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**DEVELOPMENT OF STANDARDIZATION
AND QUALITY CONTROL (SLSI)**

DP/SRL/86/007

SRI LANKA

Report of the evaluation mission*

Prepared in co-operation with
The Democratic Socialist Republic of Sri Lanka,
The United Nations Development Programme, and the
United Nations Industrial Development Organization

* This document has not been edited.

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José María Hernández, C

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SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

PART A

Project Title: Standardization and Quality Control - Phases I and II

Project Number: Phase I - DP/SRL/82/003
Phase II - DP/SRL/86/007

<u>Executing Agency</u>	<u>UNDP Budget</u> US\$	<u>Project</u> <u>Approved</u>	<u>Dates of</u> <u>Evaluation</u>
UNIDO	Phase I 890.812 Phase II 632.764	29 Oct. 82 23 Feb. 88	14-28 January 91

<u>Government Imple-</u> <u>menting Agency</u>	<u>Government Budget</u> <u>(local currency)</u>	<u>Date</u> <u>Operations started</u>
SLSI	Phase I 12.402.440 Rs. Phase II 7.212.026 Rs.	December 1982 March 1986

I. Objectives and outputs (Phase II)

(Note: Immediate objectives and output statements are identical. Output statements taken from latest PPER. 10/90.)

- (1) Development of laboratory accreditation activities.
- (2) Information and education.
- (3) Development of engineering standardization activities.
- (4) Development of company standardization activities.
- (5) Quality inspection activities.

II. Purpose of the evaluation mission

The Terms of Reference required the usual assessments of progress at the various levels of project designs, a re-examination of project design and its probable impact, institution-building, sustainability and lessons learned. Specific issues for review included:

- (a) Relations of the projects with industry and other end-users:
- (b) Problems related to the organizational position, management and government support of the SLSI;
- (c) Future financing of SLSI in general, and the laboratories in particular.

In its initial meetings with the Secretary to the Minister of Industries, Science and Technology, it was made clear that the Government was particularly interested in these specific issues, although issue (c) above was expanded to include all outreach services to industry, and team analyses, conclusions and recommendations about the future role and mission of SLSI were specifically requested.

III. Findings of the evaluation mission

The major findings can be succinctly stated as follows:

Project efficiency was assessed as fair to satisfactory. Considering external factors, the use of UNDP/UNIDO inputs was satisfactory. Due to delays and omissions, the efficient use of Government inputs was less than planned or poor.

Results at the output level were less than planned but, given the external constraints implied, they were reasonably satisfactory. Success at the project purpose level, however, is in doubt. Therefore, effectiveness is assessed as less than satisfactory.

Sustainability, as defined by the team, is also in doubt without some radical changes in mission, approach, management, and other innovations, particularly in reference to outreach services.

The significance and relevance of the project to current Government policy and priorities, as presently designed, has changed as the process of industry deregulation and privatization accelerates.

The SLSI is doing a commendable job in executing its public and mandatory functions concerning standards, certification, accreditation and inspection. Too much time and effort, however, is being given to establishing national standards of a voluntary nature instead of adopting international standards.

Some useful outreach is being provided, particularly in training and testing.

However, under its current status as a public corporation, without continuing and strong leadership, and lacking the flexibility needed to identify and respond to industry needs in a new and highly competitive environment, SLSI will not be able to respond significantly to the Government's Industrial Strategy without some rather drastic changes, particularly in reference to outreach services to industry.

Industry is willing and able to pay the full costs for effective consultations and other services concerned with quality control, either directly from SLSI or as part of multi-disciplinary task forces (i.e., in cooperation with other quasi-public institutions concerned with industrial outreach services).

Until SLSI and sister organizations are providing services which significantly assist relatively large- and medium-scale factories in achieving and maintaining quality control standards necessary for open competition, other functions such as consumer education and protection, assistance to cottage and small-scale industry, etc., must take a back seat.

III. Recommendations of the evaluation mission

The recommendations concerning the project involves re-designing the remainder of what is left in the budget to provide short-term, international experts in strategic planning, metrology, quality assurance and management to assist the new Director-General, when appointed, in positioning

the SLSI to respond effectively and promptly to the Industrial Strategy recently promulgated by the Government.

Requests for future UNDP/UNIDO assistance should await the outcome of such a plan.

The Government should initiate actions which will provide the SLSI with the necessary authority, flexibility, staffing and physical facilities to carry out effective and demand-driven outreach services related to quality control.

The evaluation report should be transmitted as soon as possible to the Industrial Commission, which is currently conducting an analysis of infrastructural changes and requirements for institutions concerned with science and technology.

V. Lessons learned

The events to date demonstrate how an original project design can be rendered obsolete or marginal by external events, unless they are monitored and considered on a regular basis.

A number of recommendations are concluded which are related to the process of design and evaluation, most noteworthy which are:

- Encourage scheduling of tripartite reviews in conjunction with in-depth evaluations:
- Placing more emphasis on defining the "purpose" of a project as differentiated from expected results/outputs:
- Greater emphasis must be extended on using the lessons learned from previous thematic evaluations on project design and implementation:
- Use of the service module concept for institution-building projects should be required and monitored.

VI. Evaluation team

Raymond E. Kitchell, Development Management Consultant, and team leader, representing UNDP

Oscar Gonzalez-Hernandez, Chief of Evaluation Staff, and representing UNIDO

A. Milinda Moragoda, Managing Director of Mercantile Management Services Ltd., and representing the Government of Sri Lanka.

PART B

To be completed by the resident representative of UNDP immediately after the evaluation has been finished, and sent to the UNDP regional bureau, UNIDO Headquarters and the Government concerned.

I. Recipients of the report of the evaluation mission

II. Comments of UNDP field office

PART C

To be completed by UNDP and sent to the resident representative of UNDP and the regional bureau concerned within one month of the receipt of the report together with Parts A and B of this summary.

PART D

To be completed by the resident representative of the UNDP 12 months after completion of the evaluation.

Follow-up action to the evaluation report

I. INTRODUCTION

The Sri Lanka Standards Institution (SLSI) was established in 1964 for the primary purpose of promoting standardization in industry and commerce which was at one time operating under the Ministry of Trade and Commerce. It currently operates under the auspices of the Ministry of Industry, Science and Technology. The SLSI, a corporate body, is headed by a Chairman and management is vested in a council consisting of eleven members appointed by the Ministry. The chief executive of the organization is the Director General who is also ex-officio Vice-Chairman of the Council. There are six technical divisions which carry out the main body of work.

SLSI has received UNDP/UNIDO assistance since 1982 when Phase I, entitled "Development of Standardization and Quality Control", SRL/82/003 was approved and became operational. The UNDP contribution was estimated at \$700,250 with a Government contribution of 12,402,440 SLRs. The main objective or purpose of the project was to upgrade the SLSI's capability to undertake standardization in general and the improvement of staff technical skills in selected areas, e.g., import inspection, consultancy services, consumer education and the institution of a laboratory accreditation program. In the final tripartite review it was concluded that the outputs (called immediate objectives) had been successful to about 90% of the target. However, it was evident that further external assistance was needed to consolidate the effects of the project under completion and to broaden the SLSI's scope of activities. Accordingly, a second phase of the project entitled "Standardization and Quality Control (Phase II)", SRL/86/007, was approved in 1988. It contemplated a duration of three years and included a UNDP contribution of \$575,000 and Government inputs of 7,212,026 Rs. The five areas selected for further institutional development were: laboratory accreditation, promotion of standards and consumer education; engineering standards; quality control; and import/export inspection.

The first phase of project assistance was justified on the basis that standardization and quality control are necessary adjuncts to undertaking a rapid industrial development program with strong emphasis on export capabilities. Establishment of national standards and implementation of quality control functions at an early stage of industrial development was seen as a sine qua non for orderly industrial growth, reduction of waste and optimum productivity. In the second phase, the Government was revising the policies regarding a free market economy, privatization, deregulation and industrial priorities. At this time the project rationale shifted to improving the "competitiveness" of Sri Lankan industry, facilitate international trade and increase consumer protection with the objective to stimulate further industrial growth in an open economy. With minimum controls on quality and price, the need for standards, certification and inspection services have become more critical. Detailed discussions of the current policy environment affecting the project appear in the "context of the project" in the next chapter.

The on-site evaluation took place in Colombo and nearby areas on 14 to 26 January 1991. The evaluation mission members were:

- . Raymond E. Kitchell. Development Management Consultant and team leader. representing UNDP
- . Oscar Gonzalez-Hernandez. Chief of Evaluation Staff. representing UNIDO
- . A. Milinda Horagoda. Managing Director of Mercantile Management Services Ltd.. representing the Government of Sri Lanka.

Unfortunately the Government representative was not free until the second week of the exercise and was therefore unable to participate in all the team assessments. However, his knowledge of industrial conditions and Government expectations were invaluable to the team in reaching its final conclusions and recommendations.

Interviews were held with the Secretary of the Ministry of Industries, Science and Technology, the Finance Ministry, the Department of Internal Trade and the Export Development Board. Visits were also made to four industrial firms who have been end-users of SLSI's services. Interviews also were conducted with several SLSI Council members, the Acting Director General, the Deputy Director General and Division Directors and visits were made to the several laboratories. SLSI staff were requested to make a self-evaluation of their current status and performance using an expanded service module format. Consultation also took place with the UNDP Resident Representative, Deputy Resident Representative and UNIDO Country Director (a full list of places visited and persons consulted is included in annex II of this report).

Assessments in this report, made by the Deputy Director General and the Division Directors of SLSI, end-users and the evaluation team, were made using a 0-1 favor-to-disfavor scale as follows:

- 5 - far exceeding expectations/excellent
- 4 - more than planned/very good
- 3 - as planned/satisfactory
- 2 - less than planned/fair
- 1 - marginal/poor
- 0 - cannot determine.

The exercise ended with an oral presentation of the major team findings, conclusions and recommendations to the tripartite representatives. This was followed immediately by a tripartite review of the project. The team wishes to acknowledge the co-operation, support and understanding of all involved and particularly the deputy Director General and Acting National Project Director, Mr. C.D.R.A. Jayawardena.

II. PROJECT CONCEPT AND DESIGN

A. Context of the project

Until 1977, Sri Lanka followed a protected and import-substitution type of economy, industrialization being spearheaded by relatively large public enterprises. The Government that came to power then started to liberalize the trade and payment system but failed to address the large size and inefficiency of the public sector. In fact, the public investment programme actually expanded placing increased pressures on the budget and balance of payments. In response, in November 1986 the Government prepared a Policy Framework Paper (PFP) supported by a structural adjustment facility of the IMF which included, inter alia, reducing the public sector and restructuring and reorientation of the industrial sector towards increased external competitiveness.

However the implementation of such measures suffered delays mostly caused by domestic conflict and violence during part of 1987 and most of 1988 and 1989. New presidential elections in the end of 1988 led to a new Government which was confronted by a continuation of delayed economic reforms and severe economic and financial constraints. In mid-1989 the Government embarked on a series of economic restructuring efforts aimed at implementing the unfulfilled goals of the PFP, particularly the reduction of the public sector, inter alia, by reducing the size of the civil service by 20% over 4-5 years, privatizing a large number of public enterprises and stepping up the opening of the economy including manufacturing. In what concerns the industrial sector, this new policy was stated in "A Strategy for Industrialization in Sri Lanka", issued by the Ministry of Industries on 15 December 1989 which followed a free trade regime while drawing up measures to boost economic development through industrialization. It recognized that this approach would take time to yield positive results. Priority was provided to export oriented industrialization in line with the economic restructuring programme of mid-1989. The need to provide short-term incentives to industrial investment was recognized, particularly to export-oriented industries. However, a continuation of import substitution efforts on a competitive basis was also supported. A special reference was made to the need for domestic-oriented enterprises to become externally competitive and for the phasing out of uneconomic lines of production.

Despite the economic difficulties since the early 1980s and the ethnic disruption of the late 1980s, growth of industrial output doubled from 4% per annum in the 1970s to 8% in the 1980s. More than half of Sri Lanka's exports in 1989 relate to manufactures although distribution is highly skewed. In fact, 30% of total exports refer to garments which underscores the potential for growth in other industrial sub-sectors.

While the strategy encompassed incentive packages for research and development, technical assistance and financial schemes to assure the upgrading of small- and medium-scale industries and for training facilities, somehow the subject of standardization and quality control was absent from this document. However, the mission was assured by high level officials in the Ministry of Industries, Science and Technology that the Government is placing emphasis on industry reaching adequate quality levels since only in that way will they be competitive in domestic and external markets. While the Government will continue to support financially related public institutions, which includes the SLSI, they will have to be more responsive to industry

(which will be increasingly private) needs to find their respective market niches and prospects.

It is useful to trace briefly the history and the prospects of the SLSI within the economic background identified above. Created as the Bureau of Ceylon Standards (BCS) in 1964, it commenced activities during 1965 on electrical, mechanical and civil engineering, agriculture products, chemicals and metrication. The first standards were published in 1967 and pertained to import-substitution products. The first tests relating to chemical products were undertaken in its own laboratories established in 1970. BCS joined the ISO in 1972. The first training in standardization and quality control was undertaken in 1973. 1979 saw the launching of the export inspection scheme which was limited to agricultural and fishing commodities. This scheme, therefore, did not first correspond to any export drive and, in fact, did not fall within the then adopted industrialization model. The Import Inspection Scheme was implemented in 1986 to monitor the quality of products imported into the country under the liberalized import policies. Those covered are presently canned fish, condensed milk, fruit concentrates, electrical fittings, switches and outlets, lamp holders, electric bulbs, hot plates and fertilizers. In 1987 consumer education circles started to be established in high schools in an effort to create consumer awareness.

The opening up of the economy in regard to industrial products, although started in 1986, only now is beginning to be significantly felt in the country. Consequently, the effects of an open economy have just started to affect significantly the direction of the SLSI. Nevertheless, the policy of selling services to end-users started at an early date. Despite economic downturns and the fear that much of the work carried out under SLSI is on a voluntary basis, income from services amounted to approximately 20 % of the total budget in 1989.

At this juncture - an economy continuing to open up, the financial support to public institutions diminishing and the possible increase in the number of institutions, public and private, in the outreach service business - the SLSI has to determine its market niche and become more responsive to end-users needs making itself less dependent financially on the Treasury.

B. The project document

1. The problem and technical approach

The problems to be solved by both phases of the project are rather similar, since they were not adequately solved by the first phase and thus carried through to the second phase. They refer to:

(a) the lack of adequate laboratory facilities and manpower within and without the SLSI to provide quality control and certification services to industry and to back up the development of standards;

(b) insufficient consumer protection and awareness of the public at large;

(c) the lack of a sufficient number of national and company standards (including company quality procedures) for industrial products and inputs;

(d) the unfulfilled needs of industry for advice related to quality control and standardization in their production.

These problems were tackled by the project in the following way:

- by equipping SLSI laboratories, upgrading its manpower skills and assisting in the launching of a laboratory accreditation scheme;
- by advising and assisting in launching a consumer awareness programme;
- by advising on the development of additional national and company standards;
- by assisting in the launching of paid consultancy services to industrial plants on industrial standardization and quality assurance.

In the opinion of the evaluation mission, the problems were tackled in an adequate and conventional way noting, however, that the absence of a detailed strategy for SLSI to respond to the different and changing needs of the industrial sector in an increasingly competitive and open economic environment seriously jeopardizes project success at the project purpose level.

2. Objectives, indicators and major assumptions

Phase I

In the project document for Phase I, the "immediate objectives" are described as follows:

The immediate objectives of the project are to upgrade the Sri Lanka Standards Institute's (SLSI) capability to:

- (1) implement standardization, quality control and product quality certification of local goods with special emphasis on products manufactured by state owned organizations;
- (2) be the official agent of foreign standards/quality certification institutions for Sri Lanka in export products as well as imported products; and
- (3) carry out consultancy services at factory level in order to implement quality control and standardization procedures and practices.

The "output" statements, which are all related to immediate objective (1), are stated as:

- (1) Establishment of standards specifications;
- (2) International standards work;
- (3) Establishment of Quality Control functions in State controlled industries;
- (4) Upgrading the facilities of the laboratory;
- (5) Library and technical information services.

Measuring indicators were specified but were easily quantified performance targets not directly related to institutional capacity. In the justification of the project, the purpose is described as "...to expand the national capabilities in providing product standardization and quality control

services to the industries and exporters/importers of goods". But this aim is then almost forgotten in the design sections of the project document.

Except for prior obligations, there was no attempt to explicitly identify major assumptions about changes in the project environment, i.e. expectations of events outside management control which would affect the production of outputs and their continuing importance. While the institution-building function of the project is clear, the logic and major design elements or levels are confused. For example, the immediate objectives and outputs are identical. Many are not described in terms of increased capabilities, and indicators appropriate for purpose, output and activity levels are absent. Activities are related to immediate objectives or outputs and provide the basis for preparing an event-oriented workplan.

Phase II

In the Phase II project document, the "immediate objectives" are stated as:

To strengthen the Sri Lanka Standards Institution and improve its capability to:

- (1) establish a national scheme of laboratory accreditation in Sri Lanka: (see output 1)
- (2) carry out public information and education activities creating consumer demands which will induce manufacturers to produce goods conforming to national standards: (see output 2)
- (3) carry out standardization activities and formulate new standards in the engineering industries at the national level in Sri Lanka: (see output 3)
- (4) carry out company standardization activities enabling producers to formulate in-house standards in food and mechanical engineering industries: (see output 4)
- (5) establish a quality control system for imports and exports based on bilateral agreements with major trade partners. (see output 5)

The outputs are further described in detail as to staff, facilities, equipment and skills as:

- | | |
|---------------|--------------------------------------|
| Objective 1 : | Laboratory Accreditation |
| Objective 2 : | Information and Education |
| Objective 3 : | Engineering Industry Standardization |
| Objective 4 : | Company Standardization |
| Objective 5 : | Inspection Procedures |

Estimated completion dates are provided but baseline data (e.g., Phase I institution-building achievements) are missing.

Activities, again commendably related to each output, are included in the prodoc. No indicators at any design level are provided. Major assumptions are also absent. However, enough information is provided to provide a sound basis for the subsequent development of service modules and related workplans.

3. Targeted beneficiaries

Phases I and II

Only a general statement is included, i.e. "industries and exporters/importers of goods", while more specific end-users and beneficiaries are implied in the Phase II statement of immediate objectives/outputs. No direct treatment of this important question is included in the project document.

4. Work plan

Phase I

Under the heading Work Plan Bar Chart, the project document requires that "a detailed work plan for the implementation of the project will be prepared by the leader of the national staff assigned to the project. This will be done at the start of the project and brought forward periodically. The agreed upon work plan will be attached to the project document as annex 1 and will be considered as part of this document". No annex 1 or work plan, bar chart or otherwise, was discovered in the project file made available.

Phase II

A preliminary and extremely simple (bar chart) work plan is provided in the prodoc as annex II. A detailed work plan was to be prepared by the NPD in consultation with international experts and updated periodically. Both the UCD and UNIDO backstopping officer, in reviewing the November 1989 PPER, noted the need for a 'revised' and 'realistic' workplan that takes into account prevailing conditions, responds to improvements in conditions (or setbacks) and an understanding by all parties as to qualifications of experts and specifications for training programs". Subsequent mention of a workplan is sparse and apparently was overshadowed by other problems which were resulting in "stagnation" and a possible need for "reformulation of the project". The NPD states this was because (a) external events constantly required schedule up-dating, and (b) activities could be adequately monitored using SLSI normal progress reports.

5. Assessment

The design of Phase I was conducted using the then new guidelines issued by UNDP and UNIDO and a serious attempt to comply is evident. However, the confusion in UNDP/UNIDO's application of the logical framework concept for project design, particularly in the use of term "immediate objective" instead of "purpose" is clearly demonstrated in this design where immediate objectives include an introductory statement which is the briefest possible description of purpose (i.e. upgrade SLSI's capability) and statements of programs to be carried out, i.e. almost its entire mission. The thrust is correct but it totally fails to distinguish between the role of SLSI per se and the more limited purpose or aim of the project. The "outputs" which are also referred to as "goals" and except for the laboratory facilities are not expressed in institution-building terms, i.e., the capability which is to be established, expanded and/or strengthened. UNIDO guidelines already issued on the use of service modules for institution-building projects were obviously not used.

In Phase II, immediate objectives and outputs are identical but, with

the latter, more detail is given as to the capabilities to be established. However, lacking baseline data and appropriate detail on the type, quantity and magnitude of services to be provided, it depends heavily on subsequent definition and work planning which apparently did not take place in a sufficient and timely manner, if at all.

Assumption and indicators

In neither phase was any explicit consideration given to "critical assumptions" and it is doubtful whether the concept was understood. In terms of indicators, in Phase I those supplied were simple performance targets not directly related to institution-building but which could have been useful in estimating service demand. In Phase II, none were supplied. Again the nature of design guidelines to adequately distinguish between the purpose level of a project (confusingly labeled immediate objective - does a project have a long term objective? No, only the Government has that) and the output level makes the selection of indicators a personal process of grasping at that which is quantified in the easiest way. The difference can be briefly demonstrated as follows:

<u>Design Level</u>	<u>Indicators</u>
1 Development objective(s)	. Increase in garment exports . Decrease in health hazards from imported canned fish
2 Purpose (immediate objective)	. Increased quality control in textile mills . Adoption of voluntary national standards . Expanding use of certification programmes (referred to as end-of-project-status indicators)
3 Outputs	Type, magnitude and quality
4 Activity	Selected major events or milestones in work plan
5 Inputs	Expenditures, deliveries

Targeted beneficiaries

No direct treatment of this important question is given in the prodocs for either phase raising the question of whether the design guidelines require such statements or, if they do, why reviewing officers do not take note. In this case, the subject is first raised when preparing a PPER where a statement on beneficiaries is required. In passing, it should be noted that beneficiaries refer to the development objective and purpose levels, not the output level (i.e. SLSI, are obvious beneficiaries of project inputs and activities). A higher standard of project design should have been and was reflected in Phase II but failure to use the service module concept is unfortunate and makes evaluation of performance more subjective than need be.

Work plan

The absence or preparation of simplistic bar charts almost solely related to input delivery indicates a serious deficiency in project management and, perhaps, the guidelines provided for work planning. This should be more carefully monitored and remedial action taken when required by the NPD, UCD, and UNIDO backstopping officer. If adequate for UNDP/UNIDO purposes, some leeway could be provided in using SLSI processes for work planning.

Assessment of design elements

Based on the analysis provided above and review of documentation, assessments on project design are as follows:

<u>Design Level</u>	<u>Phase I</u>	<u>Phase II</u>
Development objective	2	1
Technical approach		
Immediate objectives (purpose)	3	1
Outputs	1	3
Indicators	2	0
Assumptions	0	0
Work Plan (activities)	1	1
	—	—
Overall assessment of project design	<u>2</u>	<u>2</u>

III. PROJECT IMPLEMENTATION

A. Assessment of inputs supplied and activities undertaken

1. Inputs

In both phases, UNIDO was to supply short-term experts, a considerable number of fellowships and study tours and equipment. The external budget in both phases was basically as follows:

Table 1

Budget in U.S. dollars

	<u>1st Phase</u>	<u>2nd Phase</u> ¹
Short-term experts	167.584	159.823
Fellowships & study tours	291.414	243.554
Equipment	416.254	223.600
Sundries	15.560	5.787
Total	<u>890.812</u>	<u>632.764</u>

1 At the end of the project.

2 As of 31 December 1990. Does not include the mandatory budget revision for 1990. The mission could not obtain from Financial Services of UNIDO a more updated budget situation.

In the supply of short-term experts there were the usual delays, in particular during the second phase. On the one hand the posts called for rather specialized expertise not always easy to attract, particularly for a country where the publicized safety was not the highest. On the other hand the candidates submitted by UNIDO did not always meet the high expectations of the SLSI. As a result during this advanced stage of phase II only 33% of the international expert component was supplied while the remaining is expected to be supplied until the end of this year. Two man/months of national expertise was supplied during the second phase and none under the first. The expertise supplied was adequately qualified. The implementation of fellowships and delivery of equipment suffered usual delays which did not affect the project. Despite the lack of permanent headquarters for the SLSI, all equipment except one piece (a higher temperature furnace for calibration of thermometers) was installed and is being used properly. The training and equipment provided by UNIDO is considered applicable and adequate.

Regarding the Government contribution to the project, the personnel provided was adequate in quantity but, in some cases, very much below those indicated in the project document - for instance the engineering department was supposed to have a total of 20 engineers but has only seven. However, as it turns out, it is not felt that this condition seriously affected project success.

The recent lack of a full-time Director-General will be discussed in

chapter V. At the Deputy Director-General and Department Director level, the quality of the staff employed was assessed as good. Most have 20 years experience in quality control and standardization and have appropriate academic qualifications. At the operational level - engineers and scientists - the level of industrial experience and academic achievement was sometimes deficient. For instance, the officer dealing with power electric standards development was not an electrical engineer. It is recognized that this problem is of difficult solution since the salaries offered do not always attract suitable staff.

The only short-coming of real serious note is the provision of the permanent headquarters for the SLSI promised under both phases but still not completed. Only the structure for the first phase of the building (20,000 sq.ft) is completed due, primarily, to bankruptcy of the original contractor and legal problems with the consulting architect which, reportedly, will soon be solved. The SLSI is presently housed in seven different buildings including the laboratories in four buildings. This is detrimental to the operations of the SLSI and hampers inter-departmental coordination.

2. Activities

A rather elaborate list of activities related to each output, with quantified indicators, was included in the project document for Phase I. A detailed work plan was to be prepared but was never done. These activities were by and large undertaken although with slippage. The project was to end by the end of 1986 but in fact only terminated a year later. The quantified indicators, which were highly optimistic, could not be reached in the majority of cases, e.g., the number of standards issued. The activities which were not undertaken or completed pertain to the permanent headquarters and to twinning with similar institutions abroad. These tasks, which were relegated to the second phase, even if they were not explicitly stated in the second phase project document.

A list of 20 activities related to the five inputs was included in the project document of Phase II. A bar chart for such activities was included but a detailed work plan was never prepared. An analysis of these activities show that they were undertaken either totally or partially, again with slippage - with the exception of those pertaining to:

- Laboratory accreditation;
- Vehicle with audio-visual equipment for promotion work;
- Extension of the computer system to cover standards development.

It is expected that these activities will be completed by the end of 1991 with the exception of the computer system which will be financed under an IDA loan.

In conclusion, the implementation of the project's activities has progressed satisfactorily, given the conditions.

B. Assessment of project management

1. UNIDO

Planning, backstopping monitoring and review

The project documents were prepared respectively by a consultant under preparatory assistance for the first phase and by a UNIDO staff member together with the National Project Secretary for the second phase. An assessment of project design is made in chapter II. As mentioned just above, no work plan was prepared in both phases although it was required in the project document. Technical backstopping of the project could only be addressed by the evaluation team for recent years. Backstopping was assessed to be weak until a year ago when it improved noticeably and is now judged competent and adequate.

Monitoring of the project was essentially ad hoc since a detailed work plan was missing in both phases. There was no review undertaken of the currency or adequacy of the project design in both phases. Revisions were limited to budgetary changes.

2. UNDP

Management of the tripartite review process and co-ordination

Tripartite reviews were held regularly every six months as it was mandatory - during the first phase of the project. There three parties were adequately represented in such reviews. The chair was normally occupied by a Deputy Director of the External Resources Department of the Ministry of Finance. SLSI was represented by its Director General, also the National Project Director, the Deputy Director General, and the Project Executive Secretary. The Ministry of Industry was represented at a senior level. UNDP was represented by its Resident Representative (or Deputy) and UNIDO by the SIDFA, often also by the backstopping officer. Project progress reports were prepared for the TPR's by the Project Executive Secretary using the form then in force. Tripartite reviews tended to concentrate on delivery of inputs in the carrying out of activities.

The second phase coincided with the introduction of the new progress reporting format, namely the PPER, and tripartite reviews were held annually. The nature of tripartite reviews did not change and only in the last tripartite review held in early 1990 was there a shift of attention from inputs and activities to management problems which by then had become clearly visible. The last scheduled TPR is to take place on 25 January 1990 and is primarily to consider the findings and recommendations of this in-depth evaluation.

Coordination and administrative support by UNDP was found adequate. No particular delays were reported on equipment customs clearance, experts and fellowships acceptance and matters related to UNDP jurisdiction were normally delegated to the SIDFA, except participation in tripartite reviews.

3. Sri Lanka Government Support

National Project Director

The support of the Sri Lankan Government to the project was mixed. However, it did not differ from support provided to similar projects. During the period under review, despite that general Government policy was supportive of the SLSI and its mandate, retrenchment in public expenditures meant that budget appropriations were often lower than requested. Recruitment freezes in the public sector, such as the one presently in force, meant that vacant posts could not be filled even if budgets were available. This is exemplified by the present situation in the engineering department where out of a total cadre of 20 only seven positions filled. The recent and frequent changes of tutelage of the SLSI did not help either. Another consequence of inadequate Government support is represented by the erection of the SLSI permanent headquarters. While the planning started in 1982, it is now roughly only 2/3 completed and it is not foreseen when will it be. However, the present problem with the project is not so much the degree of Government support but the way in which the Government allows the SLSI management to run its business.

IV. PROJECT RESULTS

A. Assessment of outputs produced

1. Methodology

If the principal function of a project is institution-building, as in this case, the output or results of project activities must be expressed in terms of new or increased "capacity" to perform the service or functions planned for the organizational unit responsible. Providing a service, e.g. negotiating two export inspection agreements is not a measurement of the capacity but an indicator of its use which is appropriate in evaluating project success at the project purpose level but not at the output level.

The indicators for an objective evaluation of project results, therefore, are the original specification of the dimensions of the capacity to be created or strengthened, less the baseline capacity, if any, which was present at project initiation. Words like "functioning", "capable", "improved", "qualified", and "strengthened", which appear frequently in the output statements taken from the prodoc, are essentially meaningless for evaluation purposes unless supported by further specification in subsequent documentation.

UNIDO guidelines on project design for institution-building projects require use of the service or functional module concept for planning, implementation and monitoring. The concept was not used in the project design stage and was introduced only by the UNDP required format for its Project Performance Evaluation Report (PPER). This report, prepared by the Acting National Project Director from SLSI progress reports, initiated the use of such an approach but the data pressed into the limited size of the form (Part III Evaluation of Project Performance - Outputs) was, except for the quantification of staff requirements, seriously deficient in information on type, magnitude, level and locations of service demand anticipated, the skill levels required, the methodologies and procedures needed, identification of end-users, marketing of services, and special management features including self-financing targets.

In order to improve upon this situation, the team prepared two forms for completion by Division Directors. The first required the directors to provide a self-assessment of inputs and results. The second invited the directors to prepare service modules in greater detail than that provided in the PPER including the output planned by project completion, current status, any anticipated gaps by project completion and recommendations on what should be done to fill these gaps, if any. The purpose was explained orally during team discussions with staff. The self-assessments were provided but only one or two divisions made any attempt to develop a service module and these were essentially the same statements prepared by the NPD in the latest PPER.

Just below appears the descriptive statement of each output and sub-output, current status, accomplishments, and a comparison of assessments made by the Division Directors, the NPD and the evaluation team. This is the team's best effort, given the current conditions, to provide systematic and more objective assessments. It must be noted that the completion of most outputs has been adversely effected by external factors, particularly Government freezes on recruitment and turmoil in the countryside.

2. Output assessments

Output No. 1. Laboratory Accreditation

- a. (i) A functioning technical secretariat (attached to the Laboratory Services Division) consisting of three staff members who, on the basis of improved facilities, will be capable of organizing and administering laboratory accreditation activities within the country-completion date end of 1989.
- (ii) Two officers have been trained in New Zealand but only one officer is working in the secretariat who is also responsible for the calibration and metrology services of the laboratory. Staffing expected to be completed by 12/91.
- b. (i) Improved SLSI laboratory facilities in temperature, pressure, hardness and mass measurements capable of covering the needs in instrumental analysis while establishing a scheme for the accreditation of laboratories.
- (ii) Specialized measuring instruments were obtained for the electrical illumination, pressure and mass measurement laboratories. Initial work has been completed to obtain a Universal Testing Machine in the materials testing laboratory. No mention of temperature, hardness and surface dimensions.
- c. (i) A qualified and trained core national staff of six engineers/researchers within the Laboratory Services Division, of whom three will be from the technical secretariat capable of assessing laboratories according to nationally accepted schemes; three will be from food, electrical and chemical testing laboratories, educated in the above disciplines, to be responsible for and able to supervise the activities of testing officers to be employed by SLSI in mid 1988. This staff includes two technical officers (no completion date given).
- (ii) The target, certification of at least five laboratories by the end of 1990, has been missed due to lack of manpower. No hard data on whether and when additional staff will be supplied.

Accomplishments

The National Laboratory Accreditation Committee (NLAC) and technical Advisory Committee (TAC) were formed and produced the following products/documents.

- General requirements for accreditation
- Technical criteria on mechanical, chemical and biological testing
- Publicity brochure
- Application form
- Questionnaire for applicants
- Questionnaire for assessors

A logo has been approved and a pool of laboratory assessors was formed and a training program was conducted for them. A newspaper advertisement has been prepared for early release in conjunction with the arrival of a UNIDO

expert due to arrive in January. With the addition of a minimum of two more officers, accreditation work is expected to begin in the first quarter of 1991.

(i) PHASE I	DIV. DIRECTOR	DDG*	EVALUATION TEAM
quality	4	0	0
quantity	2	0	0
timeliness	2	0	0
services	0	0	0
end-use	0	0	0
Overall	3	0	0

(ii) PHASE II			
quality	4	0	3
quantity	3	0	2
timeliness	3	0	2
services	3	0	0
end-use	3	0	0
Overall assessment	3	3	2

* As included in latest PPER.

Output No. 2. Information and Education

Status

A functioning unit consisting of five officers attached to the consultancy and Training Division capable of providing training for specialists from industry and the general public on standardization and quality control benefits as well as promoting links between industry and consumer organizations. Completion date-end of 1989.

Three graduate officers have been assigned, leaving vacancies in consumer education and publicity and making it impossible to provide information on quality of manufactured products or issue a consumer bulletin. The purchase of a mobile unit has not yet been effected due to unexpected increase in cost and work on methodologies and procedures has been postponed due to delay in the appointment of foreign consultants. Consumer associations are not organized. There is also some doubt as to whether the Laboratory Division has sufficient capacity and manpower to carry out comparative listing on manufactured products.

Accomplishments

Quality control and consumer production has been introduced into Junior Secondary School Curricula. Consumer Education Circles (clubs) were

established among Commerce students throughout the country and a variety of other publicity activities were conducted.

Assessments

<u>PHASE II</u>	<u>DIV. DIRECTOR</u>	<u>DDG</u>	<u>EVALUATION TEAM</u>
quality	2	0	3
quantity	2	0	2
timeliness	2	2	2
services	3	0	2
end-use	4	0	0
Overall	3	2	2

Output No. 3. Engineering Industry Standardization

a.(i) A strengthened engineering industry standardization department consisting of 20 engineers capable of organizing, developing and administering the preparation of standards in electrical mechanical and electronic industries at national level - mid 1990.

(ii) Only seven Engineers (or the equivalent) are currently in place producing about 20-30 national standards per year. This gap is "partially" reduced by the use of technical committees. Planned training of the Division Director has not taken place.

b.(i) A set of operating procedures for developing standards in the engineering industry (and a methodology for selection of priorities) - mid 1990.

(ii) Two consultants provided by UNIDO at the request by name of prior SLSI management proved "unacceptable" to the Engineering Standards Department who requested that the second portion of their split tours be canceled and the funds used to recruit local consultants.

The current system in relation to what is described in the project document under output (3) is obviously inadequate but further action is dependent upon the appointment of a new DG.

c.(i) A five year plan for developing standardization activities in the engineering industry according to identified priorities. No date provided.

(ii) Except for a projection of staff and supporting requirements, there is no strategy or progress plan yet in existence.

d.(i) A computerized data bank for standardization activities end 1989.

(ii) Computer hardware was provided in Phase I. Plan is needed for on-line access to a central data bank and a comprehensive system design for SLSI as a whole. This will be provided under an on-going IDA loan.

Accomplishments

There appear to have been only marginal project effects in strengthening engineering industry standardization to date. The further use of project resources for this is dependent upon subsequent actions. e.g. the tripartite review decisions and installation of a new Director General.

Assessments

<u>PHASE I</u>	<u>DIV. DIRECTOR</u>	<u>DDG</u>	<u>EVALUATION TEAM</u>
quality	4	0	3
quantity	3	0	3
timeliness	3	0	3
services	4	0	0
end-use	4	0	0
Overall assessment	4	0	3

<u>PHASE II</u>	<u>DIV. DIRECTOR</u>	<u>DDG</u>	<u>EVALUATION TEAM</u>
quality	4	2	2
quantity	3	2	1
timeliness	3	2	1
services	4	2	2
end-use	4	0	0
Overall	4	2	2

Output No. 4. Company Standardization

Status

- a.(i) A functioning company standardization unit attached to the Consultancy and Training Division consisting of two full-time specialists capable of organizing, developing and administering the preparation of standards in the food and mechanical industries at company level - end of 1989.
- (ii) Full time staff is apparently not yet available. There are also some problems regarding the responsibility for the company standards function, currently shared by the Standards, Implementation and the Consultancy and Training Divisions.
- b.(i) A qualified and trained core staff of two people capable of carrying out company standardization activities - mid 1989.
- (ii) Redundant with above.
- c.(i) A manual for development of company standards - end of 1989.

- (ii) The manual was completed.

Accomplishments

In addition to preparation of the manual, 29 training programmes reaching 558 people were conducted in 1990 and 10 consultancies were performed.

Assessments

No self-assessment sheets or results were submitted to the team, perhaps a reflection of the confused responsibility for this service function. Only an overall assessment can be given as follows:

Division Director - none
DDG - unsatisfactory (2)
Evaluation Team - less than planned (2)

Output No. 5. Inspection Procedures

Status

- a.(i) A functioning inspection unit attached to the Implementation Division consisting of 10 specialists capable of organizing and executing, in cooperation with testing laboratories, inspection schemes for exported goods - end of 1990.
- (ii) Eight graduate staff officers have been made available and four more have been taught to train the rest of the unit staff on all aspects of inspection procedure and monitoring system.
- b.(i) A qualified and trained staff of four people capable of carrying out and administering inspection activities.
- (ii) Completed - see above.
- c.(i) Two Agreements on inspection procedures for export trade.
- (ii) Food and electrical items were identified as priority areas for bilateral agreements on inspection procedures. Two memoranda of understanding have been negotiated: one with respect to electrical items inspection and testing with the Japanese Machinery Association; and the other for canned fish inspection and testing with Japan Canned Food Testing Agency. Another memorandum of the same type is being prepared with the Center for Studies Management and Quality Certification.

Accomplishments

Except for the two unfilled positions, the specifications of the output have been met but there is no data available, except inference from the services provided, to assess capabilities to perform.

Assessments

<u>PHASE I</u>	<u>DIV. DIRECTOR</u>	<u>DDC</u>	<u>EVALUATION TEAM</u>
quality	3	0	0
quantity	3	0	0
timeliness	3	0	0
services	3	0	0
end-use	3	0	0
<hr/>			
Overall assessment	3	0	0

<u>PHASE II</u>	<u>DIV. DIRECTOR</u>	<u>DDC</u>	<u>EVALUATION TEAM</u>
quality	2	0	3
quantity	2	3	2
timeliness	3	3	3
services	2	3	3
end-use	1	3	4
<hr/>			
Overall assessment	2	3	3

3. Overall assessment of outputs

Concentrating on Phase II as being more relevant to the issues included in the TOR, a summary of the above assessments is:

	<u>DIV. DIRECTOR</u>	<u>DDC</u>	<u>EVALUATION TEAM</u>
Output 1-Lab Accreditation	3	3	2
Output 2-Inf. & Education	3	2	2
Output 3-Engineering	4	2	2
Output 4-Company Standards	0	2	2
Output 5-Inspection	2	2	2
<hr/>			
Composite assessment	2.4	2.4	2

While the above ratings have been systematically arrived at, they are not scientifically correct in that, as explained under methodology, complete objective data is not available or must be created after the fact. Nevertheless, it seems very clear that overall project accomplishments are less than planned and are unlikely to achieve the magnitude set out originally by project completion due, in large part, to constraints on Government inputs. There is also evidence that the components being strengthened through the project may encounter serious difficulties in carrying out their mission and effectively reaching the targeted end-users without significant changes in the internal (SLSI) and external (Government and industry sector) project

priority policies and SLRI's overall mission, now and in the immediate future, need to be reexamined.

B. Achievement of project purpose and function

The purpose of the project (immediate objective) was stated in the project document for Phase I as the upgrading of SLSI's capabilities to undertake standardization and quality control in general and the improvement of technical skills in selected areas, e.g. import/export inspections, consultancy services, consumer education and the institution of a laboratory accreditation programme. Comments on this part of the project's design were made in chapter II. In particular, it was noted that end-of-project-status indicators (EOPSs) were not established. It is difficult, therefore, to determine if the change intended by the project has taken place. The final tripartite review of that phase declared that 90% of the project's objectives had been met. The evaluation team could only make a subjective assessment of the achievement of the project's purpose based on interviews with the staff of the SLSI, interviews with end-users and observation of the laboratories. There is no doubt that the SLSI's capabilities in the areas mentioned above were upgraded (although it is impossible to determine by how much) through the production of the project's outputs. The only area where there was a noticeable shortfall refers to the institution of a laboratory accreditation programme in which planning was only started during this phase but not concluded.

The purpose of Phase II can be interpreted as the upgrading of the SLSI's capabilities in the areas of laboratory accreditation, public information and education, formulation of new standards in engineering industries and of company standards and import/export inspection.

Although almost the same comments can be made in respect of the achievement of the project objectives in Phase II, the statement of project's objectives in this phase refers essentially to outputs. It can be interpreted as the SLSI's capabilities in the areas of laboratory accreditation, public information and education, formulation of new standards in the engineering industries, preparation of quality control manuals to companies and import/export inspection. At this stage the achievement of objectives, even on a subjective basis, is perceived as behind schedule in all areas although there are positive indications that they should be met by the project's end, with the exception of the engineering department since the related department did not participate in the project.

On a more detailed basis, the following comments can be offered in respect of achievement of each objective of Phase II, recognizing that they are largely a repetition of the output assessments.

1. To establish a National Scheme of Laboratory Accreditation in Sri Lanka.

The two main National Committees for the operation of the Scheme namely the National Laboratory Accreditation Committee (NLAC) and the Technical Advisory Committee (TAC) have been established. A logo for the scheme has been selected. General criteria and technical criteria for accreditation have been finalized. Two assessor training programmes have been conducted. Applications were called from

potential laboratories for assessment in the first quarter of 1991 and first accreditation is expected before the end of this quarter.

2. To carry out Public Information and Education activities creating Consumer demands for Quality Products, etc.

Some of the recommendations of the National Consultant on Publicity Activities have been already implemented. The Schools Education Program is progressing well. The All Island Schools Radio Quiz Programs on activities of SLSI is in progress. Consumer production awareness is expected to be stepped up with the utilization of the vehicle for promotion and audio/visual equipment.

3. To carry out standardization activities in the engineering fields at the national level.

The recommendations of the two foreign consultants from the Bureau of Indian Standards are being studied but chances are that they will not be utilized. Present restrictions on recruitment of staff and the staff turnover in the Engineering Division have affected the development of Engineering Standardization activities. This objective of the project will not be achieved.

4. To carry out Company Standardization activities.

A survey has been undertaken at National level to assess the needs of the industries in the area of Company Standardization and other quality related activities. The survey was completed in the 4th quarter of 1990. Advisory services in the form of preparation of Company Standards (Company Quality Control Manual) are expected to be undertaken until the project's end. Guidelines for this purpose were prepared.

5. Import-Export Inspection

Three quality control institutions in countries exporting industrial products to Sri Lanka have been certified to inspect such products. The SLSI undertakes tests for products imported and exported.

The project's function in both phases was clearly institution-building and the evaluation is satisfied that SLSI's capabilities in its field were upgraded (but we don't know how much) by project's end. A comparison of this Section B with Section A above illustrates the redundancies which can result when the project purpose is not clearly defined in terms different from outputs/results.

C. Assessment of impact in development objective

The development objective stated in the project document of Phase I is essentially background information and cannot be used as an impact target. The mission cannot, therefore, make any assessment of impact for this phase. For Phase II, the development objective is better stated but not sufficiently to constitute a realistic development target for evaluation and appraisal purposes. In fact, it is too broad and macro-level, i.e., "stimulate industrial growth", "facilitate international trade", "improve industrial competitiveness" and "increase consumer protection". Certain marginal inroads

competitiveness" and "increase consumer protection". Certain marginal inroads in these areas can be claimed by the project but significant development changes caused by the project cannot be ascertained.

D. Unforeseen effects

While there have been unforeseen events and delays caused by factors external to the project itself, it is difficult to ascertain whether the project had any significant unforeseen effects either internally, i.e., within the SLSI, or externally, i.e., with Government policy-makers and public and private end-users. Given the immediate objectives (a) of Phase I, viz:

"Implement standardization, quality control and product quality certification of local goods with special emphasis on products manufactured by state-owned organizations".

it is evident that SLSI staff did not anticipate or fully appreciate the changes already made in Government policy concerning industrialization and an open market economy and its impact on SLSI's mission, approach, and tasks. Even in the Phase II document these changes were treated in a very limited manner, i.e., that "...further external assistance is needed to consolidate the effect of the project under completion (Phase I) and to broaden SLSI's scope of activities..." without adequate consideration of whether a continuation and expansion of the traditional approach was sufficient to meet the challenges ahead for the Government, manufacturers, exporters and importers and the public in general. As of this date, insofar as the team can determine, the project had no positive effect on this critical question for SLSI management.

Also unforeseen, was the understandable but regrettable drive by some senior staff members to use project resources provided by UNDP as a device to get around Government hiring and funding restrictions through the use of "local experts" and consultants rather than the international experts agreed upon in the Project Document. This caused internal frictions between SLSI management officials and serious concern by UNDP and UNIDO officials, certainly with an unforeseen and negative effect which still exists, although it may soon become moot.

As to project effects on end-users, except for the less than planned institutional capacities achieved due to staff turnover, hiring restrictions, unsettling conditions etc. there do not appear to have been any significant unforeseen effects - negative or positive. One exception might be the expectation that project activity, particularly concerning training, consultancy services and promotion of quality control, would have included coordination with other public organizations essentially in the same business, e.g. the Textile Centre which is also receiving UNDP/UNIDO assistance on outreach services. This has not been the case. Another unforeseen negative effect might be the continuing lack of organization and sustained consumer pressure against unfair trade and industrial practices and for increased consumer protection.

The team wishes to note that there is a connection between critical assumptions and unforeseen effects at the project purpose and output levels. If explicitly stated at the beginning, they could be monitored during the life of the project. While they can often not be prevented, changes in the

opportunities (positive). The developers of UNDP and UNIDO project design guidelines may wish to take note.

E. Assessment of sustainability

The glossary of evaluation terms included in the Briefing Kit provided the Team Leader by UNDP defines "sustainability" as

The continuation of the positive results or application of project learning in the last (sic) country once international assistance is terminated.

It can be inferred from this rather ambiguous definition that sustainability relates to the continuing achievement of the project purpose (and function). In the case of institution-building projects, it refers to institutional maturity and viability, i.e., ability to exist in a changing external environment.

The team used the following criteria, based upon the experiences of its members and the checklist provided by UNDP/CEO, to assess the actual and on-going sustainability of SLSI itself, as presently constituted.

1. Are adequate resources provided by the Government and/or end-users of SLSI services to secure, retain and expand required skill composition, facilities and laboratory equipment?

The answer is yes with some qualifications. The budget for SLSI is adequate and over 20 per cent of it is supplied from fees earned for services rendered, mostly from testing and training. This is a good percentage vis-à-vis Government budget support and can be expected to increase. The problem is with the current Government-wide "freeze" on recruitment and new expenditures. There are factors outside the control of current SLSI management but presumably short-range in nature and could be overcome by a strong DG.

2. Does a national strategic plan for standards, quality assurance and metrology exist tied into short and long-range Government policy for industrial development, research and technology and an open-market economy?

The answer is no. In 1980, the Standards Council and SLSI prepared a "corporate plan" with an outline or beginning of strategic planning but it devolved into a five-year projection of current tasks and costs. The first revision in the mid-80s continued this pattern. The exercise is currently considered as a formal bureaucratic obligation, aggravated by the turnover at the DG level, national security problems and turnover of division directors.

3. Does the SLSI have a rolling, multi-year institutional growth plan covering at least five years in the future and directly related to Government policies and Ministry directions and priorities?

Again, the answer is largely no. The Council is pre-occupied with operational management questions, e.g. budget approvals, staff recruitment and promotions, and the Ministry of Industries, Science & Technology is not yet

able to provide needed guidance and inputs. Contacts with end-users is of an ad-hoc nature and industry representation on the Council in the planning process, reviewing needs, etc. is largely ineffective, unorganized and in the minority (i.e., vis-a-vis Government representatives). It is also difficult to locate qualified representatives from the private sector willing and/or able to serve.

4. Have SLSI standards, certifications, accreditations, and quality of services received recognition by national and international organizations, peers etc ?

The application of this criteria was more difficult for the team given its time limitations. The national standards programme is generally recognized as technically sound and participative but there is some concern that, where international standards exist, the activity undertaken is onerous, time-consuming and perhaps even unnecessary. The certification programme is working internally and import/export agreements have only recently been negotiated. Testing and Training is generally viewed as adequate although consultancy services are not yet accepted universally as adequate or appropriate.

5. Has SLSI reached an adequate level of maturity and is it viable, i.e., able to cope with changes, identify changing needs and respond to them?

Established in 1965, the institution is mature by definition. Its viability and ability to recognize change and develop appropriate responses to meet them is severely constrained by: (i) an inflexible corporate structure more appropriate to a centrally planned economy rather than the provision of demand-related services to increase competitiveness; (ii) high turnover of senior management staff and internal conflict among mid-management staff; and (iii) domestic strife. In its present shape, management cannot be expected to do more than hold the ship together. The project has undoubtedly helped to strengthen and expand institutional capabilities but whether this level is adequate and whether it can respond to the drastically changed conditions remains to be seen.

Using the favor-to-disfavor scale explained in the "introduction" and applying the criteria to the current scene, the following assessments are made:

Criterion # 1 - Resources	Satisfactory	(3)
Criterion # 2 - Strategic Planning	Poor	(1)
Criterion # 3 - Growth Plan	Poor	(1)
Criterion # 4 - Recognition	Satisfactory	(3)
Criterion # 5 - Maturity & Viability	Fair	(2)

If specific end-of-project indicators had been specified at the purpose (immediate objective) level, expressed in terms of institutional viability and use of SLSI services by targeted end-users for the intended purpose (e.g. increase the quality of its product level), it would be possible to be more objective in judging or predicting sustainability; however, particularly regarding non-standards activities and the propensity of current Division Directors to expand the scope and magnitude of their services in the face of curtailed resources, the team assesses the overall present and future sustainability of SLSI, without some of the changes recommended herein, as in

doubt, particularly concerning its outreach services. The team notes that certain steps are in process, e.g., (1) as outlined in the Ministry of Industries' recently released report entitled "A Strategy for Industrialization in Sri Lanka," dated December 15, 1989, and (2) creation of an Industry Commission to review all technological institutions to make them more "demand-related" and coordinated, which could offer the opportunity for the new Director General and Chairman of the Council to solve some of these problems and increase the effectiveness, relevance and sustainability of SLSI and its programmes.

F. Follow-up required

During team interviews with SLSI staff, several requests were made for additional assistance in a Phase III including (a) increasing measurement capabilities for temperature, force and surface dimensions; (b) in the Engineering Division, the need for international experts to design testing equipment for industry and national consultants for producing a five-year programme; and (c) a new project request involving a UNDP input of US\$ 850,000 for the "Development of Standards, Quality Control and Metrology at Provincial Council Level" was surfaced.

As discussed under "sustainability" just above, the SLSI's ability to absorb a new expansion of activities at the provincial level, as well as the need for such expansion, is highly suspect in the Team's opinion. At this point it also seems premature and perhaps unnecessary to recommend a continuation of institution-building technical assistance along current lines, i.e. a Phase III of the current project or recommend the detailed parameters of a new approach. Rather, the team believes the resources freed up in SRL/86/007 by the cancellation of the second portion of the originally planned split tours for international experts for civil and electrical engineering standardization, rather than being reprogrammed for the hiring of national consultants and graduate courses, as suggested by SLSI, might better be used for assisting the new Director General in positioning the SLSI to respond more effectively and speedily to Government policies and client needs. In the process, it is probable that a more realistic and significant identification of the needs for future external assistance, if any, can be identified with the assistance of UNDP, UNIDO and/or other providers of technical assistance and support, e.g. the World Bank or bi-lateral development agencies.

As soon as possible, therefore, after the appointment of the new DG, expected in three to four months, a team of consultants should be assembled in Colombo as follows:

(1) Strategic Planning Advisor

This international expert, ideally, should be a senior management official from a national standards and quality control organization which has had experience with planning the role of a public or quasi-public institution concerned with industrial development in a competitive, open-market economy. He would act as team leader working together with the DG and his senior staff in at least outlining the parameters of a five-year plan for standardization, quality control and metrological activities responding to Government policies and priorities under changing conditions. It would also be extremely helpful if this expert could be an important or recently retired official of an institution which is interested in a "Twinning" relationship with SLSI (See chapter V, section D, on "Further needs of SLSI, for a brief discussion on

twinning arrangements). This might require as a minimum two split visits of two weeks each. The first tour would also be used to get the following experts started in a coordinated effort and, after the completion of their work, he would return to provide additional advise and wrap-up the preliminary framework of a strategic standards, quality assurance and metrology plan. The purpose of the strategic plan would be to look outward and forward to determine those projected events and conditions (critical assumptions) which will affect the mission and priorities of SLSI and consequent institutional growth and development needs. It should be presented to both the Government and industry for comment and approval.

(2) Quality Assurance Standards Advisor

The International Standard Organization (ISO) has recently developed and published a series of five international standards of extreme value for all sectors of a national economy (ISO 9000) to help nations and organizations in solving quality problems by bringing them into a conceptual order and provide a means for international communication on the subject. As an about-to-be-published UNDP-financed report on metrology will point out, these standards will have profound implications for developing countries on quality control procedures and metrology development. These standards have been adopted by the EC, and it is expected that they will be adopted by other regional economic and trade groupings, placing those countries which cannot meet these standards for quality assurance at a severe disadvantage. The Government has already adopted ISO 9000 as a Sri Lankan Standard. Accordingly, an adviser on the steps required for implementation of the ISO 9000 series should be provided for at least four weeks, the first two weeks as a team member.

(3) Metrology Advisor

As part of the suggested team, a metrology expert familiar with the problems of developing countries should also be provided for a minimum of four weeks. As mentioned above, the report of an evaluation of UNDP/UNIDO projects of technical assistance in metrology will soon be issued. The Chairman of this evaluation is also a participant in the metrology thematic evaluation. A principal output of this exercise will be a set of guidelines for planning an adequate national metrology system according to the development level and industrial objectives of a particular country. It may be possible to secure the services of the metrology expert involved in the preparation of these guidelines in testing their first field application, which would be a very fortunate opportunity for SLSI.

(4) Management and Financing Advisor

Also as part of the suggested team, but also available to the Ministry of Industries and its Industrial Commission, a specialist in the management and financing of IRSIs in an opening or open-market economy should be provided for four weeks. He/she would be expected to give particular attention to the flexibilities, authorities and other changes necessary to transform SLSI (and similar organizations) into more self-reliant, demand or client-responsive outreach institutions.

To the extent this exercise can be a team effort of the international experts with the DG, his senior staff and the Ministry, the likelihood of success will be greatly enhanced. It is also suggested that the UCD and UNIDO

backstopping officer be involved, especially at the beginning and completion of the exercise. The team believes that this approach is so vital to SLSI's future that, if necessary, additional funds should be provided or reprogrammed from other budget items of the project.

V. FINDINGS ON THE PROJECT

A. Efficiency

The team efficiency is defined in the UNDP Briefing Kit as follows:

"Efficiency is the productivity of the activity implementation process of an activity - how well inputs are converted into outputs. An efficiency analysis usually compares a variety of ways of conducting an activity to find the one which requires minimum inputs to achieve some fixed goal or produces maximum outputs from a fixed quantity of inputs."

In chapter III, the evaluation team has made assessments regarding inputs and activities to the extent feasible. The cost of UNDP inputs, which were consistently underestimated, was extended by the delay caused by external factors. All things considered, the use of UNDP inputs was reasonably efficient and satisfactory. Due to delays and omissions, the efficient use of Government inputs was less than planned or fair.

B. Effectiveness

1. Explanation

The glossary of terms included in the UNDP Briefing Kit states that

"Effectiveness is a measure of the extent to which an activity achieves its objectives"

which is consistent with the confusion in UNDP/UNIDO guidelines as to the principal elements of the logical framework concept for project design.

Efficiency, as assessed above, concerns the economic (in resources and time) use or transformation of inputs into work programmes or activities. Effectiveness, on the other hand, deals with the production of the outputs (planned project results) and an assessment of their contribution to achieving the project purpose as measured by end-of-project-status indicators. In brief, it is a means-end chain of inputs to activities to outputs to purpose (currently mislabelled as immediate objectives) to higher level (development) objective or goal. The team assessment is made on this basis, even though the purpose of this project has to be inferred since the statements of immediate objectives and outputs are identical. Project purpose is or should be defined as the change which the project is intended to cause or facilitate, e.g., to provide services to a selected industry which will improve factory quality control throughout the total production process. The end-of-project-status indicators of success, in this example, would be that targeted end-users have used these services to actually improve the quality of their product line. As explained below, the extent to which improved quality assurance increases competition, exports and consumer protection is the measure of the project's impact.

2. Assessment

The individual assessments by outputs are given in Section A of chapter IV, just above. The team came up with an overall rating of 2.1, i.e., less

than planned. This was principally caused by the delay and/or reduction in Government inputs and includes a projection of the status of each output at project completion in December 1991. Given the external constraints imposed upon the project, accomplishments achieved, i.e., increased capabilities, are viewed as satisfactory.

Using a purpose statement along the lines suggested in the example given just above, however, there is ample evidence to conclude that by project completion, the purpose of increased and demand-related services will not be achieved, nor is it likely that they will be achieved in the reasonable future without some major infrastructural, policy and management changes, as suggested elsewhere in this report. There is a clear overlap between the criteria used for judging sustainability and end-of-project-status indicators although, of course, the project affects only a portion of the total SLSI mission. In chapter IV, E., a detailed assessment is given resulting in a judgment that SLSI's sustainability or viability in the rapidly changing political - economic - industrial environment in Sri Lanka is also in doubt.

This is not the fault of the project per se but is very pertinent to assessing the relevance, significance and probable impact of this or any future project assistance by UNDP/UNIDO.

In brief, therefore, the team assesses effectiveness as less than satisfactory, exacerbated by rapidly raising industry demand and need for help in a deregulated, open market economy.

C. Significance and relevance

Phase I of the project was not sufficiently tied into current Government economic policies and objectives, e.g., it was still focused on Government-owned industries. This oversight may be pardoned, however, because the de facto situation had not changed.

In Phase II, however, and particularly in the past year, Government economic policies have been implemented. Privatization of many Government-owned factories is taking place, tariffs are being lowered and, in general, industry is being deregulated and, in the process, left unprotected. The Minister of Industries is very concerned that industry gets the help it needs to be competitive in this new environment and is currently studying the various Government institutions and corporations, including SLSI, for the contributions they might be able to make and changes which may be necessary to achieve them. Through his Secretary, the Minister requested the evaluation team to provide him with some frank thoughts on the subject and its recommendations.

In the normal activities carried out by a Standards Bureau or similar public entity, i.e., establishing national standards, metrology, inspection, certification and accreditation, SLSI has been doing a credible job, given the constraints imposed upon it. It is in the "outreach" services to Government and industry, such as testing, training, problem identification and analysis and consultancy services for quality control that the SLSI can be most helpful to the Government in carrying out its industrial strategy. Unfortunately, it is this area, excluding training, where, currently, the SLSI is weakest. Without a strategic plan approved by the Minister, innovative and forceful leadership by a new DG and Council, the provision of more flexibility (almost to the extent of privatization of the outreach service) and providing staff

motivation and in-factory experience. SLSI is unlikely to meet the challenge.

It may be possible to reduce the professional staff devoted to preparing national standards by adopting international standards in most cases and diverting them to outreach services but, in any case, they are small in number and the qualifications and mental set for regulatory work are not the same as that needed for responsive and effective outreach to industry.

The team has prepared recommendations for the remainder of the project life which are designed to help the Ministry, Council and new SLSI Director General sort out the problems and alternative ways for SLSI, in concert with other concerned organizations, to make a maximum contribution to increasing the competitiveness of Sri Lankan industry. When the suggested exercise is completed, it is hoped that the Government, particularly the Ministry of Industries, Science and Technology, the SLSI Council and senior management, will be in a better position to make decisions on a change in mission and approach. At the same time, the need for outreach technical assistance can also be assessed which, the team suggests, should be more narrowly focused and more of a direct support nature, encompassing a twinning relationship with a sympathetic institution that has faced similar problems.

D. SLSI

The SLSI was established in 1964 under a centrally directed economy whose industrialization policy was based on an import substitution model spearheaded by large public enterprises. Despite the change in 1977 to a more liberal and private sector-driven economy, local industries continued to be heavily protected and public ownership of industrial enterprises was untouched. SLSI, therefore, continued to operate within a public-dominated protected industrial environment. Only in late 1986, but more noticeably in early 1989, did the effects of the opening up of the economy begin to be felt and public enterprises start to be sold to the private sector. At present, the industrial sector is becoming essentially private and is increasingly exposed to external competition which demands higher levels of quality. The present situation and future of the SLSI has to be seen in this light. The SLSI, as it is now, seems to be unable to respond adequately to the needs of the industry by helping it to reach adequate quality levels. It is overextended, uncoordinated within itself and with other institutions involved in science and technology and the outreach (to industry) service business. Its civil service staff has mixed motivations. These conditions are symptomatic of inadequate central management capabilities and a lack of policy direction. Unless the SLSI undertakes some fundamental changes to increase the effectiveness of its services, the institution will become severely constrained and will not be able to adequately respond to industrial needs in raising quality levels. The mission feels that the remaining budget of the project, supplemented if necessary, should be used to trigger the necessary changes in the institution.

National standards have taken exceedingly long to be developed (cases of six to seven years were reported) and final results were not too different from international standards. The straightforward adoption of the latter would, in some cases, have resulted in substantial savings of scarce personnel and financial resources of the institution, not to speak of time savings for both SLSI staff and its technical committees.

While the SLSI has been reportedly capable of determining quality shortcomings in the production process of its clients, it has been less effective in triggering, on its own or in cooperative arrangements with other outreach service institutions, the necessary corrective actions. There seems to be no consensus within SLSI on its role in the latter activities, which are definitely in demand, a demand that can be expected to increase dramatically in the near future.

The Institution itself recognizes the need for change but it is unable to react by planning and implementing the necessary changes in the current managerial vacuum. Under the present circumstances and after the appointment of a qualified Director General, a project-financed twinning arrangement with a similar institution in a more developed country with an open economy is a good idea, since experiences in such institutional changes could be useful to SLSI.

The financing of the SLSI merits some attention, particularly its outreach services. While a public corporation which carries out essentially voluntary services, the SLSI has been able to generate income from such services which amounted to approximately 20 per cent of its budget. In line with public divestiture in industry, the Government wishes public institutions of a service nature to become increasingly self-financing. The above percentage of earnings, therefore, has to be increased and this can only be achieved by being more demand-oriented and cost-effective. The cost of services must also be increased to cover all costs, including motivational stipends for staff, and provide a "profit" for re-investments in SLSI of both a capital and development nature.

The need for a clearer policy and general direction for SLSI operational management has been repeatedly expressed in this report. The same need is expressed regarding the composition and functions of the Council of the SLSI. Its members are mostly current or retired Government officials who tend to interfere in the day-to-day operation of the institution. Subsequently, the Council essentially plays the role of overseer, useful perhaps when there is no DG on board, but which fails to provide direction in line with industry needs. This is not surprising since out of eleven members, only one ostensibly represents industry.

In analyzing the SLSI's mandate, it is necessary to distinguish its regulatory (adoption and issuance of standards) functions from the demand-driven outreach activities needed by industry clients to become more competitive. While these two functions in more developed economies reside in separate institutions (they correspond to the legislative and judicial powers in a Government) they may, given the prevailing conditions in Sri Lanka, reside under the same institutional roof; however, under separate departments. In any case, the driving force of the Institute's outreach services must be assisting the emerging middle and large-scale industries to increase their "competitiveness". This means other functions and services, e.g. consumer education and protection and assistance to cottage and small-scale industry, must take a back seat or be provided by other public-supported agencies.

While the mission was unable, due to time limitations, to visit other public and private institutions in the science and technology and outreach service business, it observed little cooperation between such existing institutions which, no doubt, causes overlaps and duplications. On the basis of factory visits undertaken by the mission, it was found that SLSI has been

instrumental in spreading the concepts of standardization and quality control through its clients. As mentioned elsewhere in the report, industry is willing to pay for such services. Pressures for industry to become more competitive will result in more focused, sophisticated and speedier services on demand. At the other end, a stronger say of the private sector in the conduct of SLSI's affairs is clearly needed.

Finally, the present spread of the SLSI through seven different buildings is not conducive to in-house co-operation and integration of services. The completion of the permanent headquarters whose construction commenced in March 1984 is long overdue.

VI. RECOMMENDATIONS

A. Recommendation related to current project

1. Through the programming of existing project resources and/or the provision of additional resources (estimated to total US\$ 50,000), the focus of the remainder of the Phase II project should be on positioning SLSI senior management to respond effectively to the Industrial Strategy recently promulgated by the Government. Specifically (see chapter IV, F. for details), a team consisting of Strategic Planning, Quality Assurance and Metrology Advisors should be assembled for four weeks (conditional on appointment of a full-time, permanent DG), each using split tours if necessary, to work with the new Director General, Chairman of the Council and Secretary of the Ministry of Industry, Science and Technology in developing the parameters of a five-year strategic plan for standards and quality control which is responsive to the Government's priorities and industry needs, along with a parallel SLSI institutional growth plan. In addition, a specialist in the management and financing of industrial outreach institutions should be made available to the team and the Ministry of Industries as part of this exercise, since the problem will be generic to similar institutions.

B. Recommendation related to future assistance

If the above recommendation is approved and acted upon successfully, one expected result would be a more realistic identification of the need, scope and type of additional technical assistance, if any. Therefore:

2. It is recommended that, if requested, UNDP and UNIDO participate in the Government review of the proposed Government strategic plan for standards and quality control and a parallel institutional development plan for the specific purpose, inter alia, of determining how and if a new type of UNDP/UNIDO project assistance would be most useful.

C. Recommendation related to SLSI institutional form and structure

The present SLSI institutional form, as a corporate body, has to be drastically changed to make it more responsive to industry need and demand. Given SLSI's scope of work, which comprises both regulatory and outreach activities and the political and economic conditions prevailing in the country, the most adequate or feasible form for Sri Lanka seems to be the one of a quasi-public nature with a high degree of flexibility, while receiving clear policy and programming directions from both the Ministry and industry. The flexibility should include the authority to hire short and long-term staff on a contractual basis financed by earned fees. At the same time, the grant position of its budget should be gradually reduced to reach a mutually agreed upon target of say 50 per cent, the remaining being obtained by sales of services.

SLSI should be composed of two main departments:

- One which will comprise the statutory functions such as the development and issue of standards, metrology measurement

standards, consumer protection, inspection and information.

- The second department, with an outreach and public education mission, would encompass all demand-driven activities of the institution such as accreditation, testing, implementation of standards, metrology and instrument calibration services, quality control consultancies, training and initiation and participation in multi-institutional outreach services work. Such activities should be generating income to cover costs, overhead and institutional growth.

In order to encourage the interest and participation of the industry (increasingly private), some kind of industry-SLSI association should be devised whereby firms can become fee-paying members of SLSI which, in addition to providing some small but symbolic support, would entitle them to basic services such as data base information services, a periodic magazine or newsletter and, most important, to provide a forum for their inputs and to have a say in the planning and management of the institution. The latter could be achieved by having the Chairman of the Council elected from among representatives of the associated firms and by having a substantial amount of Council members (up to 50 per cent) from the same firms. In summary:

3. The Government should initiate actions to provide the SLSI with the necessary authority, flexibility and staffing to carry out effective and demand-driven outreach services related to quality control. This includes:

- (a) A reorganization which recognizes the fundamental differences between SLSI's regulatory and public functions and its client-relationship to industry;
- (b) A closer participation of industry in the planning and management of outreach services; and
- (c) Charging market prices to industry for such services.

D. Outreach services

In its interventions at plant level, the SLSI identifies quality shortcomings which will make changes in the production process necessary. There is an intention in some departments of the SLSI to enter into the area of process engineering in order to remedy such shortcomings. The SLSI is ill-equipped to do so on its own since it is outside its current mandate and, in any case, it would be impossible for the institution to have the necessary know-how to intervene in process engineering covering the whole gamut of industrial and agricultural sectors (some of the products tested by SLSI are agricultural commodities), in addition to the areas of work already within its province. This is a task better addressed by other outreach organizations, either public or private. It does not mean that SLSI should be alien to this field. In fact, it can usefully take the lead in identifying systematic production problems identified through quality control analyses and assembling appropriate teams from outside sources, recognizing that outreach services in process engineering are not adequately covered in Sri Lanka.

4. SLSI should take the lead, when its quality control activities identify production problems of a systematic or process nature, in assembling

multi-disciplinary teams (e.g., industrial engineer, quality control specialist and a factory's production engineer) to analyze, diagnose and offer solutions.

E. Co-operation between institutions

As indicated under Findings, the different institutions involved in R & D, standardization, quality control and outreach services operate very much on their own with little coordination and exchange of information on what each institution is doing. Certain horizontal mechanisms exist (such as the Industry Commission) which are supposed to ensure coordination; however, their high level distances such bodies from the operations of the institutions and thus are not effective for the purpose indicated above. What is needed are informal and periodic consultations between the management and staff of these institutions to exchange information on work programmes, identify areas of cooperation and mutual interest, and draw up joint programmes/services. Again, here the new DG of SLSI may have to break new ground in initiating such coordination.

5. The Ministry of Industry, Science and Technology, or other appropriate organization, should take steps to ensure that public-supported industry-oriented institutions providing outreach services are effectively coordinated at the operational level.

F. Additional recommendations

6. In any future institutional growth and development planning, SLSI should use the service module methodology to project, specify and monitor the expansion and strengthening of its capacities. UNIDO's Evaluation Staff can provide appropriate guidelines and training in its use.
7. A copy of this request should be transmitted, as soon as possible, to the Industry Commission, which is currently conducting an analysis of infrastructural changes and requirements for institutions involved in science and technology. This report, hopefully, will be a timely input when considering the future role of SLSI in the total national picture.
8. In a similar vein, the UNDP/UNIDO thematic evaluation of Industrial Research and Service Institutions (IRSIs) contains findings, conclusions and guidelines which are extremely relevant to the charge given to the Industrial Commission. The UNIDO Evaluation Staff and UCD should make a copy of this report and derivative guidelines available to the Commission on an urgent basis.

Note: Recommendations concerning the evaluation process per se and addressed primarily to UNDP/BPPE/CEO are included in chapter VII, Lessons Learned.

VII. LESSONS LEARNED¹

After the oral presentation of the highlights of the major findings, conclusions and recommendations to senior Government officials, the UNDP and the UNIDO Country Director, the same people immediately reconvened as a tripartite review committee. This process had the disadvantage of not permitting any of the parties to consider the recommendations beforehand with appropriate staff support. This factor, however, was far outweighed by the de facto advantage that this event was probably the only occasion where the senior officials involved, including the UNIDO backstopping officer, would consider and make joint decisions regarding the project itself and, equally if not more important, the institution it was intended to assist.

If this innovation is continued as a general practice in Sri Lanka and elsewhere, and the team recommends just that, the team should be permitted to spend more time on-site, i.e., beyond two weeks or ten working days, to bring their draft report closer to its final version. It is this very process of refinement that often results in more meaningful recommendations, including factual support of them.

As illustrated in chapter II on Project Concept and Design, UNDP and UNIDO guidelines on project design and the application of the logical framework concept need revision to clearly distinguish between the project purpose (called immediate objective(s) under PPM guidelines) and outputs and provide indicators at each level of project design, i.e., higher level (than the project) goal or objective, the project purpose, and the project outputs intended to create the change specified at the purpose level. At the same time, guidelines for the preparation of objectively verifiable end-of-project-status indicators at the purpose level are needed to provide the basis for assessing project success within the development context specified during the project appraisal and approval process and used to justify the project in the first place. They also would be at least partial indicators of sustainability.

Insofar as the evaluation process itself is concerned, the Evaluation Briefing Kit supplied by UNDP/CEO will be a great help for those unacquainted with the purpose and methodology of in-depth evaluations but the glossary of terms, together with the checklist, is not sufficient guidance for preparation of the report itself. Rather than supply only a basic format and checklist, it is suggested that UNDP provide guidelines for preparation of the final report similar to those issued by UNIDO last year (UNIDO/DG/B.106, dated 18 April 1989). There were also some problems encountered by the Team Leader in preparing the Project Evaluation Data Entry Sheet. Obviously, some entries in the form must be made by UNDP/CEO; however, even those which could be inserted by the Team Leader were sometimes ambiguous in the choices presented and/or necessary descriptors were not provided.

Unfortunately, it was demonstrated again in this exercise that UN development institutions often have a short memory. The results of the Industrial Research and Services Institute (IRSI) evaluations (ID/B/C.3/86 plus Add. 1 and 2) and IRSI PAN UNDP/PPM/TL/29 are clearly highly relevant to standards, metrology and quality control projects, particularly to SLSI as it

¹ Prepared by the UNDP Team Leader.

goes through the difficult process of "privatizing" its own outreach services. It is noted with regret that the guidelines in the UNDP Briefing Kit on evaluation of institution-building projects, otherwise very good, omits any reference to the service module concept, which is required by the PAN and UNIDO/PC.31/Add. 3 for these types of multi-service industrial institutions. They could also apply, with slight modifications, to institution-building projects in other sectors, e.g., an agriculture extension service. Without the detailed and baseline data required in the preparation of these modules, effective work planning and an objective evaluation of institution-building outputs is not possible. It is unclear why UNIDO does not inform its project designers of the guidelines available for these types of projects and more effectively monitor their use.

The above statements, prepared by the UNDP Team Leader, are presented for the particular attention of UNDP/CEO and UNIDO/ODG/EVAL. They are summarized in the following recommendations:

- (1) The scheduling of tripartite reviews immediately after the oral briefing of the in-depth evaluation results by the Evaluation Team should be encouraged. In such instances, additional time should be provided beforehand to allow the Evaluation Mission to refine its major conclusions and recommendations on-site, including any necessary revisions which the team may believe desirable after these two meetings.
- (2) The UNDP/PPM guidelines should be revised to make a clearer distinction between project purpose and outputs. Use of the term "immediate objective(s)" should be discouraged. EOPS indicators should be provided as part of the design, appraisal and approval process.
- (3) UNIDO should increase its efforts to ascertain that existing programme guidance distilled from previous thematic evaluations is included in project design exercises and in the briefing of all backstopping officers, SIDFAs, JPOs, CTAs and experts.
- (4) The UNDP Evaluation Briefing Kit needs augmentation and clarification, particularly concerning the content of final reports and completion of the Project Evaluation Data Entry Sheet.
- (5) The use of the service module concept should be required for all institution-building projects. It should be revised to include three parts, viz.:
 - (i) A complete module (output) as expected by project completion;
 - (ii) The baseline of the module at time of project approval; and
 - (iii) An annual status update of the module.

Forms (i) and (ii) should be used in preparation of and annexed to the project document. Form (iii) should be used in PPER preparation and TPRs.

While all forms will be used for in-depth evaluation, the forms need to be redesigned to provide adequate space to provide complete data needed - not the often meaningless summaries now prepared.

JOINT EVALUATION MISSION OF THE GOVERNMENT OF
SRI LANKA/UNDP/UNIDO OF DP/SRL/86/007 -
STANDARDIZATION AND QUALITY CONTROL, PHASE II

DRAFT TERMS OF REFERENCE

I. BACKGROUND

1. Project

The Sri Lanka Standards Institution (SLSI) was set up in 1964 with the primary purpose of promoting standardization in industry and commerce. The SLSI operates under the auspices of the Ministry of Trade and Commerce.

The SLSI is headed by a chairman and the management is vested in a Council. The executive power lies with the director general and the deputy director general. The SLSI is organized in six technical divisions: scientific standards, engineering standards, laboratory services, implementation, consultancy and training, and documentation and information. International relations and statistical units co-ordinate the activities in their respective areas.

Since 1982 SLSI has received UNDP/UNIDO assistance first through the project SRL/86/003 - Development of Standards and Quality Control - which main objective was to upgrade the SLSI's capability to undertake standardization in general and the improvement of the level of technical skills of the staff of the SLSI in order to meet the new demands of the Government policies. This was also achieved. However, it was felt that further external assistance was needed to consolidate the effects of the project under completion and to broaden the SLSI's scope of activities to fit the needs of the country. The second phase of the project - SRL/86/007 - was approved in February 1988 with a UNDP budget of US \$ 575 000 and it became operational the following month. The project has a duration of three years (1988-1991).

The development objective of the project - SRL/86/007 - is to improve the competitiveness of the Sri Lankan industry, facilitate international trade and increase consumer protection. The immediate objective is to strengthen the SLSI and improve its capability by giving technical assistance in laboratory accreditation, information and education, company and engineering industry standardization and inspection procedures.

The first Tripartite Review Meeting under the second phase was held on 14 February 1990. At the meeting the objectives were considered viable. The progress in achieving them had been delayed due to external reasons. The major problems the project was facing were the vacant director general post and the standstill in the construction of the laboratory building. Fast actions to resolve these problems was considered high priority for a successful implementation of the project.

2. Evaluation

As the total assistance to SLSI in two phases exceeds US\$ one million, an in-depth evaluation was included in the project document of Phase II. At the Tripartite Review Meeting held in February 1990, it was agreed by all parties concerned to undertake the evaluation in November 1990 as scheduled.

II. PURPOSE AND SCOPE OF THE EVALUATION

1. Project-related issues

- a) To assess the progress towards the production of the outputs which aim at developing laboratory accreditation, and engineering and company standardization activities as well as establishing functioning units for information and education, and quality inspection;
- b) To assess the progress towards the achievement of its objective of strengthening the SLSI through establishing a national scheme of laboratory accreditation and a quality inspection system for imports and exports. As also through carrying out such activities as public information and education, and engineering and company standardization;
- c) To re-examine the design of the project;
- e) To identify and assess the factors that have facilitated the progress of the project, as well as those factors that have affected it adversely;
- f) To examine the extent to which Phase I project as well as the results of the current, Phase II project have contributed towards improvements in standardization and quality control in industry and trade.

As part of the above-mentioned tasks, the mission will review whether the approach utilized in the projects has led to optimum results, or whether another approach could have improved the results. This will require a review of the following issues:

- a) Relations of the projects with industry and other end-users;
- b) Problems related to the organizational position and management of SLSI.
- c) Future financing of SLSI in general, and the laboratories in particular.

The mission will also review to what extent the planned relations with and involvement of the private sector in the projects have been realized and how they could be improved.

While a thorough review of the past is in itself very important, the in-depth evaluation is expected to lead to detailed suggestions for a successful completion of the remaining part of the on-going project. The mission is free to make any relevant recommendations.

2. Institution Building - related issues

The Mission will review the following five issues:

i. Identification of Needs, Affordability and Commitment

- a) Where and how was the need for the specific technical co-operation (TC) identified? Was it part of a comprehensive national TC programme, of a sector plan or did it derive from the country programme? If derived from phase I of assistance how was priority established?
- b) How was affordability of the SLSI (at starting, during implementation and after project completion) established? Can needs for financial, human and technical resources be specified and are the resources available?
- c) How were policy requirements and linkages between the SLSI and other institutions identified?
- d) Was there momentum and commitment within the SLSI to innovation and change?

ii. Specification of Goals and Involvement

- a) Identify institution building goals of the project.
- b) Are the goals clearly identified in the project document?
- c) Does SLSI clearly understand the goals of the projects and their role in achievement of these goals?

iii. Intervention: Design and Provision

- a) Did the project design phase include a deliberate choice of institutional arrangements for project implementation? Was the choice preceded by a process of institutional screening of possible implementation arrangements, e.g. reliance on central government ministries, local government bodies, non-governmental organisations, and/or ad hoc project organisations?
- b) Did design draw attention to cross-sectoral and cross-institutional demands on the SLSI?

- c) Which means were used: to support development of the SLSI; on-the-job or organised training; blue-print organisational design; preparations of plans and policies; twinning; scholarships; involvements of local professionals; others?
- d) To what was the work of the advisers and training linked - innovations and procedures, programmes, organisational structure, others?
- e) Were both technical/operational and institutional functions included in the job descriptions of project attached technical assistance personnel? Was the balance between the two types of functions appropriate, and did it change during project implementation?

iv. Effectiveness and Appropriateness

- a) Which methods of institutional development support seem to have been most effective?
- b) How does the simplicity of institutional design (e.g., co-ordination requirements, focus on project objectives, level of integration etc.) affect a project's performance or effectiveness?
- c) In retrospect (evaluation perspective), was the technical co-operation appropriate to the country's organisational and development context and needs? Did the technical co-operation evolve (was it phased), as the needs of SLSI changed? Did the technical co-operation assist SLSI in responding flexibly to changing development needs and circumstances?
- d) Was the TC-intervention cost-effective? Can the costs and the benefits be estimated and compared? If so, how was this achieved? What were the results of the cost-effectiveness analysis?

v. Institutional Sustainability

- a) Does the Government view the SLSI and what it produces with sufficient satisfaction to assure its continuous support for its programmes?
- b) Will the Government continue to support SLSI? Can it? Is the financing of regular maintenance and support systems for the activities of the SLSI assured within the Government's budget?
- c) Was the balance between the project's technical/operational objectives and its institutional development objectives appropriate from the point of view of sustainability of project results?

- d) How is the management structure of SLSI designed? How is the team work of the management staff functioning?
- e) Does SLSI have the capability to identify changing needs and respond to them?
- f) How self sufficient is SLSI?

3. Lessons learned

The mission is expected to record any lessons that can be learned from the experience of the two projects in particular anything that either can be applied or should be avoided in the future.

III. COMPOSITION OF THE MISSION

The mission will be composed of:

- One UNDP consultant, team-leader
- One UNIDO consultant
- One representative of the Government of Sri Lanka

The members of the mission should not have been directly involved in the design, appraisal and/or implementation of the projects.

IV. TIMETABLE AND REPORT OF THE MISSION

The total duration of the mission is planned for 21 working days and the timetable is proposed as follows:

- 1) Briefing of the UNDP consultant at UNDP HQs, New York - 1 day
- 2) Briefing of the UNDP and UNIDO consultants at UNIDO HQs, Vienna - 3 days
- 3) Field work - 10 days
- 4) Debriefing at UNIDO and UNDP HQs - 1 day each
- 5) Preparation of the final report - 5 days

The mission members will assemble in the office of the UNDP Resident Representative in Colombo, on Monday 7 January 1991 at 9.00 a.m. for a local briefing and arrangement of logistics.

The teamleader is responsible for the conduct of the evaluation as well as for the preparation of the final report. The report should be prepared in accordance with UNDP guidelines and in sufficient number of copies (10 copies for UNDP Colombo).

At the end of the field work the mission will hold a meeting with the management of the SLSI, senior officials of the Ministry of Trade and Commerce and the External Resources Department as well as the Resident Representative at which it will present and discuss its initial findings, conclusions and recommendations.

V. CONSULTATIONS IN THE FIELD

The mission will maintain close liaison with the Resident Representative of UNDP and the UNIDO Country Director in Sri Lanka, the concerned government organizations and the project's national and international staff.

Although the mission should feel free to discuss with the authorities concerned anything relevant to its assignment, it is not authorized to make any commitments on behalf of UNDP or UNIDO.

VI. BACKGROUND DOCUMENTS

- Project documents for phase I and II, (DP/SRL/82/003, DP/SRL/86/007).
- Latest project budget revision, (DP/SRL/86/007/?).
- Project Progress Reports (PPR) DP/SRL/82/003: 12/82-4/83, 5/83-10/83, 11/83-4/84, 5/84-9/84, 10/84-3/85, 4/85-9/85, 10/85-3/86
- Tripartite Review Reports DP/SRL/82/003: 02/06/83, 06/12/83, 20/06/84, 16/11/84, 25/06/85, 03/12/85, 01/07/86, 09/12/86.
- Project Performance Evaluation Report (PPER), November 1989.
- Tripartite Review Report DP/SRL/86/007, 14/02/90.
- Technical reports prepared by experts, consultants and subcontractors: "Project Report: Communication Strategy" DP/SRL/86/007, 30/5/89.

ORGANIZATIONS VISITED AND PERSONS MET. WITH THEIR FUNCTION

Ministry of Industries, Science and Technology

R. Wickreμεςinghe	Minister
A.S. Jayawardena	Secretary
W.C. Dheerasekera	Director, Markets and Consumer Service

Ministry of Policy Planning

Mrs. C. Amarasekera	Additional Director, External Resources Division
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Ministry of Trade

Mrs. J. Pinnawale	Commissioner of Internal Trade
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Export Development Board

Mrs. M. Pandittesekere	Director, Product Management
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SLSI

G.S. Fernando	Council Member
C. Dahanayake	Council Member
Asoka N. Semanayake	Acting Director General
C.D.R.A. Jayawardene	Deputy Director General
B.S.P. Mendis	Director, Scientific Standards
W.W. Bandularatne	Director, Engineering Standards
V. Pilanavithana	Director, Implementation
R. Goonathilake	Director, Consultancy and Training
D.D. Kodagoda	Director, Laboratory Services
Mrs. S.M. Wijewansa	Director, Documentation and Information
Mrs. M.P.M. Thilaicanatawa	Asst. Director, Chemical Laboratories
S.K.S.I. de Silva	Maintenance Engineer
T.S. Amarawansa	Testing Officer

UNDP Colombo

J.K.R. England	Resident Representative
S. Sharif	Deputy Resident Representative (Programmes)
B. Garcia	Deputy Resident Representative
J.B. Gorski	UNIDO Country Director
Miss Nina E. Lindroos	Junior Professional Officer

Enterprises visited

Mason's Mixture Limited (Paints)	
S.C.A. Fernando	Managing Director
V. Thalpavila	Marketing Executive

ORGANIZATION CHART

of SLSI

