant</b>  | <b>Revaluation<br/>Reserve</b> | <b>Accumulated<br/>Fund</b> | <b>Accumulated<br/>Surp/Deficit</b> | Value in Rs.<br><b>Total</b> |
|-------------------------------------|---------------------------|--------------------------------|-----------------------------|-------------------------------------|------------------------------|
| <b>Balance at 31- December 2010</b> | <b>235,639,155</b>        | <b>850,000</b>                 | <b>90,694,719</b>           | <b>(63,913,020)</b>                 | <b>263,270,854</b>           |
| Received for the Year               | 75,584,618                |                                | 6,772,184                   |                                     | 82,356,802                   |
| Adjustments Made -                  | (14,781,109)              | (850,000)                      | (9,198,635)                 | 71,006.06                           | (24,758,738)                 |
| Surplus/ Deficit for the Year       |                           |                                |                             | 3297783                             | 3,297,783                    |
| <b>Balance at 31- December 2011</b> | <b><u>296,442,664</u></b> |                                | <b><u>88,268,268</u></b>    | <b><u>(60,544,231)</u></b>          | <b><u>324,166,701</u></b>    |
| Adjus to the Opening Balance -      | 20,425,000                |                                |                             | (140,431)                           | 20,284,569                   |
| <b>Re-stated Opening Balance</b>    | <b>316,867,664</b>        |                                |                             | <b>(60,684,662)</b>                 | <b>344,451,270</b>           |
| 9 Received for the Year             | 91,908,533                |                                | 12,872,050                  |                                     | 104,780,583                  |
| Adjustments Made                    | (22,263,520)              |                                | (9,448,231)                 | (707,192.00)                        | (32,418,943)                 |
| Surplus/ Deficit for the Year       |                           |                                |                             | (10,150,353)                        | (10,150,353)                 |
| <b>Balance at 31- December 2012</b> | <b><u>386,512,677</u></b> |                                | <b><u>91,692,087</u></b>    | <b><u>(71,542,207)</u></b>          | <b><u>406,662,557</u></b>    |

# **ATOMIC ENERGY AUTHORITY**

## **Notes to the Accounts**

### **1 SIGNIFICANT ACCOUNTING POLICIES**

#### **1.1 General**

##### **1.1.1 Basis of Preparation**

The Financial statements comply with Sri Lanka Public Sector Accounting Standards for the accrual basis of accounting. The measurement base applied is historical cost adjusted for revaluation of assets. The financial accounts have been prepared on a going concern basis and the accounting policies have been applied consistently through the period.

##### **1.1.2 Comparative Information**

The Authority has constantly applied the accounting practices with those used in the previous year's figures and phrases have been re arranged where ever necessary to confirm to the current year's presentation.

##### **1.1.3 Changes in Accounting Policies**

Accounting polices adopted are constant with these in the previous financial year.

##### **1.1.4 Foreign Currency Transactions**

All non monitory items received as donations are reported at the rates prevailing at the time the transactions were occurred.

##### **1.1.5 Events Occurring after the Balance Sheet Date**

All material events occurred after the Balance Sheet date has been considered and where appropriate adjustments or disclosures have been made in the financial statements.



### **1.1.6 Taxes**

Authority used to collect VAT which was applicable for the period from their customers. Policy on VAT applicable to the Authority was changed with effect from the year 2008. Accordingly, the allowable input tax component was calculated considering the ratio between internally generated income and the grants received from the Treasury. Apart from this, the Nation Building Tax, Economic Service Charges and Income Tax are paid to the Department of Inland Revenue in compliance with the prevailing rules.

## **1.2 ASSETS AND BASIS OF THEIR VALUATION**

Assets classified as current assets in the Balance sheet are cash and those which are expected to realize in cash, during the normal operating cycle of the Authority's business or within one year from the Balance sheet date.

Assets other than current assets (non-current assets) are those which the Authority intends to hold beyond a period of one year from the Balance sheet date.

### **1.2.1 Infrastructure, Plant & Equipment**

The Infrastructure, Plant & Equipment are recorded at cost revaluation less accumulated depreciation. Cost of tangible Property, Plant & Equipment is shown at cost of acquisition or construction together with any incidental expenditure incurred in bringing the asset to its working condition for its intended use.

Funds for acquisition of non current assets are provided mainly by the General Treasury and International Atomic Energy Agency (IAEA).

### **1.2.2 Depreciation/Amortization**

Provision for depreciation is calculated using the straight line method on the cost or revaluation of all Property Plant & Equipment, in order to write-off such amount over the estimated useful economic life of such assets

The Authority revised the accounting policy on depreciation of fixed assets with effect from 2009. Earlier the Authority applied 10% per annum as the rate of depreciation of fixed assets other than the Building and Motor vehicles. The Board of Management has decided to change the depreciation rate only for the Electronic equipment, as 25% and 33 1/3% for Computers, Software & Accessories considering their useful life.

The rate of depreciation used on a straight line method is as follows.

|                                         |               |         |
|-----------------------------------------|---------------|---------|
| Buildings                               | Over 50 years | 02 %    |
| Boundary Wall                           | Over 10 years | 10 %    |
| Office Equipments, Furniture & Fittings | Over 10 years | 10 %    |
| Electronic Equipment                    | Over 4 years  | 25 %    |
| Computers, Software & Accessories       | Over 3 years  | 33 1/3% |
| Motor Vehicles                          | Over 4 years  | 25 %    |
| Scientific Equipment                    | Over 10 years | 10 %    |
| Radiation Facility                      | Over 10 years | 10 %    |
| Library Books                           | Over 10 years | 10 %    |
| Sports Equipment                        | Over 10 years | 10 %    |

### **Leas Hold Asset**

The land held under long term lease is amortized over the period under lease. Atomic Energy Authority (AEA) had entered in to a 99 year lease agreement with Urban Development Authority (UDA) for the land situated at 460, Baseline Road, Orugodawatta, Wellampitiya. In 1996 Atomic Energy Authority (AEA) had paid Rs. 9,750,000/- on behalf of acquiring this lease hold property. This transaction has been identified as an operating lease and shown in the Balance Sheet accordingly

### **1.2.3 Inventories -Basis of valuation**

The cost of each category of inventory is determined on the following basis.

Stocks of consumables - At actual cost on first in first out method (FIFO)

### **1.2.4 Trade & Other Receivables**

Trade debtors and other receivables are stated at their cost and amounts estimated to realize, inclusive of provisions for bad & doubtful debts, and Atomic Energy Authority makes a general provision for doubtful debtors, which have been outstanding for over 5 Years.

### **1.2.5 Cash & Cash Equivalents**

Cash flow statement has been prepared by using the direct method. Cash & Cash equivalents are defined as cash at Bank and stamp stock which are easily convertible.

## **1.3 LIABILITIES AND PROVISIONS**

### **1.3.1 Retirement Benefits to Employees**

#### **1. Defined Benefit Plan**

The Retirement benefits to employees are provided according to the laid down statutory requirements, Authority's contribution for Employee's provident fund and Employees' trust fund is 12% and 3% respectively.

Gratuity provision is made according to the Gratuity Act No.12 of 1983. The liability for payment to an employee arises only after the completion of 5 years continued services. The gratuity liability is not externally funded but in order to meet this liability, a provision is carried forward in the Balance sheet, based on half month's salary of the last month of the financial year of all employees who completed one year of service, Total liability is calculated on the basis of half month initial salary as at 31<sup>st</sup> December of each employee.

### **1.3.2 TRADE AND OTHER PAYABLE**

Trade and other payable are stated at their cost

### **1.3.3 Capital Commitments and Contingent Liabilities**

All material capital commitments and contingent liabilities of the Authority are disclosed in the respective notes in the accounts.

### **1.3.4 Provisions**

Provisions are recognized as when the Authority has a present obligation (Legal or constructive) as a result of a past event, where it is probable that an outflow of resources embodying economic benefits will be required to settled the obligation and a reliable estimate can be made of the amount of the obligation.

## **1.4 DIFFERED INCOME**

### **1.4.1 Grant and Donations**

Grant and Donations are credited to the income statement over the periods necessary to match them with related cost, which they are intended to be compensated in a systematic basis. Grants related to Property Plant & Equipment, including non monetary grants at fair value is differed in the balance sheet and credited to the Income Statement over the useful life of the related assets and their remaining lease period.

## **Government Grant**

Government grant for recurrent & capital has been identified separately. Recurrent grant is the major income source & credited to the income & Expenditure statement while grant for capital expenditure is taken to accumulated fund with due adjustment for depreciation component of fixed assets Capital grant received from other sources are shown as differed income under non current liability.

## **1.5 INCOME STATEMENT**

Income & Expenditure Accounts are prepared in accrual basis.

### **1.5.1 Revenue and Expenditure Recognition**

Major source of revenue is Recurrent Grant by the treasury.

#### **1.5.1.1 Income**

Income received from operating activities is comprised with net income of Regulatory Services, NDT Inspections & Training, Nuclear Instrumentation & Calibrations, Interest on Loans, Non Refundable deposits, Sundry income, damaged stock disposal income, Gain on disposal of assets based on accrual concept & excluding VAT.

#### **1.5.1.2 Expenditure**

Expenses are recognized in the income statement on the basis of a direct association between the cost incurred and the earning of the specific items of income where appropriate. All expenditure incurred in running of the Authority and depreciation of the property, plant & equipment has been charged to income in arriving the Income over expenditure

### **1.5.2 Research & Development**

Costing the research projects has been considered direct material, labour & other expenses and charged as recurrent expenditure.

## **2. CORPORATE INFORMATION**

Atomic Energy Authority (AEA) was established by the Atomic Energy Act No.19 of 1969. The AEA is located at No. 60/460, Orugodawatte, Wellampitiya..

**Notes to the Accounts**  
**As at 31-December 2012**

|                                       | <b>2,012</b>      | <b>2011</b>       |
|---------------------------------------|-------------------|-------------------|
|                                       | <b>Rs.</b>        | <b>Rs.</b>        |
| <b>3 Revenue</b>                      |                   |                   |
| Government Grant- Recurrent           | 39,987,000        | 30,000,000        |
| Rec. Grant for cler. Lab. Consumables | 0                 | 78,277            |
| Differed Revenue                      | 31,711,770        | 23,979,744        |
| Consumable received as Donation       | 75,456            | 355,348           |
| Profit on Disposal of assets          | 17,216            |                   |
|                                       | <b>71,791,442</b> | <b>54,413,369</b> |
| <b>4 Other Income</b>                 |                   |                   |
| Food Testing                          | 32,205,618        | 31,416,977        |
| Food Testing (HPGE Method)            | 126,800           | 131,192           |
| NDT Inspection Services               | 7,743,027         | 3,932,598         |
| Licensee Fees                         | 4,064,466         | 3,700,478         |
| Radiation Protection Services         | 7,400,653         | 1,892,791         |
| Interest on Loan                      | 273,886           | 302,672           |
| Nuclear Analytical Services           | 209,934           | 121,932           |
| General Scientific Services           | 1,560,818         | 1,284,724         |
| NDT Training Courses                  | 3,252,800         | 2,193,595         |
| Amendment Charges                     | 37,578            | 31,065            |
| Miscellaneous Income                  | 706,226           | 576,427           |
| Radiation Processing Services         | 235,716           |                   |
|                                       | <b>57,817,522</b> | <b>45,584,452</b> |
| <b>5 Employee Benefits Cost</b>       |                   |                   |
| Salaries                              | 34,568,750        | 24,109,574        |
| NCNDT                                 | 452,816           |                   |
| Employees Provident Fund              | 4,152,484         | 2,869,057         |
| NCNDT EPF                             | 54,338            |                   |
| Employees Trust Fund                  | 1,038,085         | 717,264           |
| NCNDT ETF                             | 13,584            |                   |
| Additional Allowances                 | 4,958,858         | 1,801,544         |
| Interim Allowances                    | 34,308            | 36,170            |
| Over Time& Holiday payments           | 1,322,476         | 1,073,609         |
| Gratuity- for the Year                | 6,121,799         | 1,180,793         |
| Encasement of Medical leave           | 1,819,162         | 1,435,039         |
| Incentive                             | 735,796           | 550,788           |
| Cost of living                        | 7,472,384         | 5,949,085         |
| NCNDT COL                             | 51,606            |                   |
| Trainees Allowances                   | 195,550           | 228,400           |
| Consultant Allowance                  | 675,000           |                   |
|                                       | <b>63,666,997</b> | <b>39,951,324</b> |

| <b>Notes to the Accounts</b>  |                                              | <b>2,012</b>      | <b>2011</b>       |
|-------------------------------|----------------------------------------------|-------------------|-------------------|
| <b>As at 31-December 2012</b> |                                              | <b>Rs.</b>        | <b>Rs.</b>        |
| <b>6</b>                      | <b>Administrative &amp; Operational Cost</b> |                   |                   |
|                               | Office Traveling                             | 276,305           | 232,004           |
|                               | RCA Meeting                                  | 398,745           | 237,777           |
|                               | IAEA General Conference                      | 1,674,453         | 1,422,123         |
|                               | Traveling for Authority Members              | 45,250            | 16,500.00         |
|                               | Fuel & lubricants                            | 1,565,479         | 872,458           |
|                               | Office Consumables & Stationary              | 2,163,617         | 2,436,534         |
|                               | Laboratory Consumables                       | 4,211,010         | 1,593,402         |
|                               | Clearing charges                             | 56,443            | 68,982            |
|                               | Laboratory Consumable Donation               | 86,365            | 974,550           |
|                               | Uniforms                                     | 187,119           | 145,092           |
|                               | Maintenance of Office Building               | 2,482,027         | 2,677,857         |
|                               | Service & Repairs of Equipment               | 4,422,976         | 2,329,021         |
|                               | Maintenance of Motor vehicle                 | 1,276,193         | 861,417           |
|                               | Electricity                                  | 4,218,496         | 3,265,215         |
|                               | Water                                        | 288,098           | 236,412           |
|                               | Telephone                                    | 642,079           | 753,799           |
|                               | Telex , Fax & E-Mail                         | 610,560           | 467,225           |
|                               | Postage                                      | 286,317           | 199,108           |
|                               | Security                                     | 3,055,982         | 2,908,308         |
|                               | Insurance                                    | 2,493,835         | 1,516,341         |
|                               | Transportation                               | 665,886           | 968,910           |
|                               | Rates                                        | 324,000           | 252,000           |
|                               | Legal Expenses                               | 86,350            | 263,678           |
|                               | Ground Rent                                  | 102               | 102               |
|                               |                                              | <b>31,517,685</b> | <b>24,698,813</b> |
| <b>7</b>                      | <b>Other Recurrent Expenditure</b>           |                   |                   |
|                               | Remuneration for Authority Memb.             | 354,550           | 197,000           |
|                               | Training Programme ,Seminars                 | 1,661,796         | 776,163           |
|                               | Staff Local Training Programme               | 1,029,099         | 415,392           |
|                               | Exhibition                                   | 1,438,513         | 913,860           |
|                               | Subs. fees for Local and Foreign Membership  | 56,061            | 23,223            |
|                               | Incidental Expenses for Scientist            | 150,486           | 131,152           |
|                               | Entertainment                                | 92,086            | 74,189            |
|                               | Advertisement & publicity                    | 832,847           | 802,815           |
|                               | Subscript. for Newspapers                    | 43,805            | 61,410            |
|                               | Printing & Publications                      | 92,856            | 264,112           |
|                               | Bank Charges                                 | 29,055            | 27,524            |
|                               | Welfare Services                             | 383,831           | 226,050           |
|                               | Audit Fees                                   | 200,000           | 150,000           |
|                               | Miscellaneous Expenses                       | 86,256            | 192,341           |
|                               | Payment for N.D.T Training Course            | 908,884           | 545,112           |
|                               | Payment for Radiation Protection             | 802,778           | 275,597           |
|                               | Cont.....                                    | <b>8,162,904</b>  | <b>5,075,939</b>  |

| <b>Notes to the Accounts</b>                 |                          | <b>2,012</b>             | <b>2011</b> |
|----------------------------------------------|--------------------------|--------------------------|-------------|
| <b>As at 31-December 2012</b>                |                          | <b>Rs.</b>               | <b>Rs.</b>  |
|                                              |                          |                          |             |
| Cont.....                                    | 8,162,904                | 5,075,939                |             |
| Payment for Inspection                       | 995,352                  | 442,768                  |             |
| Payment for Life Science Division            | 606,685                  | 457,759                  |             |
| Payment for General Scientific Division      | 42,972                   | 52,221                   |             |
| Payment for Radiation Processing Division    | 4,457                    |                          |             |
| Research & Development Projects              | 576,529                  | 168,758                  |             |
| Agriculture project                          | 376,868                  | 367,361                  |             |
| Stamp Duty                                   | 8,625                    | 9,575                    |             |
| Nation Building Tax                          | 867,591                  | 690,362                  |             |
| Debit Tax                                    |                          | 52,975                   |             |
| Economic Service Charges                     |                          | 87,422                   |             |
| Income Tax                                   |                          | 17,684                   |             |
| Social Responsibility Levy                   |                          | 411                      |             |
| Surcharge                                    |                          | 11,649                   |             |
| Corporate Plan                               |                          | 600,000                  |             |
| Doubtful Debtors                             | 823,124                  |                          |             |
| Obsolete Stock (Lab. Consumable Items)       | 397,758                  |                          |             |
| Loss on disposal of unusable assets          |                          | 35,272                   |             |
|                                              | <b><u>12,862,864</u></b> | <b><u>8,070,156</u></b>  |             |
| <b>8 Depreciation /Amortization of Asset</b> |                          |                          |             |
| Amortization (Lease Rent)                    | 98,485                   | 98,485                   |             |
| Depreciation on Acquisition of Assets        | 22,165,054               | 14,682,624               |             |
| Depreciation on IAEA Donations               | 9,448,231                | 9,198,635                |             |
|                                              | <b><u>31,711,770</u></b> | <b><u>23,979,744</u></b> |             |

**Property Plant & Equipment – Note No 16**
**Tangible Assets Note**

| <u>Lease Hold Assets</u>                | <u>Note- 9.1</u> | <u>Life of the Asset</u> | <u>Balance As At 1/1/2011</u> | <u>Adjustment Made</u> | <u>Re-stated Opening Bal.</u> | <u>Additions/ Transfers in</u> | <u>Disp/Tran out Adjust</u> | <u>Balance As At 31-12-2012</u> |
|-----------------------------------------|------------------|--------------------------|-------------------------------|------------------------|-------------------------------|--------------------------------|-----------------------------|---------------------------------|
| Cost                                    |                  |                          |                               |                        |                               |                                |                             |                                 |
| Land                                    |                  | 99                       | 8,239,897                     |                        |                               |                                | (98,485)                    | 8,141,412                       |
|                                         |                  |                          | <b>8,239,897</b>              |                        |                               | <b>-</b>                       | <b>(98,485)</b>             | <b>8,141,412</b>                |
| <b>Owned Assets</b>                     |                  |                          |                               |                        |                               |                                |                             |                                 |
| <u>Note- 9.2</u>                        |                  |                          |                               |                        |                               |                                |                             |                                 |
| <b>Land &amp; Building</b>              |                  |                          |                               |                        |                               |                                |                             |                                 |
| NDTC-Land                               |                  |                          | 90,884,994                    |                        | 90,884,994                    |                                |                             | 90,884,994                      |
| Office Building                         |                  | 50                       | 76,913,225                    |                        | 76,913,225                    | 3,144,697                      | (1,889,052)                 | 78,168,869                      |
|                                         |                  |                          | <b>167,798,219</b>            |                        | <b>167,798,219</b>            | <b>3,144,697</b>               | <b>(1,889,052)</b>          | <b>169,053,863</b>              |
| <b>Infrastructure, Plant &amp; Equ.</b> |                  |                          |                               |                        |                               |                                |                             |                                 |
| Boundary Wall                           |                  | 10                       | 1                             |                        |                               |                                |                             | 1                               |
| Scientific Equipment                    |                  | 10                       | 79,436,872                    | (35,176)               | 79,401,696                    | 19,809,940                     | (9,839,465)                 | 89,372,171                      |
| Scientific Equipment donation           |                  | 10                       | 56,034,197                    |                        | 56,034,197                    | 14,292,774                     | (9,448,231)                 | 60,878,741                      |
| Office Equipt/ Furn & Fitti.            |                  | 10                       | 8,231,002                     |                        | 8,231,002                     | 2,628,150                      | (1,186,040)                 | 9,673,112                       |
| Other Equipment                         |                  | 10                       | 452,226                       |                        | 452,226                       |                                | (2,509)                     | 449,717                         |
| Motor Vehicle                           |                  | 4                        | 13,300,589                    |                        | 13,300,589                    | 9,100,000                      | (5,950,651)                 | 16,449,938                      |
| Radiation facility                      |                  | 10                       | 867,552                       |                        | 867,552                       |                                |                             | 867,552                         |
| Library Books                           |                  | 10                       | 853,288                       |                        | 853,288                       | 699,142                        | (128,448)                   | 1,423,982                       |
| Computer items & software package       |                  | 3                        | 3,087,433                     |                        | 3,087,433                     | 1,745,222                      | (1,661,405)                 | 3,171,250                       |
| Electronic Items                        |                  | 4                        | 2,408,521                     |                        | 2,408,521                     | 1,342,837                      | (955,524)                   | 2,795,834                       |
| Security Hut & fence-                   |                  | 10                       | 536,411                       |                        | 536,411                       | 274,960                        | (82,128)                    | 729,243                         |
| Access Bridge                           |                  | 10                       | 2,118,083                     |                        | 2,118,083                     |                                | (286,439)                   | 1,831,644                       |
| NDT Fence                               |                  | 5                        | 457,990                       |                        | 457,990                       |                                | (49,080)                    | 408,910                         |
| NDT Boundary Wall                       |                  | 10                       | 2,500,185                     |                        | 2,500,185                     |                                | (258,302)                   | 2,241,883                       |
| <b>TOTAL ASSETS VALUE</b>               | <b>Rs.</b>       |                          | <b>170,284,350</b>            | <b>(35,176)</b>        | <b>170,249,173</b>            | <b>49,893,025</b>              | <b>(29,848,222)</b>         | <b>190,293,979</b>              |



| <b><u>DEPRICIATION</u></b>                    |            | <b>As At</b>       | <b>Adjustment</b> | <b>Re-stated</b>  | <b>Additions/</b> | <b>Disposals/Transfers</b> | <b>As At</b>      |
|-----------------------------------------------|------------|--------------------|-------------------|-------------------|-------------------|----------------------------|-------------------|
| <b><u>Amortization/Depreciation</u></b>       | <b>%</b>   | <b>40,544</b>      | <b>Made</b>       | <b>Opening</b>    | <b>Transfers</b>  | <b>out</b>                 | <b>31-12-2011</b> |
| Land                                          |            |                    |                   |                   | 98,485            | (98,485)                   |                   |
|                                               |            |                    |                   |                   | 98,485            | (98,485)                   |                   |
| <b><u>Land &amp; Building</u></b>             |            |                    |                   |                   |                   |                            |                   |
| NDTC-Land                                     |            |                    |                   |                   |                   |                            |                   |
| Office Building                               | 2          |                    |                   |                   | 1,893,393         | (1,893,393)                |                   |
|                                               |            |                    |                   |                   | 1,893,393         | (1,893,393)                |                   |
| <b><u>Infrastructure,Plant &amp; Equ.</u></b> |            |                    |                   |                   |                   |                            |                   |
| Boundary Wall                                 | 10         |                    |                   |                   |                   |                            | -                 |
| Scientific Equipment                          | 10         | 32,598,706         |                   | 32,598,706        | 9,684,607         | (9,760,916)                | 32,522,397        |
| Scientific Equipment donation                 | 10         | 4,345,195          |                   | 4,345,195         | 9,448,231         | (9,448,231)                | 4,345,195         |
| Office Equip/ Furn & Fitti.                   | 10         | 1,062,678          |                   | 1,062,678         | 1,160,805         | (1,171,776)                | 1,051,708         |
| Other Equipment                               | 10         | 441,014            |                   | 441,014           | 2,509             | (2,509)                    | 441,014           |
| Motor Vehicle                                 | 25         |                    |                   | -                 | 5,950,651         | (5,950,651)                | -                 |
| Radiation facility                            | 10         | 867,550            |                   | 867,550           |                   | -                          | 867,550           |
| Library Books                                 | 10         | 307,249            |                   | 307,249           | 128,448           | (128,448)                  | 307,249           |
| Sports Equipment                              | 10         |                    |                   | -                 | 1,531,613         | (1,531,613)                |                   |
| Computer items                                | 33         | 505,870            |                   | 505,870           | 933,079           | (955,516)                  | 505,870           |
| Electronic Items                              | 25         | 104,204            |                   | 104,204           | 82,128            | (82,128)                   | 81,767            |
| Security Hut                                  | 10         |                    |                   | -                 | 286,439           | (286,439)                  |                   |
| Access Bridge                                 | 10         |                    |                   | -                 | 49,080            | (49,080)                   |                   |
| NDT Fence                                     | 20         |                    |                   | -                 | 258,302           | (258,302)                  |                   |
| NDT Boundary Wall                             | 10         |                    |                   | -                 |                   | -                          |                   |
| <b>TOTAL DEPRICIATION</b>                     | <b>Rs.</b> | <b>40,232,466</b>  |                   | <b>40,232,466</b> | <b>29,515,892</b> | <b>(29,625,609)</b>        | <b>40,122,750</b> |
| <b><u>NET BOOK VALUES</u></b>                 |            |                    |                   |                   |                   |                            |                   |
| <b>Land &amp; Building</b>                    | <b>Rs.</b> | <b>2,012</b>       |                   |                   |                   | <b>2,011</b>               |                   |
| <b>Lease Hold Properties</b>                  | <b>9.2</b> | <b>8,141,412</b>   |                   |                   |                   | <b>8,239,897</b>           |                   |
| <b>Infrastructure,Plant &amp; Equ.</b>        | <b>9.1</b> | <b>150,171,229</b> |                   |                   |                   | <b>130,051,884</b>         |                   |
|                                               |            | <b>327,366,504</b> |                   | 18                |                   | <b>306,090,000</b>         |                   |

| As at 31-December 2012 |                                                        | 2,012<br>Rs.      | 2011<br>Rs.       |
|------------------------|--------------------------------------------------------|-------------------|-------------------|
|                        | <b><u>Current Assets</u></b>                           |                   |                   |
| <b>9</b>               | <b>Cash at Bank</b>                                    |                   |                   |
|                        | Ac no:071-1-001-1-3320739                              | 496,180           | 4,102,318         |
|                        | Ac no: 0441-001-9-0210873                              | 0                 | 105,000           |
|                        | Stamp Stock                                            | 16,344            | 2,792             |
|                        | Balance at the end of the year                         | <b>512,524</b>    | <b>4,210,110</b>  |
| <b>10</b>              | <b>Receivables</b>                                     | <b>11,735,965</b> | <b>12,408,133</b> |
|                        | <b><u>Trade Receivables</u></b>                        |                   |                   |
| 10.1                   | <b>Debtors</b>                                         |                   |                   |
|                        | Trade Debtors -Related to Current Year                 | 2,727,327         | 3,620,965         |
|                        | Trade Debtors -Related to Previous Years               | 1,877,322         | 1,411,294         |
| 10.2                   | Provision for Doubtful Debts                           | (979,118)         | (158,794)         |
|                        | Net Trade Debtors Amount as at 31-12-2012              | <b>3,625,531</b>  | <b>4,873,465</b>  |
|                        | <b><u>Staff &amp; Non Trade Receivables</u></b>        |                   |                   |
| 10.3                   | Staff Debtors                                          | 369,765           | 116,650           |
| 10.4                   | Other debtors                                          | 1,267,879         | 75,100            |
|                        | Ministry of Science & Technology (MGIF Project)        | 98,657            | 7,664             |
|                        |                                                        | <b>1,736,301</b>  | <b>199,414</b>    |
| 10.5                   | <b>Advances &amp; Loans</b>                            |                   |                   |
|                        | Motor Cycle Loan                                       | 237,083           | 279,167           |
|                        | Special Distress Loan                                  | 15,000            | 26,875            |
|                        | Cycle Loan                                             | 33,563            | 44,557            |
|                        | Festival Advance                                       | 64,200            | 58,200            |
|                        | Distress Loan                                          | 5,681,063         | 6,587,733         |
|                        | Advance to Employee                                    | 514               | 514               |
|                        | Balance at the end of the year                         | <b>6,031,423</b>  | <b>6,997,045</b>  |
| 10.6                   | <b>Refundable Deposits (Receivable)</b>                | 342,710           | 338,210           |
| <b>11</b>              | <b>Inventories</b>                                     |                   |                   |
|                        | Chemical Stock                                         | 273,908           | 485,370           |
|                        | Office & Laboratory Consumable & Vehicle Spare Stock   | 1,350,995         | 1,375,530         |
|                        | Laboratory Consumable stocks Identified as obsolete    | 397,758           | 397,758           |
|                        | Provision for Lab Consu. stocks Identified as obsolete | (397,758)         |                   |
|                        | IAEA Closing stocks (Donation))                        | 1,967,352         | 2,268,991         |
|                        | Balance at the end of the year                         | <b>3,592,254</b>  | <b>4,527,649</b>  |

**Notes to the Accounts**  
**As at 31-December 2012**

**12**

**Prepayments**

|                                 | <b>2,012</b>     | <b>2011</b>      |
|---------------------------------|------------------|------------------|
|                                 | <b>Rs.</b>       | <b>Rs.</b>       |
| Cooling Services (PVT) Ltd.     | 9,003            | -----            |
| Access International            | -----            | 12,622.80        |
| Sri Lanka Insurance Corporation | 3,047,508        | 2,207,418        |
| Metropolitan Communication Ltd  | 10,797           | 9,849.00         |
| Motor Traffic Commissioner      | 16,142           | 8,977            |
| Hideki International            | 781              | 677              |
| Metropolitan Office (Pvt) Ltd   | 17,591           | 46,667           |
| S.L.A.B                         | 59,044           | 49,790           |
| Brown & Co.                     | 4,167            | 1,667.00         |
| Chairman                        | 20,000           | 20,000           |
| Executive Director              | 18,000           | 18,000           |
| National Insurance Trust Fund   | 61,953           | 69,849           |
| Soar Technology                 | 51,000           | 51,000.00        |
| H& L Electricles                | 14,280           | -----            |
| Wasana Guest                    | 51,000           | -----            |
| Balance at the end of the year  | <b>3,381,265</b> | <b>2,496,515</b> |

**13**

**Other Current Assets**

|                                                 |                   |                  |
|-------------------------------------------------|-------------------|------------------|
|                                                 | <b>25,710,672</b> | <b>1,197,039</b> |
| 13.1 With holding Tax Receivable                | 2,785             | 29,876           |
| 13.2 Income Tax Advance                         | 17,158            | 17,684           |
| 13.3 VAT Receivable                             | 26,751            |                  |
| 13.4 I.A.E.A Receivable                         | 582,712           | 582,712          |
| 13.5 Advance payment for Building Maintenance   | 154,823           | -----            |
| 13.6 Mobilization Advance paid to SLLRDC & NBRO | 24,560,811        |                  |
| 13.7 <u>Purchasing Advance</u>                  |                   |                  |
| Balance at the beginning of the year            | 566,767           | 67,159           |
| Adjustments made for prior year                 | (209,750)         |                  |
| Restated Opening Balance                        | <b>357,017</b>    | <b>67,159</b>    |
| Settlements                                     | (354,044)         | (67,159)         |
| Purchasing Advance for the year                 | 362,660           | 566,767          |
| Balance at the end of the year                  | <b>365,633</b>    | <b>566,767</b>   |

**14**

**Work-In-Progress**

|                                                     |                   |                  |
|-----------------------------------------------------|-------------------|------------------|
| Water Proofing work                                 | 515,283           | 515,283          |
| Construction of NCNDT Payments to the SLLRDC & NBRO | 56,199,722        | 655,226          |
| Office Automation Software                          | -----             | 389,375          |
| Balance at the end of the year                      | <b>56,715,006</b> | <b>1,559,884</b> |

| Notes to the Accounts  |                                                                    | 2,012              | 2011               |
|------------------------|--------------------------------------------------------------------|--------------------|--------------------|
| As at 31-December 2012 |                                                                    | Rs.                | Rs.                |
| <b>15</b>              | <b>Research &amp; Development On Going Projects</b>                |                    | -                  |
|                        | Water Resource Management                                          | 1,881,447          | 1,736,117          |
|                        | Pre Feasibility Study on Nuclear Power Generation                  | 832,776            | 524,776            |
|                        | Radiative Monitoring Programme                                     | 241,628            | 143,824            |
|                        | Y N S S                                                            | 701,290            | 224,080            |
|                        | C K D - Project- Received in Advance                               |                    | 47,294             |
|                        | Developing National Capability to Respond radiological Emergencies | 1,584,701          | 45,926             |
|                        | MIPA Project                                                       | 770,763            |                    |
|                        | Electro Beam Service Facility in Sri Lanka                         | 33,182             | 33,182             |
|                        | Balance at the end of the year                                     | <b>6,045,787</b>   | <b>2,755,199</b>   |
| <b>16</b>              | <b><u>Infrastructure, Plant &amp; Equipment</u></b>                |                    |                    |
| 16.1                   | Property Plant & Equipment                                         | 150,171,229        | 297,850,104        |
| <b>17</b>              | <b>17.1 Land &amp; Building</b>                                    | <u>177,195,275</u> | <u>8,239,897</u>   |
|                        | Balance at the end of the year                                     | <b>327,366,504</b> | <b>306,090,001</b> |
| <b>18</b>              | <b>Other Long Term Assets</b>                                      |                    |                    |
|                        | Scientific Equipment received for MGIF project                     | 9,417,746          | 9,417,746          |
|                        |                                                                    | <b>9,417,746</b>   | <b>9,417,746</b>   |
| <b>19</b>              | <b>Unusable Items</b>                                              |                    |                    |
|                        | Unusable Items                                                     | 31,850             | 31,850             |
|                        |                                                                    | <b>31,850</b>      | <b>31,850</b>      |
| <b>20</b>              | <b>Trade Payable</b>                                               | <b>16,305,166</b>  | <b>5,092,945</b>   |
| 20.1                   | Creditors & Accruals Opening Balance                               | 4,499,415          | 2,176,933          |
|                        | Prior Year Adjustment                                              | (35,195)           |                    |
|                        | Re-stated Opening Balance                                          | 4,464,220          | 2,176,933          |
|                        | Settlement during the year                                         | (3,511,350)        | (1,572,497)        |
|                        | Provision for the year                                             | 14,039,636         | 3,894,979          |
|                        | Balance at the end of the year                                     | <b>14,992,506</b>  | <b>4,499,415</b>   |
| 20.2                   | Advance Income for License fees                                    | 313,500            | 116,383            |
| 20.3                   | Advance Income for Radiation Protection                            | 4,428              | 13,608             |
| 20.4                   | Advance Income for Food Testing                                    | 1,270              | 540                |
| 20.5                   | Over Income                                                        | 46,979             | 39380              |
| 20.6                   | Advance received for CKD project                                   | 577,545            |                    |
| 20.7                   | Sundry Creditors                                                   | 19,838             | 19,838             |
| 20.8                   | Imperial Teas (PVT) Ltd.                                           |                    | 392                |
| 20.9                   | VAT Payable                                                        |                    | 131,789            |
| 20.1                   | Advance payment received for Rent – Polipto Co.                    | 245,250            | 180,000            |
|                        | Retention Money -Sumo Engineering (PVT) Ltd.                       | 12,250             |                    |

| Notes to the Accounts                |                                                   | 2,012               | 2011                |
|--------------------------------------|---------------------------------------------------|---------------------|---------------------|
| As at 31-December 2012               |                                                   | Rs.                 | Rs.                 |
| 20.1                                 | Refundable deposit Payable                        | 91,600              | 91,600              |
| <b>21</b>                            | <b>Retirement Benefit Obligations</b>             |                     |                     |
|                                      | Balance at the beginning of the year              | 15,434,480          | 14,722,022          |
|                                      | Cash Paid                                         | (129,881)           | (453,812)           |
|                                      | Add : Provision for the year                      | 6,237,248           | 1,166,270           |
|                                      | Balance at the end of the year                    | <b>21,541,847</b>   | <b>15,434,480</b>   |
| <b><u>Capital &amp; Reserves</u></b> |                                                   |                     |                     |
| <b>22</b>                            | <b>Capital Grant</b>                              |                     |                     |
|                                      | Current Assets                                    | <b>296,442,664</b>  | 232,685,068         |
|                                      | Prior Year Adjustment for Grant Received          | 20,425,000          | 2,954,087           |
|                                      | <b>Opening Balance after the SLAS Adjustments</b> | <b>316,867,664</b>  | <b>235,639,155</b>  |
|                                      | Capital Grant Received for the year               | 90,600,000          | 75,584,618          |
|                                      | Grant Received for Clearing of Donation           | 1,308,533           |                     |
|                                      | Application of SLAS 24 relevant to current year   | (22,263,520)        | (14,781,109)        |
|                                      | Balance at the end of the year                    | <b>386,512,677</b>  | <b>296,442,664</b>  |
| <b>23</b>                            | <b>Accumulated Fund</b>                           |                     |                     |
|                                      | Balance at the beginning of the year              | <b>88,268,268</b>   | 90,694,719          |
|                                      | Adjustments Made as per the SLAS 24 prior to 2010 |                     |                     |
|                                      | <b>Opening Balance after the SLAS Adjustments</b> | <b>88,268,268</b>   | <b>90,694,719</b>   |
|                                      | Application of SLAS 24 relevant to 2010           | (9,448,231)         | (9,198,635)         |
|                                      | Donations Received for the Year                   | 12,872,050          | 6,772,184           |
|                                      | Balance at the end of the year                    | <b>91,692,087</b>   | <b>88,268,268</b>   |
| <b>25</b>                            | <b>Deficit</b>                                    |                     |                     |
|                                      | Balance at the beginning of the year              | <b>(60,544,231)</b> | <b>(63,815,812)</b> |
|                                      | Prior Year adjustments                            | (140,431)           | (97,208)            |
|                                      | <b>Re stated Opening balance</b>                  | <b>(60,684,662)</b> | <b>(63,913,020)</b> |
|                                      | Adjustments A/C                                   | (707,192)           | 71,006              |
|                                      | Surplus/Deficit for the year                      | (10,150,353)        | 3,297,783           |
|                                      | Balance at the end of the year                    | <b>(71,542,207)</b> | <b>(60,544,231)</b> |

## **Disclosures to Accounts**

### **IAEA Donations under Technical Cooperation**

The Atomic Energy Authority (AEA) functions as the focal point of Sri Lanka for the coordination and implementation of the Technical Cooperation Programmes of International Atomic Energy Agency (IAEA) in order to develop nuclear technology in the country.

The assets and consumables donated to AEA under various IAEA projects have been accounted in AEA books of accounts.

The following details are relevant to the transactions during the year 2012 for AEA technical cooperation programmes.

| <b>No</b> | <b>Project No.</b> | <b>Project Description</b>                                                                                                                       | <b>Allocation in Euros (€)</b> | <b>Allocation in SLRS (approximate)</b> | <b>Value of Equipment &amp; Consumables Received in SLRS</b> |
|-----------|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|-----------------------------------------|--------------------------------------------------------------|
|           |                    | Development of National Capabilities of Radiological Emergencies                                                                                 | 168,029                        | 27,724,800                              | 9,449,079                                                    |
| 02        | 1/007              | Strengthening the Non Destructive Testing (NDT) through the establishment of an accredited Center for NDT.                                       | 67,866                         | 11,197,890                              | 2,394,447                                                    |
| 03        | 0/010              | Strengthening of Radiation Safety Programme and Nuclear Analytical Capabilities of the National Research Centre                                  | 61,035                         | 10,070,775                              | pending                                                      |
| 04        | 5/043              | Supporting the Operation of the Gamma Irradiation facility for preservation of food, sterilization of medical products and quarantine of fruits. | 48,097                         | 7,936,005                               | pending                                                      |
| 05        | -----              | Inter-regional Projects/Research Projects                                                                                                        | 10,000                         | 1,650,000                               | 1099131                                                      |
|           |                    | <b>Total</b>                                                                                                                                     | <b>355,027</b>                 | <b>58,579,470</b>                       | <b>12,942,657</b>                                            |

In addition to above, AEA had conducted several research projects using IAEA assistance and trained AEA employees as well as officers of other national institutes in various fields. AEA officials had also participated in several meetings conducted in several countries under the above projects.

Sri Lankan Government has made the following contributions as the National Participation Cost (NPC) on behalf of receiving the above assistance from IAEA .

1. Regular Budget contribution SLRS. 8.4 million from Ministry of Power & Energy..
2. Assessed Programme Cost (APC) and National Participation Cost (NPC) SLRS. 6 million from the External Resources Department (ERD) of the General Treasury.

### **Accounting & Inventory Records on Equipment Including IAEA Donations**

Many equipment were received under various technical cooperation projects and were given to government institutions through AEA. They had been recorded as AEA assets in the books and in accounts of the AEA. This had happened during the last couple of years.

The Board of management looked in to this matter during the year 2009 and appointed a subcommittee to update the inventories and transfer the ownership to the present user institutions. A consultant also was appointed to help this committee.

The subcommittee had identified the actual equipment belonging to AEA, and those equipment belonging to outside institute and action to has been officially handover the equipment, where they are already installed in outside institutions.

Board has decided to obtain confirmation from all the institutions by sending another reminder on the acceptance of the items and to hand over the same officially to present users. Three (3) institutions (Rubber Research Institute, Cancer Institute and NMU -National Hospital Colombo) had replied to the letters. Necessary adjustments in the accounts were made for those who had confirmed the existence of the equipment.

### **Revaluation of Property ,Plant & Equipment**

In order to comply with LKAS 16, Process of revaluation of Property ,Plant & Equipment have been started and as the first step list of Scientific Equipment which are in working order but the WDV is zero, were sent to the Department of Valuation. List of Other Equipment for revaluation in compliance with the LKAS 16 will be prepared in due course.

### **Related Party Disclosures**

There is no related party or related party transaction to be disclosed in the Financial Statements.

### **Other Long Term Assets**

Scientific Equipment received as donation from IAEA under Multi-Purpose Gamma Irradiation facility Project (MGIF) worth Rs 9,417,746/- is shown under other long term assets in the Balance Sheet.

### **Outsourcing of AEA Properties**

The Board of Directors of the AEA has decided to rent the idling space (400sft.) of AEA to be used by the Polipto Lanka (PVT) Ltd for a period of One Year .Polipto Lanka (PVT) Ltd. Is a Company gazetted under the Ministry of Power & Energy.

### **Un settled commitments at the end of the year 2012**

The following Equipment were ordered in December 2012 with the fund release from the National Budget Department. But the required money was not received from the Department of Treasury Operation Department in December 2012. Therefore the following commitments will have to be settled out of 2013 capital grant.

| <b>Date</b> | <b>PO No</b> | <b>Item</b>                                 | <b>Amount Rs.</b> |
|-------------|--------------|---------------------------------------------|-------------------|
| 21.12.2012  | 2467         | Reinforced Detection Meter/Cover Meter      | 1,094,240         |
| 21.12.2012  | 2469         | Pile Integrity Tester                       | 2,234,400         |
| 21.12.2012  | 2470         | Pile Echo Tester                            | 1,545,600         |
| 21.12.2012  | 2471         | Moisture Meter for Concrete Testing         | 397,600           |
| 21.12.2012  | 2472         | Impact Echo Tester                          | 3,091,200         |
| 21.12.2012  | 2473         | Corrosion Analysis Detector                 | 2,044,000         |
| 21.12.2012  | 2476         | Flowed specimen kit for NDT                 | 2,478,560         |
| 21.12.2012  | 2468         | Pull off Tester                             | 741,400           |
| 21.12.2012  | 2474         | Ultrasonic Pulse velocity with oscilloscope | 1,291,752         |
| 21.12.2012  | 2475         | Schmidt Hammer                              | 662,166           |
|             |              | <b>Total</b>                                | <b>15,580,918</b> |

Required funds were not received in 2012 from the Department of Treasury Operation for the settlement of following bills of the NCNDT building project.

| <b>Date</b> | <b>Bill</b> | <b>Contractor</b>                              | <b>Amount Rs.</b>    |
|-------------|-------------|------------------------------------------------|----------------------|
| 10.01.2013  | No.04       | Sri Lanka Land Reclamation & Development Corp. | 6,859,817.82         |
| 22.01.2013  | No.05       | Sri Lanka Land Reclamation & Development Corp. | 5,861,345.34         |
|             |             | <b>Total</b>                                   | <b>12,721,163.16</b> |

AEA has made a request to the Department of Treasury Operations to transfer the above commitments to the deposit account as per the State Accounts Circular 226/2012 dated 09.11.2012.

### **Global Threat Reduction Initiative Programme (GTRI)**

United States of America (USA) has funded US\$ 26750 under the above programme in order to dispose the two unserviceable nuclear sources available at Horticulture Research Institute Gannoruwa and AEA. Funds received under this project have been deposited in the Deputy Secretary's Account No 4201 under the Dept. of Treasury Operations (TOD). Amount spent out of the funds received during the year 2012 was US\$ 26250 under the supplementary allocation 119-01-02-12-2502-(13) approved by the Department of National Budget.

Balance amount is receivable on delivery of the sources to India. If any excess amount is found after completing the given tasks, it can be used to cover the overheads born by the AEA in this regard.



### **Justification for the deficit for the year 2012**

Main income source of the income statement is Recurrent Grant receive from the Treasury. Total recurrent grant approved for the year 2012 was Rs.44.1 million. On the request made by the Secretary, Ministry of Power & Energy (MOPE) Rs.3.5 million was transferred to MOPE by FR 66 in order to find the shortage of Regular Budget Contribution for the year 2012.

Therefore the remaining recurrent grant was Rs.40.6 million. AEA allowed utilizing a part of the recurrent grant for the above purpose with the view to cover its cash expenses by using internally generated income and debt collections.

11. Following non cash transactions also included in the income statement.

|                                    |              |
|------------------------------------|--------------|
| 18. Provision for gratuity         | Rs.6,121,799 |
| 19. Provision for doubtful debtors | Rs. 823,124  |
| 20. Provision for obsolete stock   | Rs. 397,758  |

The above mentioned items are the main reasons for the deficit.



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**கணக்காய்வாளர் தலைமை அபிபதி திணைக்களம்**



**AUDITOR GENERAL'S DEPARTMENT**

මගේ අංකය }  
எனது இல. } EH/B/AEA/FA/12  
My No }

ඔබේ අංකය }  
உமது இல }  
Your No. }

දිනය }  
திகதி } // April 2014  
Date }

The Chairman  
Atomic Energy Authority

**Report of the Auditor General on the Financial Statements of the Atomic Energy Authority for the year ended 31 December 2012 in terms of Section 14(2)(c) of the Finance Act No. 38 of 1971**

The audit of financial statements of the Atomic Energy Authority for the year ended 31 December 2012 comprising the statement of financial position as at 31 December 2012 and the statement of financial performance, statement of changes in net assets 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 32(3) of the Atomic Energy Authority Act No. 19 of 1969. My comments and observations which I consider should be published with the annual report of the Authority in terms of Section 14(2)(c) of the Finance Act appear in this report. My detailed report in terms of Section 13(7)(a) of the Finance Act will be issued in due course.

**1.2 Responsibility of the Management for the Financial Statements**

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

**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. 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.

අංක 306/72 පොල්දූව පාර,  
බත්තරමුල්ල, ශ්‍රී ලංකාව

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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 judgment, including the assessment of the risk of material misstatements of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the Authority'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 Authority'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 qualified audit opinion.

#### **1.4 Basis for Qualified Audit opinion**

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

## **2 Financial Statements**

### **2.1 Opinion**

In my opinion, except for the effects on the financial statements of the matters referred to in paragraph 2.2 of this report, the financial statements give a true and fair view of the financial position of the Atomic Energy Authority as at 31 December 2012, 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 Sri Lanka Public Sector Accounting Standards (SLPSAS)**

Even though the Authority had disclosed in the notes to the financial statements that the measurement base applied was historical cost adjusted for revaluation of assets, the Authority had not revalued its property plant and equipment to ensure that the carrying amounts did not differ materially from the fair value, which would be determined at the date of financial position, as stipulated in SLPSAS 7 – Property, Plant and Equipment. Further, fully depreciated assets of which the historical cost was Rs. 103.44 million had continued to be used by the Authority without taking action to revalue the relevant assets.



### 2.2.2 Accounting Deficiencies

It was observed that the balances of assets of the Authority as per Fixed Assets Register differ from the closing balances of the ledger accounts and the total difference amounted to Rs. 1,113,835 as at the date of the statement of financial position. Details are shown below.

| Type of Asset              | Balance as per<br>Ledger Accounts | Balance as per Fixed<br>Assets Registers | Difference       |
|----------------------------|-----------------------------------|------------------------------------------|------------------|
|                            | Rs.                               | Rs.                                      | Rs.              |
| Scientific Equipment       | 89,372,171                        | 90,203,890                               | 831,719          |
| Other equipment            | 449,717                           | 446,780                                  | 2,937            |
| Office equipment/Furniture | 9,673,112                         | 9,393,933                                | 279,179          |
| <b>Total</b>               |                                   |                                          | <b>1,113,835</b> |

### 2.2.3 Accounts Receivable and Payable

The following observations are made

- Although the Authority had called confirmation from all debtors in respect of outstanding balances of Rs. 4,604,649 (before bad debt provision) remains as at the end of the year under review, confirmation was not received by audit.
- Age analysis of debtors as at 31 December 2012 is shown below.

| Category                                          | Total            | Less than<br>one year | 01-03<br>years | 03-05<br>years | More than<br>05 years |
|---------------------------------------------------|------------------|-----------------------|----------------|----------------|-----------------------|
|                                                   | Rs.              | Rs.                   | Rs.            | Rs.            | Rs.                   |
| General Scientific<br>Equipment                   | 1,309,939        | 486,696               | 155,966        | 65,595         | 601,682               |
| Radiation Protection                              | 2,188,968        | 1,299,345             | 446,934        | 90,922         | 351,767               |
| Non Destructive Testing<br>(NDT) Inspection       | 257,093          | 203,718               | 36,075         | -              | 17,300                |
| Non Destructive Testing<br>(NDT) Training Courses | 586,699          | 553,430               | -              | 27,400         | 5,869                 |
| Food testing                                      | 261,950          | 184,140               | 75,310         | -              | 2,500                 |
| <b>Total</b>                                      | <b>4,604,649</b> | <b>2,727,329</b>      | <b>714,285</b> | <b>183,917</b> | <b>979,118</b>        |

According to the above age analysis a sum of Rs. 1,877,320 had been remained unsettled for more than one year and the balances amounting to Rs. 979,118 remained unsettled for more than 5 years which had included a sum of Rs. 715,966 receivable from government sector institutions.

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

The Advisory Committee, appointed by the Minister of Power and Energy had not met since 1999 in line with Section 31 of the Atomic Energy Authority Act No. 19 of 1969. Even though a new Committee had been nominated by the Authority in 2006, the Committee was not appointed even up to the end of the year under review.

#### **2.2.5 Lack of evidence for audit**

Radiation Facility and Sport Equipment amounting to Rs. 867,552, shown under property, plant and equipment could not be satisfactorily vouched in audit due to non-availability of sufficient and appropriate evidence.

### **3 Financial Review**

#### **3.1 Financial Results**

According to the financial statements presented, the working of the Authority for the year under review had resulted in a deficit of Rs. 10,150,353 as compared with the corresponding net surplus of Rs. 3,297,783 for the preceding year, thus indicating a deterioration of Rs. 13,448,136 in the financial results. The increase of total expenditure is higher than the increase of the total income during the year under review as compared with preceding year is the main reason for this deterioration.

### **4 Operating Review**

#### **4.1 Performance**

As per the Corporate Plan, the Atomic Energy Authority (AEA) functions as the focal point of Sri Lanka for the coordination and implementation of Technical Cooperation Programmes of International Atomic Energy Agency (IAEA) in order to develop nuclear technology in the country. Accordingly, IAEA provides funds to the member countries for various projects that linked to the Country Programme Framework or to the national development plans where there is no Country Programme Framework under their Technical Cooperation Programmes. However, the IAEA expects the AEA to complete the implemented projects within the given period of time with coordination of the relevant Recipient Institutes and Counterpart(s).

The following observations are made with regard to the implementation of Projects.



- (a) Under the Technical Cooperation Programme of 2012–2013, the IAEA had approved a sum of Euro 741,724 equivalent to Rs. 58,579,470 as core financing and Euro 1,014,584 equivalent to Rs. 80,129,257 as Footnote Financing, for 8 projects to be implemented during the said period. According to the information made available to audit, out of the above approved 8 projects, the AEA was supposed to implement 4 projects and the other 4 projects were planned to be implemented by some other Government Institutions as follows.

| Project No.  | Core Financing Approved |                |                   | Footnote Financing | Utilization of core financing (approved for the year 2012) as at 31 December 2012 |            | Recipient Institutes and Counterpart(s)                                              |
|--------------|-------------------------|----------------|-------------------|--------------------|-----------------------------------------------------------------------------------|------------|--------------------------------------------------------------------------------------|
|              | 2012                    | 2013           | Total (2012/2013) |                    | Amount                                                                            | Percentage |                                                                                      |
|              | Euro                    | Euro           | Euro              |                    | Euro                                                                              | %          |                                                                                      |
| SRL/0/010    | 61,035                  | 42,000         | 103,035           | 50,000             | 39,061                                                                            | 64         | AEA                                                                                  |
| SRL/1/007    | 67,866                  | 18,000         | 85,866            | 150,000            | 46,770                                                                            | 69         | AEA                                                                                  |
| SRL/2/008    | 62,000                  | 47,000         | 109,000           | 80,875             | 43,262                                                                            | 70         | Ministry of Power and Energy,<br>University of Moratuwa,<br>Ceylon Electricity Board |
| SRL/2/009    | 70,775                  | 89,621         | 160,396           | -                  | 50,000                                                                            | 71         | AEA,<br>Ministry of Environment                                                      |
| SRL/5/043    | 48,097                  | -              | 48,097            | -                  | 21,196                                                                            | 44         | AEA,<br>University of Peradeniya                                                     |
| SRL/5/044    | 35,460                  | 38,150         | 73,610            | 133,709            | 24,212                                                                            | 68         | University of Peradeniya,<br>Anti-malaria Campaign                                   |
| SRL/6/032    | 63,000                  | 27,000         | 90,000            | 350,000            | 68,885                                                                            | 109        | University of Peradeniya<br>Teaching Hospital Jaffna                                 |
| SRL/6/033    | 26,810                  | 44,910         | 71,720            | 250,000            | 14,493                                                                            | 54         | Teaching Hospital Jaffna                                                             |
| <b>Total</b> | <b>435,043</b>          | <b>306,681</b> | <b>741,724</b>    | <b>1,014,584</b>   | <b>307,879</b>                                                                    | <b>71</b>  |                                                                                      |

The following observations are made in this regard.

- Out of total core financing of Euro 435,043 approved for the year 2012, the AEA had utilized only a sum of Euro 307,879 or 71 per cent as at the end of the year under review.
- Even though a sum of Rs. 1,014,584 had been approved as footnote financing for the years of 2012–2013, the AEA and other Recipient Institutes and Counterparts were not being able to utilize any amount of footnote financing facilities so far due to delays in implementing core financing.

- (iii) Sufficient and appropriate evidences were not made available to audit that the AEA had taken proper actions to implement projects by coordinating Recipient Institutes and Counterpart in terms of the technical corporation programme of the IAEA for the 2012–2013 biennium. *“As per the Chairman of the Authority, the International Division performs these with very limited staff and the Division also carried out all the Human Resources matters until recent past. This Division performs activities more than it can do utilizing its available staff. However, the AEA has appointed Project Evaluation Committee comprising eight most Senior Officers of AEA to evaluate and review the implementation of Projects.”*
- (iv) Opportunities for obtaining new projects might have been obstructed due to delays in implementing the existing projects.
- (b) According to the status report of 2009–2011 prepared by the IAEA, following projects should have been completed as at the end of the year 2011. However, due to delay in implementation of activities, AEA was unable to utilize such funds as expected. Fund utilizations out of the fund approved for the above period as at 30 June 2013 are as follows.

| Project No.  | Core Finance Approved |                |                |                  | Utilization of core financing as at 30 June 2013 |            | Recipient Institutes and Counterpart(s)                                                     |
|--------------|-----------------------|----------------|----------------|------------------|--------------------------------------------------|------------|---------------------------------------------------------------------------------------------|
|              | 2009                  | 2010           | 2011           | Total            | Amount                                           | Percentage |                                                                                             |
|              | Euro                  | Euro           | Euro           | Euro             | Euro                                             | %          |                                                                                             |
| SRL/9/009    | 92,600                | 173,275        | 45,000         | 310,875          | 370,708                                          | 119        | AEA,<br>Disaster Management Center                                                          |
| SRL/8/020    | 82,900                | 87,155         | 66,300         | 236,355          | 7,770                                            | 3          | AEA,<br>Central Environmental Authority,                                                    |
| SRL/6/031    | 145,400               | 103,500        | 35,975         | 284,875          | 213,720                                          | 75         | University of Kelaniya                                                                      |
| SRL/5/042    | 129,576               | 85,116         | 94,675         | 309,367          | 239,192                                          | 77         | University of Kelaniya,<br>Veterinary Research Institute Kandy,<br>University of Peradeniya |
| SRL/8/019    | 207,715               | 245,115        | 120,000        | 572,830          | 240,930                                          | 42         | AEA                                                                                         |
| <b>Total</b> | <b>658,191</b>        | <b>694,161</b> | <b>361,950</b> | <b>1,714,302</b> | <b>1,072,320</b>                                 | <b>63</b>  |                                                                                             |

*“As per the Chairman of the Authority, Project SRL/8/020 was failed due to reasons beyond the control of the Authority. The project was submitted to IAEA, assuming that the KOICA support could be obtained with the concurrence of the Department of National Planning. The Department of National Planning assigned a low priority for*



*the project and the Authority, together with Central Environmental Authority were unable to secure the technical assistance from KOICA. Due to this reason the project was failed, but the IAEA has utilized the funds already approved for Sri Lanka for provision of assistance to project SRL/6/032, to procure a Gamma Camera with a component of government cost sharing."*

- (c) Even though following projects should have been completed at the end of the year 2008, it was observed that those projects had been completed only in the year 2012 after long delay.

| Project No. | Time Period | Financial Approval | Actual Expenditure | Percentage of Utilization of Funds as at 30 June 2013 | Date of Completion |
|-------------|-------------|--------------------|--------------------|-------------------------------------------------------|--------------------|
|             |             | Euro               | Euro               |                                                       |                    |
| SRL/6/030   | 2007-2008   | 190,680            | 160,994            | 84                                                    | 22 May 2012        |
| SRL/2/007   | 2007-2008   | 187,040            | 170,622            | 91                                                    | 04 December 2012   |

*"As per the Chairman of the Authority, these projects have been delayed due to implementation of fellowships and expert mission as finding of suitable fellowship institutes had become difficult".*

- (d) IAEA technical cooperation provided on the basis of the recipient Member State does not have the necessary expertise and nuclear facilities at the national level to utilize nuclear techniques to address national development issues and contribute to the achievement of socio economic goals. Therefore, projects should be designed to fill a well identified national gap in expertise, capabilities or infrastructure.

Even though the AEA was expected to implement projects and utilize the available funds provided by the donor agencies in an effective and efficient manner (with an implementation rate of 95 per cent), it was observed that implementation rate of some projects were at a very lower rate and it had evidenced that project designs and work plans had not properly focused on country requirements from such projects. Instances of failures of some of such projects are shown below.



| Project No. | Finance Approved |         |        |        |        |         | Utilization of total financing as at 30 June 2013 |            | Recipient Institutes and Counterpart(s) |
|-------------|------------------|---------|--------|--------|--------|---------|---------------------------------------------------|------------|-----------------------------------------|
|             | 2007             | 2008    | 2009   | 2010   | 2011   | Total   | Amount                                            | Percentage |                                         |
|             | Euro             | Euro    | Euro   | Euro   | Euro   | Euro    | Euro                                              | %          |                                         |
| SRL/5/040   | 74,100           | 143,495 | -      | 69,395 | -      | 286,990 | 57,450                                            | 20         | Coconut Research Institute              |
| SRL/8/020   | -                | -       | 82,900 | 87,155 | 66,300 | 236,355 | 7,770                                             | 3          | AEA, Central Environmental Authority    |

## 4.2 Transactions of Contentious Nature

The following observations are made.

- (a) Without preparing a proper incentive scheme and obtaining the necessary approval from the General Treasury in accordance with the Public Enterprises Circular No. 95 of 14 June 1994, a sum of Rs. 735,796 had been paid by the Authority to its employees as incentives for the year under review.
- (b) The Authority had paid an amount of Rs. 1,172,351 as overtime payment during the year under review and for the same period 266 ½ days of lieu leave had also been obtained by the employees of the Authority. The Board meeting held on 19 March 2013 had taken a decision to stop such practice and to provide only one benefit in this regard.

## 4.3 Idle and Under Utilized Assets

The following observations are made.

- (a) The assets (equipment) valued at Rs. 9,417,746 had been donated by the IAEA to the Multi-purpose Gamma Irradiation Facility (MGIF) through the Authority on 31 May 2010. However, such assets were remained idle due to the MGIF had not started its operational activities even up to 31 December 2013, and this amount had been shown under other long term assets of the Authority.
- (b) According to the Board decision taken on 26 May 2008, an obsolete stock of Ammonia Sulphate, valued at Rs. 397,758, had been decided to be issued to schools or to the ITI institute. However, such stock had been remained idle up to the date of audit inspection on 15 August 2013.

#### 4.4 Procurement of Machinery and Equipment

According to the audit test checks carried out on procurement of machinery and equipment during the year under review, following observations are made.

##### (a) Procurement of an Impact Echo Tester

- (i) The highest bidder had been selected and awarded the contract at the price of Rs. 3,091,200 and the TEC had rejected lowest bidder without valid reasons.
- (ii) According to the information made available, only the deviation for the rejection of the lowest bidder, when compared to the selected bidder, was excluding the clause of "Notebook Computer and two BCN cables" which had been mentioned as a requirement in the specifications. According to the catalog provided by the said company, "the data is easily uploaded to a PC for inclusion in reports and data analysis. Data communication takes place via the RS-232 port and Windows compatible PC software." Accordingly, it was revealed that such items were not so important for the functionability of the system.

As per the Procurement Guidelines 7.8.3, deviations that has no effect on the functionability, quality or delivery of the Goods or Services offered, and that can be quantified and given value which can be added to or subtracted from the price for purposes of comparison can be identified as minor deviations.

Accordingly, it was observed that,

- Even though, "Notebook Computer and two BCN" cables had been identified as critical in the bidding documents, such items could have been identified as minor deviations.
  - The loss incurred by the Authority as a result of rejecting the lowest bidder was amounting to Rs. 771,690.
  - Notebook Computer and two BCN with high capacity could be bought from the market at very lower price when compared to the loss incurred by the Authority.
- (iii) This instrument had not been tested at the time of acquisition, and the technical viability and operational ability had been tested 6 months after the acquisition. However, a capable officer was not available to test it and accordingly, an expert invited from India had done some tests satisfactorily. Therefore, it was observed



that the training requirement on the operation of the equipment had not been considered.

- (iv) The equipment had not been used for any commercial purposes up to 30 September 2013.

#### (b) Procurement of Moisture Meter for Concrete Testing

- (i) Only three suppliers had responded for the invitation of bids for the purchasing of "Moisture Meter" during the year 2012. The highest bidder, had been selected and awarded the contract at the price of Rs. 355,000 and rejected the lowest offer by giving unacceptable reasons.
- (ii) As a result of rejecting the lowest offer, the loss incurred by the Authority was amounted to Rs. 123,875 and also, it was 35 per cent higher than the lowest offer.
- (iii) This equipment had not been used for any commercial purposes up to 30 September 2013.

#### (c) Procurement of Pile Integrity Testing Equipment and Pile Eco Tester

Authority had purchased the above equipment for the purpose of pile testing based on sonic pile testing method. Both equipment could be used for the same purpose but, the Pile Integrity Testing Equipment was technologically more advanced equipment than the Pile Eco Tester. Accordingly, it was revealed that the Authority could have achieved its pile testing objective by acquiring only the Pile Integrity Testing Equipment. Hence it was observed that the expenditure incurred by the Authority amounting to Rs. 1,545,600 for the purchase of Pile Eco Tester would be a fruitless expenditure. It was also observed that this equipment had not been used for any commercial purposes up to 30 September 2013.

### **4.5 Human Resource Management**

Twenty four vacancies in different categories of the staff, including 10 of staff grade, 10 of clerical and allied grades and 4 of minor grades, were existed as at the end of the year under review due to failure of maintenance of realistic cadre level and periodic review of the cadre. Information relating to the staff of the Authority is shown below.

| Category of Staff          | Approved Cadre | 2012         |           |
|----------------------------|----------------|--------------|-----------|
|                            |                | Actual Cadre | Vacancies |
| Staff Grades               | 62             | 52           | 10        |
| Clerical and Allied Grades | 50             | 40           | 10        |
| Minor Grades               | 25             | 21           | 04        |
| Total                      | 137            | 113          | 24        |

#### **4.6 Revision of the Atomic Energy Authority Act No 19 of 1969**

The International Atomic Energy Agency (IAEA) by its letter No. AUT/MULT/IAEA/22 of 01 January 2006 had informed the Authority that the present Act is adequate at the time it was promulgated and in view of the current international safety standards and increased application of radiation technologies in health/agriculture and other areas, the above Act needs to be revised. Further, a revision of the present Act is needed since it had not been demarcated the regulatory and promotional functions of the Authority in order to avoid any conflict of interest. Even though a Committee had been appointed in 2006 to review the weaknesses of the present Act and to prepare a new draft Act, that task had not been succeeded even up to the date of this report.

#### **4.7 Renting out a part of the Authority's building**

The Authority had rented out three rooms, with 545 square feet, in the second floor of the building owned by the Authority to a private company at a rate of Rs. 100 per square feet per month. Following observations are made in this regard.

- (a) The rental was fixed without obtaining the service of the Chief Valuer.
- (b) Charges for the usage of auditorium, car park, etc. had not been decided.

### **5 Accountability and Good Governance**

#### **5.1 Internal Audit**

It was observed in audit that most of the areas in the Annual Audit Programme for the year under review had not been covered and it was further observed that Internal Audit Division of the Authority consisted of only one officer and additional works also had been assigned to that officer.

## **5.2 Audit Committee**

Several instances of non-responding by the Board of Directors for the decisions taken by the Audit Committee were observed.

## **5.3 Procurement Plan**

Even though a procurement plan had been prepared by the Authority, it was not in line with the Action Plan and the budget prepared by the Authority for the year under review.

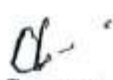
## **5.4 Budgetary Control**

Significant variances were observed between the budget and the actual, thus indicating that the budget had not been made use of as an effective instrument of management control.

## **6 Systems and Controls**

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

- (a) Property, Plant and Equipment
- (b) Debtors and Other Receivables
- (c) Compliance with Laws, Rules, etc.
- (d) Procurements
- (e) Utilization of Resources
- (f) Human Resources Management
- (g) Assets Management
- (h) Payment of incentive to the staff
- (i) Budgetary control

  
**H.A.S. Samaraweera**  
**Auditor General**



**Replies for the comments of the Report of the Auditor General on the Financial Statements of the Atomic Energy Authority for the year ended 31 December 2012 in terms of Section 14 (2) (c) of the Finance Act No. 38 of 1971**

**2.2 Comments on Financial Statements**

**2.2.1 Sri Lanka Public Sector Accounting Standards (SLPSAS)**

List of Scientific Equipment identified as to be revalued was submitted to the Department of Valuation. Officers from the valuation Department visited to verify these assets and requested to paste identification numbers on the equipment for easy identification. Steps have been taken to do so.

**2.2.2 Accounting Deficiencies.**

(a) The difference between ledger account and the fixed assets register are coming from old balances. It is difficult to reconcile these two records due to lack of records. However, AEA was able to reduce the difference during last couple of years and due adjustments had been made for identified reasons. Action will be taken to make necessary adjustments to eliminate these differences with the concurrence of the Board of Management.

**2.2.3 Accounts Receivable and Payable**

(a) Letters had been sent to all the trade debtors requesting to confirm the balance directly to the Auditor General; Responses from the debtors were very poor. However certain debts were settled as a result of sending confirmations.

(b). Position as at 31-12-December 2011 of the trade debtors is as follows.

|                              | Item               | Balance As at<br>31.12.2010 | Recovered<br>Up to 31.12.11 | Recovery % | Remaining<br>Balance |
|------------------------------|--------------------|-----------------------------|-----------------------------|------------|----------------------|
| Analysis of<br>Trade Debtors | Less than one year | 1,473,369                   | 1,279,983.3                 | 87%        | 193,386              |
|                              | 01 – 03 years      | 243,296                     | 61,911                      | 25%        | 181,385              |
|                              | 03 – 05 years      | 882,364                     | 46,683                      | 3.5%       | 835,681              |
|                              | More than 05 years | 165,724                     | 6,931                       | 4.1%       | 158,793              |

An action has been taken to collect the services charges for the services before attending to the job. However, in certain jobs, such as personal monitoring, the AEA has to provide services as a regulatory matter and to protect radiation workers. In such cases AEA is compelled to provide services on credit basis. Income for Non Destructive Testing (NDT) is assessed after completing the job. AEA has decided to attend the jobs below Rs.100, 000/= without advances and others on 50% advance of estimated job value.

**2.2.4 non- compliance with Laws, Rules, Regulations and Management Decisions.**

Steps have been taken to appoint Advisory Committee in May 2014.

**2.2.5 Lack of evidence for audit**

An action has been taken to write off the balance available as Radiation facility in 2013 as many items of said asset had been capitalized erroneously.

**3. Financial Review**

**3.1 Financial results**

Accepted. Reason for the financial deterioration was that the following expenditure had been increased in 2012 due to increase of the R & D activities.

21. Laboratory Consumables

22. Service & Repair of Scientific Equipment

#### **4. Operating Review**

##### **4. Operation Review,**

##### **4.1 Performance, ((a), (i),(ii), (iii)**

Due to operation failures and insufficient commitments from the national project counterpart institutions the total allocation of IAEA core inputs were not utilized on time.

To minimize any repercussion in the future project planning, it is suggested to appoint a project implementation monitoring team with the guidance of the AEA Board of Management. The Term of Reference for such a mechanism could be prepared and implemented to over view the National TC projects implementation. Based on the advice and failures the AEA could strengthen project implementation and request government funds in advance for the components referred to in the foot note A.

##### **(iv)**

The IAEA will provide technical assistance for 5 new projects in the new TC cycle. Suggested to appoint a new “ project formulation committee” with the guidance of the Board of Management to identify suitable national TC projects for IAEA assistance.

##### **(b) (c)**

Remedial measures have been taken to implement all the left over components of the projects mentioned in the schedule and PPRs (Project Progress Reports) are already forwarded to IAEA for the closure of the projects.

##### **( d)**

The AEA has made necessary arrangements to address national development issues. The MGIF (Gamma Irradiation Facility), NCNDT, (national Center for NDT) NCNA, (Proposed National Center for Nuclear Agriculture) NCMEPC, (proposed, National Center for Marine Environmental Pollution Control) are some entities AEA established, and will be established in near future.

Pls. note nobody could implement a project for 100% completion. But AEA try its best to achieve the objective of the project.

#### **4.2 Transactions of Contentious Nature.**

**(a)** The AEA has paid incentives based on the Board approval.

**(b)** Steps have been taken to stop previous practice as per the audit committee decision in respect to overtime payment and lieu leave.

#### **4.3 Idle and Under Utilized Assets**

**(a)** The Assets donated by IAEA valued Rs.9417746 on 31<sup>st</sup> May 2010

These assets which donated by the IAEA and received by us on 10<sup>th</sup> May, 2010 hasa been properly maintained. These were relocated at Sri Lanka Gamma Centre and now being fully utilized for the plant operational activities.

By utilizing these asets for the activities of the SLGC we have already generated an income worth Rs.14 mm from January to April 2014.

**(b)** This has been used as a N-15 fertilizer. Effectivity of this fertilization has to be ascertained. Steps have been taken to send a sample to IAEA in Vienna.

#### **4.4 Procurement of machinery and Equipment**

**4.4(a)** Procurement of an impact Echo Tester for Concrete Testing.

This equipment and related technique was really new to the AEA and accordingly no-body was familiar with the equipment. However, the AEA had a big challenge to initiate the related services once the NCNDT is initiated its commercial services.

Since no body was familiar with the equipment and related technique, the user wanted to purchase the equipment along with complete accessories including a compatible computer with relevant software's and technical training. Equipment was not requested separately, to avoid any possible risk of malfunction of the equipment due to an un-compatible computer connect to the equipment. This further had been advised by the General Scientific Division of AEA to the user.

(i) Accordingly, the equipment was purchased with complete accessories including a compatible computer and software. Later the supplier provided a technical training and now the staff of concrete testing unit  
(ii) are well familiar with the equipment and has started providing relevant services,. (Ref. annexure 1 -A list  
(iii) of services provided)  
(iv)

According to the certified Technical specifications of this equipment, supply of Notebook Computer and two BCN cables were mentioned as a compulsory ("C") item.

Reason was that the Technical Evaluation Committee (TEC) and the user had experienced that some components specially printers and computers other than supplier provide are not compatible with the equipment.

Under this circumstances any bid submitted without compulsory items are considered as a substantially nonresponsive bid.

Therefore the lowest bid without Notebook Computer had not been considered as a substantially responsive bid.

#### 4.4. (b) Procurement of Moisture Meter for Concrete Testing

Accepted. Steps will be taken to avoid repetitions of such default in the future.

#### 4.4 (C) Procurement of pile Integrity Testing Equipment and pile Echo Tester

Although both equipment can be used for similar activities, the pile integrity tester is more convenient in field testing and pile echo tester is more convenient for laboratory and class room exercises and teaching purposes.

The proposed NCNDT is planned to provide both inspection service (in field) and training services (in laboratory). Therefore, both the equipment have been requested by the user – one for mainly field work.

In addition, if one equipment is out of order the other equipment can be used for the relevant service.

#### 4.5 Human Resources management

The new cadres of the Authority were created from the year 2011 as per the necessities of the Authority including the projects i.e. the NCNDT and MGIF of the Authority and the following cadre positions were vacant as at 31<sup>st</sup> December 2012.

|    |                          |      |                                        |      |
|----|--------------------------|------|----------------------------------------|------|
| 1. | Staff Grades             | - 10 | - Director                             | - 01 |
|    |                          |      | Scientific Officers                    | - 09 |
| 1. | Clerical & allied Grades | - 10 | - Management Assistant (MA -Non- Tech) | - 03 |
|    |                          |      | Technical Assistants (MA-Tech.)        | - 07 |
| 2. | Minor Grades             | - 04 | - Driver                               | -01  |



**1. Director 01**

The Post of Director was vacant on 01-07-2012 and the Board granted approval to appoint the Head of the Industrial Application Division as the Acting Director on 07-09-2012 and duties covered by him till steps would be taken to fill the vacancy in the past. Reasons for the delay are as follows.

Since there was a problem in the Scheme of Recruitment to call applications to fill the vacancy internally i.e. as per the new SOR, it is considered only the experience as Senior Deputy Director. As such the Scheme was revised by the Management Services Department by the letter dated 17<sup>th</sup> Dec. 2012. After that the vacancy was advertised in “the Sunday Observer” and “Varamanjari” of 6<sup>th</sup> January 2013. However, no applications were received by external candidates. Accordingly, after interviewing an internal candidate, the vacancy was filled on 21<sup>st</sup> Feb. 2013 by appointing Mr. D.G.L.Wickramanayake, who was the acting Director previously.

**1. Scientific Officer 09**

There were 09 vacancies in the Post of Scientific Officers (SO) in the Authority. The cadre was approved by the MSD on 08-03-2011 and 13-05-2011 and at that time there was a pending a court case related to the new SOR. Therefore, recruitments were not processed. After the decision of the Supreme Court, recruitments were processed. Accordingly 23 vacancies were filled in March 2012. After these appointments, 03 SOs resigned in the year 2012. The advertisements were published in newspapers in August 2012 and, examination was held on 6<sup>th</sup> October 2012 for 47 qualified candidates. Thereafter interview was held on 5<sup>th</sup> November and then 8 candidates were selected for appointment. Approval of the Board was obtained at the Board Meeting held in December 2012 and accordingly 8 vacancies were filled on 01-01-2013.

**2. Management Assistant 03**

Two cadre positions were approved on 03-08-2012 for MGIF. One vacancy fell vacant after retirement of a Management Assistant in Administration Division. These vacancies were filled on 03.06.2013.

**3. Technical Assistant 07**

There were 3 vacancies in MGIF and 04 vacancies in Divisions of AEA.

Though the vacancies of Technical Assistants were published in the news papers, sufficient applications were not received, since the candidates, who have qualifications of NDT, NDES, HNDE in the NVQ level 6 and over the level 5 are not attractive. As such, the Authority could select less than one or 5 candidates. Also, after recruitment, employees resigned from service as the lower salary. In August 2012 paper advertisements were again published, and there were 20 applicants who have necessary qualifications. The examination was held on 16<sup>th</sup> September 2012 and 5 candidates sat for the examination. Accordingly 4 vacancies were filled in October 2012. Thereafter advertisement was again published in the news papers on 8<sup>th</sup> February 2013 to fill another 07 vacancies. All vacancies were filled on 03.06.2013 by calling applications externally.

**4. Driver - 01**

Cadre was approved on 03.08.2012 for MGIF. At that time, there was no vehicle assigned to the MGIF. Therefore, steps were not taken to recruit. Vehicle was requested from the Treasury

during that period. Approval was given hire a vehicle for MGIF and quotations were called for several times. It was delayed to recruit a driver and this vacancy has now been filled.

#### 5. **Lab Attendant 03**

Cadre was approved on 03.08.2012 and steps will be taken to fill these vacancies. Since commencement of commercial operations were delayed, temporary workers for loading and unloading duties were recruited from a Manpower supply company.

### **4.6 Revision of the Atomic Energy Authority Act No.19 of 1969**

Reasons for the delay

History

- 1) Drafting of a new Act was initiated in 2006 after strong recommendation of IAEA Radiation Sources Infrastructure Appraisal Mission visited Sri Lanka from 1<sup>st</sup> – 5<sup>th</sup> August 2005. The mission recommended separating regulatory and promotional functions between two-independent entities. The draft Act was prepared by then Working Director using some old Act of other countries without much support obtaining from technical persons. It was after one year submitted to IAEA and the IAEA informed that it is a basic document and requested to re-draft the bill.
- 2.) The drafting of the new Act was again commenced in 2011 and draft was prepared by Mrs Seneviratne a senior lawyer retired from the Legal Draftsman Department based on the draft prepared by the Working Director (W.D.). This draft prepared by Mrs Seneviratne was a combination of contents in the Atomic Energy Authority Act No. 19 of 1969 and draft prepared by W.D. This draft was discussed with IAEA Senior Legal Officer Mr. Cherf, along with the person who drafted the Act, representatives from Attorney General Departments, AEA Board Members and AEA key staff members during one day programme conducted in a Hotel Wadduwa. Extensive revisions were suggested by the IAEA expert and requested to include certain sections from IAEA books “Hand Book on Nuclear Law”, “Implementing Nuclear Law” and the “International Basic Safety Standards 115”. A draft with the amendments and additions was prepared by a committee appointed by the Board consisting then Executive Director, Mr. J.M.A.C. Jayasinghe, Mr. D.G.L. Wickramanayake, Mr. H.L. Anil Ranjith and Mr. T.H.S. Shantha. The above activities were taken place during the Atomic Energy Authority was under the preview of Ministry of Science and Technology and the Ministry of power and Energy. The draft prepared was discussed with legal draftsman Department lawyers appointed for this purpose and a Lawyer from Attorney General Department and the final draft prepared by AEA after discussion with above lawyers was submitted to Secretary, Ministry of Technology, Research and Atomic Energy in the first quarter of 2013 for submission to the Legal draftsman’s Department for its final approval.. The Secretary was of the opinion that the draft needed comprehensive revisions and requested a meeting with Chairman and Senior Officers of AEA. During the meeting with the Secretary, Ministry of Technology and Research, it was decided to revisit the entire draft by a competent draftsman. During the above period the Authority was functioned under the Ministry of Technology, Research and Atomic Energy.

#### *Present Status*

At the advice of Secretary, Ministry of Technology & Research and in agreement with the Chairman, Director General and Director (Radiation Protection and Regulations), the task of drafting of the new Act for Atomic Energy Authority was given to Mrs. Sriyangani Fernando, Consultant to the Ministry of Justice who was retired from Legal Draftsman’s Department. The technical discussions were held the lawyer along with Director (R.P), D.D. (R.P.) to obtain technical requirements for the draft. More than 15 days discussions were held. The draft given by Mrs. Fernando was reviewed by a committee headed by the Secretary, Ministry of Technology and Research and final draft was prepared after the several discussions. The final draft was sent to IAEA by mail on 28<sup>th</sup> July 2013 for review by IAEA Legal Division before, Sri Lanka team visit for discussion at the end of August this year 2013.

The Sri Lanka team comprising Secretary, Ministry of Science and Technology, Mr.PasanGunasena, AEA Board Member, Mr.H.L.AnilRanjith, Director (Radiation Protection and Regulations), and Mrs Sriyangani Fernando, Legal Officer who drafted the bill visited IAEA under IAEA technical cooperation project from 27 August- 30<sup>th</sup> August 2013 to discuss the draft with IAEA Legal officers in the IAEA Legal Division as this bill contains some sections related to conventions signed by Sri Lanka with the IAEA.

IAEA made some suggestions and the final draft was prepared by the team incorporating suggestions and revisions agreed by the team with the IAEA during the discussion.

The final draft was submitted to Legal Draftsman's department on 04<sup>th</sup> November 2013. Approval of the Legal Draftsman was received on 12<sup>th</sup> March 2014 after several discussions and effecting amendments agreed upon during the discussions. The draft was submitted by the Ministry to Attorney General's Department for approval latter part of March 2014.

In the meantime, the draft has been given for Sinhala and Tamil translations. It is expected to get the approval of the Parliament and establish new institutions before ending of this year.

#### **4.7 Renting out of a part of the Authority's Building**

- a) Steps have to be taken to get valuation report from the license valuer.
- b) Valuation report will be obtained including the usage of auditorium, car park etc. Also usage of the Electricity, Water & Overtime are claimed percentage from the Polipto Lanka Ltd.

### **5. Accountability and Good Governance.**

**5.1** The Internal Audit Division has to work with very limited staff. In addition to the routine duties, the Chairman also assigns special duties. Therefore, delay occurs in covering the annual audit programme for the year under review.

However, considering the expansion of functions of the Authority, cadre approval for a management assistant post has been requested from the Department of Management Services with the Board approval. In addition to that an Internal Audit Officer post also has been proposed in the new organization structure for the Atomic Energy Board to be constituted.

#### **5.2 Audit committee**

Audit Committee Minutes are being submitted to the Board and decisions on then have been implemented.

#### **5.3 Procurement Plan**

The Atomic Energy Authority prepares the Procurement and Action Plans in compliance with the relevant guidelines, circulars & adhering to the time line. Above two plans are prepared independently as two separate activities. However, we have taken steps to streamline the process of preparation of Procurement plan & the Capital Budget in aline with Action plan,

Due to some practical problems of procurement we are unable to utilize the Capital Budget in full. And action will be taken to review the Action Plan periodically and revised the Procurement plan & Capital Budget accordingly with the approval of Board of Management.

In order to avoid above deficiencies action will be taken to prepare Procurement Plan in line with Action Plan and implement it according to the capital budget.

#### **5.4 Budgetary Control**

Every possible action had been taken to maintain a realistic budget in the year 2012.Necessary revisions were effected with the approval of the Board when observe the variances.

### **6 Systems and Controls**

The following steps have been taken up to now in order to improve the poor systems and controls highlighted in the report.

#### **(a)Property, Plant and Equipment**

- Action have been taken to officially hand over the scientific equipment to the relevant

institutions which have already been handed over, and remove them from the scientific equipment register of AEA

- The process of reconciliation the difference of ledger balances with the respective asset registers have been started, and have already found some of the reasons. This process will be continuous till reconcile the difference.

**(b) Debtors & Other Receivable:**

Individual debtor accounts have been up dated. Business development unit will be strengthening in order to minimize the debtors.

**(c). Compliance with Laws, Rules etc.:**

Every possible steps have been taken by the Authority to take decisions and approvals without deviating or violating existing laws and regulations.

**(d) Procurement**

The Authority already has realized the deficiencies of the Procurement activity. Therefore we have being prepared Procurement procedures and strictly adhere to National Procurement Guideline and apart from that action will be taken to conduct an awareness programm on Procurement procedures for all the relevant staff.

**(e) Utilization of Resources**

Action will be taken to Procure Property, Plant and Equipment in line with the Procurement Plan and fully utilized them for Operational activities of AEA in order to achieve the AEA targets.

**(f) Human Resource Management**

Actions will be taken to fulfill the variance as per the approved carder following the procedure given in scheme of recruitment.

**(g) Asset Management**

Action will be taken to maintain the Assets and safeguard them in proper manner.

**(h)Payment of Bonus**

This was an incentive payment to AEA staff. Necessary allocations had been available in the recurrent budget. The Authority set a target for the income each year and request from the employees to achieve the target during the year. The given target for the year 2012 was Rs.50 million and actual was Rs.57 million. Considering the above achievement, the Board of directors decided to make the said payment. No funds from the Treasury were utilized for this payment.

**(i)Budget:**

All the efforts are made to prepare a realistic Budget in every year. Variances are occurred mainly due to following reasons.

12. Suppliers are unable to supply goods/services in time.
13. When quoted prices are higher than the estimates.

.....

Chairman

AEA