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**SUGGESTIONS FOR A UNITED NATIONS PLAN OF ACTION
FOR PROMOTING INDUSTRIAL STANDARDIZATION
IN DEVELOPING COUNTRIES**

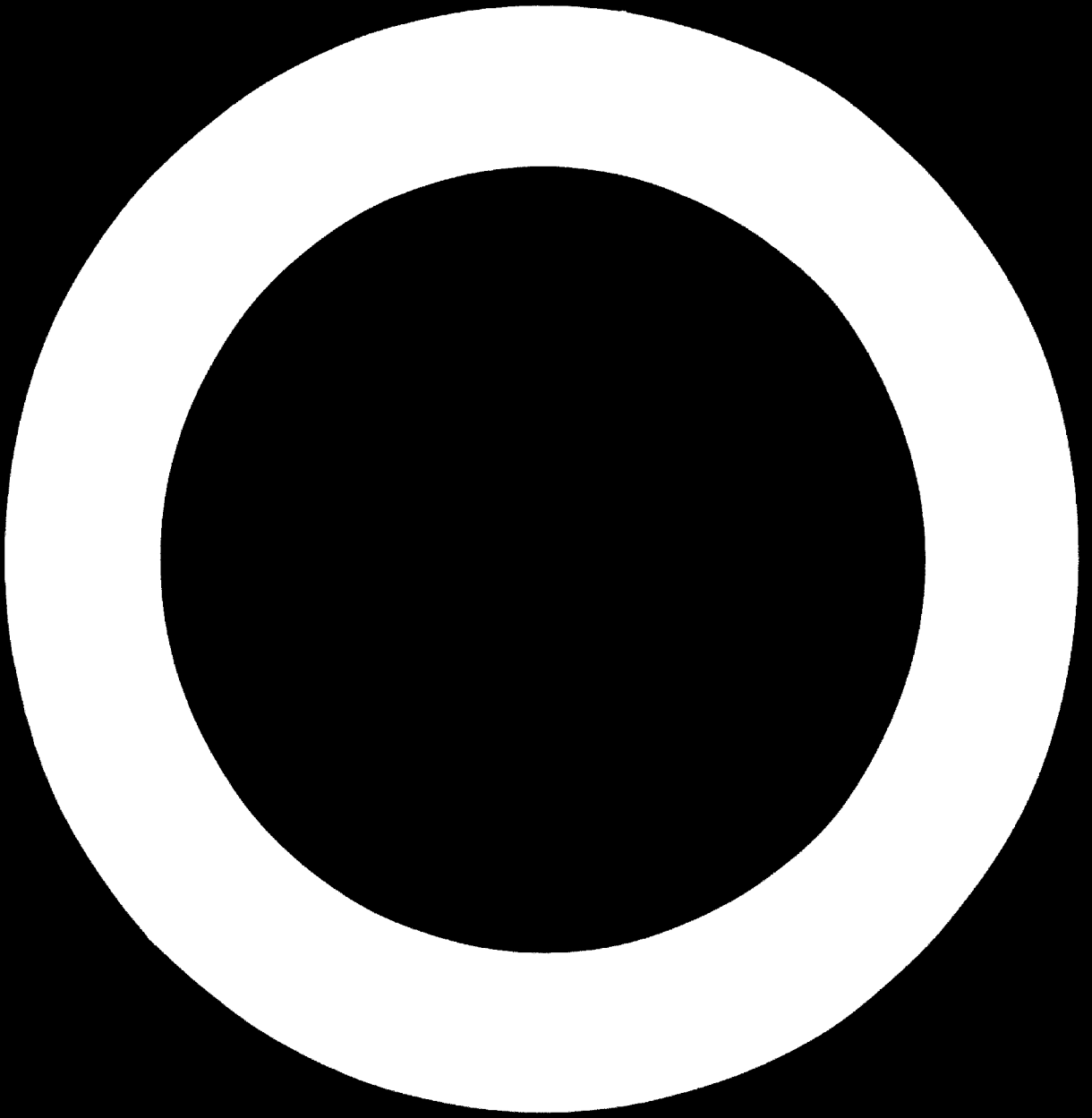
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66-1494

We regret that some of the pages in the microfiche copy of this report may not be up to the proper legibility standards even though the best possible copy was used for preparing the master fiche.



1. INTRODUCTION

1.1 In light of my previous knowledge and experience of national organizations and of the International Organization for Standardization (ISO), I was asked to review the present work of the United Nations Centre for Industrial Development in the field of standardization in relation to developing countries and to suggest lines along which this work could be developed in the future. Specifically the following questions were raised:

- (a) What role can the United Nations play in promoting the principles of industrial standardization in the developing countries?
- (b) What can the United Nations do to extend the volume of their technical assistance for the developing countries in the field of standardization?
- (c) What is the role of seminars and symposia on standardization in addition to the Denmark Seminar to be held in October this year?

During the brief time at my disposal I have tried to go through a record of activities of the United Nations Centre for Industrial Development in promoting standardization among developing countries, and find that they represent a very good beginning indeed, in a rather difficult and relatively new field. Without going into the detailed review of the activities up to date, I would confine myself to the task of making suggestions as to how and to what extent these activities could be profitably extended in the various directions. As regards the specific questions raised above, I feel the answers to these would become self-evident without each one being dealt with separately.

2. IN RELATION TO DEVELOPING COUNTRIES

2.1 It is important first of all to recognize that the term "developing countries" does not refer in any sense to an homogeneous community of countries. Apart from the fact that the natural resources, economic systems, methods of planning and aspirations differ from one country to the other, there is the more significant aspect pertinent from the point of view of our approach and that is the specific stage of a country's development industrially and otherwise. By and large, it would be the stage of development of a country that would determine the type and the extent of assistance which the United Nations could usefully render in the development of its standardization activity.

2.2 For the purpose of this report, therefore, I would categorize the developing countries in the following groups:

- Group A - Countries in the very early stages of development where little, if anything, has been done towards planning of industries or towards standardization effort;
- Group B - Countries where development has either been adequately planned or is in actual progress, and where the value of starting a standardization movement has been recognized and some concrete steps taken in that direction, though the standards activity has not developed far enough to make an adequate impact on the economic life of the country;
- Group C - Countries where development of industry has made significant progress and also where the standardization movement has gone far enough to make a significant contribution towards this development.

2.3 Obviously, any classification like this cannot be considered either exhaustive or universally applicable but, for our purpose, it should suffice to enable us to delineate profitable lines of approach for United Nations assistance to the different groups of countries.

2.4 Taking the countries of Group A, their needs could perhaps be listed as follows:

- (a) Helping them recognize the value of and understand the philosophy of standardization and the part it could play in planning the various development schemes with the view to getting the most out of them. This would involve making available published literature and opportunities for policy-making personnel to participate in suitably designed conferences, seminars and symposia, etc. (see also paragraph 4.2).
- (b) Detailed surveys of existing conditions within the country with a view to planning the initiation of standardization activity, for example, through the establishment of national standards bodies. These surveys could be undertaken, if need be, by experienced specialists made available by the United Nations.
- (c) The training of specialist personnel of the country itself to enable it to man the standardization programme outlined as a result of such surveys and planning; this could be done both by making available fellowships for such personnel to take part in the currently available training programmes, for example those in France and India, and through travelling fellowships to enable them to make study tours of countries where standardisation is effectively in progress.

- (d) While dependence of the countries on trained personnel of their own should be considered essential and encouraged to be developed, it may be necessary in certain cases to make available specialists and experts for short periods from other countries either in specific fields of technology or in the organizational techniques of standardization as such.

2.5 As regards countries of Group B, it will be recognized that, apart perhaps from items (a) and (b) of the preceding paragraph, they would have needs similar to those indicated under (c) and (d) above and, in addition, may require:

- (a) Expert review of the existing standardization movements particularly with a view to pinpoint the areas in which improvement may be called for, and discovering means for expediting the promotion of standardization movement.
- (b) As a result of such reviews or otherwise, it may be found that the extension of standardization activity in a given country requires additional and extensive effort towards attaining widespread implementation of standards in actual practice; such efforts may include securing official recognition of national standards, introduction of certification marks indicating conformity of goods to standards, initiation of company and industry standards movements involving intensive training of personnel, or other similar means. In each of these cases, specific types of assistance would be called for in which the United Nations could play an important part by way of planning the schemes and making available the necessary resources, both manpower and financial.

2.6 Countries in category C, however, would not generally need the types of assistance as outlined in the case of Groups A and B above, but they could play an important role in assisting the United Nations in organizing the various activities aimed at helping countries of categories A and B by way of making available the specific types of experience which would be directly useful and perhaps also, to a limited extent, the experienced manpower. Nevertheless, countries in this category may have specific needs of their own in meeting of which the United Nations could make its contribution, as, for example:

- (a) In certain areas these countries may require the development of a comprehensive programme of standardization in a specific field of industry for which either teams of specialists or firms of consultants may be needed, or for which extensive research programmes may have to be organized. The United Nations could play a very important role in helping to meet these needs.
- (b) Normally, the demand for specialist personnel in the relatively advanced among the developing countries is many times greater than availability, and the calibre of specialists available from the relatively more advanced countries through international aid programmes is generally such that, at best, it could be relied upon to fill relatively junior posts. Nevertheless, in view of acute shortages, even this level of personnel could be of great help and should be made available more freely and more promptly. I would refer to the paper recently written for the United Nations expressing some of my thoughts on this question.^{1/}

^{1/} UNCTAD and ISI by Dr. Lal C. Verma. This paper will be published by UNCTAD in a volume containing appraisals of the Technical Assistance programme.

- (c) In order to meet the manpower shortage in the field of standardization, such countries would require extensive training programmes to be organized for undertaking standardization tasks at various levels, for example at the company level, at the national and international levels. Apart from the assistance that may be given to these countries for organizing such training programmes, it may be worthwhile to consider the establishment of a central training centre to meet the needs of training of countries of all the three categories. This point is further dealt with in paragraph 4.7 below.

3. IN RELATION TO ISO AND IEC

3.1 As far as international organizations dealing with standardization are concerned, it may be recognized that the International Organization for Standardization (ISO) constitutes the most representative world body in which all national standardization organizations of importance are well represented. The International Electric-technical Commission (IEC), which acts as the electrical division of ISO, operates as an independent entity as far as its financing and administration are concerned, although in matters concerning technical work, it forms a part of ISO. The position being as unusual as it is, it is important that, while dealing with ISO, the United Nations and organizations of the United Nations family should constantly keep in mind the independent character of IEC and may, if possible, deal directly with it on all matters, particularly those concerning electrical questions. It must, however, be admitted that any influence brought to bear in bringing ISO and IEC organizationally closer together would be a step in the right direction.

3.2 The Development Committee of ISO (DEVCO) was organized only a few years ago to look into the standardization problems of developing countries and has, so far, worked without active participation of IEC although it is clear that electrical problems of developing countries could hardly be separated from those related to other industries. But this is not an aspect of ISO-IEC relations in regard to which the United Nations could do very much, it is brought out here merely to indicate the kind of organizational lacunae that are brought about by the existing arrangements, of which the United Nations must be aware.

3.3 On the recommendation of DEVCO, ISO has already adopted a procedure for dealing with requests received from developing countries for assistance in organizing national standardisation movements. Under this arrangement, ISO General Secretariat is to circulate such requests among its member bodies to find out the extent to which any member body may be in a position to assist the requesting country. In this manner, services of expert personnel available in the member countries of ISO can be placed directly at the disposal of the enquiring country, in case the latter is prepared to foot the bill. On the other hand, if financial assistance is also required, the General Secretariat of ISO would refer such requests to international organizations, such as the United Nations.

3.4 It appears to me that the United Nations together with ISO could usefully develop a modus operandi more suited to the situation, so that all such requests and enquiries for assistance from developing countries could be more expeditiously dealt with, including those from within the ISO member bodies and from outside ISO membership that may be received by ISO. In developing such a procedure, it would be pertinent to keep in mind that the ISO and IEC agencies could be appropriately used as centre for two-way traffic; firstly, to determine the needs and requirements of developing countries, and secondly, for locating the technical and expert personnel in

other countries for meeting these needs. However, as has been observed in some cases previously, formal procedures often involve avoidable and unnecessary delays. It is important, therefore, to bear in mind that any procedures designed for joint United Nations-ISO effort should ensure that assistance required is made available as speedily as possible.

3.5 ISO has nominated from time to time its liaison officers to the various members of the United Nations family, including ECAFE, ECE, ECLA, ECA, FAO, ILO, UNESCO and the United Nations itself. The main idea in nominating these officers was to keep the United Nations Agencies continually informed of the existence and facilities of ISO in the field of standardisation and to establish such exchange of information, technical and otherwise, which may help the work of ISO and IEC on the one hand and the United Nations Agencies on the other hand, in specific fields of standardisation in which they may be engaged. In view of the existence of ISO and IEC - organisations specially designed to meet the demand for international standards - it should be considered worthwhile for any other international organization, either within or without the United Nations family, to hold prior consultations with ISO or IEC before undertaking any projects dealing with standardization. This approach, if widely adopted, is bound to prove helpful particularly because within the ISO and IEC family national standardization organisations from each member country would be available for consultation, which, in many cases, are not governmental agencies but are national bodies having direct contact with industries and enjoying national status in the field of standardization within their own countries.

3.6 As a result of such consultation it might happen that special projects may have to be established for evolving international standards of common interest to developing countries (or for that matter even to developed countries), which may be advantageously undertaken by ISO or IEC.

In such cases, the financial burden of undertaking the projects could perhaps be usefully shared by the United Nations or such members of the United Nations family as may be directly concerned.

3.7 Most developing countries face the common problem of non-availability of freely exchangeable currency, which makes it difficult for them to participate, as actively as may be desired, in the activities of the various technical committees of ISO and IEC. There are many cases where important contributions could be made by the developing countries to the technical work of ISO and IEC and their own interests safeguarded. Besides, such participation is a valuable opportunity for delegates of developing countries to come in direct personal contact with their opposite numbers from developed countries and thus gain from the latter's knowledge and experience. In the Indian experience there exist many cases where lack of participation or inadequate participation by Indian experts has led to the drafting of international recommendations not always suitable to the economic needs of the country. This situation either causes delays in processing the international recommendations or, if they happen to go through as such in the original unsatisfactory form, they remain unacceptable to the national organization. The United Nations may, therefore, usefully give some consideration to the possibility of relieving this situation by making available the necessary convertible currency to enable the representatives of developing countries to participate in overseas meetings of technical committees of ISO and IEC. In all such cases it is to be emphasized that making the convertible currency available should not involve financing the national delegations, for that should always remain the responsibility of the national standards bodies or the industry of the countries concerned, which is an essential prerequisite to preserve the representative character of the national delegations.

3.8 Notwithstanding the fact that the United Nations is a governmental organization and many national standards bodies of ISO and IEC in developing and developed countries are non-governmental or quasi-governmental, it would be profitable to explore ways and means of promoting, as far as practicable, direct communication between the United Nations and the national standards organizations or at least to keep the latter informed of all United Nations action in relation to standardization.

4. GENERAL

4.1 In most developed countries when one talks of industrial standardisation, one automatically distinguishes between industry and agriculture. From the point of view of most developing countries, however, agricultural activities represent an important sector of economy in which large fractions of populations are engaged. It is suggested therefore that in dealing with standardization problems of developing countries, the United Nations bear in mind their need for standards in the field of agriculture, for example those dealing with implements and machinery, fertilizers and insecticides, propagation materials and grading of produce, forestry products and animal husbandry, and so on.

4.2 Discussions at the Denmark Seminar will perhaps indicate the directions in which United Nations activity in the field of standardisation might be extended and developed. But what would appear to me to be an important first step to take is to make a systematic approach to the problem of bringing home to policy makers of all developing countries the importance of initiating national standardization movements in their countries at an early date. To this end, it would appear useful to consider the possibility of holding short-term conferences of policy making personnel from countries in each of the regions, followed perhaps by a world-wide conference of all regions to review the steps taken by the various countries concerned. The objective of such conferences would be mainly to get the ball rolling in each country, where industrial development is being planned.

4.3 As a practical measure, it may be suggested that such Regional Standards Conferences may be organized continuously with some other regional conference in which policy-makers would normally be participating, such as the Regional Industrialisation Symposia to be held during the winter and spring of 1965-66. This will not only save time and expense but also ensure good attendance of the appropriate personnel. These conferences need to be of one or two days' duration only and should be addressed, among others, by outstanding world figures in the field of standardisation.

4.4 The world-wide conference suggested above should follow at a discreet interval after the regional conferences so as to allow adequate time for action by individual countries, thus enabling a worthwhile review of such actions to be made.

4.5 If conferences of the type suggested above are agreed to, the objectives of the Danish type of seminars and symposia could perhaps be somewhat re-oriented so as to provide platforms for the exchange of experiences of senior executives and specialists engaged in standardization in the various developing countries and for assisting each other in the solution of special problems and difficulties that may have been encountered in the propagation of standardisation movements.

4.6 Seminars dealing with specific technical subjects of common interest to groups of developing countries may also prove useful as exemplified by the Latin American Seminar on standardization in the field of steel held a few years ago, at which the Indian experience of the ISI Steel Economy Project furnished the basis for the evolution of a plan to be followed by the Latin American countries. Similar seminars on standardization in the field of forestry would perhaps be of interest to ECAFE and ECA region countries, and there may be several other subjects of common interest. The United Nations would be serving a useful purpose if such possibilities were fully exploited.

4.7 In an earlier paragraph (see 2.6(c)) reference was made to the need for training of personnel of the developing countries for undertaking active standardization work at various levels -- national, industrial and company. The Indian experience has pointedly brought out the fact that the large-scale demand for technical personnel by every new industry brings about such a shortage of experienced engineers, technologists, and scientists that the manning of posts in the field of standardization becomes extremely difficult. In order to meet this difficulty, the Indian Standards Institution has had to organize for itself a training programme for young engineers and graduates just out of college to enable them to undertake the responsibility of standardisation projects within the Institution. In addition, ISI has been forced in

recent years to establish training programmes for company standards engineers already employed or intended to be engaged in in-plant standardisation work by various industries. The former training programme is spread over two years while the latter varies from one week to two weeks duration, with periodical follow-up review sessions.

4.8 It is obvious that the need for trained personnel in newly developing countries requires special attention of the United Nations. It is an area in which United Nations resources could be advantageously utilized to provide a positive service. The seminars and symposia discussed above cannot be considered sufficient to meet this rather large-scale and continued need, nor can the short-term appointment of specialists from developed countries serve the purpose. A central international training centre for standardisation engineers suitable for all levels of work is perhaps the answer and the United Nations may consider the possibility of establishing one. The Indian Standards Institution would be glad to make available its own experience and facilities in this field.

4.9 It is understood that a proposal is under consideration to appoint at the United Nations Headquarters a standardisation specialist to look after the United Nations programme in this field. It is considered a welcome move which will fill a positive need and go a long way in expediting the achievement of the objective which the United Nations has set for themselves in helping developing countries.

4.10 The United Nations publication entitled "Industrial Standardisation in Developing Countries" represents an excellent effort in making available the background knowledge to the developing countries interested in the subject. It is expected to provide the basic background document for the Denmark Seminar next October. Some suggestions may emanate from the seminar discussions for improvement of this publication, but I have a feeling that it could perhaps be made into a really useful guidebook or handbook of value for use by all newly developing countries which may be interested in setting up standardisation activity. The directions in which improvements could be effected would be:

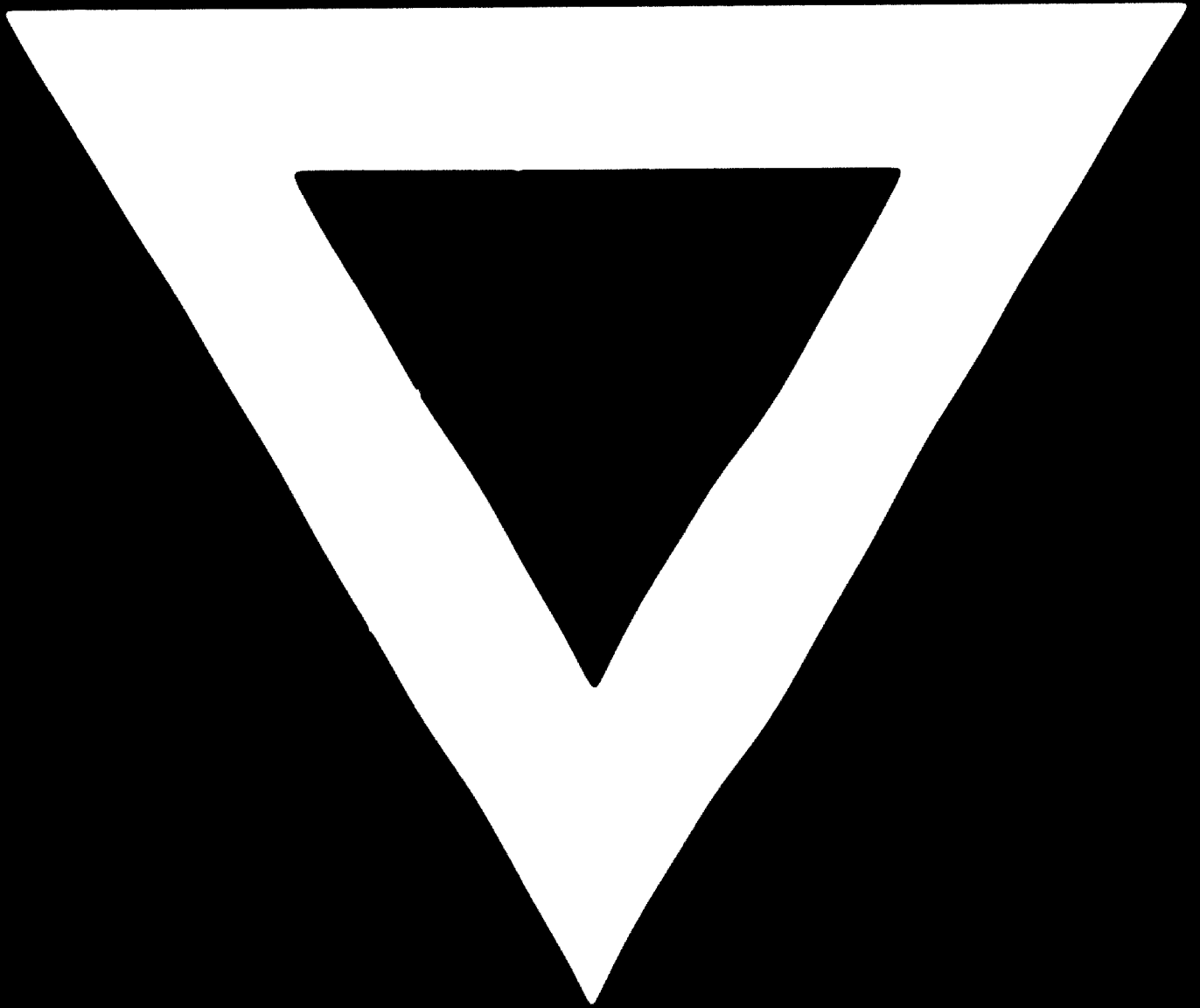
- (a) By concentrating on essential principles and procedures and eliminating a great many details which tend to distract the attention of the reader who may be coming in contact with the rather strange subject for the first time.
- (b) By attempting to achieve an amount of balance in the presentation and emphasis, for example, the material on company standardisation could be considerably curtailed and a new chapter on certification marking usefully added.
- (c) By citing some actual examples of standardisation problems relating to developing countries and their factual solutions, in order to emphasise and illustrate the relationship between industrial planning and standardisation and to bring out the benefits that accrue therefrom.
- (d) By considerably limiting and bringing up to date the material presented in Annex I on national standards organisations of various countries.
- (e) By deleting most other annexes dealing with company standardisation which appear to be unnecessary in a document of this type.

If considered necessary, IEO could take up the task of re-editing this publication or compiling a new one in the light of the above suggestions and those that may emanate from the Summit Seminar.

4.11 It is recommended that, on the basis of the recommendations contained in this document and other suggestions that may be available, a consolidated plan for United Nations action may be evolved. When and if this is done, it would be desirable that the plan is given wide publicity among all the developing countries of the world, drawing pointed attention to the various facilities that the United Nations would be in a position to provide. The plan may also usefully be publicised among the organisations of the United Nations Family and IEO and IEC member bodies, whose co-operation and collaboration constitute an important ingredient of the whole programme.

4.12 In conclusion, I would like to record my deep appreciation for having been asked to make recommendations for developing the United Nations programme of work in this very important field. My only regret is that due to the shortness of time available to me, I was obliged to limit my presentation to almost telegraphic language and not to be able to elaborate adequately on any of the proposals in detail, or give proper justifications for them. Nevertheless, it will be my pleasure to remain at the disposal of the United Nations for helping to work out details of any or all of the recommendations as may be desired.





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