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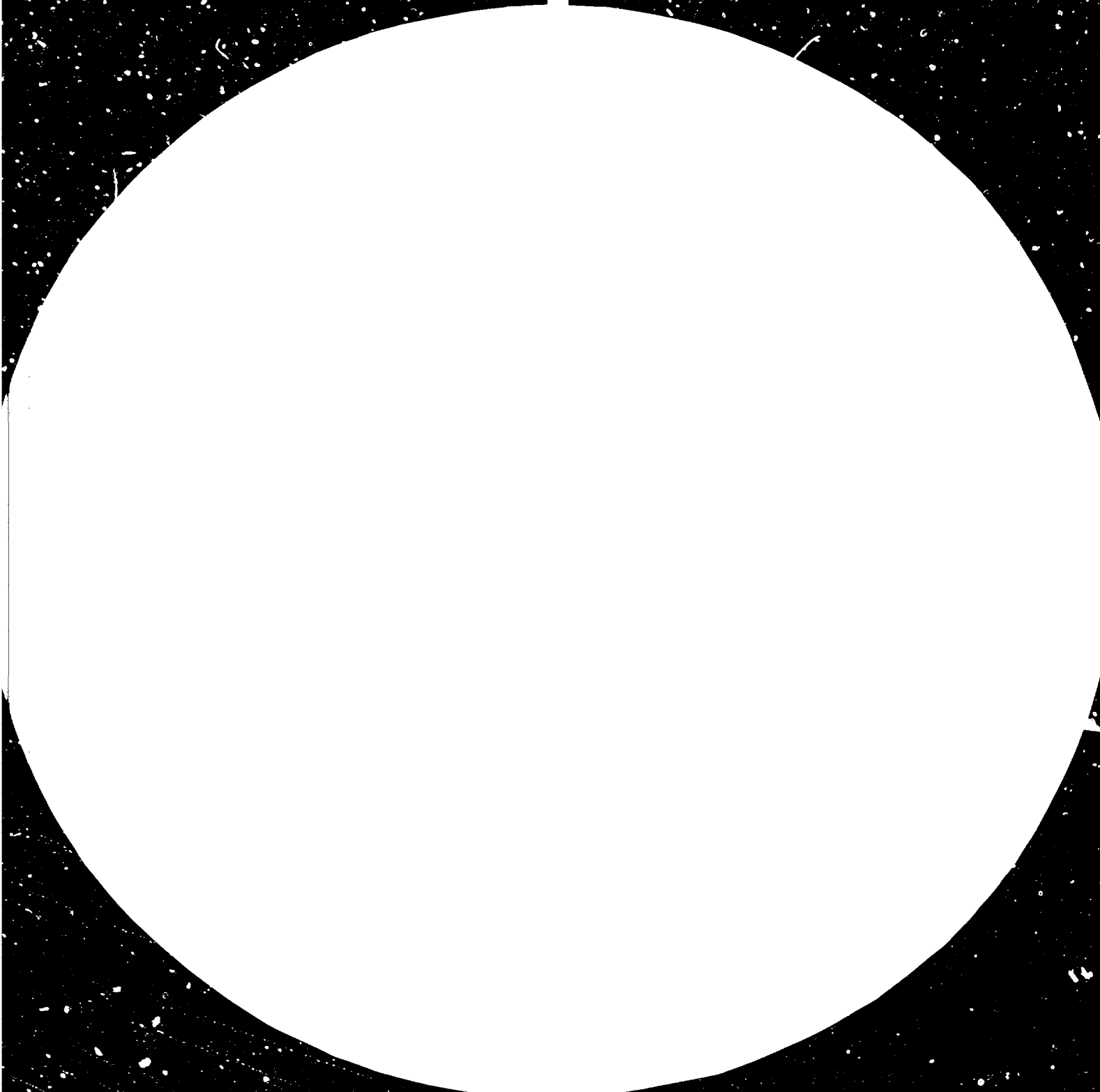
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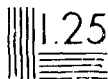
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THE SUBJECT AND THE POSSIBLE ORGANIZED FORMS OF CO-OPERATION ON THE
QUESTIONS OF STANDARDIZATION BETWEEN DEVELOPING COUNTRIES*

prepared by

D. Lisica**

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** Section Head, Federal Standardization Institute, Belgrade, Yugoslavia

1. Introduction

Both the developing and developed countries realize that it is of mutual interest that the developing countries must become an active partner to other countries regarding the elaboration and application of standards. In order to attain this goal many problems have to be solved. It is obvious, however, that establishing corresponding forms of cooperation between the developing countries represents a problem in itself; this problem also represents a condition with the view to attaining the mentioned goal.

Cooperation on harmonization of standardization systems represents one of the prerequisites of successful trade exchange among the developing countries, as is also the case with other countries. At the same time, cooperation is indispensable in finding out, by joint efforts, solutions which will secure rapid industrialization by which heterogeneous technical and technological systems will be avoided, as well as subjection to technical and technological dependence upon those countries delivering equipment.

Cooperation is also necessary for the elaboration of the concept of coordinated influence on the work of international organizations for standardization, to enable passing of international standards in which the interests of the developing countries will be present equally with the interests of other countries, since international standards are considered to be the basic instrument for technical and technological harmonization.

At the Ministers' Conference of Non-Aligned Nations held in February 1981, the subject concerning cooperation of the non-aligned nations in the field of standardization was brought forward for consideration, starting with the importance which standardization may have in the activities aiming at the constitution of a new economic system; therefore it is estimated that it will fill the gap existing in overall cooperation among the developing countries. Special attention should be drawn to consideration of the problem related to the transfer of knowledge of the developed countries to the developing countries in the field of standardization. Due to the differences in conditions in the developing countries in which standardization is to be developed, special attention should be paid to the conditions existing in the developed countries. Mechanical transfer of the practice of the developed countries cannot give the expected results. The developing countries alone must, with joint efforts, adjust procedures of standardization to the conditions of their countries. It is essential to direct integral cooperation in the field of standardization through other economic and technical activities of the developing countries which are run by the government and economic bodies of the countries.

2. The need for cooperation

For the promotion of mutual trade between developing countries, it is indispensable to establish, among other things, cooperation in the solution of the problems of defining and assurance of the quality of products which are the subject of exchange. Though it seems obvious in itself that no trade can be achieved unless special attention is drawn to the problem of quality, it often happens in trade between the developing countries that quality is considered only when the goods arrive at the border of the importing country, or even worse when the goods have already reached a consumer. Both cases cause dissatisfaction and misunderstanding between the countries dealing with trade. Consequently, mistrust appears between the developing countries regarding the possibilities of qualitative exchange;

therefore, by taking the line of least resistance, the preference in exchange is given to the developed countries. This weakens enthusiasm and political willingness for cooperation between the developing countries when exchange is involved.

With insight into this problem one realizes that the agents of exchange do not know that modern trade cannot successfully be dealt with if the activities of contemporary organized standardization are not observed with regard to the assurance of corresponding quality; passing and application of standards for the characteristics of finished products, for the procedures of making products and the materials the products are made from, for the procedures of the checking characteristics, etc. Nowadays, the number of products put on the international markets is so large and their characteristics so complex that their definition and verification require a great number of specialized experts working for a long time. Therefore, classic "agreements" on quality, without the application of the systems of standards, prepared in advance and conforming with the systems of other countries, simply cannot suffice. Cooperation on the harmonization of the systems of standardization thus represents one of the prerequisites of successful exchange between the developing countries.

The need for harmonization of the systems of standardization arises from the "Agreement on Technical Barriers to Trade" passed by GATT. The developing countries certainly are less able to meet the requirements of the said agreement, thus making the need for cooperation with the view to solving the problem of the development of standardization and their incorporation in the international trade.

The process of industrialization in the developing countries now also requires cooperation regarding the application of standardization. In fact, all developing countries are facing the same problem of selecting the equipment and technology which industrialization of the country concerned requires; of whether to decide to choose one supplier and one country which will provide all equipment and technology or to choose several suppliers from many countries subject to the suitability of the offered conditions. In the first case, with careful thought, the equipment and technology which make a harmonious system, can be provided under two unfavourable effects: inevitable technological and economic dependence upon the supplier exists due to the dependence on spare parts, raw materials and maintenance and replacement of parts and equipment; the second unfavourable effect is the fact that the price paid for industrialization is higher than if the equipment were chosen subject to a supplier that offers a lower price. However, when choosing and ordering the equipment from many suppliers, if the requirements of standardization and typization were not taken into account, it would lead to a disharmonious technical and technological system in the industry of the country which is very expensive for maintenance due to a large number of parts and materials, and as a system also, very ineffective and inadequate for further promotion.

It is not easy to secure a harmonious system of standardization within industrialization, not even for those countries with a long tradition in organized work on standardization, not to mention the countries which have no experience in industrialization or knowledge of the rules of standardization, as is the case with many developing countries. The above reasons show that cooperation between developing countries is the only way of solving this common problem. Namely, the solution of the problem cannot be „bought“ from the developed countries; they have overcome the period of industrialization with systems of standardization which more or less suit themselves; nevertheless, this does not mean at all that they may suit others. A universal system of standardization, therefore, does not exist. It has to be created. Specific needs of the developing countries, in this respect, are in their immediate need for this system as a basis of strategic determination in industrialization, while for the developed countries it is only a matter of future orientation which they will gradually establish in accordance with the replacement of existing equipment and technology. Therefore, cooperation between the developing countries concerning accelerated establishment of the standardization system, necessary for rational industrialization, is indispensably needed by these countries.

Standards of international organizations for standardization, such as ISO and IEC, should constitute this universal system of standardization. However, if the work of these organizations were taken into consideration it would be found that the developed countries are predominantly present and have almost complete influence on the subject and the way of work of these organizations. Moreover, the developed countries act in an organized way, mutually coordinated (sometimes from bloc positions) which enforces their domination even more. The developing countries, even when present, act disharmoniously and without a uniformly elaborated concept. Thus their influence is even less. Accordingly, it is necessary to elaborate by means of cooperation a concept of coordinated actions in international organizations for standardization and to realize the influence of developing countries upon the work of these organizations in order to involve the developing countries' interests equally.

3. The present situation of cooperation between the developing countries

The extent to which one country gives importance to the activities of standardization may be indicated by the development of national institutions for standardization in the country concerned. The possibilities of realizing cooperation with other countries are higher, provided that national institutions for standardization are more developed and more effective. Therefore, we shall begin consideration of the situation of cooperation between developing countries with an analysis of data concerning the development of national institutions for standardization.

When reviewing the data given by the International Organization for Standardization, regarding the number of employees in national institutions for standardization, the annual budget, year of establishment, and number of standards passed (situation in 1977), it can be concluded that about 30 developing countries have relatively developed institutions for standardization (see table 1). This table does not include some of the developing countries that are ISO members, either due to the shortage of data about them, or due to the fact that the number of personnel and the number of the standards passed is significantly below those of other countries indicated in the table. These are: Albania, Cyprus, Indonesia, Ivory Coast, Lebanon, Libya, Morocco, Sudan, Tanzania. Membership of international organizations indicates the readiness of a country to establish cooperation with other countries. In view of the above stated, it should be pointed out that the number of developing countries which are members of the International Electrotechnical Commission (IEC) is remarkably lower than the number of members in ISO. Members of IEC are: Algeria, Argentina, Brazil, China, Cuba, Egypt, India, Iran, Korea (dem. rep.), Korea (rep.), Mexico, Pakistan, Turkey, Venezuela, and Yugoslavia, 15 developing countries.

The majority of developing countries which are members of ISO, participate in the work of a special committee for the developing countries (DEVCO); this indicates their readiness for cooperation. The following countries have not registered as participants in this committee: Albania, Bangladesh, Chile, Korea (rep.), Mexico, Morocco, Pakistan, and Venezuela. The developed countries also participate in the work of this committee. The task of the committee is as follows:

- To identify the needs and requirements of the developing countries in the fields of standardization and related areas (e.g. quality control, metrology and certification, etc.) and to assist the developing countries as necessary in defining these needs and requirements.
- Having established these needs and requirements, to recommend measures to assist the developing countries in meeting them.
- To provide a forum for the discussion of all aspects of standardization and related activities in developing countries, and for the exchange of experience among the developed and developing countries, as well as among developing countries. This should be done in close liaison with the specialized agencies of the United Nations,

IEC and ISO Council committees.

For the period of 1981-1982, DEVCO has established a concrete programme of work implying the following elements: A. Identification and accommodation of needs, B. Preparation of guides, C. Training: i) regional training seminars, ii) training of technical officers for national standards bodies and iii) training of technical officers for ISO/TC/SC secretariat functions, D. Study tours by senior officers of national standards bodies, E. Participation in technical meetings. F. Development of standards related to products.

From the standpoint of the promotion of cooperation among the developing countries, it is very important to notice that numerous countries are members of regional organisations of standardization, as follows:

African Regional Organisation for Standardization, ARSO

Egypt, Ethiopia, Ghana, Guinea, Ivory Coast, Kenya, Liberia, Libyan Arab Jamahiriya, Malawi, Mauritius, Niger, Nigeria, Senegal, Sudan, Togo, Tunisia, Uganda, United Republic of Cameroon, United Republic of Tanzania, Upper Volta, Zambia.

Arab Organisation for Standardization and Metrology, ASMO

Algeria, Bahrain, Iraq, Jordan, Kuwait, Lebanon, Libyan Arab Jamahiriya, Morocco, Oman, Palestine, Qatar, Saudi Arabia, Sudan, Syria, Tunisia, United Arab Emirates, Yemen (Arab. rep.), Yemen (People's Dem. Rep of).

Council for Mutual Economic Assistance, CMEA

Viet Nam, Cuba, Mongolia.

Comision Panamericana de Normas Tecnicas, COPANT

Brazil, Panama, Venezuela, Mexico, Bolivia, Central American countries: (El Salvador, Honduras, Costa Rica, Nicaragua, Guatemala), Colombia, Chile, Ecuador, Paraguay, Argentina, Peru, Trinidad and Tobago, Uruguay.

The aims of these organizations are chiefly as follows:

- to draw up regional standards,
- to cooperate with standards organizations in other countries and with the international bodies in the field of standardization, metrology and quality control.

The aim of ARSO is also to promote social, industrial and economic development and to provide consumer protection and human safety by advocating and establishing activities concerning standardization in Africa.

The aim of COPANT is also to act as liaison and coordination body between the national standards institutions and ensure their representation when so required.

In Asia, the Economic and Social Commission for Asia and the Pacific is initiator of the establishment of

cooperation in the field of standardization among its members. For this purpose, a meeting of the Heads of Standards Institutions in the Region was held in November 1980. At this meeting the significance of cooperation among the countries of this region regarding the development of standardization activities was underlined. The cooperation reflects in exchange literature on their national standards, draft standards, reports, bulletins and other material among themselves. Information on operation of certification making systems, programmes of training and special projects are also supposed to be exchanged under general agreements. From the standpoint of the least developed countries it is important to point out the prediction that such facilities for exchange of information could be intended to other countries in the region that are in the process of establishing national standards bodies.

Regional organizations are certainly very useful and probably an inevitable practical form of cooperation among developing countries, and the aims these organisations have laid down are in accordance with endeavours to meet the needs for the development of standardization of the countries of a specified region. Regional organisations may determine particularities of the requirements of the region involved; these particularities should be borne in mind when passing international standards: particularities due to climate conditions, tradition, level of industrial development, etc. Their advantage is in the fact that the countries due to relatively small distances may easier be in contact.

In the survey of the present situation of cooperation of the developing countries in the field of standardization, it should be pointed out that at the Ministers' Conference of Non-Aligned Nations, held in New Delhi in February 1981 a very important conclusion was reached. This conclusion confirms the need for cooperation between the countries belonging to the non-aligned movement with regard to standardization, metrology and quality control, and states as follows:

"Bearing in mind the part played by standardization, measurement and quality control activities in the processes of industrialization, transfer of technology and industrial co-operation among developing countries, and their important role in stimulating and promoting trade relations, the Ministers welcomed the establishment of a working group of member countries interested in the formulation of an action programme for co-operation among non-aligned countries in standardization, measurement and quality control.

In that connection the Ministers recognised that rapid progress by the developing countries in that area formed an essential part of the efforts for the establishment of the New International Economic Order. They therefore instructed the Working Group to submit specific proposals to the Coordination Bureau with a view to the adoption of the cooperation programme in standardization, measurement, and quality control by the Seventh Conference of Heads of State or Government of Non-Aligned Countries".

When assessing the degree of overall cooperation achieved among the developing countries, the following reasons may be specified as preventing the developing countries from representing an organized force which is in a position to influence more essentially the development of international standardization, and to a great extent meet the needs of these countries regarding the development in the field of standardization:

- to arouse the awareness of the need of standardization in many developing countries is a slow process. The fact is that about 30 developing countries do not attempt any organized work on standardization while a large number has just started the process of standardization;
- in the majority of developing countries there are no favourable conditions for more effective organizing of standardization due to poorly developed industry and shortage of industrial experts;
- poor financial possibilities of the developing countries,
- transfer of knowledge and experience of the developed countries to the developing countries, in the field of standardization, is a slow and difficult process;

— questions concerning the development of standardization are not sufficiently present in the bodies and forums of the developing countries dealing with the questions related to the economic and social development of these countries.

We shall consider in more detail the question of transfer of knowledge and experience as it is most connected with the goal of this paper and since it touches on other essential questions.

4. The possibilities of using the experience of the developed countries

Many developed countries have courses and seminars for the developing countries for the purpose of transferring their knowledge and experience to the developing countries. Such courses and seminars are held by France, Great Britain, Germany and Japan, almost regularly. It should be underlined that some of the developing countries having greater experience, such as India, also have courses and seminars in the field of standardization. More detailed information on all courses and seminars, as well as conditions for participation are compiled by ISO and UNIDO, in order to convey and pass the required information to the countries interested in the matter.

The courses and seminars usually face difficulties in solving organizing problems, such as: travel expenses, the cost of accommodation, lecturers expenses, providing a convenient place, terms and conditions for the courses. These difficulties are more or less overcome by obtaining financial and expert assistance, scholarships, etc. However, this paper intended to point out the difficulties arising from the absence of application of some of the solutions used by developed countries in the developing countries. Namely, the work technique used by developed countries in their national institutes for standardization is not applicable under the conditions existing in the developing countries, regarding some essential questions of these countries.

The technique used by developed countries is based on conditions existing in their countries, i.e. economic enterprises are conscious of the significance of standardization and accordingly interested in the elaboration of national standards and are ready to send their experts to work in working bodies of national institutes for standardization, i.e. to work at an international level. In the developing countries, however, due to poorly developed industry, as a rule there is neither consciousness about actual need for national standards, nor enough enterprises which can or wish to send their experts to work on the elaboration of national standards. Consequently, in the developing countries, the approach to national standards organizing must be slightly different from the way the work on elaboration of national standards is organized in developed countries, especially at the initial stages.

The second difficulty refers to the answer to the following question: which national standards should be passed, how to foresee the final aim regarding the number and kind of national standards which should be passed, and which standards should be used up to the time the national standards will be passed. Namely, the developed countries which transfer knowledge of their work technique of the elaboration of national standards, use the technique which is applied when a large number of national standards is involved made over decades and where it is only necessary to proceed with such work on passing new standards and revision of a certain number of standards already passed, but outdated. If the same technique were applied to the developing countries which do not have national standards at all, it would mean waiting for decades to pass in order to reach the situation the developed countries are in; provided that the available number of experts for the elaboration of standards is at least the same as the number in the developed countries during the period in which they set up national standards. It is obvious that such a way of using the knowledge of the developed countries is irrational and mechanical and that another way must be found and applied — the way which will lead them to their goal more rapidly and safely. It is also necessary to decide which standards are to be used in the country concerned until national standards are passed, the standards of the

developed countries, international standards, or to let the situation develop by itself. But if in the process of rapid industrialization the situation is allowed to develop by itself, it would lead to the development of industry whose products would be disharmonious and incompatible in some regions, branches, groups, etc., and the work procedures dissimilar and disunited. In other words, an expensive and ineffective industry would be developed in the country concerned.

This means that the developing countries, even with the application of knowledge and experience of the developed countries must make efforts, through cooperation among themselves and together, to find out solutions for their own most rational and optimum development of standardization.

5. Further possible ways and forms of cooperation among developing countries in finding out solutions for an optimal development of standardization

In addition to the above mentioned forms of cooperation within regional organizations, and within the competence of the DEVCO committee of the ISO organisation, it is logical and very useful to establish bilateral cooperation with neighbouring countries, or with countries being most useful. The advantages may be expected, above all, in cooperation with those countries with which significant exchange exists or may exist. The cooperation should provide harmonisation of standards for the products to be imported/exported, as well as exchange of information important for the exchange, etc.

Considering that the experience of one developing country is of great benefit to another developing country, an exchange of experience between developing countries can be realized on the basis of the programme of bilateral cooperation. Practical forms of exchange, apart from documentation exchange, are visits of experts, acquaintance with the actual work of one country with another, joint seminars, courses and discussion etc. However, if the present results of cooperation between developing countries are analyzed, particularly from the viewpoint of participants in the activities of international organizations for standardization, and influence on the work of these organizations, it is obvious that efforts should be made to seek even more effective ways of eliminating obstacles which slow down and make this cooperation difficult, mentioned under point 3: lack of awareness concerning the genuine role of standardization, poorly developed industry, difficulty in applying experiences of the developed countries, insufficient financial and personnel possibilities, the questions on standardization are not sufficiently present within the activities of government bodies and economic bodies of the country, etc.

We trust that the way of eliminating these obstacles, quicker than up to now, should be sought in a better liaison among the activities at national and international levels, directed by economic and government bodies with the view to the rapid industrialization of the developing countries and activities within the field of standardization. The fact that some of the mentioned regional organizations for standardization act either as intergovernment organizations or in liaison with intergovernment organizations, should be emphasized as being useful anyway.

However, it must be stated that in the sequence of overall activities concerning the solution of economic and technical cooperation among the developing countries: within Group 77, within the non-aligned movement (up to the Ministers' Conference in New Delhi), within the domain of individual bodies of UN, etc., the aspect of standardization was not present. In such a way the processes of standardization directed by standardization bodies do not obtain critical verification by the bodies governing the economy of the country; nor, consequently, their appropriate support and stimulus. These reasons may jeopardize the activities of standardization by making them, in some cases, be the goal in itself.

Accordingly, it is necessary within overall activities of the developing countries, particularly when

creating a new economic system, to study the possibilities of solving the mentioned problems of the development of standardization, in order to enable standardization to be used as an effective instrument in coordinated industrialization on the developing countries. First of all, within these limits one should foresee the ways of creating the conditions that the following strategic subjects of standardization in the process of rapid industrialization should be solved, starting from the principle of collective self-reliance, as is in principle adopted among the developing countries:

a) on which existing international, regional and national standards, and similar documents, industrialization should be based in the developing countries while avoiding the following:

— creating a disharmonious technical and technological system due to the lack of typization and unification, on one hand and

— dependence on a country that has supplied the equipment, due to mechanical taking over of the standardization system of that country, on the other hand;

b) in the sense of question a) how to perform in practice the control of conformity of imported equipment with those standards,

c) how to establish which international standards, essential for the realization of coordinated industrialization in the developing countries, are missing,

d) how to pass standards indicated under c)

The solution of these questions requires personnel and financial potential which certainly exceed the possibilities of single countries. Therefore, it would be indispensable, as a rule, to include solutions of these questions in every thorough project of industrialization in some regions performed at the international level within the competence of UNIDO, within regional economic organizations in the UN and similar organizations. This would contribute to a remarkable improvement of quality of these projects, and would enable the activities of standardization in the developing countries to find their genuine purpose. One would hope that these questions will be taken into consideration in the programme of cooperation between the countries of the non-aligned movement that a large number of the developing countries belong to.

TABLE 1

No.	Country	Year of establish.	Personnel	Annual budget in Swiss Fr.	Number of nat. standards
1.	Algeria	1973	73	3,000,000	No data
2.	Bangladesh	since ind.	70	111,317	468
3.	Brazil	1940	149	3,985,000	3,570
4.	Chile	1943	53	860,000	1,193
5.	China	1973	No data	No data	1,750
6.	Colombia	1963	61	764,612	1,607
7.	Cuba	1961	No data	261,333	405
8.	Egypt, Ar.R.of	1957	500	1,800,000	1,600
9.	Ethiopia	1970	137	2,314,000	108
10.	Ghana	1967	268	3,280,000	258
11.	India	1946	1,622	6,625,110	9,710
12.	Iran	1960	1,180	21,391,216	1,922
13.	Iraq	1963	105	1,500,000	782
14.	Jamaica	1968	152	1,867,252	120

continued

No.	Country	Year of establish.	Personnel	Annual budget in Swiss Fr.	Number of nat. standards
15.	Kenya	1973	84	84,000	40
16.	Korea, Dem.P.Rep.	1949	No data	No data	1,342
17.	Korea, Rep.	1961	84	2,802,000	6,184
18.	Malaysia	1975	443	5,018,500	584
19.	Mexico	1946	280	3,532,337	3,068
20.	Nigeria	1971	120	8,034,669	120
21.	Pakistan	1951	73	319,440	687
22.	Peru	1970	219	9,029,233	2,001
23.	Philippines	1947	223	3,472,720	354
24.	Saudi Arabia	1972	86	7,000,000	106
25.	Singapore	1966	No data	5,200,000	222
26.	Sri Lanka	1962	146	479,820	425
27.	Thailand	1969	159	858,485	290
28.	Turkey	1930	169	4,117,670	3,244
29.	Venezuela	1958	135	2,870,000	1,317
30.	Viet Nam S.R.of	1962	120	No data	2,816
31.	Yugoslavia	1946	114	2,971,396	9,419



