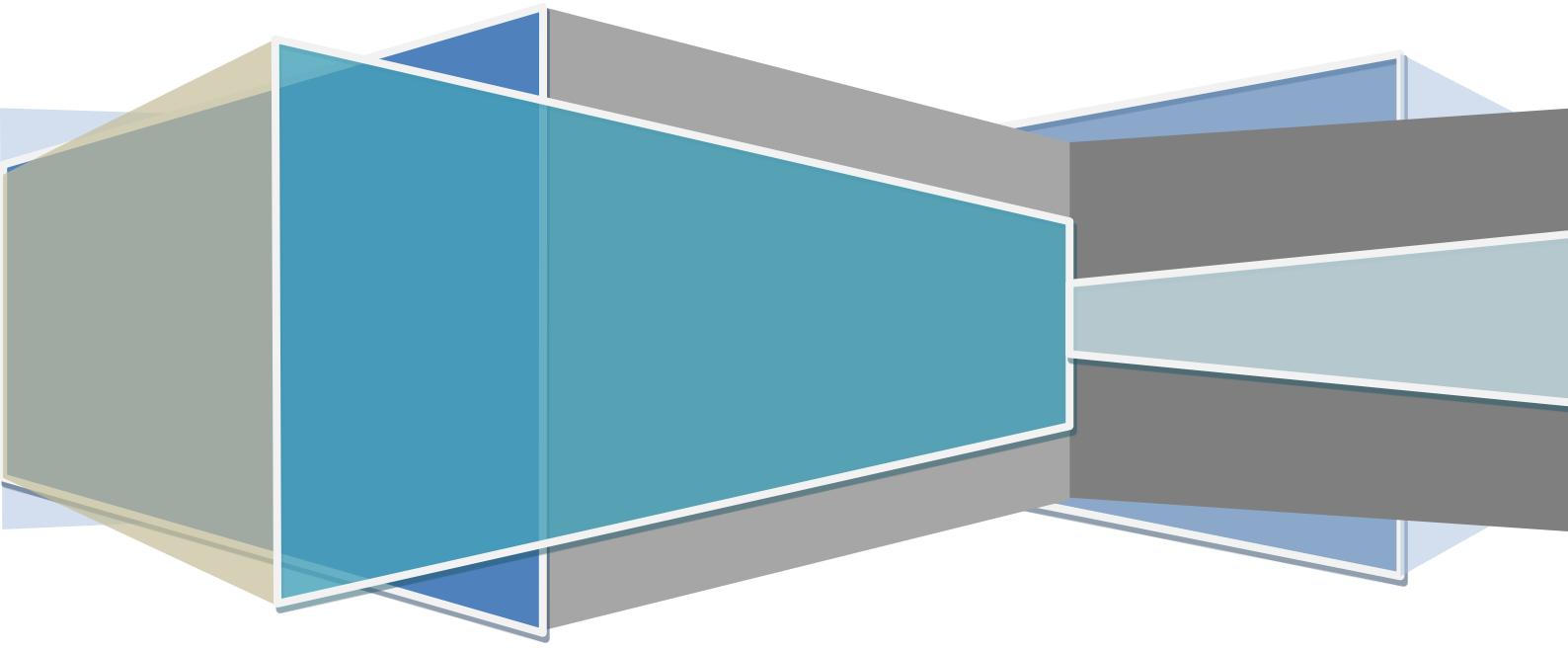
National Science & Technology Commission

Institutional Review

Assessment of the
Sri Lanka Accreditation Board (SLAB)



December 2014

ABBREVIATIONS

SLAB - Sri Lanka Accreditation Board

NASTEC - National Science and Technology Commission

TAC - Technical Advisory Committees

PAC - Policy Advisory Committee

TAC - Technical Advisory Committees

GHG - Greenhouse Gas

PT - Proficiency Testing

GLP - Good Laboratory Practice

MRA - Mutual Recognition Arrangement

APLAC – Asia Pacific Laboratory Accreditation Cooperation

ILAC – International Laboratory Accreditation Cooperation

NQI - National Quality Infrastructure

SLSI - Sri Lanka Standards Institution

MUSSD - Measurement Units, Standards & Services Department

IAF - International Accreditation Forum

SWEDAC – Swedish Board for Accreditation and Conformity Assessment

Sida - Swedish International Development Agency

S&T - Science and Technology

KPI- Key Performance Indicator

ACKONWLEDGEMENT

The review team would like to acknowledge Chairman and the members of the Governing Council, Director/CEO and the staff of the SLAB for their support and cooperation during the period of evaluation. In addition, we appreciate the cooperation extended by the members of the Technical Advisory Committees (TACs) and the stakeholder representatives of the Sri Lanka Accreditation Board (SLAB).

The review team also would like to extend its gratitude to the Chairman and the Director/CEO of the National Science and Technology Commission (NASTEC) for placing confidence and appointing its members to conduct this performance review. Finally, the support and the courtesy offered by the staff of the NASTEC are greatly appreciated.

EXECUTIVE SUMMARY

The SLAB, the national accreditation body for conformity assessment was established under the Act of Parliament No. 32 of 2005, as an independent statutory body to grant accreditations in accordance with national standards based on the relevant international standards to laboratories, certification and inspection bodies, training institutions and other persons seeking accreditations for their products and services; to promote accreditation activities; to ensure competence in internationally accepted accreditation practices; to facilitate international co-operation in accreditation; to develop necessary capacity building to undertake the above functions, and to carry out all such other acts as may be necessary or conducive in discharging any or all of the above functions.

Under the authority given to the NASTEC by the Science & Development Act No 11 of 1994 to review the Science and Technology (S&T) institutions in relation to object set out in section 2 of the Act, a committee has been appointed by the NASTEC to review the performance of SLAB during the three year period, 2011-2013. A five member committee comprised of Professor T. R. Ariyaratne, Professor S. S. Colombage, Professor J. C. N. Rajendra, Professor L. Karunanayake, and Mr. I. Siriwardena, carried out the review during the period, Nov – Dec 2014.

The SLAB is governed by a Council appointed by the Minister holding the portfolio of Science & Technology. The functions of the SLAB are administered by the Director/CEO appointed by the Minister. Under the director there are nine staff grade officers at the deputy/assistant director levels to administer the aspects of medical, testing, calibration, Certification, Inspection, Finance & administration, and the quality.

The accreditation activities of the SLAB are supported by four statutory committees namely, Policy Advisory Committee (PAC), Accreditation Committees, Technical Advisory Committees (TACs) and an Audit Committee. The Technical Advisory Committees are supported by Expert Committees. Accreditations are granted to laboratories, certification bodies and inspection bodies and other persons required carrying out conformity assessments, in accordance with national standards based on the relevant international standard.

In fulfilling its goals, the SLAB has launched Accreditation Schemes based on relevant international standards of ISO/IEC 17025, ISO 15189, ISO/IEC 17021, ISO/IEC 17065, ISO/IEC 17024, & ISO/IEC 17020 in the following areas of Testing and Calibration of Laboratories, Medical Laboratories, Certification Bodies of Management Systems, Product Certification Bodies, Certifying Persons, Inspection Bodies, Greenhouse Gas (GHG) Validation/Verification Bodies, Proficiency Testing (PT) Service Providers, and Good Laboratory Practice (GLP).

Foreign trainers provided training on ISO 14064, 14065 & 14066 and OECD guidelines on GLP. After getting knowledge on current or revised standards, SLAB staff and outside experts are trained on assessing Conformity Assessment Bodies (CABs) on respective international standards; ISO/IEC 17020, 17021, 17025 & 17065 and ISO 15189.

Within the 8 years of existence, at the end of 2013, the SLAB had accredited 41 testing laboratories, 4 calibration laboratories, 13 medical laboratories and 5 certification bodies, and 1 inspection body. During the period under the period of evaluation i.e. (2011 -2013) SLAB has managed to grant

accreditations for 17 Testing laboratories, 2 Calibration laboratories, 9 Medical Laboratories, 5 Certification Bodies, and 1 Inspection Body. However, year-wise analysis on the number of overall accreditation requests received by the SLAB reveals a continuous drop, and it requires immediate attention of the Board.

During the period 2011 – 2013, the SLAB has gained admission as a signatory to the Mutual Recognition Arrangement (MRA) of Asia Pacific Laboratory Accreditation Cooperation (APLAC) and International Laboratory Accreditation Cooperation (ILAC) for testing, medical testing and calibration. SLAB was also admitted as a signatory QMS, EMS and Product certification by the PAC in 2013. SLAB is awaiting international recognition for QMS, EMS and Product certification from IAF. As such the test reports and Certificates issued by SLAB accredited CABs are recognized and accepted internationally. Quality certification of exports from Sri Lanka based on testing and certification are now recognized as equivalent to test reports and certificates issued in other countries, facilitating market access for Sri Lankan products.

SLAB has strengthened its financial position by generating funds in the form of accreditation and training fees during the period 2011-2013. Such revenue increased from Rs. 8.1 million in 2011 to Rs. 12.9 million in 2012 and to Rs. 18.1 million in 2013. In 2013, the self-generated funds accounted for 52% of the total revenue amounting to Rs. 35 million. The balance 48% of the revenue was received from the Treasury.

All the activities of the SLAB are carried out according to a five year corporate plan. The Corporate/Strategic Planning of SLAB should be improved so as to meet the industry and social needs taking into account government policies and global trade standards. A major lapse noticed in the corporate plan is the lack of being proactive and innovative in responding to the changing needs of the trade, industry and the society. There is no evidence that the views of stakeholders such as prospective CABs from trade and industry or regulatory bodies have been taken into consideration when developing the corporate plan.

Considering the widespread diseases related to food and drinking water, it is important to strengthen accreditation facilities to ensure safe food and drinking water. SLAB should have a forward-looking approach in developing its Corporate Plan to identify and accredit potential fields such as rain forest, organic textiles and information security. The SLAB needs to devise a mechanism to accommodate stakeholder requirements more effectively in its strategic planning. In formulating the Corporate Plan, an interactive process amongst all staff levels of SLAB is also recommended.

As for capacity building and retention of human resources, SLAB suffers heavily when it comes to retaining its S&T staff and there seems to be no strategies available with the authorities to overcome this problem. Opportunities for development of their S&T career in the Institute are minimal. One possible strategy would be to initiate research and development activities related to accreditations in suitable areas so that S&T staff can get involved in such activities, which in turn would be beneficial to both the staff and the institute.

Quality assurance of products and services is the prerequisite for accreditation by an independent body. Responsibility of assuring quality of products and services lies on the producer/service provider. Review team strongly believes that government's intervention is needed to implement a suitable mechanism to promote the quality of products and services aiming at achieving a minimum

technical level, enabling comparability, and also ensuring competition on equal terms with other economies. Relevant authorities may make use of the provisions given in section 4.3.7 of the ISO/IEC 17011 guidelines to set up such a mechanism.

The accreditation process has been hampered in several fields due to constraining factors that are beyond the control of SLAB, and these need to be addressed by the relevant authorities without further delay. The inadequacy of metrological infrastructure at the national level is a major hindrance to carry out the relevant tests. Reluctance on the part of government bodies to ensure accreditation is also a major constraint. Non-enforcement of accreditation for medical laboratories in government hospitals by the Ministry of Health is a case in point. Similarly, the two vehicle emission certification companies are not directed by the Registrar of Motor Vehicles to follow the accreditation rules.

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1. INTRODUCTION

1.1. Sri Lanka Accreditation Board (SLAB)

The SLAB for Conformity Assessment was established in 2005 by an Act of Parliament No. 32/ 2005 to develop and strengthen the National Quality Infrastructure (NQI) in Sri Lanka and to facilitate domestic and international recognition and acceptance of products and services. Through this process it is expected to develop local capacities in metrology, calibration and product testing, in order to provide services to local testers, producers and exporters according to international best practices, and also to enhance consumer protection. SLAB operates in conjunction with the Sri Lanka Standards Institution (SLSI), Measurement Units, Standards & Services Department (MUSSD), and other government regulatory bodies, which form the NQI. However, SLAB functions as an independent body under the Ministry of Technology and Research.

1.2. Functions of SLAB

Functions of the SLAB as spelt out in the said Act of Parliament are as follows:

(a) To grant accreditation, in accordance with national standards based on the relevant international standard, to laboratories, certifications and inspection bodies and other persons required to carry out conformity assessments.
(b) To promote accreditation activities in conformity with the guidelines laid down in the National Quality Policy as approved by the Cabinet of Ministers.
(c) To ensure competence in internationally accepted accreditation practices and to facilitate international co-operation in accreditation.
(d) To encourage and promote the use of accreditation, the training of assessors, the conduct of seminars and the dissemination of information on accreditation.
(e) To do all such other acts as may be necessary or conducive in discharging any or all of the above functions.

As an accreditation body, the SLAB operates in accordance with the international standards set by the ISO/IEC 17011 conformity assessment-“General requirements for accreditation bodies accrediting CABs”.

1.2.1. National Quality Policy

The SLAB shall be a service organization which is committed in providing accreditation services to its clients at the highest level of integrity, effectiveness and efficiency. While responding to the changing needs of clients, other stakeholders and the business environment, the SLAB is committed in providing accreditation services in accordance with international standards and principles.

The SLAB is geared to actively and effectively participate in the work of international bodies in order to enhance international recognition. The SLAB shall provide an environment for staff members and assessors to upgrade their competencies continually to enable them to contribute in the activities of SLAB at the highest level of professionalism.

1.2.2. Key Thrust Areas and Goals

Based on the functions stated above, the six major thrust areas and goals identified by the SLAB as given in its Corporate Plan for 2013-2017 are as follows:

Table 1: Key Thrust Areas and Goals

Key Thrust Area		Goals
1	Promotion of concept of Accreditation	1. Promote accreditation amongst conformity assessment bodies. 2. Create public awareness.
2	Provision of accreditation services	Provide accreditation services.
3	Capacity building	Capacity building of human resources.
4	International recognition	Obtain and maintain international recognition from ILAC and IAF.
5	Good governance	Maintain an efficient and transparent organization.

1.2.3. Organizational Structure & Human resources

The SLAB is governed by a Council appointed by the Minister holding the portfolio of Science and Technology, and the functions of the SLAB are administered by the Director/CEO appointed by the Minister. Under the director there are 09 staff grade officers at the deputy/ assistant director levels to administer the functions of medical, testing, calibration, Certification, Inspection, Finance & administration, and the quality.

The organizational structure of the SLAB is given in Annexure G. Four committees namely, the Policy Advisory Committee (PAC), Accreditation Committees, Technical Advisory Committees (TACs), and an Audit Committee are established by the Council to assist it in granting accreditations to CABs. The Technical Advisory Committees are supported by Expert Committees. Accreditations are granted to laboratories, certification bodies and inspection bodies required to carry out conformity assessments, in accordance with national standards based on the relevant international standard.

Technical Assessors and other personnel necessary to carry out conformity assessments are absorbed from the academics and professionals in the industry. At present, there are about 200 external assessors who have been trained with close attention and supervision of SLAB, and are being employed in conformity assessments conducted by SLAB. They are provided with procedures, guidelines, checklists and formats as and where necessary, and their expert views are always sought before recommending a laboratory, an inspection body or a certification body for granting accreditation. The recommendation made by the assessment team is presented to the relevant Accreditation Committee for accreditation decision.

1.2.4. Present Activities of SLAB

In fulfilling its goals, the SLAB has launched Accreditation Schemes based on relevant international standards of ISO/IEC 17025, ISO 15189, ISO/IEC 17021, ISO/IEC 17065, ISO/IEC 17024, ISO/IEC 17020 & ISO/IEC 17043 in the following areas.

- Accreditation of Testing and Calibration of Laboratories
- Accreditation of Medical Laboratories
- Accreditation of Certification Bodies of Management Systems
- Accreditation of Product Certification Bodies
- Accreditation of Bodies Certifying Persons

- Accreditation of Inspection Bodies
- Accreditation of Greenhouse Gas (GHG) Validation/Verification Bodies
- Accreditation of Proficiency Testing (PT) Service Providers
- Accreditation of Good Laboratory Practice (GLP)

Foreign trainers provided training on ISO 14064, 14065 & 14066 and OECD guidelines on GLP. After gaining knowledge on current or revised standards, SLAB staff and outside experts are trained on assessing CABs on respective international standards; ISO/IEC 17020, 17021, 17025 and 17065 and ISO 15189.

1.2.5. The accreditation process

The Director, with the approval of the Council appoints a review team of Assessors from amongst officers of the Board or any other persons who are suitably qualified, to function as Assessors for the purpose of making the assessments required under the provisions of the Act.

Prior to applying for accreditation, any organization which seeks SLAB accreditation should develop and document their management system in line with the relevant international standard. After submitting the application along with the Quality Manual and support documents, a document and record review report are issued identifying the discrepancies, if any. After submitting the corrective actions with sufficient documentary evidence, a pre-assessment is arranged on-site. The objective of this pre-assessment is to make the organization ready for the final assessment. The nonconformities raised if any, shall be corrected and necessary corrective actions shall be submitted with sufficient documentary evidence. The final assessment is arranged thereafter, in which a comprehensive assessment is conducted against the accreditation criteria. As usual, all the nonconformities are to be corrected before the accreditation is recommended.

Within the 8 years of existence, at the end of 2013, the SLAB had accredited 41 testing laboratories, 4 calibration laboratories, 13 medical laboratories and 5 certification bodies, and 1 inspection body. Furthermore, there were 9 testing laboratories, 02 calibration laboratories, and 06 medical laboratories which were being processed at different stages of the accreditation process. The corresponding numbers for the period of evaluation (2011 -2013) are as follows:

Table 2: Accreditation granted from 2011 to 2013

Accreditation Scheme	2011	2012	2013
Testing laboratories	07	05	05
Calibration laboratories	01	01	None
Medical Laboratories	04	03	02
Certification Bodies	02	01	02
Inspection Bodies	None	None	01

Table 3: Applications in process in each year (2011 to 2013)

Accreditation Scheme	2011	2012	2013
Testing laboratories	10	11	15
Calibration laboratories	02	01	02
Medical Laboratories	05	02	02
Certification Bodies	02	01	00
Inspection Bodies	None	01	None

1.2.6. Affiliation with International Accreditation Bodies

(1) ASIA PACIFIC LABORATORY ACCREDITATION COORPORATION (APLAC)

SLAB is a full member of APLAC and is a signatory to the Mutual Recognition Arrangement (MRA) of APLAC. SLAB was admitted as a signatory to the APLAC MRA in December 2009. Through the Mutual Recognition Arrangement (MRA), test reports issued by SLAB Accredited Laboratories in Sri Lanka will be recognized and accepted internationally. The scope of APLAC MRA covers Testing Laboratories (ISO 17025) and Medical Laboratories (ISO 15189).

The APLAC is a cooperation of accreditation bodies in the Asia Pacific region that accredits laboratories, inspection bodies and reference material producers. It is recognized by the Asia Pacific Economic Cooperation (APEC) as one of five Specialist Regional Bodies (SRBs). Accreditation bodies in 24 economies in the region are members of APLAC .

Through the APLAC Mutual Recognition Arrangement (MRA), APLAC facilitates the acceptance by Governments and Industry in each economy of reports and certificates from facilities accredited by signatories to the MRA.

(2) INTERNATIONAL LABORATORY ACCREDITATION COOPERATION (ILAC)

SLAB is a full member of ILAC and is a signatory to the Mutual Recognition Arrangement (MRA) of ILAC. SLAB gained full membership and signatory status in the ILAC MRA in December 2009. The scope of ILAC MRA covers Testing Laboratories including Medical Testing Laboratories. Through this arrangement Quality certification of exports from Sri Lanka based on testing are recognized as equivalent to test reports issued in other countries thereby facilitating market access for Sri Lankan products.

The International Laboratory Accreditation Cooperation (ILAC) is the international cooperation of Laboratories and Inspection bodies formed more than 30 years ago to help remove technical barriers to trade. ILAC counts as its member's laboratory and inspection accreditation bodies representing more than 70 economies and regional organizations. In conjunction with ILAC, specific regions have also established their own accreditation co-operations, notably European cooperation for Accreditation (EA) in Europe and the Asia Pacific Laboratory Accreditation Cooperation (APLAC) in Asia Pacific. These regional co-operations work in harmony with ILAC and are represented on ILAC's board of management. ILAC is encouraging the development of such regional co-operations in other parts of the globe.

(3) PACIFIC ACCREDITATION COUNCIL (PAC)

SLAB has gained full membership status of PAC. PAC is an association of accreditation bodies and other interested parties whose objective is to facilitate trade and commerce among economies in the Asia Pacific region. Its ultimate objective is the creation of a global system that grants international recognition of certification or registration of management systems, products, services, personnel and other programmes of conformity assessment.

The PAC promotes the international acceptance of accreditations granted by its accreditation body members, based on the equivalence of their accreditation programmes. The PAC operates within the framework of the International Accreditation Forum (IAF) and in cooperation with other regional groups of accreditation bodies around the world.

(4) SWEDISH BOARD FOR ACCREDITATION AND CONFORMITY ASSESSMENT (SWEDAC)

SLAB has established a technical co-operation program with SWEDAC. Technical Assistance for development of SLAB accreditation activities is provided by SWEDAC funded by Swedish International Development Agency (Sida).

(5) INTERNATIONAL ACCREDITATION FORUM (IAF)

SLAB is in the process of seeking membership of IAF.

1.2.7. Sources of Funding

The liabilities arising out of the activities of the SLAB are covered by funds sourced by the following means:

a) Funds appropriated by the Parliament / Government of Sri Lanka.
b) Moneys received and accrued in the performance of services such as fees for accreditation and income from information and training activities.

2. PROCEDURE ADOPTED FOR PERFORMANCE REVIEW

The Science & Development Act No. 11 of 1994 mandates the National Science and Technology Commission (NASTEC) to review the progress of Science and Technology (S&T) institutions in relation to objectives set out in Section 2 of the Act. The NASTEC in consultation with the institution to be reviewed decides on a review team as well as a schedule for the review. The team is guided by the directions given in the guidelines prepared by NASTEC for the performance review of S&T Institutions.

The SLAB invited NASTEC to review the institution in April 2014. NASTEC in consultation with the SLAB entrusted the review task to a team of 5 members selected based on their expertise. The self-assessment report of the SLAB was made available to NASTEC in May 2014.

NASTEC met the review team in October 2014 and identified lines of inquiry as well as further information and documentation necessary for the review. The team also identified individuals as well as groups they wished to meet during the site visit and agreed with the Chief Executive Officer (CEO) on dates and a time table for the review (see Annex B).

Site visits were carried out on 3rd, 23rd October, and 13th November 2014. The initial meeting of the review team with the CEO and the Governing Council was held to brief them regarding the objectives of the review, clarify as to why and for whom the evaluation is being done, and describes the benefits of such an evaluation to the institution. This was followed up by a detailed presentation by the CEO of the institution based on the submitted self-assessment report.

The review panel held discussions with members of different categories of staff (Director, Deputy Director (Finance & Administration), Deputy Director (Technical Manager-Testing & Calibration Laboratories and Inspection Bodies), Deputy Director (Quality Manager and Technical Manager for Medical Laboratories & Certification Bodies), Assistant Directors (Testing/Calibration/Certification/Inspections), and lower categories of the staff. The review team also visited several divisions of the institute, and had discussions pertaining issues with the relevant officers (see Annex C).

Separate meetings were held on 23rd October with representatives from three selected TACs (see Annex D), and the Governing Council (see Annex E) of the SLAB. Documents related to various activities including the files maintained by them with regard to the accredited bodies were also examined by the review team. The final meeting was held on 13th November 2014 with stake holders at NASTEC (see Annex F). After the review meetings, the review team met on several occasions to discuss the findings to draft the review report.

The report is structured as two documents; the present document, which constitutes the main part of the report and a second document (see Annex A), prepared in the form of a set of tables, which provides management and output assessments.

3. MANAGEMENT ASSESSMENT AND OUTPUT ASSESSMENT

3.1. Management Assessment

3.1.1. Assessment of Institutional Response to External and Internal Environment in Planning Organizational Strategy

In carrying out its functions, the SLAB complies with the mandate stipulated in the Act. The admission of SLAB in ILAC MRA for testing, calibration and IAF MLA for certification has enhanced the credibility of the SLAB at local, regional and international levels.

The SLAB has developed the Corporate Plan for the period 2013-2017 with the aim of further promoting and providing accreditation facilities in conformity with the Act of 2005. The strategic planning of the SLAB is based on the organizational mandate stipulated in the Act. Accordingly, the SLAB grants accreditation to CABs, namely laboratories, certification and inspection bodies, training institutions and other relevant parties in accordance with the national standards based on international standards. SLAB has taken action to promote accreditation activities in conformity with the guidelines laid down in the National Quality Policy.

The SLAB strictly adheres to the mandate laid down in the Act of 2005. However, SLAB could have linked its strategic planning to government policies or development goals. While appreciating the limitation of the SLAB being an accreditation body to directly get involved in the development process, the Review Team is of the view that there is scope for taking into account the government's national development policies in strategic planning.

In this regard, the SLAB could have considered the critical development areas laid down in the government's policy documents such as "Development Policy Framework" of 2010 (DPF). The national development policies are geared to address issues relating to agriculture, industry, knowledge economy, tourism, environment and other important fields. In agriculture, high priority is placed in achieving a broad based shift from low-value added products to high value added products accompanied by sustained improvements in productivity and competitiveness in international markets. Certification of such products ensuring international standards is crucial to meet the foreign demand. The government also envisages transforming the industrial sector to a high value added, knowledge-based, internationally competitive and diversified sector by 2020. According to the DPF, the national science and technology strategy envisages provision of consistent, long term framework for growth and development of science and technology contributing significantly to the achievement of the status of a middle income country in the foreseeable future. In this context, a

growing demand for certification could be expected from the manufacturing firms for their newly introduced high-tech products targeting overseas markets.

The DPF also envisages transforming the tourism sector to be the largest foreign exchange earner in the economy by 2020, while preserving the country's cultural values, natural habitats and environment. A robust accreditation and certification mechanism needs to be evolved to ensure the quality of tourism services and safety standards for this growing sector. The SLAB could play a pivotal role in this process. As regards environment, the priority areas identified in the DPF includes depletion of the green cover, air pollution, solid waste management and water resources. These also call for effective quality standards with required accreditations.

It is noteworthy that the SLAB has taken the initiative recently to facilitate the quality infrastructure needed to implement the National Research and Development Investment Framework (NRDIF) for 2015-2020 which was launched for the first time by the Ministry of Technology and Research in July 2014. The SLAB has identified the relevant interventions in the form of testing, standardization and accreditation for the 10 thrust areas and 10 policy interventions envisaged in NRDIF. For this purpose, SLAB convened a stakeholder meeting on 10th November 2014 successfully to coincide with the "Science Week".

The SLAB has not given adequate attention to global market dynamics in the preparation of its strategic plan, though it has fulfilled the accreditation needs of certain export industries. In the present global trade system an essential pre-requisite of trade is that any product or service accepted formally in one economy must also be free to circulate in other economies without having to undergo extensive re-testing. The World Trade Organization (WTO) considers that non-acceptance of test results and measurement data of the originating country by another country is a Technical Barrier to Trade. Accreditation is considered as the first essential step to overcome that problem by facilitating mutual acceptance of test results and measurement data. The SLAB could take initiatives to prepare itself in advance to provide accreditation to certification bodies for potential export products that may require international certification in the future. Such forward-looking approach is not evident in the present strategic planning of the SLAB, and it usually seems to accommodate accreditation requirements of the stakeholders as and when needed.

Some international certification companies intend to shift accreditation of their branches abroad from foreign accreditation agencies to SLAB in view of the cost effectiveness. Such growing market potential needs to be recognized by the SLAB in its strategic and management plan.

The SLAB has applied SWOT analysis in formulating the strategic plan. Stakeholder considerations are identified in the SWOT analysis and included in the Corporate Plan and risk analysis. Nevertheless, stakeholder needs are not adequately taken into account by SLAB in its strategic planning. SLAB conducts training, awareness and promotional programmes for stakeholders focusing on accreditation. Other needs such as PT programmes and reference materials are addressed directly with the relevant parties. These are included in the Corporate Plan for 2015-2019 and Action Plan 2015.

The Board of Governors provides overall directives in strategic planning of the SLAB. The senior staff is involved in the preparation of the Corporate Plan. However, the standard interactive exercises among the staff are not adequately followed in formulating the corporate plan, though senior staff members provide inputs for the plan. Future expansion of activities is not envisaged in the Corporate Plan, and accordingly, dependence on government funding is projected to decline with increased reliance on self-generating funds from the current activities.

3.1.2. Planning S&T Programmes and Setting Priorities

SLAB has developed the goals in the Corporate Plan in conformity with the Act of 2005. However, there does not seem to have any emphasis on national development goals. Planning and priority settings are subject to the approval of the Board of Governors. The staff members are actively involved in programme planning as well as priority setting.

Stakeholder needs are accommodated in accreditation, PT, training and awareness programmes as stipulated in the Corporate Plan. Action plans and Balanced score cards are monitored at quarterly progress review meetings, bi-annual management review meetings, quarterly audit committee meetings and monthly Council meetings. SLAB collects feedback from the stakeholders through a customer satisfaction form. Stakeholders are represented in the institution's PAC and technical committee meetings. PAC minutes are presented to the Council meetings on a regular basis.

The lack of initiatives to undertake new fields of accreditation is a major lacuna in the current planning process of the SLAB. For example, some certification bodies have expressed their intention to expand their activities to new areas such as rain forest and information security certifications. The Rainforest certification on food and beverages assures consumers that products come from farms that are managed to the rigorous standards of sustainable agriculture, where workers and their families enjoy dignified, safe conditions, and where wildlife and habitats are protected. As regards information security, the ISO 27000 standards provide a globally recognized framework for robust information security management. These standards are essential for the present digital-based banking sector. Another emerging industry that would require accreditation is organic textiles. The SLAB should be ready to provide accreditation for these new areas to be undertaken by the certification bodies in the near future.

3.1.3. Planning S&T/ R&D Projects

Both S&T and R&D projects are beyond the scope of SLAB. Hence, the review team considered accreditation-based activities of SLAB as S&T projects. Planning of accreditation activities are based on manuals and training programs designed in conformity with national and international standards. SLAB follows a well-developed process for preparation, review and approval of accreditation. However, SLAB should develop and use a database on accreditation for its future plans. The SLAB's Corporate Plan does not provide any medium or long-term project plans.

Accreditation activities conducted by the SLAB are multidisciplinary. They include laboratories in medical, chemical, microbiological, mechanical, food, textiles, calibration, and greenhouse gas, in addition to the accreditation of management system, product certification and inspection bodies. SLAB also grants accreditation for services in proficiency testing (PT) and good laboratory practices (GLP). Basic research aspects are beyond the scope of SLAB's mandate.

SLAB has been admitted as a signatory to the Mutual Recognition Arrangement (MRA) of Asia Pacific Laboratory Accreditation Corporation (APLAC) and International Laboratory Accreditation Corporation for testing and calibration. SLAB has also been admitted as a signatory by the Pacific Accreditation Corporation (PAC). SLAB was admitted to APLAC/ILAC MRA for testing (ISO/IEC 17025) including medical testing (ISO 15189) in 2009 and calibration (ISO/IEC 17025) in 2012. SLAB has applied for APLAC MRA for inspection (ISO/IEC 17020) in 2014. SLAB was admitted to PAC MLA for QMS (ISO 9001), EMS (ISO 14001) & Product certification (ISO/IEC Guide 65) in 2013 and FSMS (ISO 22000/TS 22003) in 2014.

3.1.4. Project Management and Maintenance of Quality

The resources of SLAB are allocated among the two technical divisions involved in (a) testing, calibration and inspection, and (b) medical testing and certification. It also has a separate division to deal with finance and administration. The administrative procedures followed in resource allocation comply with government regulations. Adequate review and monitoring procedures are adopted in the accreditation process by SLAB in conformity with ISO/IEC 17011 standard. SLAB adopts the Balanced Scorecard procedure to monitor the progress of the action plan.

As the accreditation assessments are conducted on-site, SLAB does not need any testing equipment. However, inadequacy of metrology infrastructure facilities at the national level is a major hindrance to carry out certain tests. Staff members have access to stand alone computers and software. The lack of an integrated computer network in SLAB has adverse consequences on the efficiency of the organization. Most of the documents are maintained in hardcopy format, and there is no Management Information System (MIS) within the organization

SLAB has been able to provide accreditation within a reasonable timeframe. However, non-response of certain applicants to fulfil the expected conformity standards has caused delays in certain cases. Also, reluctance on the part of the regulatory bodies to insist on accreditation hampers the process. For example, the Health Ministry needs to give strict directives to the labs in government hospitals to obtain accreditation. Similarly, the two companies involved in vehicle emission testing are not directed by the relevant authorities to go through the accreditation process. The review team noted that SLAB is unable to take any action on such non-compliances as accreditation is not mandatory.

The review team observed that in the case of certain medical tests, the non-availability of positive samples locally impedes such testing. Obviously, strict trade regulations prevent importation of such samples. Intervention in these matters may be beyond the scope of SLAB. Nevertheless, initiative needs to be taken by relevant authorities to overcome this problem in the midst of spread of new diseases worldwide.

3.1.5. Human Resource Management

SLAB has followed appropriate recruitment procedures in terms of the government rules. Although the size of the staff is somewhat insufficient considering the present and the future workloads, the staff members competently handle their given tasks. Cooperation among the staff is found to be excellent.

In its Corporate Plan, the SLAB has not planned for an expansion of staff in diverse fields for the future.

The high staff turnover is a major problem encountered by SLAB. Less attractive salary scales and lack of financial and non-financial incentives have led qualified young scientists to leave the institution at frequent intervals. This trend has caused severe problems to the management, as the trained officers who leave SLAB cannot be easily replaced by newly recruited officers without providing them with adequate training. Continuity of communication with stakeholders has also been problematic due to frequent changes in staff.

Adequate steps have to be taken to address the above problems and thereby to retain competent staff. The scheme of recruitment needs to be restructured by providing an attractive remuneration package and other benefits. The lack of opportunity to pursue postgraduate studies under the present setup is a hindrance to the staff to develop their career prospects and to remain in the institution. This also seems to have negative effects on the credibility of the SLAB staff when they

perform their duties as team leaders in accreditation assessments. In view of these considerations, the review team recommends that a suitable scheme of postgraduate training in relevant fields be introduced for the staff.

It is too early to assess the effectiveness of staff incentives which include a performance allowance of Rs. 9,000 introduced by SLAB in 2013. In addition, a scheme of encashment of unclaimed medical leave is available since 2006.

3.1.6. Management of Organizational Assets

Although SLAB has been able to execute its functions as stipulated in the Act, it does not have sufficient statutory powers to impose accreditation. The reason is that it is not mandatory for the CABs to obtain accreditation from SLAB, and the process is currently carried out on a voluntary basis.

Currently, the infrastructure available to SLAB is very poor. It is located in a rented house which does not have office environment. The staff members do not have adequate office facilities. The board room and the training hall are not up to the standards. The access road is in a dilapidated condition and there are no parking facilities. As regards computer equipment, an in-house maintenance system for day- to- day troubleshooting, etc. has to be introduced.

SLAB has strengthened its financial position by generating funds in the form of accreditation and training fees during the period 2011-2013. Such revenue increased from Rs. 8.1 million in 2011 to Rs. 12.9 million in 2012 and to Rs. 18.1 million in 2013. In 2013, the self-generated funds accounted for 52 percent of the total revenue amounting to Rs. 35 million. The balance 48 percent of the revenue was received from the Treasury.

Underutilization of the allocated capital expenditure by SLAB throughout the period 2011-2013 is a matter of concern. In contrast, the actual recurrent expenditure exceeded the allocated amounts during this period. Action needs to be taken to avoid such discrepancies.

SLAB has identified income generation opportunities, but strategies and activities needed to harness such opportunities are not formulated. Specifically, there is potential to generate more income by promoting accreditation among CABs which are not yet accredited.

3.1.7. Coordinating and Integrating the Internal Functions/Units/Activities

SLAB is operating within a comprehensive organization structure with well-allocated duties and functions. While the Governing Council provides overall directives, there are several specific committees to deal with matters relating policy advice, audit, accreditation and technical advice. The institution is managed by the Director/CEO. The two Deputy Directors (Technical Managers) are responsible for accreditation activities in their respective fields. There is a separate division for finance and administration under the purview of a Deputy Director. Given the small size of the staff, internal communication is conducted effectively.

3.1.8. Partnership in Managing Information Dissemination

SLAB's main modes of dissemination include its website, half-yearly newsletter, seminars and workshops. The website provides information about different accreditation schemes, guidelines for testing, calibration, certification, inspection and proficiency testing. It also contains SLAB's publications including the Annual Report. The newsletter is only available in print form and it is not posted in the website.

It would be desirable to publicize the role of SLAB in accreditation more vigorously among the stakeholders. SLAB may also consider educating the general public on accreditation using mass media and public discussions.

SLAB obtains customer feedback from three sources, namely (a) biannual customer survey, (b) customer feedback after every assessment and (c) customer feedback after every accreditation.

3.1.9. Monitoring, Evaluation and Reporting Procedures

SLAB monitors and evaluates its activities on a regular basis through quarterly progress reviews, management reviews and internal audits to ensure conformity to ISO 17011 standard and the stipulated ILAC guidelines.

At present, Monitoring and Evaluation (M&E) are handled through manual documents, and therefore, an automated MIS is recommended. The views of stakeholders are taken into account in M&E process through regular training programmes and awareness programmes. A client feedback form is also used for the purpose. The M&E results are used to improve the accreditation procedures.

3.2. Output Assessment

The duties and the functions of the SLAB are governed by the ISO/IEC 17011 document on 'Conformity assessment - General requirements for accreditation bodies accrediting conformity assessment bodies' - 2005. This International Standard specifies general requirements for accreditation bodies assessing and accrediting CABs. It is also appropriate as a requirements document for the peer evaluation process for mutual recognition arrangements between accreditation bodies. For the purposes of this International Standard, CABs are defined as organizations providing the following conformity assessment services: testing, inspection, management system certification, personnel certification, product certification and, in the context of this International Standard, calibration.
In the regulatory sector, government authorities implement laws covering the approval of products (including services) for reasons of safety, health, environmental protection, fraud prevention or market fairness. At the same time any product or service to be competitive and acceptable in the local and foreign markets it needs to satisfy certain requirements specified by national and international accreditation bodies. The accreditation, however, is not mandatory requirement in Sri Lanka, and accreditation bodies such as SLAB are expected to maintain strict impartiality of their activities. The reviewers have recognized these facts when assessing the output of the SLAB.

3.2.1 Accreditation Services

During the evaluation period of 2011 – 2013 the SLAB has successfully processed 34 out of 54, the applications received (See Table 2 and 3) during the period from CABs.

Although the Key Performance Indicator (KPI) values given by the respective corporate plans differ from year to year during the three years (2011 – 2013), the performance achieved is satisfactory. However, according to the Tables 2 and 3, when the total numbers of applications received during the three years and the total numbers of applications successfully processed are considered, the completion rate is found to be less than 50% for Testing Laboratories. The review team feels that steps have to be taken to rectify this situation.

Furthermore, Tables 2 and 3 indicate that there is a continuous decline in the number of total applications received with the year, and is not a good trend. It is true that SLAB has no mandate to

influence prospective CABs to apply for accreditations, but appropriate steps should be taken to reverse this adverse trend.

Apart from the above activities, the review team has noted that the SLAB has taken steps to introduce new accreditation schemes in relation to GHG validation and verification bodies and good laboratory practices. Discussions conducted with stakeholders revealed that some of them still had to seek assistance from foreign accreditation bodies especially in the case of organic product accreditation related to garment industry as there is no such scheme available under SLAB. It was also noted that accreditation needs may arise in the fields such as rainforests, tourism, food and nutrition. The review team recommends that the SLAB to initiate accreditation activities in such areas.

3.2.2 Proficiency Testing

One of the mechanisms that can be adopted by the accreditation bodies is to encourage the CABs to participate in proficiency testing programmes in order to improve and maintain their standards. Reviewers have noticed that this is not happening at satisfactory levels due to various reasons. This is a process which requires active participation by SLAB, standard reference laboratories and the CABs. Lack of standard references needed to carry out some meaningful exercise is found to be one of the major problems.

3.2.3 International links

Recognition by foreign accreditation agencies is a significant achievement for any local accreditation body. During the period 2011 – 2013 the SLAB has gained admission as a signatory to the MRA of APLAC and ILAC for testing, medical testing and calibration. SLAB was also admitted as a signatory QMS, EMS and Product certification by the PAC in 2013. SLAB is awaiting international recognition for QMS, EMS and Product certification from IAF (admitted in 2014). As such the test reports and Certificates issued by SLAB accredited CABs are recognized and accepted internationally. Quality certification of exports from Sri Lanka based on testing and certification are now recognized as equivalent to test reports and certificates issued in other countries, facilitating market access for Sri Lankan products.

3.2.4 In-house management

As an accreditation body the SLAB is expected to comply with the international standards set by the ISO/IEC 17011 in managing their activities. SLAB is expected to follow general management procedures set by 17011 including their guidelines for document control and keeping records. Reviewers have noted that they adhere to the standards set by the ISO in carrying out their activities. However reviewers have observed that further improvements are needed in the updating of the current practice of using manually operated system to a fully automated management system.

3.2.5 Training and awareness programmes

(a) Training programmes

Training of the workforce to face the current challenges is a must to achieve the development goals set by any institution. The accreditation process is a highly technical exercise which requires current knowledge and appropriate skills in the respective areas of accreditation. During the period 2011-2013, the SLAB staff attended 23 local training programmes and 11 foreign training programmes. As far as the durations are concerned all the programmes can be considered as short courses spanning to several days or weeks.

The local programmes are conducted mostly by local resource personnel drawn from the industry and the academia with the participation of a few foreign experts. Reviewers feel that this situation needs to be improved especially in the case of the training of assessors related to technical fields. Foreign training for comparatively longer periods is highly recommended especially for technical assessors.

(b) Awareness programmes

It seems that the awareness of the industry the importance of accrediting their products and services is not satisfactory at all. This situation is exemplified by the decline in the number of applications received by the SLAB requesting accreditations. Reviewers have noticed that the SLAB prefers to maintain their strict impartiality by limiting its interactions with prospective stakeholders to minimum. Reviewers are of the opinion that this is not conducive to the development of accreditation activities in the country and recommend taking innovative approaches to improve the situation.

3.2.6 Further training for professional categories of the SLAB staff

Staff at higher categories is highly qualified academically. However, accreditation is a challenging subject which requires up to date knowledge and skills especially in the technical areas. Impression we have received through the discussions with stakeholders is that some of the assessors do not have the modern technical skills and hands-on-experience to deal with situations. This situation is far from satisfactory and requires attention from the respective authorities.

4. PRODUCTIVITY OF INSTITUTION BASED ON OUTPUTS AND S&T STAFF STRENGTH

According to the self-assessment report during the three year period ending 2013, 17 testing laboratories, 9 medical laboratories, 2 calibration laboratories, 5 certification bodies and 1 inspection body have been accredited by the SLAB. However, applications received from 36 testing laboratories, 9 medical laboratories, 5 calibration laboratories, 3 certification bodies and 1 inspection body have been processed by the SLAB. Further, they have introduced accreditation systems for GHG validation and verification bodies and good laboratory practices. As most of these accreditations required several rounds on initial evaluations, both document and physical evaluations and thereafter continues monitoring of the accredited institution, the number achieved by the institute is fairly satisfactory.

In addition to accreditations, the institute has carried out more than 20 training programmes/workshops annually. These programmes are also organized by the scientific staff while attending to their normal accreditation duties such as maintaining files, etc. Two to three scientific staff members participate for each programme as resource persons while an assistant director is responsible for planning and carrying out training and workshops. The support rendered by the administrative staff to the scientific staff to carry out these activities successfully also found to be very positive. In addition, they have published 9 training manuals for assessor training, 12 advisory leaflets and 6 posters.

Further, various programmes to increase the awareness of the accreditation concepts of the general public, school children and administrators are carried out by SLAB time to time. This is in addition to the News letters published to disseminate knowledge on the concept.

However, the institute has a limited staff to attend to all the activities of the institute. There are two scientific sections in the SLAB for accreditation process. That is Testing, Calibration & Inspection section and Medical & Certification section. These two sections are headed by two deputy directors. One of them also functions as the Quality Manager of the institute. In addition, there are seven assistant directors who function as the lower layer of the SLAB's two technical divisions under the two DDs. Altogether, there are 10 S&T staff members including the Director. Except one AD, all the DDs and ADs have master level postgraduate qualifications. It is noted that the basic and postgraduate qualifications possessed by them are in biological areas such as Microbiology, Food Science and Technology, etc. Since, currently majority of the institute's work involves in biology/medical related areas it seems that the biology biased skill base of the S&T staff is positively contributing to the output. However, as there are many export industries such as rubber and plastics, ceramics, IT and construction related industries where the testing done for products are mainly non-biological in nature, it is advisable to have at least one or two physical science or engineering graduates in the S&T staff.

The institute is serving for about 80 organizations with the small staff available. In addition, SLAB is aiming at serving 200 customers by 2015 and to become self-sufficient. However, the target of 200 customers by 2015 has not sufficiently been supported in the corporate plan with a projected increase of human and other resources. As the S&T staff seem to attend to a heavy workload already compared to work done by their counterparts in other organizations such as NSF and research institutes, it is better if the institute can plan for expansion of its human resources to maintain the quality of output.

Although, the institute has paid a performance incentive of LKR 9000 in 2013, it seems that there is a concern about retention of trained staff. Since 2006, 18 assistant directors have joined SLAB and

50% of the have left the institute by now. Only one AD has more than three years of experience at the institute and four AD have joined the institute in 2013. Although, effect of this problem has not been reflected in the output, it is inevitable that it will affect output and efficiency of the institute immensely if this trend is to continue. In addition, this can create a bad image for the institute which will adversely affect quality of its recruitments.

The customers of the SLAB have already noticed and are concerned above the issue of retention of staff. They are not happy with change of responsible officer very frequently as they have to face communication delays and technical difficulties each time a new officer starts handling their files. Another, related issue is that lack of experience/expertise of the SLAB staff that coordinates accreditation activities. When some disagreements between assessors and the client surfaced, it is noted that a new less-experienced SLAB staff is not confident enough to handle the situation smoothly. Since SLAB hires their assessors from a pool of academics/researches with PhDs or similar qualifications, it is better to equip SLAB officers also with similar qualifications to increase their confidence and efficiency.

These issues can severely affect output of the SLAB as there are some multinational institutes who currently assessing the capabilities of SLAB to move their entire operations to Sri Lanka.

Another S&T staff related problem that can affect the institutes' output is the interruption of work due to the maternity leave taken by the staff. One example is the delay in computerizing the database due to the above problem. It was noted that the officer assigned for the task went on maternity leave in the middle of the process and hence, another officer was assigned to continue the task. However, she too has gone on maternity leave recently. This has delayed the entire computerization operation and the institute still handles its filing system manually. There are two root causes for the problem. First, except one DD, entire S&T staff is female and it is inevitable that they take maternity leave. Second, most of the staff recruited has left the institute after a few years of service and the institute has recruited more young female staff.

If SLAB can make careers of S&T staff more attractive for young graduates, so that it can attract more male graduates as well as retain both male and female staff in their jobs for longer periods. However, it could be impossible for SLAB to offer higher salary structure since it is a semi-government institution. Hence, the committee can suggest following three solutions.

1. Exploring the possibility of obtaining R & D allowance given for scientific officers in the government institutions. If the staff of SLAB is eligible, they can carry out some research and publish some scientific papers in area of accreditation itself or some other area such as science management using data already available. This could be an immediate short-term solution.
2. In keeping with goal 5 of the cooperate plan of SLAB (2014-2018), SLAB can facilitate and encourage S&T staff to obtain PhDs. Not only this will help retention of S&T staff, but also increase the credibility and marketability of the SLAB. SLAB can plan this activity strategically to have PhDs in most important areas of their work to make the institute profile in each area very strong. When a team is led by a person with a PhD in the relevant field, the team will have a high acceptability from the industry. Even in place like NSF where science administration and the project monitoring is the main duty, a significant number of S&T staff has acquired PhDs.
3. The third option is that to move SLAB management structure from a semi-government board to a government own company structure where employees can be given much attractive remuneration packages and much higher operational freedom to the CEO and the Board of Directors of SLAB.

5. OVERVIEW OF THE INSTITUTION'S PERFORMANCE AND CONTRIBUTION TO NATIONAL DEVELOPMENT

5.1. Institution's performance

SLAB's main activities during the years 2011 – 2013 are:

(i) Laboratory accreditation

(ii) Accreditation of certification bodies

(iii) Accreditation of inspection bodies

(iv) Quality assurance activities

(v) Providing training on accreditation (Not consultancy)

The SLAB has updated their Corporate Plan regularly during the years 2011 – 2013, to facilitate its operation and to provide accreditation facilities in conformity in efficient and effective manner. Based on the assessment of needs of accreditation and the finding of SWOT analysis, SLAB has laid down the following specific goals to move forward.

a) Promote accreditation amongst conformity assessment bodies and create public awareness

b) Capacity building of human resources

c) Provide accreditation services

d) Obtain and maintain international recognition from ILAC and IAF

e) Maintain an efficient and transparent organization

Though the SLAB has identified these goals with SWOT analysis, the strategies to achieve certain goals could have been formulated in an efficient way to accommodate the stakeholder's needs.

In order to assess the overall performance of the SLAB, it is necessary to look at the performance in each identified specific goals. What follows is a brief critical review of the activities specified under each goal.

a) Promote accreditation amongst conformity assessment bodies and create public awareness

By the Act of Parliament No. 32: 2005, SLAB has the mandate to promote accreditation activities in conformity with the guidelines laid down in the National Quality Policy as approved by the Cabinet of Ministers. Based on the discussion with the SLAB staff, it is evident that the SLAB has designed and conducted several awareness/training programmes and workshop to regulators and interested parties. Also the SLAB has taken steps to create awareness among general public through media in the form of paper articles and interviews. Review team is in the opinion that SLAB has achieved significantly in this task. However, SLAB needs to analyse its accumulated database for future promotional activities amongst conformity assessment bodies. Since the accreditation is a voluntary process, review team feels that neither the conformity assessment bodies nor the general public is not in the process of visualizing the importance of accreditation. Therefore, it is worthwhile if SLAB could find a strategic way out to apprise both the conformity assessment bodies and the general public in more efficient and effective way in relation to the significance of getting accreditation.

b) Capacity building of human resources

SLAB has successfully implemented the planned activities in building competence of its own staff, assessors and lead assessors during the years 2011 – 2013. Capacity building activities are generally conducted with locally available resource persons. However, for specific activities, foreign resource persons were also employed.

It was noted that in the year 2013, assessor training programmes on GHG validation and verification bodies and Good Laboratory Practice were conducted by foreign trainers from Taiwan and Australia respectively. Foreign trainers provided training to SLAB staff on ISO 14064, 14065 & 14066 and OECD guidelines on GLP. SLAB staff and outside experts were also trained on assessing CABs on respective international standards; ISO/IEC 17020, 17021, 17025 & 17065 and ISO 15189. SLAB staff who received foreign training on conformity assessment practices and techniques has served as resource person to local participants on later date.

Review team was pleased to note that the stakeholders who were present during the discussion were generally happy about the performance of the assessors and their progress. Also they were satisfied with the service rendered by the SLAB staff. However, it was noted that the assessors need to be updated and trained with the relevant technologies incorporated in testing and calibration. Review team is in the opinion that the SLAB can include some kind of real world mock training in their yearly schedule for their assessors by incorporating relevant technologically updated techniques and its relevant process. This will certainly enhance the assessors' performance and it will improve the assessment process.

c) Provide accreditation services

SLAB has significantly progressed in providing accreditation and renewal of accreditation to laboratories, certification and inspection bodies, training institutions and other persons required to carry out conformity assessments in reasonable time. Stakeholders who were present during the discussion were satisfied with the process and duration that SLAB has taken in delivering the accreditation.

During the 8 years of existence of SLAB, at the end of 2013, it had accredited 41 testing laboratories, 4 calibration laboratories, 13 medical laboratories and 5 certification bodies, and 1 inspection body. Furthermore, SLAB had accredited 9 testing laboratories, 2 calibration laboratories, and 6 medical laboratories. Review team appreciates the progress made by the SLAB over the years. Nevertheless, review team feels that SLAB should adopt a progressive approach to undertake accreditation tasks in emerging fields which supports the national development.

According to the self-assessment report, there are number of incidents that SLAB could not be able to finalize its accreditation process in a given time frame. During the discussion with SLAB staff, it was revealed that these delays are mainly due to the conformity assessment bodies. Either they do not respond to the queries raised by the assessors and lead assessors or do not comply with the recommendations made by the SLAB authorities. Further, it was noted that the reluctance of the relevant regulatory bodies to insist on accreditation has adversely affected the SLAB's progression. Review team feels that these types of response may be due to the fact that the conformity assessment bodies do not have any compulsion to obtain accreditation for their own operation. Therefore, review team strongly urge the SLAB to find a suitable strategy or alternative approach to overcome these types of problems.

d) Obtain and maintain international recognition from ILAC and IAF

SLAB has been admitted as a signatory to the MRA of APLAC and ILAC for testing, medical testing and calibration.

SLAB also been admitted as a signatory QMS, EMS and Product certification by the PAC in 2013. SLAB is currently awaiting international recognition for QMS, EMS and Product certification from IAF.

As such the test reports and certificates issued by SLAB accredited CABs are recognized and accepted internationally. Quality certification of exports from Sri Lanka based on testing and certification are now recognized as equivalent to test reports and certificates issued in other countries, facilitating market access for Sri Lankan products.

Review team appreciates the steps taken by the SLAB to obtain the relevant signatory status from the international accreditation organizations.

e) Maintain an efficient and transparent organization

According to the documents available, it is evident that SLAB had conducted regular meetings as scheduled. Through the appropriate committees, SLAB has reviewed and updated the quality manuals and the other documents. As per the schedule, SLAB has carried out the progress reviews and external evaluation.

Review team is satisfied with the ongoing operation of the SLAB and the governance. However, to make it more efficient and transparent, review team feels that wider consultative process is needed when preparing corporate plan/strategic plan.

5.2. Contribution to national development

At present, SLAB is operating a number of accreditation schemes in the areas of testing, medical testing, calibration, certification and inspection.

As far as accreditation of testing laboratories (ISO/IEC 17025) is concerned, according to the Self-Assessment Report, SLAB covers selected types of laboratory tests in chemical, biological, physical & mechanical testing. As test reports issued by accredited laboratories are accepted in quality assurance activities in international and domestic trade, regulatory authorities could use the services of accredited laboratories in the implementation of various regulations.

Review team realises the development of metrology infrastructure that deals with accuracy and traceability of measurement standards is crucial for accreditation process. Therefore, it is paramount important to develop and improve the metrological infrastructure including the National Metrology Institute (MUSSD) to ensure that all measurements are traceable to International SI units. Although the accreditation scheme of calibration laboratories against ISO/IEC 17025 paves the way for an enhanced metrological infrastructure in the country, steps have to be taken to improve traceability of measurement standard and ensure the acceptance by the international bodies.

It is obvious that the reliability and accuracy of test results issued by medical laboratories is a critical issue in the National Healthcare System, whether it is a private or state institution. Under the accreditation scheme provided by SLAB for medical laboratories (ISO 15189), the reliability of test results is assured. The areas covered by the SLAB under this scheme include Clinical Pathology, Clinical Biochemistry, Haematology, Microbiology and Serology, Histopathology, Immunology, Molecular Biology, Pharmacology and Nuclear Medicine. During the discussion and from the documents available at SLAB it is evident that only the private sector medical laboratories have shown interest in getting accreditation from SLAB. Review team recommends that the relevant higher authorities in the medical sector should take appropriate steps to encourage or rather insist the state sector medical laboratories in Government Hospitals to get the national accreditation from SLAB.

Accreditation scheme for CBs given by SLAB cover certification of management systems (quality, environment, food safety, occupational health and safety, information etc - ISO/IEC 17021),

certification of products ISO/IEC 17065 and certification of persons (ISO/IEC 17024). Accreditation of certification bodies assures the reliability and acceptance of certifications issued by these bodies in international trade and in domestic markets. Quality certification by accredited CBs is a basic requirement in the international trade.

Accreditation scheme for inspection bodies given by SLAB is based on ISO/IEC 17020 provides a formal recognition of an inspection body's services for its integrity and reliability. Organizations required to conduct various types of inspections for regulatory purposes could be accredited under this scheme.

SLAB has a plan to introduce two more new programmes in line with national development. They are GHG validation/verification and GLP for R&D laboratories. As mentioned earlier, the review team feels that SLAB should take steps to introduce accreditation of new ventures such as certifications of rainforests, information security management, environment, tourism and organic textile manufacturing.

Overall, the review team appreciates the efforts made by the SLAB towards national development from its inception. Since the service rendered by SLAB is on voluntary basis, it is very difficult for the SLAB to expand its services. Review team feels that at least the associated regulatory bodies should come forward and develop effective mechanism to enact regulations in order to facilitate/impose their clients to get appropriate accreditation /certification.

6. OVERALL JUDGMENT

The review team has assessed the performance of the SLAB during the period 2011 - 2013 in accordance with the mandate given by the NASTEC, and its overall judgment is presented below.

- Accreditation Activity

  SLAB has performed the accreditation activities in compliance with the international standards set out by the ISO/IEC. During the three year period, under evaluation, it has carried out conformity assessments under strict impartiality as required by the ISO/IEC regulations, and granted accreditations for 17 Testing Laboratories, 2 Calibration Laboratories, 9 Medical Laboratories, 5 Certification Bodies, and 1 Inspection Body. However, year-wise analysis on the number of overall accreditation requests received by the SLAB reveals a continuous drop, and it requires immediate attention of the Governing Council.

- Strategic Planning

  Strategic/Corporate planning is a management tool that helps an organization to focus its activities in order to achieve its goals set by the vision and mission statements. One of the weaknesses of the corporate plan of the SLAB is the lack of being proactive and innovative in responding to the changing needs of the trade, industry and the society. Apart from the accreditation activities mentioned above, the corporate plan does not indicate any plans to address emerging trends in the field of accreditation activities. There is no evidence that the views of stake holders such as prospective CABs from trade and industry or regulatory bodies have taken into consideration when developing the corporate plan.

- Development of accreditation activities

  SLAB is in the process of introducing two more new programmes in line with the national development. They are GHG validation/verification and GLP for R&D laboratories. However, SLAB's inability to introduce accreditation of new ventures such as certifications of rainforests, information security management, environment, tourism and organic textile manufacturing has adversely affected the respective stakeholders.

- Capacity building of human resources

  It was noted that in the year 2013, assessor training programmes on GHG validation and verification bodies and Good Laboratory Practice were conducted by foreign trainers from Taiwan and Australia respectively. Foreign trainers provided training to SLAB staff on ISO 14064, 14065 & 14066 and OECD guidelines on GLP. SLAB staff and outside experts were also trained on assessing CABs on respective international standards; ISO/IEC 17020, 17021, 17025 & 17065 and ISO 15189. SLAB staff members who received foreign training on conformity assessment practices and techniques have served as resource persons in subsequent training workshops for local participants. In addition, the institute has carried out more than 20 training programmes/workshops annually. However, it was noted that the assessors need to be updated and trained with the relevant technologies incorporated in testing and calibration. Retaining of the S&T staff has become a major problem for the SLAB,

and it does not have an effective strategy to overcome this problem. Opportunities for development of their S&T career in the Institute are minimal.

- International Recognition

  SLAB has been admitted as a signatory to the MRA of APLAC and ILAC for testing, medical testing and calibration. SLAB has also been admitted as a signatory QMS, EMS and Product certification by the PAC in 2013. SLAB is currently awaiting international recognition for QMS, EMS and Product certification from IAF. As such the test reports and Certificates issued by SLAB accredited CABs are recognized and accepted internationally. Quality certification of exports from Sri Lanka based on testing and certification are now recognized as equivalent to test reports and certificates issued in other countries, facilitating market access for Sri Lankan products. Review team appreciates the steps taken by the SLAB to obtain the relevant signatory status from the international accreditation organizations.

7. RECOMMENDATIONS

- It is recommended that SLAB adopts a forward-looking approach in developing its Strategic/Corporate Plan taking into account the domestic and global needs as well as government's policy changes. It is also important that stakeholder needs are taken into account in the corporate plan.

- The SLAB should be ready to provide accreditation for new emerging areas to be undertaken by the certification bodies and conformity assessment bodies in the near future.

- The relevant authorities should enforce implementing accreditation requirements to the CABs under their purview. Medical labs in government hospitals and vehicle emission testing companies are a case in point.

- SLAB should consider diversifying its activities which are presently biased towards medical lab testing. For instance, there are many industries such as rubber and plastics, ceramics and construction related and IT industries where the testing done for products are mainly non-biological in nature, therefore, it is advisable to have at least one or two physical science or engineering graduates in the S&T staff.

- It is recommended that the SLAB plans for expansion of its human resources to maintain the quality of the output.

- The SLAB generally hires their assessors from a pool of academics/researches with PhDs or similar qualifications, it is better to uplift SLAB officers also to similar qualifications in order to enhance their competence, confidence and efficiency.

- The SLAB may include some kind of real world mock training in their yearly schedule for their assessors by incorporating relevant technologically updated techniques and its relevant process.

- Initiate R&D activities related to accreditations in suitable areas so that S&T staff can get involved in such activities, which would be beneficial to both the staff and the institute. Necessary supports to carry out R&D work should be sought from national and international funding agencies.

- Explore the possibility of obtaining the R&D allowance given for scientific officers in the government institutions.

- It was noted that the reluctance of the relevant regulatory bodies to insist on accreditation has adversely affected the SLAB's progression. Review team feels that these types of responses may be due to the fact that the CABs do not have any compulsion to obtain accreditation for their own operation. Therefore, review team strongly urges the SLAB to find a suitable strategy or alternative approach to overcome these types of problems.

- Quality assurance of products and services is the prerequisite for accreditation by an independent body. Responsibility of assuring quality of products and services lies on the producer/ service provider. Review team strongly believes that government's intervention is needed to implement a suitable mechanism to promote the quality of

products and services aiming at achieving a minimum technical level, enabling comparability, and also ensuring competition on equal terms with other economies. Relevant authorities may make use of the provisions given in the section 4.3.7 of the ISO/IEC 17011 guidelines to set up such a mechanism.

8. ANNEXURE

Annex A

7.1. Management Assessment

The ability of an institution to produce useful and relevant outputs depends on among others internal policies, strategies, management practices the way in which these are applied. By evaluating these critical aspects of an institution, one can identify causes that enhance or hamper the performance of that institution.

The following aspects of management have been assessed:

(i) Institutional response to external and internal environment in planning organizational strategy
(ii) Planning S&T Programs and priorities
(iii) Planning S&T/ R & D Projects
(iv) Project management and maintenance of quality
(v) Human Resource Management
(vi) Management of organizational assets
(vii) Coordinating and integrating the internal functions/ units/activities
(viii) Managing information dissemination and partnership
(ix) Monitoring, evaluation and reporting

❋ ***Management practices assessment***

(1) Always used/ always considered/ involved/analyzed	≡	**Strong**
(2) Occasionally used/ considered/ involved/analyzed	≡	**Moderate**
(3) Not used/ Not considered/ Not involved/Not analyzed	≡	**Weak**

i. ***Assessment of Institutional Response to External and Internal Environment in Planning Organizational Strategy***

The external environment of an institution (e.g. consumer/industry needs, government policies, market conditions, partners, and competitors) will critically affect its performance. Science & Technology institutions need to regularly assess these in order to plan and respond effectively to challenges and opportunities, and to deliver results that are relevant and useful.

The external environment of Science & Technology / Research & Development institution is vibrant due to changes in stakeholder conditions and needs. It is important for an institution to periodically review and adjust its directions and goals, to meet these changes. These adjustments in turn may require significant actions, such as changes in focus and programs, organizational structure, and management strategies.

Management practice	Level of Practice (Performance Indicators)			Comments / Evidence
	Strong	Moderate	Weak	
Government policies and development goals are used/ considered to establish goals and plan organizational strategy for the institution		V		Has developed goals in conformity with the act. However emerging industry needs are not adequately addressed. *
The organizational mandate (as specified by the relevant Act) is considered in strategic planning	v			
The institution is responsive to changes in Government policies and strategies		V		SLAB is strictly adhering to mandate given by the act (2005)*
Factors such as strengths, weaknesses, threats and opportunities are considered in strategic planning		V		Though the SLAB has identified the goals with SWOT analysis, the strategies to achieve certain goals are not formulated.*
Stakeholders needs are taken into consideration in strategic planning		V		Although SLAB has not covered entire spectrum of stakeholder needs, they have taken some steps to address some identified issues*/Meetings with stakeholders
The Board of Governors is involved in strategic planning	v			
The extent to which staff members are involved in strategic planning			v	Interactive exercise is not adequately followed in formulating the corporate plan
Government allocations and alternative funding opportunities (donor funding) are considered in strategic planning		V		Future expansion of activities are not projected
The extent to which policies and plans of the organization are reviewed and updated		V		Conduct regular review meetings based on their activity plan (Balanced Score Card)

ii. ***Planning S&T programs and setting priorities***

A program is "an organized set of research projects, activities or experiments that are oriented towards the attainment of specific objectives". Programs are higher in research hierarchy than projects. Program objectives should be consistent with organizational strategies and reflect user needs and development goals.

Management practice	**Level of Practice (Performance Indicators)**			**Comments/ Evidence**
	Strong	**Moderate**	**Weak**	
National development goals are considered in planning programs & setting priorities		V		Has developed goals in conformity with the act. However emerging industry needs are not adequately addressed. [1]
Board of Governors participate in planning and priority setting of program	v			
The extent to which the staff of the institution participate in programme planning and priority setting	v			Staff is actively involved in program planning and priority setting [2]
Stakeholder interests are considered in programme planning		V		Stakeholder interest are considered to a minimum level[3,4]
The extent to which programmes are planned and approved through appropriate procedures	v			SLAB conducts progress review meetings regularly.
The extent to which the availability of funds (government allocations and other funds) generating funds are taken into consideration in planning programmes	v			
The obtaining of necessary equipment is considered in planning programmes				Not Applicable

[1] Self-Assessment Report
[2] Meeting with staff
[3] Corporate Plan
[4] Stakeholder discussion

Stakeholders are represented in the institution's planning and review committees.		V		Improvements are necessary to accommodate the views of stakeholders such as CABs when institution plans are formulated
The extent to which socio economic and commercialization of aspects are considered in programme planning.				Not Applicable
Effectiveness and efficiency of institutional procedures in approving new S& T programmes.	v			Accreditation based activities is considered equivalent to S&T programmes

iii. ***Planning S& T / R& D Projects***

A project is a set of activities designed to achieve specific objectives within a specified period of time. A project includes interrelated research activities or experiments, schedule of activities to be completed within a specific time period, budget, inputs and outputs, focused towards intended beneficiaries. Projects are the buildings blocks of programmes. For an institution to achieve its objectives, it is necessary for projects to be well planned in terms of their expected outputs, activities, and input requirements.

Management practice	**Level of Practice (Performance Indicators)**			**Comments/ Evidence**
	Strong	**Moderate**	**Weak**	
The staff is provided with guidance for project planning	v			Planning of accreditation activities are based on manuals and training programmes
Previous research results/data are used for planning projects			v	Database on accreditation is not analysed to plan future activities
The extent to which the institution follows a formal process for preparation, review and approval of projects	v			SLAB follows a well-defined process

The extent to which organizational plans (e.g. medium-term plan, corporate plan, strategy etc.) are used to guide project selection and planning			v	Corporate plan does not provide long or medium term project plans
Multidisciplinary projects/ activities are encouraged by the institutions	v			Accreditation activities are multidisciplinary
Foreign collaborations are encouraged and incorporated in planning.	v			Full membership of several international accreditation bodies have been obtained
Partnership with private sector is encouraged by the institution				Not Applicable
The extent to which development research/activities are considered in planning projects				Not Applicable
The extent to which basic research are considered when planning projects			v	These aspects have not been considered in project planning
The degree to which adverse effects on environment are considered in planning projects				Not Applicable

iv. ***Project management and maintenance of quality***

Proper project management and quality assurance/improvement practices are needed to ensure effective research operations, the quality of output and achievement of desired objectives.

Management Practice	**Level of Practice (Performance Indicators)**			**Comments/ Evidence**
	Strong	**Moderate**	**Weak**	
The effectiveness of the procedures for resource allocation at different levels (organization, departments, program etc.)		V		Although the quality of management of the accreditation process is satisfactory, the selection of appropriate assessors could be improved.

Ensuring that instruments, equipment and infrastructure facilities are sufficient for implementation of projects				Insufficient due to weak national metrology infrastructure facilities
The effectiveness of administrative procedures and support for project implementation (procurement and distribution of equipment and materials, transport arrangements, etc.)	v			
Formal monitoring and review processes are used to direct projects towards achievement of objectives	v			
The extent to which the researchers are supported by the required technical / field staff.				Currently not applicable
Ensuring that established field / lab methods, and appropriate protocols are used	v			
Research projects/ S& T activities are completed within the planned time frame.		V		Non-response of some applicants for accreditation
Ensuring that scientists / researchers have access to adequate scientific information (scientific journals, internet, international databases, advanced research institutes, universities etc.) that strengthens the quality of research.				Not Applicable
The extent to which quality assurance practices are followed by the institutions	v			
Ensuring that researchers/ scientists have access to computers and necessary software	v			

v. ***<u>Human Resource Management</u>***

Availability of an adequate number of qualified staff and effective management of human resources are key determinants of organizational performance. Establishing a cadre of qualified staff takes many years. To keep pace with new developments in science, technology, and management, it is also essential to upgrade staff regularly. Staff planning, selection, recruitment, evaluation, and

training are key components of human resources management that need to be in place for effective performance of an institution.

Management Practice	Level of Practice (Performance Indicators)			Comments/ Evidence
	Strong	Moderate	Weak	
The institution maintains and updates staff information in a database (including bio data, disciplines, experience, publications, projects)	v			
The institution, plans and updates its staff recruitments based on programme and project needs		V		Though they have followed recruitment procedures, there is room to recruit staff in diverse fields
The effectiveness of the selection procedures and the schemes of recruitment		V		Scheme of recruitment could be improved to attract more applicants
Training is based on institution and program objectives and on merit,		V		Restricted only to short term trainings
The effectiveness of the procedures in promoting a good working environment and maintaining high staff morale.			v	No adequate steps are being taken to retain competent staff. Postgraduate level training in relevant fields is not given or planned.1
The effectiveness of staff performance appraisals		V		Incentives given are not performance based
The effectiveness of rewards and incentive schemes in motivating the staff			v	It's too early to comment on the effectiveness of certain incentives given in 2013. There is no evidence of awarding performance-based rewards.1
The effectiveness of managing staff turnover, absenteeism and work interruptions.			v	High turnover of staff needs to be addressed and managed.

vi. ***Management of organizational assets***

Organizational assets include not only staff buildings, equipment, and finances, but also include assets such as knowledge, technologies developed, intellectual property, and even credibility and reputation. A continuous effort is needed to protect all of these assets, because they are the basis for the sustainability of the institution and allow it to continue delivering quality research and service outputs.

Management Practice	**Level of Practice (Performance Indicators)**			**Comments/ Evidence**
	Strong	**Moderate**	**Weak**	
The ability of the institution to carry out its mandate and the assigned statutory powers		V		Although the SLAB has ability to carry out its mandate, it does not have adequate statutory powers to promote their activities.
Infrastructure (buildings, stations, fields, roads) is satisfactorily maintained.			v	It does not have adequate infrastructure facilities.
Vehicles and equipment (lab, field, office) are properly managed and maintained.		V		
The effectiveness of procedures to ensure that equipment are in working order		V		In-house maintenance mechanism has to be developed
The effectiveness of the institution's overall strategy in generation and proper utilization of funds		V		Since the institute has a clear vision to become self-sufficient by 2016, SLAB needs to develop proper strategies and activities.
The extent to which the institution identifies opportunities for income generation and cost recovery		V		The opportunities are identified however the strategies are not formulated. 2
The extent to which the intellectual property rights of the institute are protected				NA

vii. ***Coordinating and integrating the internal functions/ units/activities***

The planning and coordination of units (departments, divisions, committees, research stations, etc.) and interaction among them are often neglected and it affects the overall performance of the institution. The organization of these units and the overall structure need to be reviewed

from time to time to ensure smooth and efficient operations. The planning and coordination of units, logistics, resources, and information flows are necessary to achieve integration and smooth functioning.

Management Practice	Level of Practice (Performance indicators)			Comments/ Evidence
	Strong	Moderate	Weak	
The extent to which institution is evaluated internally and restructured based on current needs	v			
The effectiveness of internal communication and coordination mechanisms	v			
Institution's overall direction and coordination are provided by a central planning committee / unit.	v			
The extent to which different units are assigned clearly defined functions	v			
Responsibilities of research / management staff are clearly identified	v			
Effectiveness of using appropriate reporting procedures and feedback in management at different levels	v			

viii. ***Partnership in managing information dissemination***

An important requirement of all S& T / Research & Development institutions is management of dissemination of technology and information to users. The partnership / linking up with other actors in Science & Technology and information system (including, universities, industries, private sector, international research organizations, extension, farmers etc.) promotes information exchange, collaboration, and cost sharing, and ultimately improves the quality and relevance of research.

Management Practice	Level of Practice (Performance Indicators)			Comments/ Evidence
	Strong	Moderate	Weak	
The institution systematically plans and performs dissemination of information	v			Newsletter and the website
The extent to which the institution plans and maintains linkages with key partners for sharing and dissemination of information	v			

The effectiveness of institutional procedures for technology transfer	v			Training 1
The effectiveness of the system to obtain feedback from different types of stakeholders		v		Three types of feedback systems are available at different stages of accreditation for clients.

ix. ***Monitoring, evaluation and reporting procedures***

Monitoring (assessing ongoing S&T / research activities) and evaluation (evaluating the value, quality and results of research) are key management processes of public-S& T institutions Monitoring and evaluation are also important for determining whether the institution is learning from its earlier achievements and failures. Monitoring, evaluation, and reporting procedures need to be properly designed (i.e. integrated into project planning and implementation) and periodically reviewed, in order to provide useful information for decision-making and accountability.

Management Practice	**Level of Practice (Performance Indicators)**			**Comments/ Evidence**
	Strong	**Moderate**	**Weak**	
The institution monitors and evaluates (M&E) its own activities periodically	v			Regular meeting 1
M&E is supported by an adequate management information system (MIS), which includes information on projects (e.g. costs, staff, progress, and Results).		v		At present it is manually handled. Automated MIS needs to be developed.
The extent to which S& T results and other outputs are adequately reported internally (e.g. through reports, internal program reviews, seminars).	v			
External stakeholders contribute to the M & E process in the institution	v			
The extent to which the results of M&E are used for project/ research planning and decision-making.	v			

7.2. Output Assessment

b) <u>Output measurements</u>

Output Category	Nos.	General Comments on quality and relevance of outputs and productivity of institution
1. **Technologies Developed** • New products / technologies • Improved products / technologies / laboratory methods • New planting materials / seed varieties	 00 00 NA	
2. Technologies transferred to industry / entrepreneurs • Technologies developed locally • Foreign technologies adapted and transferred	 00 03	 GHG validation and verification bodies and good laboratory practices
3. Information Dissemination / Extension ***Publications*** ▪ S&T institutional review reports ▪ Training manuals ▪ Advisory leaflets ▪ Maps ▪ Posters ▪ Manuals of procedures ***Dissemination events*** ▪ Workshops and seminars ▪ Conferences ▪ Exhibitions ▪ Media events ▪ Open days ▪ Demonstrations	 03 09 12 NA 06 20 31 03 05 02 03 NA	 Annual Reports: 2011, 2012 and 2013 Training modules for Assessor training programmes Two day seminars (31) were conducted for different CABs (Testing, Medical laboratories)
4. Publications • Research papers in ISI journals • Other research papers • Conference proceedings • Books and monographs • Technical reports • Research reports	 00 00 00 00 00 00 00	

5. Patents ***Individual*** • Local patents • Foreign patents ***Institutional*** • Local patents • Foreign patents	 NA NA NA NA	
6. Services (Testing, Calibrations, Consultations, Advisory and etc.) • Policies developed • Reviews of S&T institutions • Research grants awarded and administered • Funding for training programmes and other S&T activities • Monitoring of research projects • Data bases developed • S&T surveys and maps • Science popularization activities • Environmental impact assessments • Instrument calibrations • Consultancy services • Testing and analytical services • Vaccines / seed production and distribution • Germ –plasm conservation • Recommendations in S&T matters	 00 NA 00 00 00 01 NA NA NA NA NA NA NA NA NA 00	
7. Training ***Staff training programmes*** • Local • Foreign ***Training programmes for stakeholders***	 23 11	

8. Other	1	All island competition for school science labs

Total S&T staff strength of institution **10**

Annex B

SLAB Review Programme 2014

Day 1 (3rd Oct. 2014) at SLAB
9.30 am- 12.30 am : Presentation about the SLAB and visit around the institution
12.30 -1.30 pm : Lunch
1.30 pm – 2.30 pm : Finance and Administration Division
2.30 pm – 4.00 pm : Testing, Calibration & Inspection Division

Day 2 (23rd Oct. 2014) at SLAB
9.30 am- 11.00 am : Medical and Certification Division & Quality Management
11.00 am- 12.30 am : Staff members (Few members - one to one discussion)
12.30 pm - 1.30 pm : Lunch
1.30 pm – 2.30 pm : Technical Advisory Committee Discussions (3 committees)
2.30 pm – 3.30 pm : Council members
3.30 pm – 4.00 pm : Review documents

Day 3 (13th Nov. 2014) at NASTEC
: Stakeholders Discussion - Group discussion
9.30 am- 10.15 am : Accredited Medical Laboratories (5 selected)
10.15 am- 11.00 am : Accredited Certification Bodies (2 selected)
11.00 am - 11.45 am : Accredited Testing Laboratories (4 selected)
11.45 am – 12.30 pm : Accredited Calibration Laboratories (3 selected)
12.30 pm – 1.30 p.m. : Lunch
1.30 pm – 4.00 pm : Report Discussion (Panel members)

Day 4 (1st Dec. 2014) at SLAB
1.30 p.m. – 4.30 p.m.: Clarifications with senior officers of SLAB

Annex C

The list of staff members interviewed for the evaluation on 3rd and 23rd October 2014

Name	Designation
Mr T Wickremasinghe	Director/CEO
Mr L H D Bandusoma	Deputy Director (Technical Manager for Testing & Calibration Laboratories and Inspection Bodies)
Ms Chanditha Ediriweera	Deputy Director (Quality Manager and Technical Manager for Medical Laboratories & Certification Bodies)
Mr D G Pushpakumara	Deputy Director (Finance and Admin)
Ms Manisha Wickramasinghe	Assistant Director
Ms Mithila Gunasekara	Assistant Director
Ms Jeewani Karunasagara	Assistant Director
Ms Sandamali Senanayake	Assistant Director
Ms Hiruni Kumaratunga	Assistant Director
Ms Punya Liyanage	Assistant Director
Ms Nelum Sri Dias	Management/Accounts Assistant
Ms Harsha Chadrasiri	Management/Accounts Assistant
Ms W P Lasanthika	Management/Accounts Assistant
Mr Jagath Madurapperuma	Management/Accounts Assistant

Annex D

The list of Technical Advisory Committee (TAC) members interviewed for the evaluation on 23rd October 2014

Name	**Area**
Dr(Ms) S. Nanayakkara	Medical Testing
Dr(Ms) J.P. Elwitigala	Medical Testing
Dr(Ms) D.G.N.N.Ranasinghe	Medical Testing
Mr. E.G. Somapala	Chemical Testing
Mr. R.M.G.B. Rajanayake	Chemical Testing
Dr. A.M. Mubarak	Chemical Testing
Dr. Chandrani Wijeratne	Biological Testing
Dr(Ms) S.I.Abeygunawardena	Biological Testing

Annex E

Discussion with council members presented for the discussion on 23rd October 2014

Name	**Designation**
Mr. Pasan Gunasena	Chairman
Prof. W. Abeywickrema	Council Member
Dr. Nirmali De Silva	Council Member
Mr.Madhawa Waidyaratna	Council Member
Mr. Sunanda Fernando	Council Member
Mr. K A S Keeragala	Council Member
Mrs. Hiransa Kaluthanthri	Council Member
Mrs. K.A.Y.R.S. Samarasinghe	Council Member
Mr. K. Premasiri Kumara	Council Member
Mrs. L.U.N. Sumanasekara	Council Member
Mr. K. Mallimarachchi	Council Member
Prof. Nadeera Karunaweera	Council Member

Annex F

Stakeholder discussion held at NASTEC on 13th Nov. 2014

Discussion with Medical Testing Laboratories- 9.30 am to 10.15 am

Sr No	Name and address of the laboratory	Contact Person
01	Confidence Medical Centre (Pvt) Ltd. No. 29, 1st Maligakanda Lane, Maradana, Colombo 10	Mr M R Mohamed Fazmin Chairman
02	Genetech Molecular Diagnostics No. 54, Kitulwatte Road,Colombo 08	Dr Dhammika Senevirathne Technical Manager
03	Durdans Diagnostic Laboratory Durdans Hospital, No. 3, Alfred Place,Colombo 03	Dr Sunil Navaratinaraja Lab Administrator
04	Hemas Hospital Laboratory Services No 389, Negombo Road,Wattala	Dr B H K R Sugathadasa Head of Laboratory
05	Ceymed Healthcare Services (Pvt) Ltd. No 132, S De S JayasingheMawatha, Nugegoda	Dr Sarath Paranavithana Laboratory Director

Discussion with Medical Testing Laboratories- 10.15 am to 11.00 am

Sr No	Name and address of the laboratory	Contact Person
01	System Certification Division Sri Lanka Standards Institution No. 17, Victoris Place, Elwitigala Mawatha, Colombo 08	Ms Samanthi Narangoda Director- System Certification Division
02	Ind-Expo Certification Ltd No. 20, 1st Galle Face Court, Colombo 03	Ms Felicia Weerawardena Quality Manager

Discussion with Testing Laboratories- 11.00 am to 11.45 am

Sr No	Name and address of the testing laboratory	Contact Person
01	Chemical Laboratory Bamber & Bruce Ltd. No. 22/A, Vijaya Kumaranathunga Mawatha, Colombo 05	Ms Saluja Thambirajah Quality Manager
02	Microbiology Laboratory SGS Lanka (PVT) Ltd. No. 141/7, Vouxhall Street, Colombo 02	Ms Himali Hettige Quality & Technical Governance Division Head
03	Electro Technology Laboratory Industrial Technology Institute No. 363, Bauddhaloka Mawatha, Colombo 07.	Mr H P P S Somasiri Officer-in-Charge Quality Assurance Division
04	Physical Testing Laboratory Dipped Products PLC Brahmanagama, Pannipitiya	Ms Devaki Rodrigo Executive PTL

Discussion with Calibration Laboratories- 11.45 am to 12.30 pm

Sr No	Name and address of the calibration laboratory	Contact Person
01	Calibration Laboratory Metrology Division Sri Lanka Standards Institution	Ms Sujeewa Udakara Director
02	Calibration Laboratory SGS Lanka Pvt Ltd No. 140/7, Vouxhall Street, Colombo 02	Ms Himali Hettige Quality & Technical Governance Division Head
03	Industrial Metrology Laboratory Industrial Technology Institute No. 363, Bauddhaloka Mawatha, Colombo 07.	Mr H P P S Somasiri Officer-in-Charge Quality Assurance Division

Annex G

Organizational Structure