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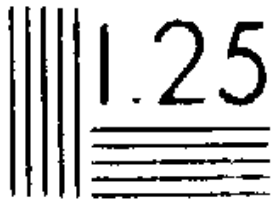
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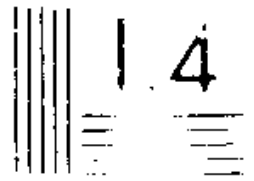
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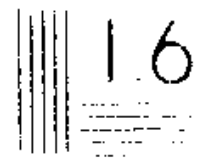
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RESTRICTED

ASSISTANCE TO THE NEPAL
INSTITUTE OF STANDARDS - II
(DP/NEP/77/001)

Project Findings And Recommendations

DRAFT TERMINAL REPORT

Prepared for the Government of Nepal
by
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Acting As Executive Agency
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The United Nations Development Programme (UNDP)

June 1982

CONTENTS

1. INTRODUCTION

1.1 Establishment of Nepal Institute of Standards (NIS)

1.1.1 In 1974 HMG put into effect a new Industrial Policy (2030) with a view to creating a more congenial atmosphere for industrial development. To achieve this objective, HMG decided to establish three service organizations, including the Nepal Institute of Standards (NIS) for testing and controlling standards of raw materials and finished goods.

1.1.2 The Industrial Policy of 1974 mentioned the following as constituting the functions of NIS:

i. To determine standards in the production process;

ii. To determine standards of quality of products and to certify the quality;

iii. To conduct research and organize seminars;

iv. To issue trade marks as "Mark of Excellence" for high quality products.

1.1.3 Gunastar Nirdharan Samiti, the Nepal Council for Standards (NCS), was established by an executive order on 2033-5-15 (1976 August 31) and later reconstituted with a semi-autonomous status under the Development Committee Act, 2013. By HMG Order 2034, the Council consisted of eight members representing various Ministries, the Federation of Nepalese Industry and Commerce and the Tribhuvan University, under the Chairmanship of Dr. M. M. Sainju, Hon'ble Member, National Planning Commission.

1.2 Standardization (Certification-Mark) Act 2037 (Act No. 10 of 2037)

1.2.1 The proposed functions of NIS (para 1.1.2) included not only formulation of standards but also certification of quality by a mark of conformity with standards. In working out the details of a certification system, it became apparant that a legal backing was required, specially to prevent the misuse of the mark. HMG was approached for an enactment to give statutory support to both standardization and certification activities. The Standardization (Certification-Mark) Act, 2037 (Act No. 10 of 2037) was promulgated in September 1981.

1.2.2 This Act empowers HMG to formally constitute - (i) the Nepal Council for Standards (NCS), and (ii) a Nepal Bureau of Standards (NBS) in place of the present NIS. The following are the functions of NCS and NBS as stipulated in the Act:

Nepal Council for Standards (NCS)

a. To establish, ammend or annual standards.

b. To recognize standards established by any other national or foreign institutions.

c. To recognize, suspend and derecognize government or non-government laboratories for the purpose of standardization and testing work.

d. To designate the format of the certificate and specify the form, shape and sizes of certification mark.

e. To levy fees on the grant of licences for certification mark and on the services rendered.

Nepal Bureau of Standards (NBS)

a. To issue licences authorising the use of the certification mark for the standards which have been approved by the Council.

b. To carry out inspection activities in relation to standards for products or processes.

c. To appoint or designate Inspectors.

d. To renew, suspend or cancel the licences.

e. To get bond or agreement with necessary terms and conditions signed by the licencees during the issuance of licences.

f. To carry out the secretarial functions of the Council.

1.2.3 Administrative actions to reconstitute the Nepal Council for Standards (NCS) and establish the Nepal Bureau of Standards are presently under way.

1.3 Beginning of Work

1.3.1 In November 1976, the Secretary of NIS (now Director) was deputed to study the working of the Indian Standards Institution and later to attend a Training Programme in the Organization of Standardization System in Moscow (April 1977). Following these visits, he proposed a procedure for formulation of standards, which was duly approved by the NCS. With these preliminaries over, the work began in 1977/78 on the basis of an initial programme of 35 items recommended by a Sub-Committee of the NCS.

1.4 Request for UNDP/UNIDO Assistance

1.4.1 Since the work was new and the availability of trained personnel limited, assistance was sought from UNDP/UNIDO for planning and organizing the activities and to train the personnel.

1.4.2 The Project was signed in June 1978 but the first CTA could join only in April 1979. He worked for about a year but left no report. Little progress in the development of an appropriate system concept was possible in this period. Consequently the work continued in an empirical manner.

1.4.3 The second phase of the Project started with the joining of the present CTA in September 1981. The findings and recommendations that follow reflect the work done in this phase.

2. FINDINGS

2.1 Current Activities

2.1.1 A Standards Institute, set up in the recent past, has an initial advantage to start its work. A large number of standards have been developed elsewhere, at national and international levels. They constitute a vast source of information which is available to all. To take advantage of this growing pool of knowledge and experience is one of the normal processes through which standards gain international usage.

2.1.2 Thus it is that the NIS found the initial progress of work sufficiently smooth. The Table below shows the type of work programme presently being carried out:

Work Programme	Target (1981 - 1982)
1. Standards Formulation	nos.
Preliminary Drafts	20
Finalized Drafts	14
Approved Standards	10
2. Surveys	One in each development zone
3. Seminars	1
4. Talk/Training Programmes	3
5. Quality Certification	
- Preliminary Studies	30

2.1.3 Yearly programmes as above are being met. So far 21 Nepal Standards have been approved, 24 are ready for approval and some 30 drafts are at different stages of development.

2.2 Problems and Constraints

2.2.1 As the work continued, a number of problems surfaced impeding the rate of standards formulation. The Director, NIS, very effectively outlined them as below:

i. It is difficult to collect technical data/information to form the basis of any standard, from either the producers or the consumers or the laboratories, owing to -

   a. data not being available,

   b. if some data are available, they are not properly collected or kept,

   c. some do not want to divulge information available with them.

ii. Attempts to collect data through sampling and testing within Nepal have to take into account -

a. the time taken (6 months or more) in completing such tests in other laboratories (NIS not having any laboratory of its own),

b. The inability of most laboratories to conduct all the required tests on an item,

c. the lack of uniformity in testing techniques/equipment in use in various laboratories, resulting in uncomparable reports.

iii. As a consequence of (i) and (ii) foreign standards have to be taken as the basis of work, but neither it is possible to establish their applicability in Nepal, nor is it possible to interpret the various requirements in these standards in terms of local experience/knowledge.

iv. There is apparently inadequate appreciation of the importance of standards which also explains the paucity of expertise available for manning the technical committees on the one hand and the poor interest shown in the committee activities on the other. There is also the problem of Nepalese vocabulary not being able to furnish the required terminology to describe technical specifications. This last named issue is of course not specific to NIS and applies to other institutions engaged in technical education/publication.

2.2.2 The implications of the above constraints on the impact of the work of the Institute is evidenced in the following analysis of utilization of the approved Nepal Standards:

		Nos.
i.	Number of approved standards	21
ii.	Number of standards printed/published	6
iii.	Number of standards registering sale	2
iv.	Number of copies sold	48 of one, and 4 of another
v.	Implementation by manufacturers	Some 5 standards are being studied
vi.	Commercial use (in tenders,etc.)	No information available
vii.	Official use (by government departments)	No information available
viii.	Issue of Certification Mark Licence	Not yet begun

Even admitting that the impact may improve with time, the above analysis underlines the urgency of measures for improvement.

2.3 Analysis of Causes

2.3.1 These constraints were to be expected. They are the teething troubles which arise when the process of standardization tries to penetrate the local soil to become indegenous. The central constraint that runs through the gamut of the problems is the lack of interest in standardization in general and in the work of the Institute in particular. It may appear that this situation results from insufficient appreciation of the importance of standards. While this may be partly true, the real cause lies elsewhere. Interest in standardization has a direct correlation with the state of economic development. It may be expected that this interest will increase as the tempo of economic development increases. What is more to the point, however, is that interest is created when the system of standardization is such as to induce the commitment of an increasing number of organizations in the formulation and use of standards. It is a cardinal principle of standardization that those who have a stake in standards either as a producer or as a trader or as a consumer or as an administrator, should be able to feel that the work of standardization at the national level is their own.

2.3.2 Inadequate availability of technical information and data is also a pointer to a similar conclusion. It is hardly likely that necessary information/data can not be generated within the country. That the information is not forthcoming reflects the fact that standardization is not yet a live issue. In the context of a limited industrial base in Nepal, the initiative to make standardization a live issue rests on the various government departments. In the work of many of them, standards have a good deal of relevance. To cite a few examples, standards are required in the execution of all laws relating to safety and public health, in almost all phases of activities of the public works department (buildings, roads, etc.), in generation and distribution of electricity, in processing, grading and storage of agricultural produce, in bulk purchases for civillian and defence requirements, and so on. Yet these departments are not integrated in the process of standardization in a manner as to feel compelled to contribute freely and fully to the development of national standards.

2.4 Remedial Measures

2.4.1 In one of his papers, A Review of the Work of the Nepal Institute of Standards (Dec 1981), CTA has analysed the nature of the problems and suggested remedial measures. The problems are of a type attributable to the system of working. Therefore remedial measures should begin with appropriate changes in the system itself. The changes are to be directed to bring all organizations having interest in standards (producer/consumer /trader/administrator/technologist) under one National System to plan, formulate and implement standards as a cooperative enterprise. Every member organization must contribute fully to the work involved from the stage of planning to the stage of utilization within its own sphere of interest. The conceptual base for such a system, its organization and methodology have been presented in a series of papers listed below:

i. Framework of a National Standardization System for Nepal (Annexure I).

ii. Establishment of the Deliberative Wing and Work Programme (Annexure II).

iii. Processing a Standard from Proposal to Final Stage (Annexure III).

2.4.2 The systems concept elaborated in the above papers permits of two alternative forms from which a choice has to be exercised by the appropriate authority. The alternatives lie between a Centralized and a Decentralized System of standards formulation. In the former system, planning, programming and formulation of national standards are carried out exclusively by the National Standards Body (NSB), whereas in the latter (Decentralized) System, the work is distributed among specialist organizations, with the National Standards Body (NSB) acting as a coordinator.

2.4.3 A Decentralized System would be able to surmount the types of problems and constraints now being encountered by NIS. However the merits and demerits of the two systems, tabulated below, should form the basis of an objective decision:

Criteria	Centralized Formulation System	Decentralized Formulation System
1. Organizational coherence	more coherent	less coherent
2. Control and Co-ordination	requires less effort	requires more effort
3. Utilization of resources	**less economical	more economical (permitting utilization of the combined resources of a number of organizations)
4. Generation of interest/support	less effective	more effective
5. National identify	clearcut, though narrow based	clear cut and wide based

**This system requires some transfer of authority from departments to NSB. In practice, such transfer is difficult to achieve, with the result that parallel organizations continue to formulate parallel standards leading to duplication of work and at times contradictory specifications.

2.4.4 Even with the new system of working, a change of strategy in the methodology and outlook for standards formulation will be necessary to improve the impact of the Institute's activities. Formulation of standards and their implementation are two distinct aspects, of which one or the other may have more strategic importance in a country. Considering the state of industrialization in Nepal, it would appear desirable that the Institute should lay greater emphasis on implementation than hitherto has been possible. This matter has been focussed in CTA's paper - "A Note on Long Term Plan" (Annexure IV), leading to the proposition that the Institute should reorient its work from the present "formulation oriented" approach to "implementation oriented" approach. As stated in the paper, the

Institute's presence in the production centres and availability of testing facilities on the spot are the sine qua non of an "implementation oriented" work programme. Consequently a Field Unit of the Institute will have to be established in each Industrial District if this strategic change has to be effected.

2.4.5 On the above basis, a Long Term Plan has been worked out (Annexure IV), covering the present as well as the next five year periods (upto 1989-90). A qualitative change in the work to inculcate an attitude of "implementation orientation" and the establishment of organizational facilities such as Field Units with testing laboratories in some of the Industrial Districts are the main features of the proposed plan. Even with such modest objective, the targets projected of some 300 Nepal Standards and 48 Licences for Certification Mark by 1990 represent a good leap forward from the Institute's present stage of development.

2.5 A Bird's Eye View of Proposed Changes

2.5.1 CTA's papers present a full range of concepts relevant for reorganization of the Institute's standardization activities to improve their impact. A bird's eye view of the suggested changes follows:

Current Practice	Proposed Practice
System	
The current system of work is Centralized in NIS to an extent that the sharing of responsibility by other organizations is minimal, even though technical committees do assist the NIS in the formulation stages.	Two alternative Systems (Centralized/Decentralized) have been described for a choice by NCS. The main objective is to bring together all organizations which have interest in standards, to work within the frame-work of a national system so that not only the tasks are shared but also the implementation of standards becomes easier because of wide-based participation.
Organization	
The present organizational structure consists of (a) the Nepal Council for Standards (NCS), (b) the Nepal Institute of Standards (NIS) (as the executive organ) and (c) Sub-Committees for the technical work.	A new Organizational Structure has been proposed in keeping with the objective set out above, involving the following changes: a. Division Councils, with representation of all sectoral interests (e.g. government departments, industry, trade, consumers, etc.) should take up programming and organizing the technical work through Technical Committees, and overseeing the implementation of standards. They have to be created by the NCS. b. Technical Committees should be set up (under the Division Councils) on a permanent basis, subject to reorganization from time to time, to formulate standards that would be realistic and

Current Practice	Proposed Practice
	implementable, reflecting a consensus of opinion of all interested parties. The Committees must be representative in composition.
	c. The recognition of a new category of organization, called the Specialist Organization (SO), is suggested as a part of the Decentralized System, to provide the Secretariat for a number of Technical Committees and share the burden of NIS in this respect. This will serve the purpose of de-centralizing the work, making it more broad-based and more effective in making standardization a live issue.
Procedure	
i. Subjects are taken on hand on the basis of studies undertaken by NIS officials to assess the needs of various sectors.	i. While studies by NIS officials must continue, others should be invited to submit proposals so that needs felt by sectoral interests are reflected in the programme which only can make the programme national. More basically programming should become the function of the Division Councils.
ii. Drafts are prepared by NIS officials and vetted by technical committees.	ii. Drafting should be shared by Specialist Organizations/Sub-Committees (consisting of individual experts) capable of doing this work. For a time, NIS officials may have to help SO's and Sub-Committees, specially in the collection of technical information and data on which to base the drafts. With experience SO's and Sub-Committees should be able to take on this work.
iii. NIS circulates the Drafts to elicit comments, comments are collated and presented to technical committees.	iii. In the Decentralized System, SO's would also do the circulation, etc, as the Secretariat of some of the technical committees. A major change proposed in this phase is the introduction of testing of locally collected samples, so that drafts can reflect the currently produced quality of the articles to facilitate compliance with standards at the implementation stage.
iv. After consideration of the comments by the technical committees, the drafts	iv. In the De-centralized System, this work will be shared by the SO's. A new innovation is proposed in relation to sampling and test methods. It is suggested

Current Practice	Proposed Practice
are finalized and presented to NCS for adoption as Nepal Standards.	that test methods and sampling plans may be adopted from international and other national standards without translation, which will expedite the formulation of standards to a great extent. An Alternative Procedure, suggested for implementation-oriented approach, will begin with testing of samples and assistance for implementation before drafts are prepared (stage ii above), proceeding in the following sequence - Step 1 - Assessment of quality of local production. Step 2 - A preliminary draft reflecting the assessed quality. Step 3 - A programme of research for quality improvement, if assessed quality is low. Step 4 - A revised draft based on improved quality. Step 5 - Further processing from stage iii onwards.
Work Programme	
The work programme is developed by NIS officials, based on industrial surveys.	The work programme must be need based. An initial programme has been worked out. Updating is to be entrusted to the Division Councils for which a procedure has been suggested.

2.6 Certification of Quality

2.6.1 The certification of quality for internal marketing is awaiting the completion of legal formalities under the Nepal Standardization (Certification-Mark) Act, 2037 (Act No. 10 of 2037) and Rules (2038). Under powers conferred on the Nepal Council of Standards, the system of certification, procedure, forms and fees have to be legally established. These actions have been pending for some time since the Council is being reformed.

2.6.2 In the papers listed below CTA has elaborated a suitable system, procedure and forms which, after the Council is formed, can be presented for its consideration -

i. Quality Certification System and Procedure (Annexure V),

ii. Some Comments on the Nepal Standardization (Certification-Mark) Rules, 2038 (Annexure VI), and

iii. A Note on Obligatory Use of Standards, Certification Mark and Certificate (Annexure VII).

2.6.3 As stated before, a Decentralized System for standards formulation is considered more appropriate in Nepal. In theory it is possible to have a Decentralized Certification System as well, but in practice operations are bound to become complicated if the work is to be shared by a number of organizations/laboratories. Certification of quality, especially export/import quality checking, need utmost secrecy, accuracy, and quick disposal - factors which point to centralized operation in which proper administrative control can be exercised to ensure an acceptable standard of operation. A Centralized Certification System, therefore, appears more preferable.

2.6.4 By Act No. 10 of 2037, the Institute should be able to take up some additional functions in relation to quality checking of imports/exports. A great deal of ground work lies ahead before any meaningful projection of such activities will be possible. The development of export/import specifications, establishment of inspection and testing units for quality checking, their location and procedures that would be acceptable for existing trading routes and practices, are only some of the aspects that have to be thought out in details, towards which no steps have yet been undertaken.

3. PROJECT ASSESSMENT

3.1 Project Objectives and Work Plan

3.1.1 The Project objectives were, principally, to -

a. advise and assist in working out appropriate concepts for a system, organization and procedure for standards formulation;

b. to assist in setting up a programme of work and carrying out the activities in the field of standardization;

c. to set up a national certification marking system;

d. to organize a mass-media information programme to promote quality consciousness.

3.1.2 A Work Plan submitted in November 1981 detailed out the various tasks to be performed within a time frame. It assumed a certain sequence of development as below:

i. Formulation of concepts;

ii. Consideration of the concepts and consequent re-orientation of work;

iii. Beginning of operations based on the accepted concepts.

3.2 Progress

3.2.1 Formulation of concepts was expected to be completed by March-April 1982. The following table shows the correspondence between planning and performance.

Task	Planned Period	Documents Produced	Date
A. In Relation to Standardization			
1. Elaboration of a New System	Nov '81 Jan '82	1. Frame Work of a National Standardization System	Nov '81
2. Establishment of a Network of Organizations	Dec '81 Jan '82	2. Establishment of the Deliberative Wing and Work Programme	Jan '82
3. Preparation of a Perspective Programme	Jan '82 Mar '82	3. Processing a Standard from Proposal to Final Stage	Feb '82
B. In Relation to Quality Certification			
1. Elaboration of System and Rules of Procedure	Jan '82 Mar '82	1. Quality Certification System and Procedure	Mar '82
		2. Some Comments on Nepal Standardization (Certification	Mar '82

Task	Planned Period	Documents Produced	Date
		-Mark) Rules, 2038 3. A Note on Obligatory Use of Standards, Certification Mark and Certificate	Mar '82
2. Formation of a Pool of Laboratories	Mar '82 Apr '82	1. A Note For Laboratory Co-ordination Committee	May '82
C. In Relation to Both Standardization and Certification			
1. Long Term Plan	Beginning April '82	A Note on Long Term Plan	May '82

3.2.2 The period of scrutiny of the proposed concepts by the Nepal Council for Standards and organizational changes to put the concepts into action, was to begin from February 1982. But the Council, following the Standardization (Certification-Mark) Act 2037, has not been formed as yet.

3.2.3 A delay in the operational activities thus became unavoidable. For example recruitment of two Experts (Information Expert and Laboratory Consultant) had been under way, but nominations submitted to the Government have to wait until the Council is formed. In regard to Fellowship and Equipment, the current year's allocation remains unspent to date. The following is the overall position:

Input	Amount Spent				Total Spent	Total Budg. Allocation (Rev. F)	Unspent Amount
	1979	1980	1981	1982 (6m)			
39 Fellowship	-	25,561	9,980	nil	35,541	54,152	18,611
49 Equipment	15,736	452	5,651	nil	21,839	76,188	54,349

All amounts are in US Dollars

The Equipment are mainly for audio-visual publicity; hence processing is possible only after the arrival of the Information Expert. The last Objective (3.1.1 d) namely a mass-media information programme must similarly wait for the time being.

3.3 Extension

3.3.1 In this context, CTA, following a review with the Director, NIS, submitted a proposal for extension of the Project in order to ensure that the Project should be able to produce some lasting results. The rationality behind the proposal, as stated in CTA's Memorandum dated 16 May 1982, ran as below:

a. Since the Project may have to go slow until the Nepal Council for Standards is formed, it will cause not only a delay in effecting the project inputs, but will also vitiate the inter-linkage between them requiring a rephasing and extension of the Project.

b. The present quantum of Project inputs was in any case inadequate to produce lasting results.

c. Any revision of the Project at this stage, therefore, should aim at a result-based objective, such as to ensure that -

(i) a system of working appropriate for national interest is adopted,
(ii) necessary organizational structures and procedures are established,
(iii) a long-term plan of targets and inputs are worked out, and
(iv) the system becomes operational.

3.3.2 Two alternative strategies were presented. The First Alternative was to extend the Project to end of 1984 maintaining its continuity. The Second was to break off the Project for some time, resume it by, say, the middle of 1983 and extend it to the end of 1985. The former assumed immediate formation of the Nepal Council for Standards, while the latter took into account the possibility of some further delay in completing the reorganization of the Institute, The Budgetary implications were calculated in the Memorandum to the effect that the first alternative would require an additional fund of $ 240,000 and the second $ 266,000 (TablesI and II, pages 17 and 18).

3.3.3 The proposal is due to be discussed at a meeting of Government a UNDP representatives on 9/10 June 1982, with the possibility of a Tripartite Review to follow.

3.3.4 The Third Phase Project inputs should produce some difinitive results. Assuming the sequence of development mentioned in para 3.1.2 the objective should be to attain a result-based progress as below:

Period	Result
12 months, mid 1983 to mid 1984	Scrutiny of all concepts developed in the current phase; redefining the system, organization and procedure based on accepted concepts; completion of organizational changes required to put the new system and procedure into operation.
18 months, mid 1984 to end of 1985	The new system should be fully operational, that is - - need based programming for standards formulation, - assessment of quality of local production, - preparation of standards by representative committees, - printing and publication of approved standards, - a systematic drive for implementation, and - issue of licences for certification mark, should all have begun in a planned manner. When the Project ends in Dec 1985, the Institute should be able to carry on the activities projected in the Plan (Annexure III) on its own,

3.3.5 The above results are of course subject to the assumption that the government input to implement the proposed Plan will be forthcoming. As mentioned in the Plan out-line, the growth targets envisaged are modest but would be adequate to enable the Institute to set itself on a solid foundation for a more vigorous growth in the following years. The Plan outline indicates areas in which further potential for substantial developments exists. These avenues are still to be explored and if undertaken may well establish the need for continued assistance from UNDP/UNIDO.

4. RECOMMENDATIONS

4.1 Standards Formulation

i. The system, organization and procedure for standards formulation need re-orientation to make them broad-based and suitable for effective participation by all concerned parties (in government, industry, trade, etc). The suggestions contained in the related papers Annexures I to III should receive due consideration of the appropriate authorities.

ii. The programme of work should be "need-based". The initial programme proposed (Annexure II) should be taken as a starting point and subjected to "need-based" scrutiny.

iii. Approved standards should be published and offered on sale to the public for their use.

iv. Standards should be "implementation oriented" to promote actual use by industry, trade, government and other consumer interests.

v. Implementation orientation of work programme is dependent on certain procedural changes on the one hand and some organizational input on the other (Annexure IV). Both should be given urgent consideration, in particular the question of setting up Field Units with testing facilities located in the Industrial Districts.

vi. Long-Term Plans (Annexure IV), with adequate Budgetary support, should form the basis of development of the Institute to bring it in line with national plan priorities in various sectors.

4.2 Certification of Quality

vii. The legal framework of rules and regulations for initiating the certification of quality should be completed as early as possible. Some changes in the Rules have been suggested (Annexure VI). The system, procedure, forms and fees have to be published, for which necessary details are presented in various papers (Annexures V to VII.

viii. The Long-Term Plan contemplated under (vi) above should also cover a projection of activities relating to certification of quality.

ix. At an appropriate time, consideration should be given to the question of setting up a Central Laboratory of the Institute which can cater to (a) certification of quality for internal trade, (b) quality checking for exports and (c) quality checking for imports.

x. For Import/Export quality checking, preliminary studies should be immediately undertaken to establish (a) appropriate policies and procedures, and (b) organizational pre-requisites, which should be practicable and acceptable to prevalent trading pattern and practices. Joint Committees of the Trade Promotion Centre and the Institute, with representatives of industry/trade, should be formed to detail out (i) item-wise specification, (ii) procedure for inspection and testing, (iii) testing facilities and their locations, and (iv) various formalities connected with warehousing and customs clearance, that may arise in connection with the above activities.

4.3 Implementation and Public Relations

xi. In addition to certification schemes, promotional actitities directed to (a) project the work of the Institute, (b) create standards consciousness, and (c) popularize the use of quality mark should be given due importance. Project NEP/77/001 provides assistance of an Information Expert for 6 months but the nature of the work demands that the Institute should have a section of its own to carry on this activity. Initially the proposed Publication Section may look after this work. Eventually a Public Relations Section with a publicity budget should be sanctioned.

5. ACKNOWLEDGEMENT

5.1 This draft Report was discussed with Mr. I.R. Sthapit whose contribution is hereby acknowledged.

5.2 Throughout his stay, CTA received excellent co-operation from the Institute officials. Gratitude is expressed for the same.

5.3 Thanks are due to Mr. John B. Melford, Resident Representative and various UNIDO/UNDP officers for their kind help in many ways.

(S. K. Sen)
Chief Technical Adviser

UNDP, Kathmandu
4 June, 1982

Table I

ALTERNATIVE I

Project Budget Covering UNDP Contribution
(in US Dollars)

Project Title : Assistance to the Nepal Institute of Standards - Phase II

Project Number : NEP/77/001

		Total		Phase I				Phase II				Phase II Extn.			
				1979		1980		1981		1982		1983		1984	
		m/m	$	m/m	$	m/m	$	m/m	$	m/m	$	m/m	$	m/m	$
10	PROJECT PERSONNEL														
11	Experts														
11-01	CTA on Standard & Quality Control	44.6	270,840	4.6	19,219	-	36	4	25,154	12	75,477	12	75,477	12	75,477
-02	Exp. on Information for Standardization	6.7	28,486	3.7	14,793	3.0	13,693								
-03	Match Production Expert	2.0	9,188			2.0	9,188								
-04	Consultants	9.0	54,900									6*	36,600	3*	18,300
11-99	Sub-Total	62.3	363,414	8.3	34,012	5.0	22,917	4	25,154	12	75,477	18	112,077	15	93,777
13	Support Personnel		15,332		74		468	8	390	24	4,800	24	4,800	24	4,800
15	Experts Travel		5,288		105		183				1,000		2,000		2,000
17	Other Costs		3,450				1,450				2,000				
19	Component Total		387,484		34,191		25,018		25,544		83,277		118,877		100,577
30	TRAINING														
39	Fellowship Component		55,541				25,561		9,980				10,000		10,000
49	EQUIPMENT		121,839		15,736		452		5,651				50,000		50,000
50	MISCELLANEOUS														
51	Operations Maintenance		6,388				342		46		2,000		2,000		2,000
52	Reports		2,000								800		400		800
53	Sundries		2,543		640		903		400		200		200		200
59	Component Total		10,931		640		1,245		446		3,000		2,600		3,000
99	GRAND TOTAL		575,795		50,567		52,276		41,621		86,277		181,477		163,577

*Information Expert and Laboratory Consultant together

Table II

ALTERNATIVE II

Project Budget Covering UNDP Contribution
(in US Dollars)

Project Title : Assistance to the Nepal Institute of Standards - Phase II

Project Number : NEP/77/002

		Total		Phase I 1979		Phase I 1980		Phase II 1981		Phase II 1982		Phase III 1983		Phase III 1984		Phase III 1985	
		m/m	$	m/m	$	m/m	$	m/m	$	m/m	$	m/m	$	m/m	$	m/m	$
10	PROJECT PERSONNEL																
11	Experts																
11-01	CTA on Standard and Quality Control	46.6	283,421	4.6	19,219		36	4	25,154	8	50,318	6	37,740	12	75,477	12	75,477
-02	Exp. on Information for Standardization	6.7	28,486	3.7	14,793	3.0	13,693	-	-								
-03	Match Production Expert	2.0	9,188			2.0	9,188										
-04	Consultants	9.0	54,900	*						-	-			6*	36,600	3*	18,300
11-99	Sub-Total	64.3	375,995	8.3	34,012	5.0	22,917	4	25,154	8	50,318	6	37,740	18	112,077	15	93,777
13	Support Personnel		16,132		74		468	8	390	16	3,200	12	2,400	24	4,800	24	4,800
15	Experts Travel		5,788		105		183				500		1,000		2,000		2,000
16	Other Costs		5,450				1,450				2,000						2,000
19	Component Total		403,365		34,191		25,018		25,544		56,018		41,140		113,877		102,577
30	TRAINING																
39	Fellowship Component		60,541				25,561		9,980				-		10,000		15,000
49	EQUIPMENT		123,839		15,736		452		5,651		2,000		-		50,000		50,000
50	MISCELLANEOUS																
51	Operations Maintenance		9,388				342		46		1,500		1,500		3,000		3,000
52	Reports		2,000				-		-		800		-		400		800
53	Sundries		2,743		640		903		400		200		200		200		200
59	Component Total		14,131		640		1,245		446		2,500		1,700		3,600		4,000
99	GRAND TOTAL		601,876		50,567		52,276		41,621		60,518		42,840		182,477		171,577

*Information Expert and Laboratory Consultant together