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**INDUSTRIAL CONSULTANCY FOR
TECHNICAL AND MANAGERIAL SELF-RELIANCE***

prepared by
the secretariat of UNIDO

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P R E F A C E

This paper has been prepared to serve as a basis for discussion. It attempts to identify some of the main issues concerning industrial consultancy in developing countries. Rather than proposing definitive solutions directly, it aims at stimulating the formulation of practical measures to be taken by Governments, consulting institutions, and UNIDO.

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1. INDUSTRIAL CONSULTANCY HAS GREAT POTENTIAL FOR NATIONAL DEVELOPMENT

Among the activities and professions related to development, industrial consultancy plays a crucial role. The basic function of consultancy is to provide skills or capacity not otherwise available to a client. There is no question that great need for such a service exists in developing countries. But the simple view of consultancy in developing countries as a supplement to existing skills should be replaced by a broader, more dynamic concept of its possibilities and role. The broader concept also includes the development of skills, both within the consultancy team itself, and outside it. Thus consultancy can strongly complement the overall process of skills development, particularly in areas where existing formal training approaches are inadequate or take too long.

Another area where consultancy has an important role in developing countries is in producing local solutions for problems and developing local problem-solving capacity. This implies the creation of local self-reliance for transferring, adapting and developing technology, i.e.

As indicated above, consultancy in developing countries has a wider field of action than in the industrialized countries. Further, the conditions under which consultancy operates in developing countries - cultural and technical, to name only two - are basically different from those in the industrialized countries.

Since the area of activity and the operating conditions are different from those in the industrialized countries, methodology, approaches and procedures cannot always be transferred without extensive modification. Hence there is a need for "appropriate consultancy" and for local research and experience in establishing such concepts.

Considerable benefit could be derived from the experience some developing countries have gained in building national consultancy services which are truly adapted to local conditions. Detailed examination would provide valuable data on actions which could be considered in other countries. Increased emphasis needs to be given to transferring and adapting the "technology" of consultancy.

1.1 The Role of Industrial Consultancy: Potential versus Realization

The role of industrial consultancy in skills development, as well as in producing direct, near term economic benefit, deserves heavy stress. For example it may be stated confidently that members of the consultancy - assuming it is competently led - develop skills and self-confidence at an accelerated rate through constant diagnostic and problem-solving exposure. Their personal effectiveness develops rapidly. One testimony to the validity of this observation is the high rate at which staff of consultancy services are offered attractive positions in industry.

Thus, the practice of consultancy is also a kind of intensive on-the-job training. Formal training in technical and managerial subjects is undoubtedly a good preparation. But there can be no substitute for direct problem-solving experience in building the self-confidence which is indispensable to an executive or to any professional.

Nearly identical reasoning applies to the plant-level process by which client executives are aided in strengthening their own on-the-job performance through the conduct of the consultancy assignments. Thus, the services of consultants usually include a training component automatically. This component should be made intentionally stronger when the consultancy is carried out in developing countries.

Besides the reasons for the existence of national consultancy cited above, we may also note the high cost and foreign currency drains associated with the use of overseas consultancy services.

Further, the recommendations emanating from foreign consultants in most instances are based on their own technologies and equipment, disregarding local solutions or possibilities of supply, thus enlarging the hard currency drain through further imports, and limited local contributions.

While analyzing the potential benefits of local consultancy services, we should also indicate that realization is far from reaching desired levels in most countries. Some international firms have established numerous affiliates. Most are originally based on accountancy practices, but are now

expanding their scopes broadly in accordance with strong market demands. Their standards and approaches are of course influenced by their origins, although the formal structure of affiliates often gives at least an appearance of independent status to meet local laws and preferences. The small local firms, in many cases, are inadequately equipped to provide a desirable range of services or to establish strong credibility. In some cases national services and/or independent private firms have built up admirable strength and credibility, but many others are relatively new and are yet unproven.¹

1.2 Issues: Developing Local Approaches and Inter-Country Co-operation

As suggested above, tailoring consultancy, structures and methods to local conditions is the main key to obtaining available benefits. Consequently, this is the basic topic for consideration, and since local resources and needs are unlikely to be closely matched, it is attractive to consider the possibility of supplements from outside. Altogether, these matters demand a high degree of creativity and great sensitivity to local socio-cultural characteristics.

Since these questions are so complex, this paper breaks the subject into six "issues" to facilitate discussion:

- Scope of Industrial Consultancy
- Policy Considerations
- Institutional Framework
- Internal Management
- National Programmes
- International Co-operation

These six issues are considered separately in the following section.

2. THE SCOPE OF INDUSTRIAL CONSULTANCY

It is clear that industrial problems are often interfunctional, or multi-disciplinary. Thus, in order to achieve the desired impact, consultancy services must include managerial, economic and technical elements as needed.

^{1/} One possible approach to creating an operational consultancy service is described in UNIDO/TOD.134, Development of National Industrial Consultancy Services: A Phased Programme.

A distinction is sometimes made between general consultancy (concerned with such issues as management, organization, efficiency, etc.) and specialized or engineering consultancy. The distinction is valid in that differences do exist in the way of organization, operation, inputs, etc., between the two types mentioned. But such differences in developing countries may be smaller than in the industrialized ones. On one hand the use of very sophisticated technology in developing countries is more limited in demand; and on the other hand, concern with overall effectiveness at the enterprise level is more frequent.

It is presumed that consulting services will be rendered upon request, mainly to enterprises, Government agencies and public institutions concerned with industrial development. For these clients, two principal groups of consulting requirements have been identified: (1) pre-investment activities and (2) operational assistance. Pre-investment activities involve the entire process of identifying, defining, evaluating, promoting and organizing an industrial project up to the point where financing is assured and the decision is made to go ahead with implementation. Operational assistance covers design acquisition, installation, and start-up of the plant; ensuring that operation of the enterprise meets commercial and technical objectives; and (possibly later) expansion and diversification. It also covers supporting activities related to transfer and development of technology, standards institutes, etc.

An illustrative although not comprehensive list of consultancy services which may be considered is as follows:

Pre-investment

Either directly, or in association with other local and/or foreign organizations, prepare:

- Techno-economic studies (project, branch or sector level)
- Pre-feasibility and feasibility studies
- Market, locational and other specialized studies
- Project profiles
- Technological, economic, commercial and financial evaluation of projects
- Terms of reference, invitations for tenders
- Evaluation of bids, or of contractors' work

Project Implementation

For implementation of industrial investment projects, assist in:

- Choice of technology and equipment selection
- Equipment specifications, tendering, bid evaluation, and contracting
- Negotiation of agreements (financial, commercial, management, technology, know-how)
- Scheduling, monitoring, and control of project implementation
- Plant design and layout
- Detailed engineering ^{1/}
- Installation, start-up and acceptance
- Design and implementation of management, production and marketing systems
- Construction supervision ^{1/}

Operation and Control of Existing Activities

For operating enterprises and for supporting institutions, undertake:

- Technical and management troubleshooting
- Upgrading of plant and corporate level management
- Increase in operating efficiency
- Quality control and maintenance systems
- Production planning and control
- Cost control, cost reduction
- Production flow and materials handling
- Capacity utilization improvement
- Product design and product development
- Sales systems, product line planning, pricing
- Raw material supply, including "backwards integration"
- Inventory control
- Expansion programmes, diversification
- Set-up management information and control systems
(for production and budgeting, efficiency, other performance indicators)
- Development of production for Export
- Subcontracting programmes

^{1/} This complex task will require skills not likely to be available at the earliest stages.

Project Management Systems

- For non-manufacturing institutions related to industrialisation (such as R and D and standards institutions) assist in streamlining internal programming and monitoring systems to help increase desired output and eventual application of results.^{1/}
- For Government departments assist in establishing systems related to exercise of their statutory functions (e.g. management and technology transfer, control of foreign exchange, price regulation)
- Establishment of project identification and implementation machinery

Consultancy Network

- Assist in creating or strengthening other indigenous industrial consultancy entities, with a view, inter alia, to the eventual development of a national network of co-operating units. Links with corresponding units in other countries, both developing and industrialized, may also be considered.

Special Skills

Over a period of time, develop special expertise in priority areas to be determined. These might include:

- Industrial sectors such as metal mechanics and agricultural inputs
- Selected disciplines such as R and D management, financial management, engineering design and construction liaison

3. NATIONAL POLICY AND INDUSTRIAL CONSULTANCY

Although each Government has different needs and priorities, national industrial development policy objectives are likely to include many, if not all, of the following concepts:

- More jobs and better income distribution
- More local "value added"
- Increased production for export

^{1/} Please see Managing Technical Institutions for Industrialisation
UNIDO/IOD.116, 1977

- Less foreign exchange outflow
- Acquisition of technology, management, finance and know-how on improved terms
- Effective utilization of existing industrial capacity
- Less dependence on outside skills
- Leapfrogging development of local management and technical personnel
- Stimulation of local entrepreneurship
- Integration of the national economy: both within the industrial sector and through linkages with agriculture and infrastructure
- Geographical dispersion of industry
- Enhancement and application of local R and results
- Less environmental damage (or even positive enhancement, especially in social and technological aspects)

The objectives are usually clear, but their attainment is a complex process. While in the industrialized free market economy countries the Governments traditionally played a passive role, the efforts of Governments in developing countries to accelerated development are much more active. This active role requires a stronger concentration of technical and technological skills in the Government concerned or at its service. But for historical reasons, public administration in developing countries is usually oriented towards financial and economic matters. The "technical arm" needed to carry out industrialization programmes is often weak.

Since the need for such skills is multiplying as industrial development progresses and as technological levels increase, the use of consultancy services - both domestic and foreign - has grown rapidly. And Governments have a tremendous stake in ensuring that the national interest, as embodied in the list of policy objectives given above, is fully reflected in the procedures and professional judgements applied by their consultants.

Clearly local, especially national, consultancy services are best able to take account of local aspirations, conditions and possibilities. But it may be noted that even in fairly advanced countries, there is little understanding of how policy objectives can be advanced through this approach.

Depending upon the institutional arrangements, a consultancy service is likely to be able to exert considerable leverage towards attainment of national industrial development policy objectives. Since the service by its nature influences a number of industries, its operating policies and practices potentially have a large multiplier effect. The effect arises both from the selection of clients and projects, and from the way in which assignments are carried out. If for example the design of industrial investment projects were consistently guided by a policy of "local involvement" - with all that that entails - the pattern of industrialization would be substantially different from that which would result from a policy based on pure financial considerations.^{1/} A policy emphasizing development of production for export could have similarly far-reaching effects. And these are only two examples. Others could involve enhancement and application of local R and D results, geographical dispersion of industry, encouragement of local entrepreneurship, etc.

4. THE INSTITUTIONAL FRAMEWORK

Governments have an opportunity to influence the legal and organizational form in which national consultancy services develop. As a quick review a number of common forms are summarized below:

- Independent firm, commercial or state-owned
- Subsidiary or affiliate of an international consultancy firm
- A specialized division or subsidiary of a finance institution or of a manufacturing firm (public or private)
- A service provided directly by an industrial operations department of a ministry of industry
- One function of an industrial promotion centre, usually attached to a Government Ministry
- A division of a training or applied research institution
- A function of a specialized industry support centre (e.g. a standards institute or a metal industries development centre)

^{1/} Please see "Sources and Application of Economic Leverage for the Development and Implementation of Industrial Investment Projects", UNIDO/IOD.176, 1978

- A service of the engineering or business faculty of a university, sometimes incorporated as a semi-autonomous body, and sometimes associated with contract R and D.
- A service of an industry related association, such as an association of manufacturers or a chamber of commerce and industry.
- A service of an export promotion board or similar body
- A service or division of a holding company for its affiliated enterprises.

Numerically, the first category is undoubtedly the largest on a global basis; but the greatest proportion of the independent firms are small and relatively unproven. Furthermore, as mentioned in section 1.1, a great many of the services nominally offered under the other headings are still in their infancy, as measured by the quantity and quality of their output.

In industrialized countries the consultancy firms draw on expertise from the overall professional community, as the community is sufficiently wide and provides good choice. In developing countries this is not always or fully possible, and an alternative solution should be considered. Such a solution could consist in pooling at the country level the efforts not only of individuals but also of particular institutions such as universities and research centres. Such a solution not only provides for institutional strengthening of consultancy, but also the right training at an early professional stage. Such an approach can also provide good results within a scheme of international co-operation, particularly if a policy of specialization is established, either by areas of activity or by necessary functions such as training, research, etc.

Creating a "critical mass" of skills^{1/} in order to offer a credible and professionally competent consultancy service is likely to be a severe problem in many countries. Besides the institutional approach described earlier, in many cases it may be useful to establish a panel of associated consultants whose primary institutional affiliations are elsewhere.

^{1/} Please refer for example, to "Activating the Potential of Universities for Industrial Development", UNIDO/IOD.150, 1978.

Examples of skilled people who might be worthwhile members of such a panel are university professors and staff members of management institutes and research and development centres.

In addition to the possible necessity for such an approach above mentioned to extend the number and range of consultants available to the service, there is a further, very important advantage. We may refer to the effect as "dynamic interaction". Through the pooling arrangement, staff of various institutions are brought into direct contact with officers of industrial enterprises and with each other, in a relatively informal problem-solving environment. This stimulates the interchange of practical information, increasing opportunities for solutions to be discovered. Motivation and productivity of all involved are likely to be enhanced and the effects may endure beyond the conclusion of a specific assignment.

It is to be noted that local consultants, needing technological or operational support many times revert to big international firms, instead of mobilizing resources locally. In spite of the need to develop national consultancy capacity, local consultancy normally operates in an adverse ambience, as a lack of confidence exists, even at central level. Yet clearly, a basic condition for successful development of local consultancy is a minimum of confidence, and here the Government can play an important role, establishing such confidence.

It is useful to highlight the efforts of many Governments of developing countries in promoting the creation and establishment of local consultancy services, often as a semi-autonomous governmental institution. However, in many cases the results have not been fully satisfactory. One principal problem: being a Government (or semi-Government) service the young consultants are subject to Government salaries, which are lower than those prevailing in the consultancy profession. Once they acquire the necessary experience, they are offered much better salaries by international consultancy firms and most of the developing countries' effort is wasted. Thus it becomes important that Government sponsored consultancy services have a sufficient degree of independence to permit attractive salaries and positions.

Besides Government efforts to create or to strengthen local consultancy, and the efforts of the consultancy itself, another interesting approach could be applied in developing countries. Such an approach consists in a group of manufacturing enterprises creating its own consultancy service. This would have various advantages both for the enterprises of the pool and for the consultancy service itself. The enterprises could shift a number of problems or activities which unduly absorb their efforts to the consultancy service. The consultancy service, because of the wider operational base, could cope with more complicated problems, undertaking also such tasks as training of the staff of the enterprises, etc. Obviously this solution is only possible where no conflicting commercial interests exist or where a joint effort outweighs such a disadvantage. The consultancy service established under such conditions could cover various fields or be specialized in some particular area. A classical example of the latter would be a joint consultancy service for export industries.

Another form for strengthening the operational effectiveness and potential of consultants is through the creation of co-operatives in consultancy. The co-operatives can be established in various ways. The simplest is through a direct association of various consultants. Another is through the establishment of a joint marketing and sales organization or unit. The latter could function alternatively as a jointly owned service bureau, whose expenses would be apportioned on some equitable basis.

5. INTERNAL MANAGEMENT OF CONSULTANCY SERVICES

Besides the need for a national concept of consultancy, there is also the need for suitable methodologies and strategies of operation and of organization at the service level. Patterns of consultancy operations developed in industrialized countries (just as with technologies) are not always readily transferable or adaptable. For example, the organisational scheme of a consultancy service in a developing country has to be different as it can not draw on practically unlimited skill available outside. This could imply a need for specialization, or the seeking of additional sources of skills.

Similarly a market study conducted according to methods and strategies of an industrialized country might be of little use to a manufacturer in a developing country. For instance, the product parameters identified might be beyond the production possibility. A local consultancy service should be in a position to avoid such an outcome from the outset. Techniques such as budgeting or accounting should also be adapted to the local potentials and not based on idealistic assumptions. Much the same applies to questions such as organization of the enterprise, production, etc.

To identify sound approaches, strategy and methodology in this context, much research and development work is needed. This requires a serious effort by the consultancy service which is not directly or immediately productive. Such effort can hardly be undertaken at an individual firm level as it absorbs in most cases too many resources. On the other hand some experience is available outside, or investigation of such issues could also be undertaken outside. The following case illustrates the point.

In one African country a consultancy team is developing industrial accountancy systems and staff in state-operated industries. An ingenious scheme has put a number of teams of relatively young local consultants to work in separate plants simultaneously, with frequent brief supervisory visits by senior advisors. The client companies' personnel are trained in a "modular skills" approach which makes them productive for standardized tasks in the minimum

time. In another country the work is done one-enterprise-at-a-time. Although the first method seems more efficient at a distance, it is difficult to ascertain "ex ante" whether it is transferable to the second country, or whether it will work for production control, say, as well as for accountancy.

As suggested by the above, a number of practical questions arises in the course of consultancy operations:

- a) How to obtain maximum leverage from the use of the most effective standards.
- b) Standards to be applied in executing consultancy projects, especially the degree of perfection or level of detail to be sought ("gold plated" vs. a low-cost approach).
- c) A commercial approach designed to secure maximum revenue from a client vs. the alternative of seeking maximum impact from the allocation of scarce skills.
- d) The degree to which the consultancy service assists with implementation of its recommendations.
- e) The survey approach to diagnosis versus a pinpoint or rifle shot approach.
- f) The "rate of change" which can be embodied in recommendations without exceeding realistically attainable norms.
- g) The means of allocating consultancy resources and conducting assignments in accordance with national policy objectives.
- h) Methods of controlling cost, schedule and quality of work.
- i) Means of developing professional competence in the consultancy staff.

It is certain that valuable know-how on each of these points exists among the various consultancy services. The best solutions might be adapted to the needs of other countries if such experiences were more readily available for "transfer".

6. NATIONAL PROGRAMMES FOR THE DEVELOPMENT OF INDUSTRIAL CONSULTANCY

Most Governments are already concerned with promoting, guiding, or directly participating in the development of industrial consultancy capability as an important national resource. The following few cases illustrate the diversity of measures being undertaken.

- An African country has established a specialized parastatal company to provide a broad range of **consultancy** services as a "mainstream" element of its industrialization programme.
- In an Asian country which has experienced rapid export-oriented industrialization for 25 years, the Government is determined to re-examine its past reliance on outside partners for managerial and technological decision-making. The present plan, as a first step, is to hold an international symposium to identify "promising" elements from the approaches practised by several major industrialised countries, and a number of the more advanced developing countries. Eventually a truly national approach will be evolved. The result will be put into practice through training and consultancy.
- The national development corporation in a Latin American country is considering how best to organize consultancy services to its affiliated enterprises, many of which are having difficulties in meeting loan repayment schedules.
- With active Government support, a Middle Eastern university is setting up a consultancy service which will specialize in improving the terms under which technology and management transfers take place.

As outlined earlier, there is a need to develop a national concept in consultancy and a programme to put the concept into effect. The concept should be based on two factors: 1) a judgement as to the best role consultancy can potentially play in the development of the country; and 2) an analysis of the present capabilities and contribution of the local consultancy service, compared with an assessment of the needs.

The programme, ideally, is designed to bring the actual consultancy contribution into line with its potential.

In developing the national concept, both direct and secondary effects of an extended national consultancy may be taken into account. While assessing the possible role of consultancy, such aspects as limited industrial tradition, shortage of capital, etc., should be taken into account. Also, factors such as a preference for joint ventures, or a disposition towards co-operatives should be considered, since these determine certain structures for the organization of production. The natural resource endowment (fibres, minerals, energy, etc.) is another factor contributing towards a clearer definition of areas of priority of development of consultancy. Finally, a key factor for defining areas for priority development of consultancy is the possibility of developing a comparative advantage of production in a certain field. Comparative advantage, in this respect, is not only to be considered in terms of cost advantage in the inputs, but also in such intangibles as design, marketing ability, etc., that is to say the competitiveness of the end-product.

The concept, once defined, provides guidance towards selecting measures to achieve the objectives. The priorities of the country, defined in most instances at central level, will determine fields of major demand for consultancy services. The potential demand of consultancy defines the required inputs of the service itself, thus also establishing the mode of organization and of operation. This in turn permits the introduction of measures to strengthen and mobilise the services. Thus the Government can promote research, co-operation and overall strengthening of consultancy capability in areas of interest to the country. Some examples of specific measures which can be taken by Governments (or in many cases by national institutions such as development corporations, R and D institutes, universities and consultancy firms themselves, i.a.) are the following:

- The Government can increasingly rely on local consultancy services, providing if necessary additional or complementary inputs. This would help to eliminate any lack of confidence in local consultants while directly building up their capabilities and self-confidence.

- When a project cannot be carried out entirely by local skills, an acceptable involvement of local expertise may nevertheless be brought about, through asking international firms to propose joint ventures with local firms or by arranging for local personnel to participate as temporary staff members of the overseas consulting firm. This approach should have desirable training and technology transfer effects.

- A further policy of the state in developing consultancy can be in supporting or otherwise facilitating local market development and bidding activities. This, particularly for complex projects, is an expensive item; and many local consultants lack adequate resources. A further contribution could consist in programmes of training.

- International co-operation, particularly among developing countries, can help accelerate the development of country-level consultancy. Hence, although it might sound contradictory, another policy of Government should precisely be the promotion of international co-operation, as outlined in the next section of this paper.

- The principle of complementary specialization may help to strengthen the overall range of services available from several institutions in a country (or including additional countries in a co-operating network).

- In cases where existing structures are judged to require supplementing, a new service can be established. Considerable experience can be made available to countries wishing to explore options in this area.

- Similarly, national networks of consultancy services can be set up or strengthened, to aid in pooling consultancy expertise and "cross-fertilizing" existing skills.

The above few points suggest ways to upgrade and strengthen the national consultancy services to increase their contribution to development. Considering the multiplier effect of consultancy, the effort is considered worthwhile. The central issue is how such an effort can become most effective. As a guideline it is suggested that the national programme be designed to make maximum use of existing consultancy capabilities and structures.

7. STRENGTHENING SELF-RELIANCE THROUGH INTER-COUNTRY CO-OPERATION

7.1 The Case for Co-operation in Consultancy

The benefits of co-operation among developing countries in the field of consultancy can be readily seen. They are primarily two: 1) The reduction of cost through joint actions, such as joint research or training programmes, and 2) the increase of experience on hand through exchanging or pooling expertise, which allows an increase of area and possibilities of action. ¹ Thus, co-operation permits the mobilization of resources for project development (marketing) and implementation. And while co-operation with organizations in industrialized countries is often useful, it is increasingly advantageous to emphasize co-operation among developing countries themselves.

The basic patterns of consultancy, even in industrialized countries, have a built-in component of co-operation. Generally speaking, a consultancy organization is constituted by a central nucleus either of a staff (usually generalists) or of skills, or of knowledge of a technology or process. Each of these central elements however is not operative on its own and needs a complement from outside. This aspect (i.e. how much they rely on outside) is normally a well guarded secret of the consultancy firm.

¹ In many developing countries the existing consultancy organizations consist of only a few associates. Those consultants, in most cases first class specialists returning from assignments with big consultancy organizations from industrialized countries, can nonetheless because of the limited resources, cover only a limited part of the demand, dealing usually with very general problems. They are not usually in a position to conceive original, comprehensive solutions.

The basic nucleus is usually complemented by two other factors. One of them is a good knowledge of sources and market of skills (rosters of experts) who are hired on a project-by-project basis. The other factor is a well worked out philosophy, methodology and technology of acting, which facilitates greatly the project operation and implementation. The question of why consultancy has to rely on outside is simple to answer: it would be too costly and complex to have at any moment all the skills, technology and processes on hand (or on the payroll).

Co-operation in consultancy can be considered in two dimensions. Horizontal co-operation implies enterprises of similar background, specialization and objectives, thus, enhancing actions and enlarging experiences in the same area, such as plant design. Vertical co-operation implies enterprises specializing in different but complementary fields, such as design of plant and erection of plant. While in the industrialised countries co-operation in the first case consists mainly of defense of professional interests, in the second it consists mainly of straight forward joint ventures. In developing countries both cases are of a substantial importance, as in the first case it increases the potential of action and in the second the field which can be embraced.

The co-operation as such, globally speaking, can also be considered in three areas: the making of consultancy, the selling of consultancy and the provision of consultancy. Different approaches, inputs and agreements and schemes are necessary for co-operation in each of those areas, but a successful co-operation in one of them opens the doors to the co-operation in the others.

It is also to be said that although co-operation in each area is clearly beneficial, the will to co-operate may not exist in all fields, mainly because of commercial interests. This problem however does not seem very severe between developing countries where through co-operation new fields of activity can be embraced.

One basis for co-operation is the political will of the countries and institutions to co-operate. A second important aspect is the existence or the creation of a framework of co-operation and schemes of implementation. Further, the basis of any joint action is the availability of information and effective communications. Here regional associations of consultancy can play a vital role.

In spite of what has been said about the need of a truly national approach and concept of consultancy, and of the particular need of developing countries, co-operation with consultancies from industrialized countries should not be excluded. It is recognized that through great specialization, particularly in the industrial field, levels of technology and skills have been achieved in specialized areas, which would be too costly to develop worldwide. The point is, however, to make sure that co-operation with a partner from an industrialized country is truly beneficial to the partner in the developing country. In particular it should contribute towards the strengthening and not weakening of consultancy infrastructure in the developing country. It should also enhance the local capacity for developing technology. (If necessary, the position of consultants in developing countries should be protected in this respect by appropriate national legislation).

7.2 Development of Co-operation in Consultancy

The comments in previous chapters give a schematic view on the areas, problems, ways and needs of co-operation. The complexity and variety of issues and approaches should not be an obstacle in pursuing stronger co-operation among developing countries with obvious advantages for the parties concerned.

As pointed out, co-operation should start at national level. Such co-operation would consist as far as development of consultancy is concerned in establishing links between the consultancy itself and institutions concerned (such as institutes of R and D, universities, associations) and mobilizing inputs. The results of such co-operation would be joint training and research programmes, and the pooling of operational and specialized capacity to arrive at joint ventures or other operational arrangements.

International co-operation should be promoted by Governments, professional associations, institutions, regional groupings, etc. Each of the parties concerned could promote and establish co-operation in one or another area of its specialization. For instance an active Government co-operation can be conceived at the educational, training and research level. (Particularly on regional or sub-regional basis).. Professional associations could contribute greatly in pooling and exchanging of skills, processes, etc. Through such actions they could contribute towards a stronger marketing impact of the consultancy services of developing countries. Universities can contribute through joint development of basic or specialized curriculae and through joint research programmes. A creation of permanent links in the areas of particular interest among the institutions involved would certainly enhance positive results.

The concept of co-operation implies not only the pooling of resources or undertaking a joint effort. It also implies at least to a certain degree a geographical or substantive specialization. Such specialization is justified by scarcity of resources, but also by different patterns of requirements, demand and needs of different countries. This is of particular importance in the case of international co-operation.

A wider international co-operation requires a number of actions. In the first instance it requires motivation at three levels, international, national and/or company enterprise level. This in many instances, where consultancy services are provided by a semi-government organization, can be reduced to two levels, i.e. the international and the national level. A special case of possible co-operation exists within regional groupings, such as the Andean Pact, ASEAN, and ECOWAS

Another requirement for better co-operation is the availability of information necessary to mobilize and manage such co-operation. Although there are regional associations of consultancy, which could play a vital role in this field, their aims are not always homogeneous, and resources not sufficient for a world-wide undertaking of this kind. It is to be noted that referring to information, the need is not for one-time information, but for a continuous flow, and not only on present situations, but also on future needs, projections, etc.

No doubt permanent machinery is needed to handle the two issues mentioned so far (motivation and information). Such machinery would require certain characteristics such as of being able to reach the consultants, professional organizations, Governments and Institutions concerned. The machinery should further have a good understanding of the issues, as results will only be achieved if they are handled at technical level and with technical competence.

As to the realization of an operational scheme, a number of questions should be clarified, the basis being: what are the areas of priority and which are the best ways of doing it. As to areas, broadly speaking it would seem that the basic issues are centred on how consultancy should be operationally organized and on the mechanism for supplementing or upgrading skills.

7.3 Role of UNIDO in the Development of Industrial Consultancy Services

As described before, numerous actions to achieve accelerated development of industrial consultancy in developing countries are possible. Appropriate goals, actions, ways and means depend on policy decisions, local conditions, etc.

The efforts of the countries may be complemented efficiently and with a multiplier effect by outside assistance or co-operation, or both. It is to be mentioned here that the issue is not simply one of adding financial means, but rather providing specialized inputs, either to directly support the effort or to provide the means for a necessary platform or machinery. Efforts in this field are undertaken by UNIDO at a global, regional and country level. Activities cover the areas of research, promotion of co-operation and technical assistance at various levels.

UNIDO possesses technical capacity for supporting the development of consultancy, in the field of research and publications as well as in operational activities. It also disposes of mechanisms to foster co-operation and contacts. A special organizational unit exists for co-operation among developing countries, and another for co-operation

with non-governmental organizations. Further, UNIDO disposes of a network of Industrial Field Advisers, who support operational activities as well as foster other programmes.

Various ways exist to develop consultancy capacity in developing countries through technical assistance. The most common case is direct assistance at country level in the form of an individualized project to establish or strengthen consultancy services. Such projects traditionally include provision of expertise and of fellowships.

Besides the aforementioned traditional type of assistance project, new approaches in assistance are being applied. This is possible through inclusion into the project of various elements which permit an elasticity of approach such as study tours, contacts, pairing arrangement, ad hoc advisory service, etc. The projects can include financing of such elements (travel, etc.) but also of the advisory and promotional element for devising and achieving such objectives.

Technical assistance can also be used to strengthen directly the operational and technical capacity in specific operations. So for instance if a local team of consultants could undertake a specific study but lacks experience in a certain very specialized area, such expertise could be provided through technical assistance, either as a special project or by drawing from the resources of an established technical assistance project. It is to be noted that such approach not only provides for technical solutions, but also strengthens the marketing impact of developing countries' consultancy services. It is also to be noted that such approach should also be possible through international co-operation under such arrangements as pairing or networking.

Technical assistance of UN as an additional or complementary input towards the development of local consultancy presents in its classical form one problem. Technical assistance is provided at Governments request and in most instances to satisfy direct Government needs. Thus, it can happen that when no Government or semi-Government consultancy service exists,

no assistance will be requested or that such assistance will be exclusively available to one service and not to the consultancy community of the country.

Besides direct technical assistance at country level, assistance can also be provided to foster inter-country co-operation in the field of development of consultancy. This can be done by inclusion of an element of co-operation in any specialized project, but also through specific co-operation projects at country level (financed from the countries' UNDP Country Programme), as well as through sub-regional, regional or interregional projects. The last type of project is particularly suitable for promotion of co-operation and support to it (either operational or institutional).

Technical assistance in development of local consultancy merits high priority. This is so because such assistance has a number of built-in leverage elements which help ensure a high output-to-input effectiveness ratio. Such projects have a high multiplier effect, since while developing consultancy capability, direct benefits to industry are simultaneously provided. Those projects also have a high component of building self-reliance as they enhance local technical problem solving capacity and are an effective way of upgrading skills.

For the beforementioned reasons such projects also present certain difficulties in formulation for maximum effectiveness. Here the particular conditions and objectives are to be examined in great detail so that original and imaginative ways of using and combining technical assistance inputs can be conceived. As an example, an integrated inter-sectoral programme of technical assistance can include a sub-programme for the building of consultancy.

In particular cases, special concepts of project should be developed. Such is the case for instance of LDC establishing as special support regional projects providing for a common pool of expertise.

Various other formulas can be examined and applied whenever convenient. For instance, an exchange of project personnel - both national and international - among similar projects of technical assistance could be considered. Another approach in planning technical assistance could be to establish a reserve in the global IPF figure for the development and support of co-operation among developing countries in the field of industrial consultancy.

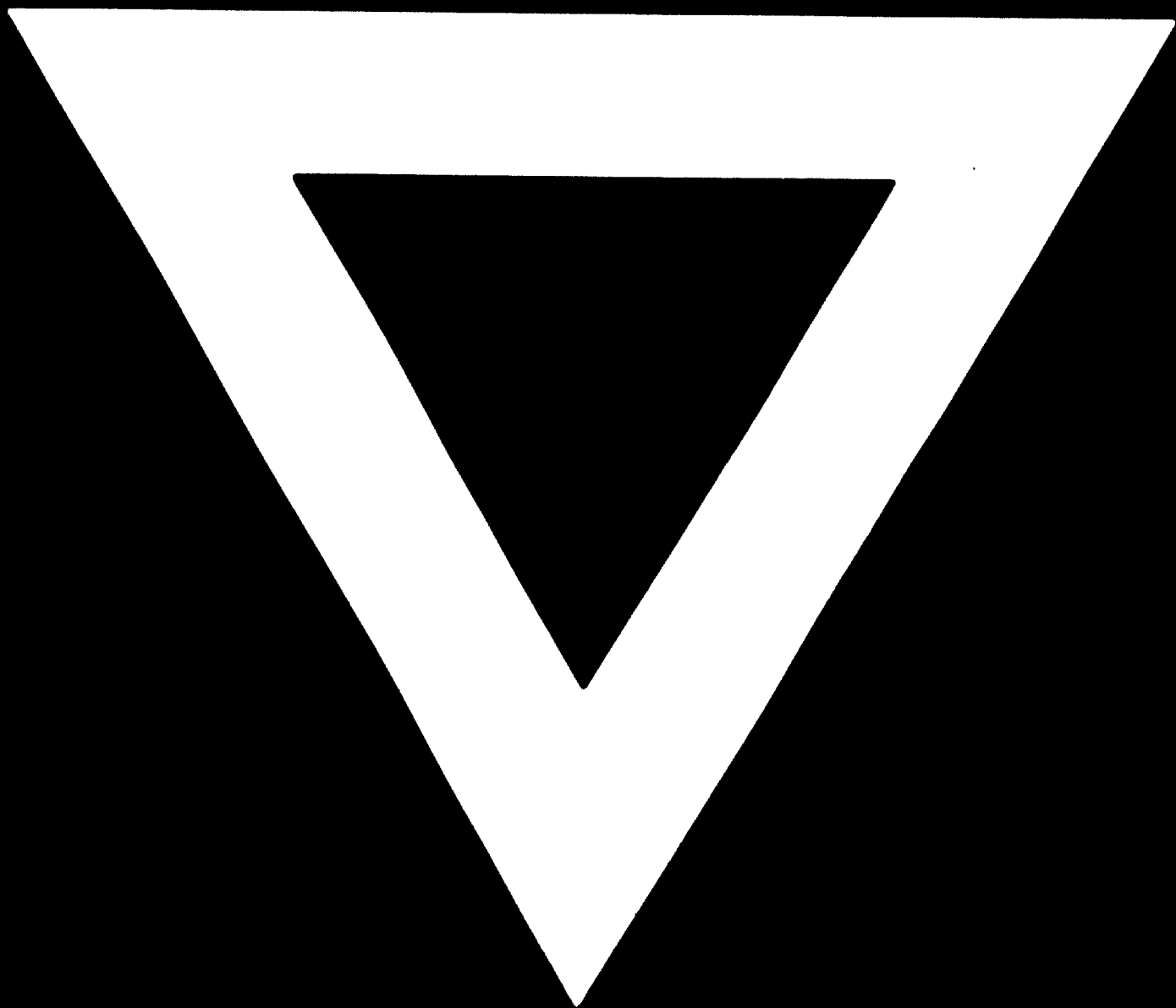
Summarising, assistance can be provided at country level to build up and strengthen the national consultancy services. Such assistance would provide expertise, possibilities of training, operational strengthening and also research. Projects can be designed in such a fashion that they combine various inputs, which permit elasticity of action and alternative solutions at one or the other stage of action. The assistance at country level can include a provision for international co-operation (particularly with other developing countries) through financing of travel, exchange of experience, etc.

Besides, there is a wide scope for UNIDO to assist through sub-regional, regional or interregional projects. These may involve the mobilisation of co-operation, supporting the co-operation itself and also providing the substantive and technical backing to actions resulting from the operational co-operation.

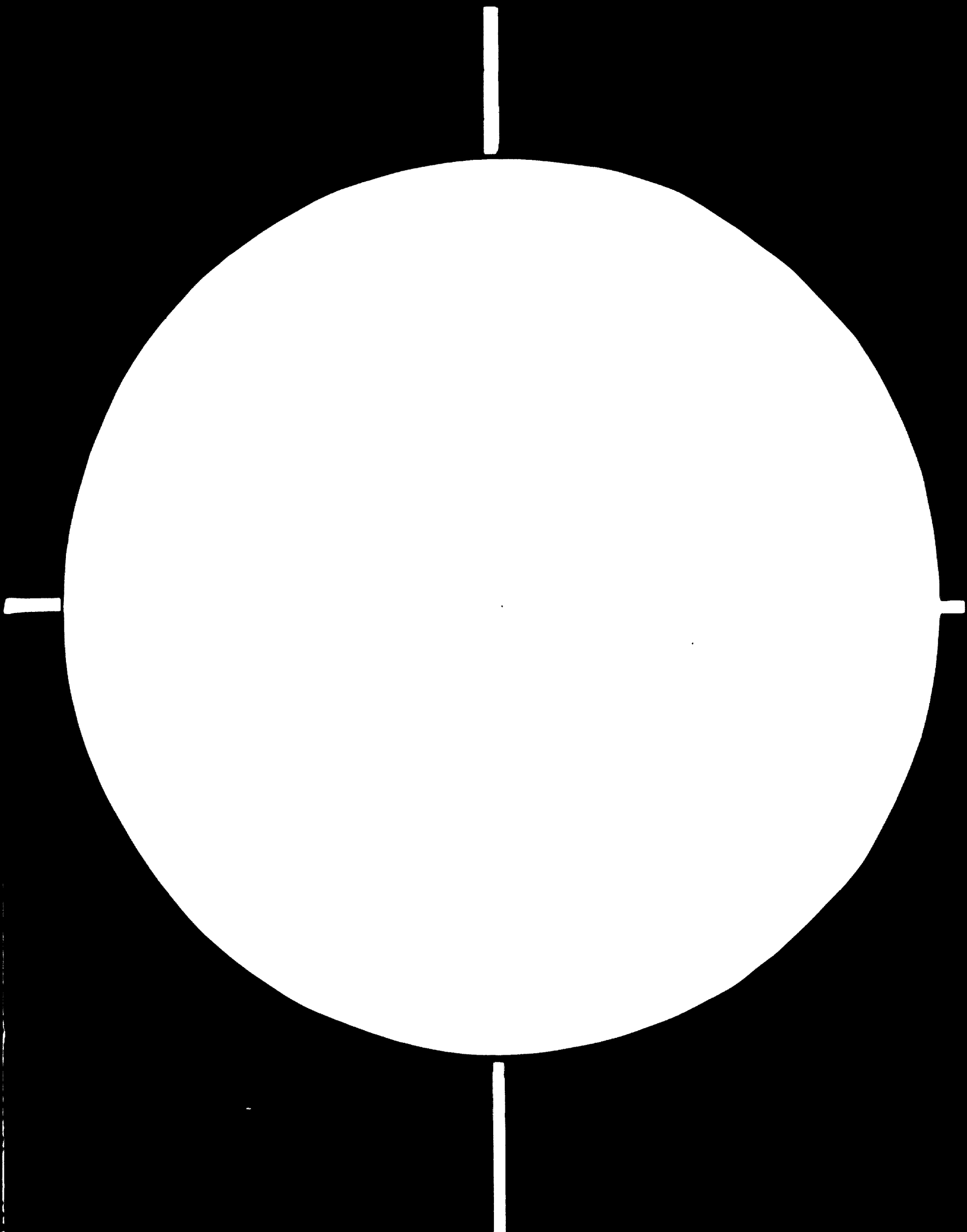
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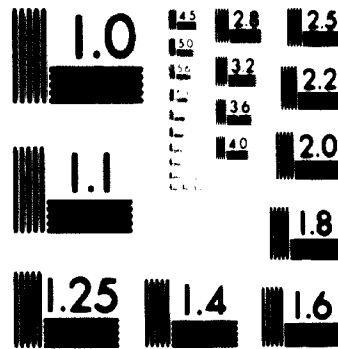


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**INDUSTRIAL CONSULTANCY FOR
TECHNICAL AND MANAGERIAL SELF-RELIANCE***

prepared by
the secretariat of UNIDO

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P R E F A C E

This paper has been prepared to serve as a basis for discussion. It attempts to identify some of the main issues concerning industrial consultancy in developing countries. Rather than proposing definitive solutions directly, it aims at stimulating the formulation of practical measures to be taken by Governments, consulting institutions, and UNIDO.

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1. INDUSTRIAL CONSULTANCY HAS GREAT POTENTIAL FOR NATIONAL DEVELOPMENT

Among the activities and professions related to development, industrial consultancy plays a crucial role. The basic function of consultancy is to provide skills or capacity not otherwise available to a client. There is no question that great need for such a service exists in developing countries. But the simple view of consultancy in developing countries as a supplement to existing skills should be replaced by a broader, more dynamic concept of its possibilities and role. The broader concept also includes the development of skills, both within the consultancy team itself, and outside it. Thus consultancy can strongly complement the overall process of skills development, particularly in areas where existing formal training approaches are inadequate or take too long.

Another area where consultancy has an important role in developing countries is in producing local solutions for problems and developing local problem-solving capacity. This implies the creation of local self-reliance for transferring, adapting and developing technology, i.e.

As indicated above, consultancy in developing countries has a wider field of action than in the industrialized countries. Further, the conditions under which consultancy operates in developing countries - cultural and technical, to name only two - are basically different from those in the industrialized countries.

Since the area of activity and the operating conditions are different from those in the industrialized countries, methodology, approaches and procedures cannot always be transferred without extensive modification. Hence there is a need for "appropriate consultancy" and for local research and experience in establishing such concepts.

Considerable benefit could be derived from the experience some developing countries have gained in building national consultancy services which are truly adapted to local conditions. Detailed examination would provide valuable data on actions which could be considered in other countries. Increased emphasis needs to be given to transferring and adapting the "technology" of consultancy.

1.1 The Role of Industrial Consultancy: Potential versus Realization

The role of industrial consultancy in skills development, as well as in producing direct, near term economic benefit, deserves heavy stress. For example it may be stated confidently that members of the consultancy - assuming it is competently led - develop skills and self-confidence at an accelerated rate through constant diagnostic and problem-solving exposure. Their personal effectiveness develops rapidly. One testimony to the validity of this observation is the high rate at which staff of consultancy services are offered attractive positions in industry.

Thus, the practice of consultancy is also a kind of intensive on-the-job training. Formal training in technical and managerial subjects is undoubtedly a good preparation. But there can be no substitute for direct problem-solving experience in building the self-confidence which is indispensable to an executive or to any professional.

Nearly identical reasoning applies to the plant-level process by which client executives are aided in strengthening their own on-the-job performance through the conduct of the consultancy assignments. Thus, the services of consultants usually include a training component automatically. This component should be made intentionally stronger when the consultancy is carried out in developing countries.

Besides the reasons for the existence of national consultancy cited above, we may also note the high cost and foreign currency drains associated with the use of overseas consultancy services.

Further, the recommendations emanating from foreign consultants in most instances are based on their own technologies and equipment, disregarding local solutions or possibilities of supply, thus enlarging the hard currency drain through further imports, and limited local contributions.

While analyzing the potential benefits of local consultancy services, we should also indicate that realization is far from reaching desired levels in most countries. Some international firms have established numerous affiliates. Most are originally based on accountancy practices, but are now

expanding their scopes broadly in accordance with strong market demands. Their standards and approaches are of course influenced by their origins, although the formal structure of affiliates often gives at least an appearance of independent status to meet local laws and preferences. The small local firms, in many cases, are inadequately equipped to provide a desirable range of services or to establish strong credibility. In some cases national services and/or independent private firms have built up admirable strength and credibility, but many others are relatively new and are yet unproven.¹

1.2 Issues: Developing Local Approaches and Inter-Country Co-operation

As suggested above, tailoring consultancy, structures and methods to local conditions is the main key to obtaining available benefits. Consequently, this is the basic topic for consideration, and since local resources and needs are unlikely to be closely matched, it is attractive to consider the possibility of supplements from outside. Altogether, these matters demand a high degree of creativity and great sensitivity to local socio-cultural characteristics.

Since these questions are so complex, this paper breaks the subject into six "issues" to facilitate discussion:

- Scope of Industrial Consultancy
- Policy Considerations
- Institutional Framework
- Internal Management
- National Programmes
- International Co-operation

These six issues are considered separately in the following section.

2. THE SCOPE OF INDUSTRIAL CONSULTANCY

It is clear that industrial problems are often interfunctional, or multi-disciplinary. Thus, in order to achieve the desired impact, consultancy services must include managerial, economic and technical elements as needed.

^{1/} One possible approach to creating an operational consultancy service is described in UNIDO/TOD.134, Development of National Industrial Consultancy Services: A Phased Programme.

A distinction is sometimes made between general consultancy (concerned with such issues as management, organization, efficiency, etc.) and specialized or engineering consultancy. The distinction is valid in that differences do exist in the way of organization, operation, inputs, etc., between the two types mentioned. But such differences in developing countries may be smaller than in the industrialized ones. On one hand the use of very sophisticated technology in developing countries is more limited in demand; and on the other hand, concern with overall effectiveness at the enterprise level is more frequent.

It is presumed that consulting services will be rendered upon request, mainly to enterprises, Government agencies and public institutions concerned with industrial development. For these clients, two principal groups of consulting requirements have been identified: (1) pre-investment activities and (2) operational assistance. Pre-investment activities involve the entire process of identifying, defining, evaluating, promoting and organizing an industrial project up to the point where financing is assured and the decision is made to go ahead with implementation. Operational assistance covers design acquisition, installation, and start-up of the plant; ensuring that operation of the enterprise meets commercial and technical objectives; and (possibly later) expansion and diversification. It also covers supporting activities related to transfer and development of technology, standards institutes, etc.

An illustrative although not comprehensive list of consultancy services which may be considered is as follows:

Pre-investment

Either directly, or in association with other local and/or foreign organizations, prepare:

- Techno-economic studies (project, branch or sector level)
- Pre-feasibility and feasibility studies
- Market, locational and other specialized studies
- Project profiles
- Technological, economic, commercial and financial evaluation of projects
- Terms of reference, invitations for tenders
- Evaluation of bids, or of contractors' work

Project Implementation

For implementation of industrial investment projects, assist in:

- Choice of technology and equipment selection
- Equipment specifications, tendering, bid evaluation, and contracting
- Negotiation of agreements (financial, commercial, management, technology, know-how)
- Scheduling, monitoring, and control of project implementation
- Plant design and layout
- Detailed engineering ^{1/}
- Installation, start-up and acceptance
- Design and implementation of management, production and marketing systems
- Construction supervision ^{1/}

Operation and Control of Existing Activities

For operating enterprises and for supporting institutions, undertake:

- Technical and management troubleshooting
- Upgrading of plant and corporate level management
- Increase in operating efficiency
- Quality control and maintenance systems
- Production planning and control
- Cost control, cost reduction
- Production flow and materials handling
- Capacity utilization improvement
- Product design and product development
- Sales systems, product line planning, pricing
- Raw material supply, including "backwards integration"
- Inventory control
- Expansion programmes, diversification
- Set-up management information and control systems (for production and budgeting, efficiency, other performance indicators)
- Development of production for Export
- Subcontracting programmes

^{1/} This complex task will require skills not likely to be available at the earliest stages.

Project Management Systems

- For non-manufacturing institutions related to industrialisation (such as R and D and standards institutions) assist in streamlining internal programming and monitoring systems to help increase desired output and eventual application of results.^{1/}
- For Government departments assist in establishing systems related to exercise of their statutory functions (e.g. management and technology transfer, control of foreign exchange, price regulation)
- Establishment of project identification and implementation machinery

Consultancy Network

- Assist in creating or strengthening other indigenous industrial consultancy entities, with a view, inter alia, to the eventual development of a national network of co-operating units. Links with corresponding units in other countries, both developing and industrialized, may also be considered.

Special Skills

Over a period of time, develop special expertise in priority areas to be determined. These might include:

- Industrial sectors such as metal mechanics and agricultural inputs
- Selected disciplines such as R and D management, financial management, engineering design and construction liaison

3. NATIONAL POLICY AND INDUSTRIAL CONSULTANCY

Although each Government has different needs and priorities, national industrial development policy objectives are likely to include many, if not all, of the following concepts:

- More jobs and better income distribution
- More local "value added"
- Increased production for export

^{1/} Please see Managing Technical Institutions for Industrialisation
UNIDO/IOD.116, 1977

- Less foreign exchange outflow
- Acquisition of technology, management, finance and know-how on improved terms
- Effective utilization of existing industrial capacity
- Less dependence on outside skills
- Leapfrogging development of local management and technical personnel
- Stimulation of local entrepreneurship
- Integration of the national economy: both within the industrial sector and through linkages with agriculture and infrastructure
- Geographical dispersion of industry
- Enhancement and application of local R and results
- Less environmental damage (or even positive enhancement, especially in social and technological aspects)

The objectives are usually clear, but their attainment is a complex process. While in the industrialized free market economy countries the Governments traditionally played a passive role, the efforts of Governments in developing countries to accelerated development are much more active. This active role requires a stronger concentration of technical and technological skills in the Government concerned or at its service. But for historical reasons, public administration in developing countries is usually oriented towards financial and economic matters. The "technical arm" needed to carry out industrialization programmes is often weak.

Since the need for such skills is multiplying as industrial development progresses and as technological levels increase, the use of consultancy services - both domestic and foreign - has grown rapidly. And Governments have a tremendous stake in ensuring that the national interest, as embodied in the list of policy objectives given above, is fully reflected in the procedures and professional judgements applied by their consultants.

Clearly local, especially national, consultancy services are best able to take account of local aspirations, conditions and possibilities. But it may be noted that even in fairly advanced countries, there is little understanding of how policy objectives can be advanced through this approach.

Depending upon the institutional arrangements, a consultancy service is likely to be able to exert considerable leverage towards attainment of national industrial development policy objectives. Since the service by its nature influences a number of industries, its operating policies and practices potentially have a large multiplier effect. The effect arises both from the selection of clients and projects, and from the way in which assignments are carried out. If for example the design of industrial investment projects were consistently guided by a policy of "local involvement" - with all that that entails - the pattern of industrialization would be substantially different from that which would result from a policy based on pure financial considerations.^{1/} A policy emphasizing development of production for export could have similarly far-reaching effects. And these are only two examples. Others could involve enhancement and application of local R and D results, geographical dispersion of industry, encouragement of local entrepreneurship, etc.

4. THE INSTITUTIONAL FRAMEWORK

Governments have an opportunity to influence the legal and organizational form in which national consultancy services develop. As a quick review a number of common forms are summarized below:

- Independent firm, commercial or state-owned
- Subsidiary or affiliate of an international consultancy firm
- A specialized division or subsidiary of a finance institution or of a manufacturing firm (public or private)
- A service provided directly by an industrial operations department of a ministry of industry
- One function of an industrial promotion centre, usually attached to a Government Ministry
- A division of a training or applied research institution
- A function of a specialized industry support centre (e.g. a standards institute or a metal industries development centre)

^{1/} Please see "Sources and Application of Economic Leverage for the Development and Implementation of Industrial Investment Projects", UNIDO/IOD.176, 1978

- A service of the engineering or business faculty of a university, sometimes incorporated as a semi-autonomous body, and sometimes associated with contract R and D.
- A service of an industry related association, such as an association of manufacturers or a chamber of commerce and industry.
- A service of an export promotion board or similar body
- A service or division of a holding company for its affiliated enterprises.

Numerically, the first category is undoubtedly the largest on a global basis; but the greatest proportion of the independent firms are small and relatively unproven. Furthermore, as mentioned in section 1.1, a great many of the services nominally offered under the other headings are still in their infancy, as measured by the quantity and quality of their output.

In industrialized countries the consultancy firms draw on expertise from the overall professional community, as the community is sufficiently wide and provides good choice. In developing countries this is not always or fully possible, and an alternative solution should be considered. Such a solution could consist in pooling at the country level the efforts not only of individuals but also of particular institutions such as universities and research centres. Such a solution not only provides for institutional strengthening of consultancy, but also the right training at an early professional stage. Such an approach can also provide good results within a scheme of international co-operation, particularly if a policy of specialization is established, either by areas of activity or by necessary functions such as training, research, etc.

Creating a "critical mass" of skills^{1/} in order to offer a credible and professionally competent consultancy service is likely to be a severe problem in many countries. Besides the institutional approach described earlier, in many cases it may be useful to establish a panel of associated consultants whose primary institutional affiliations are elsewhere.

^{1/} Please refer for example, to "Activating the Potential of Universities for Industrial Development", UNIDO/IOD.150, 1978.

Examples of skilled people who might be worthwhile members of such a panel are university professors and staff members of management institutes and research and development centres.

In addition to the possible necessity for such an approach above mentioned to extend the number and range of consultants available to the service, there is a further, very important advantage. We may refer to the effect as "dynamic interaction". Through the pooling arrangement, staff of various institutions are brought into direct contact with officers of industrial enterprises and with each other, in a relatively informal problem-solving environment. This stimulates the interchange of practical information, increasing opportunities for solutions to be discovered. Motivation and productivity of all involved are likely to be enhanced and the effects may endure beyond the conclusion of a specific assignment.

It is to be noted that local consultants, needing technological or operational support many times revert to big international firms, instead of mobilizing resources locally. In spite of the need to develop national consultancy capacity, local consultancy normally operates in an adverse ambience, as a lack of confidence exists, even at central level. Yet clearly, a basic condition for successful development of local consultancy is a minimum of confidence, and here the Government can play an important role, establishing such confidence.

It is useful to highlight the efforts of many Governments of developing countries in promoting the creation and establishment of local consultancy services, often as a semi-autonomous governmental institution. However, in many cases the results have not been fully satisfactory. One principal problem: being a Government (or semi-Government) service the young consultants are subject to Government salaries, which are lower than those prevailing in the consultancy profession. Once they acquire the necessary experience, they are offered much better salaries by international consultancy firms and most of the developing countries' effort is wasted. Thus it becomes important that Government sponsored consultancy services have a sufficient degree of independence to permit attractive salaries and positions.

Besides Government efforts to create or to strengthen local consultancy, and the efforts of the consultancy itself, another interesting approach could be applied in developing countries. Such an approach consists in a group of manufacturing enterprises creating its own consultancy service. This would have various advantages both for the enterprises of the pool and for the consultancy service itself. The enterprises could shift a number of problems or activities which unduly absorb their efforts to the consultancy service. The consultancy service, because of the wider operational base, could cope with more complicated problems, undertaking also such tasks as training of the staff of the enterprises, etc. Obviously this solution is only possible where no conflicting commercial interests exist or where a joint effort outweighs such a disadvantage. The consultancy service established under such conditions could cover various fields or be specialized in some particular area. A classical example of the latter would be a joint consultancy service for export industries.

Another form for strengthening the operational effectiveness and potential of consultants is through the creation of co-operatives in consultancy. The co-operatives can be established in various ways. The simplest is through a direct association of various consultants. Another is through the establishment of a joint marketing and sales organization or unit. The latter could function alternatively as a jointly owned service bureau, whose expenses would be apportioned on some equitable basis.

5. INTERNAL MANAGEMENT OF CONSULTANCY SERVICES

Besides the need for a national concept of consultancy, there is also the need for suitable methodologies and strategies of operation and of organization at the service level. Patterns of consultancy operations developed in industrialized countries (just as with technologies) are not always readily transferable or adaptable. For example, the organisational scheme of a consultancy service in a developing country has to be different as it can not draw on practically unlimited skill available outside. This could imply a need for specialization, or the seeking of additional sources of skills.

Similarly a market study conducted according to methods and strategies of an industrialized country might be of little use to a manufacturer in a developing country. For instance, the product parameters identified might be beyond the production possibility. A local consultancy service should be in a position to avoid such an outcome from the outset. Techniques such as budgeting or accounting should also be adapted to the local potentials and not based on idealistic assumptions. Much the same applies to questions such as organization of the enterprise, production, etc.

To identify sound approaches, strategy and methodology in this context, much research and development work is needed. This requires a serious effort by the consultancy service which is not directly or immediately productive. Such effort can hardly be undertaken at an individual firm level as it absorbs in most cases too many resources. On the other hand some experience is available outside, or investigation of such issues could also be undertaken outside. The following case illustrates the point.

In one African country a consultancy team is developing industrial accountancy systems and staff in state-operated industries. An ingenious scheme has put a number of teams of relatively young local consultants to work in separate plants simultaneously, with frequent brief supervisory visits by senior advisors. The client companies' personnel are trained in a "modular skills" approach which makes them productive for standardized tasks in the minimum

time. In another country the work is done one-enterprise-at-a-time. Although the first method seems more efficient at a distance, it is difficult to ascertain "ex ante" whether it is transferable to the second country, or whether it will work for production control, say, as well as for accountancy.

As suggested by the above, a number of practical questions arises in the course of consultancy operations:

- a) How to obtain maximum leverage from the use of the most effective standards.
- b) Standards to be applied in executing consultancy projects, especially the degree of perfection or level of detail to be sought ("gold plated" vs. a low-cost approach).
- c) A commercial approach designed to secure maximum revenue from a client vs. the alternative of seeking maximum impact from the allocation of scarce skills.
- d) The degree to which the consultancy service assists with implementation of its recommendations.
- e) The survey approach to diagnosis versus a pinpoint or rifle shot approach.
- f) The "rate of change" which can be embodied in recommendations without exceeding realistically attainable norms.
- g) The means of allocating consultancy resources and conducting assignments in accordance with national policy objectives.
- h) Methods of controlling cost, schedule and quality of work.
- i) Means of developing professional competence in the consultancy staff.

It is certain that valuable know-how on each of these points exists among the various consultancy services. The best solutions might be adapted to the needs of other countries if such experiences were more readily available for "transfer".

6. NATIONAL PROGRAMMES FOR THE DEVELOPMENT OF INDUSTRIAL CONSULTANCY

Most Governments are already concerned with promoting, guiding, or directly participating in the development of industrial consultancy capability as an important national resource. The following few cases illustrate the diversity of measures being undertaken.

- An African country has established a specialized parastatal company to provide a broad range of **consultancy** services as a "mainstream" element of its industrialization programme.
- In an Asian country which has experienced rapid export-oriented industrialization for 25 years, the Government is determined to re-examine its past reliance on outside partners for managerial and technological decision-making. The present plan, as a first step, is to hold an international symposium to identify "promising" elements from the approaches practised by several major industrialised countries, and a number of the more advanced developing countries. Eventually a truly national approach will be evolved. The result will be put into practice through training and consultancy.
- The national development corporation in a Latin American country is considering how best to organize consultancy services to its affiliated enterprises, many of which are having difficulties in meeting loan repayment schedules.
- With active Government support, a Middle Eastern university is setting up a consultancy service which will specialize in improving the terms under which technology and management transfers take place.

As outlined earlier, there is a need to develop a national concept in consultancy and a programme to put the concept into effect. The concept should be based on two factors: 1) a judgement as to the best role consultancy can potentially play in the development of the country; and 2) an analysis of the present capabilities and contribution of the local consultancy service, compared with an assessment of the needs.

The programme, ideally, is designed to bring the actual consultancy contribution into line with its potential.

In developing the national concept, both direct and secondary effects of an extended national consultancy may be taken into account. While assessing the possible role of consultancy, such aspects as limited industrial tradition, shortage of capital, etc., should be taken into account. Also, factors such as a preference for joint ventures, or a disposition towards co-operatives should be considered, since these determine certain structures for the organization of production. The natural resource endowment (fibres, minerals, energy, etc.) is another factor contributing towards a clearer definition of areas of priority of development of consultancy. Finally, a key factor for defining areas for priority development of consultancy is the possibility of developing a comparative advantage of production in a certain field. Comparative advantage, in this respect, is not only to be considered in terms of cost advantage in the inputs, but also in such intangibles as design, marketing ability, etc., that is to say the competitiveness of the end-product.

The concept, once defined, provides guidance towards selecting measures to achieve the objectives. The priorities of the country, defined in most instances at central level, will determine fields of major demand for consultancy services. The potential demand of consultancy defines the required inputs of the service itself, thus also establishing the mode of organization and of operation. This in turn permits the introduction of measures to strengthen and mobilise the services. Thus the Government can promote research, co-operation and overall strengthening of consultancy capability in areas of interest to the country. Some examples of specific measures which can be taken by Governments (or in many cases by national institutions such as development corporations, R and D institutes, universities and consultancy firms themselves, i.a.) are the following:

- The Government can increasingly rely on local consultancy services, providing if necessary additional or complementary inputs. This would help to eliminate any lack of confidence in local consultants while directly building up their capabilities and self-confidence.

- When a project cannot be carried out entirely by local skills, an acceptable involvement of local expertise may nevertheless be brought about, through asking international firms to propose joint ventures with local firms or by arranging for local personnel to participate as temporary staff members of the overseas consulting firm. This approach should have desirable training and technology transfer effects.

- A further policy of the state in developing consultancy can be in supporting or otherwise facilitating local market development and bidding activities. This, particularly for complex projects, is an expensive item; and many local consultants lack adequate resources. A further contribution could consist in programmes of training.

- International co-operation, particularly among developing countries, can help accelerate the development of country-level consultancy. Hence, although it might sound contradictory, another policy of Government should precisely be the promotion of international co-operation, as outlined in the next section of this paper.

- The principle of complementary specialization may help to strengthen the overall range of services available from several institutions in a country (or including additional countries in a co-operating network).

- In cases where existing structures are judged to require supplementing, a new service can be established. Considerable experience can be made available to countries wishing to explore options in this area.

- Similarly, national networks of consultancy services can be set up or strengthened, to aid in pooling consultancy expertise and "cross-fertilizing" existing skills.

The above few points suggest ways to upgrade and strengthen the national consultancy services to increase their contribution to development. Considering the multiplier effect of consultancy, the effort is considered worthwhile. The central issue is how such an effort can become most effective. As a guideline it is suggested that the national programme be designed to make maximum use of existing consultancy capabilities and structures.

7. STRENGTHENING SELF-RELIANCE THROUGH INTER-COUNTRY CO-OPERATION

7.1 The Case for Co-operation in Consultancy

The benefits of co-operation among developing countries in the field of consultancy can be readily seen. They are primarily two: 1) The reduction of cost through joint actions, such as joint research or training programmes, and 2) the increase of experience on hand through exchanging or pooling expertise, which allows an increase of area and possibilities of action. ¹ Thus, co-operation permits the mobilization of resources for project development (marketing) and implementation. And while co-operation with organizations in industrialized countries is often useful, it is increasingly advantageous to emphasize co-operation among developing countries themselves.

The basic patterns of consultancy, even in industrialized countries, have a built-in component of co-operation. Generally speaking, a consultancy organization is constituted by a central nucleus either of a staff (usually generalists) or of skills, or of knowledge of a technology or process. Each of these central elements however is not operative on its own and needs a complement from outside. This aspect (i.e. how much they rely on outside) is normally a well guarded secret of the consultancy firm.

¹ In many developing countries the existing consultancy organizations consist of only a few associates. Those consultants, in most cases first class specialists returning from assignments with big consultancy organizations from industrialized countries, can nonetheless because of the limited resources, cover only a limited part of the demand, dealing usually with very general problems. They are not usually in a position to conceive original, comprehensive solutions.

The basic nucleus is usually complemented by two other factors. One of them is a good knowledge of sources and market of skills (rosters of experts) who are hired on a project-by-project basis. The other factor is a well worked out philosophy, methodology and technology of acting, which facilitates greatly the project operation and implementation. The question of why consultancy has to rely on outside is simple to answer: it would be too costly and complex to have at any moment all the skills, technology and processes on hand (or on the payroll).

Co-operation in consultancy can be considered in two dimensions. Horizontal co-operation implies enterprises of similar background, specialization and objectives, thus, enhancing actions and enlarging experiences in the same area, such as plant design. Vertical co-operation implies enterprises specializing in different but complementary fields, such as design of plant and erection of plant. While in the industrialised countries co-operation in the first case consists mainly of defense of professional interests, in the second it consists mainly of straight forward joint ventures. In developing countries both cases are of a substantial importance, as in the first case it increases the potential of action and in the second the field which can be embraced.

The co-operation as such, globally speaking, can also be considered in three areas: the making of consultancy, the selling of consultancy and the provision of consultancy. Different approaches, inputs and agreements and schemes are necessary for co-operation in each of those areas, but a successful co-operation in one of them opens the doors to the co-operation in the others.

It is also to be said that although co-operation in each area is clearly beneficial, the will to co-operate may not exist in all fields, mainly because of commercial interests. This problem however does not seem very severe between developing countries where through co-operation new fields of activity can be embraced.

One basis for co-operation is the political will of the countries and institutions to co-operate. A second important aspect is the existence or the creation of a framework of co-operation and schemes of implementation. Further, the basis of any joint action is the availability of information and effective communications. Here regional associations of consultancy can play a vital role.

In spite of what has been said about the need of a truly national approach and concept of consultancy, and of the particular need of developing countries, co-operation with consultancies from industrialized countries should not be excluded. It is recognized that through great specialization, particularly in the industrial field, levels of technology and skills have been achieved in specialized areas, which would be too costly to develop worldwide. The point is, however, to make sure that co-operation with a partner from an industrialized country is truly beneficial to the partner in the developing country. In particular it should contribute towards the strengthening and not weakening of consultancy infrastructure in the developing country. It should also enhance the local capacity for developing technology. (If necessary, the position of consultants in developing countries should be protected in this respect by appropriate national legislation).

7.2 Development of Co-operation in Consultancy

The comments in previous chapters give a schematic view on the areas, problems, ways and needs of co-operation. The complexity and variety of issues and approaches should not be an obstacle in pursuing stronger co-operation among developing countries with obvious advantages for the parties concerned.

As pointed out, co-operation should start at national level. Such co-operation would consist as far as development of consultancy is concerned in establishing links between the consultancy itself and institutions concerned (such as institutes of R and D, universities, associations) and mobilizing inputs. The results of such co-operation would be joint training and research programmes, and the pooling of operational and specialized capacity to arrive at joint ventures or other operational arrangements.

International co-operation should be promoted by Governments, professional associations, institutions, regional groupings, etc. Each of the parties concerned could promote and establish co-operation in one or another area of its specialization. For instance an active Government co-operation can be conceived at the educational, training and research level. (Particularly on regional or sub-regional basis).. Professional associations could contribute greatly in pooling and exchanging of skills, processes, etc. Through such actions they could contribute towards a stronger marketing impact of the consultancy services of developing countries. Universities can contribute through joint development of basic or specialized curriculae and through joint research programmes. A creation of permanent links in the areas of particular interest among the institutions involved would certainly enhance positive results.

The concept of co-operation implies not only the pooling of resources or undertaking a joint effort. It also implies at least to a certain degree a geographical or substantive specialization. Such specialization is justified by scarcity of resources, but also by different patterns of requirements, demand and needs of different countries. This is of particular importance in the case of international co-operation.

A wider international co-operation requires a number of actions. In the first instance it requires motivation at three levels, international, national and/or company enterprise level. This in many instances, where consultancy services are provided by a semi-government organization, can be reduced to two levels, i.e. the international and the national level. A special case of possible co-operation exists within regional groupings, such as the Andean Pact, ASEAN, and ECOWAS

Another requirement for better co-operation is the availability of information necessary to mobilize and manage such co-operation. Although there are regional associations of consultancy, which could play a vital role in this field, their aims are not always homogeneous, and resources not sufficient for a world-wide undertaking of this kind. It is to be noted that referring to information, the need is not for one-time information, but for a continuous flow, and not only on present situations, but also on future needs, projections, etc.

No doubt permanent machinery is needed to handle the two issues mentioned so far (motivation and information). Such machinery would require certain characteristics such as of being able to reach the consultants, professional organizations, Governments and Institutions concerned. The machinery should further have a good understanding of the issues, as results will only be achieved if they are handled at technical level and with technical competence.

As to the realization of an operational scheme, a number of questions should be clarified, the basis being: what are the areas of priority and which are the best ways of doing it. As to areas, broadly speaking it would seem that the basic issues are centred on how consultancy should be operationally organized and on the mechanism for supplementing or upgrading skills.

7.3 Role of UNIDO in the Development of Industrial Consultancy Services

As described before, numerous actions to achieve accelerated development of industrial consultancy in developing countries are possible. Appropriate goals, actions, ways and means depend on policy decisions, local conditions, etc.

The efforts of the countries may be complemented efficiently and with a multiplier effect by outside assistance or co-operation, or both. It is to be mentioned here that the issue is not simply one of adding financial means, but rather providing specialized inputs, either to directly support the effort or to provide the means for a necessary platform or machinery. Efforts in this field are undertaken by UNIDO at a global, regional and country level. Activities cover the areas of research, promotion of co-operation and technical assistance at various levels.

UNIDO possesses technical capacity for supporting the development of consultancy, in the field of research and publications as well as in operational activities. It also disposes of mechanisms to foster co-operation and contacts. A special organizational unit exists for co-operation among developing countries, and another for co-operation

with non-governmental organizations. Further, UNIDO disposes of a network of Industrial Field Advisers, who support operational activities as well as foster other programmes.

Various ways exist to develop consultancy capacity in developing countries through technical assistance. The most common case is direct assistance at country level in the form of an individualized project to establish or strengthen consultancy services. Such projects traditionally include provision of expertise and of fellowships.

Besides the aforementioned traditional type of assistance project, new approaches in assistance are being applied. This is possible through inclusion into the project of various elements which permit an elasticity of approach such as study tours, contacts, pairing arrangement, ad hoc advisory service, etc. The projects can include financing of such elements (travel, etc.) but also of the advisory and promotional element for devising and achieving such objectives.

Technical assistance can also be used to strengthen directly the operational and technical capacity in specific operations. So for instance if a local team of consultants could undertake a specific study but lacks experience in a certain very specialized area, such expertise could be provided through technical assistance, either as a special project or by drawing from the resources of an established technical assistance project. It is to be noted that such approach not only provides for technical solutions, but also strengthens the marketing impact of developing countries' consultancy services. It is also to be noted that such approach should also be possible through international co-operation under such arrangements as pairing or networking.

Technical assistance of UN as an additional or complementary input towards the development of local consultancy presents in its classical form one problem. Technical assistance is provided at Governments request and in most instances to satisfy direct Government needs. Thus, it can happen that when no Government or semi-Government consultancy service exists,

no assistance will be requested or that such assistance will be exclusively available to one service and not to the consultancy community of the country.

Besides direct technical assistance at country level, assistance can also be provided to foster inter-country co-operation in the field of development of consultancy. This can be done by inclusion of an element of co-operation in any specialized project, but also through specific co-operation projects at country level (financed from the countries' UNDP Country Programme), as well as through sub-regional, regional or interregional projects. The last type of project is particularly suitable for promotion of co-operation and support to it (either operational or institutional).

Technical assistance in development of local consultancy merits high priority. This is so because such assistance has a number of built-in leverage elements which help ensure a high output-to-input effectiveness ratio. Such projects have a high multiplier effect, since while developing consultancy capability, direct benefits to industry are simultaneously provided. Those projects also have a high component of building self-reliance as they enhance local technical problem solving capacity and are an effective way of upgrading skills.

For the beforementioned reasons such projects also present certain difficulties in formulation for maximum effectiveness. Here the particular conditions and objectives are to be examined in great detail so that original and imaginative ways of using and combining technical assistance inputs can be conceived. As an example, an integrated inter-sectoral programme of technical assistance can include a sub-programme for the building of consultancy.

In particular cases, special concepts of project should be developed. Such is the case for instance of LDC establishing as special support regional projects providing for a common pool of expertise.

Various other formulas can be examined and applied whenever convenient. For instance, an exchange of project personnel - both national and international - among similar projects of technical assistance could be considered. Another approach in planning technical assistance could be to establish a reserve in the global IPF figure for the development and support of co-operation among developing countries in the field of industrial consultancy.

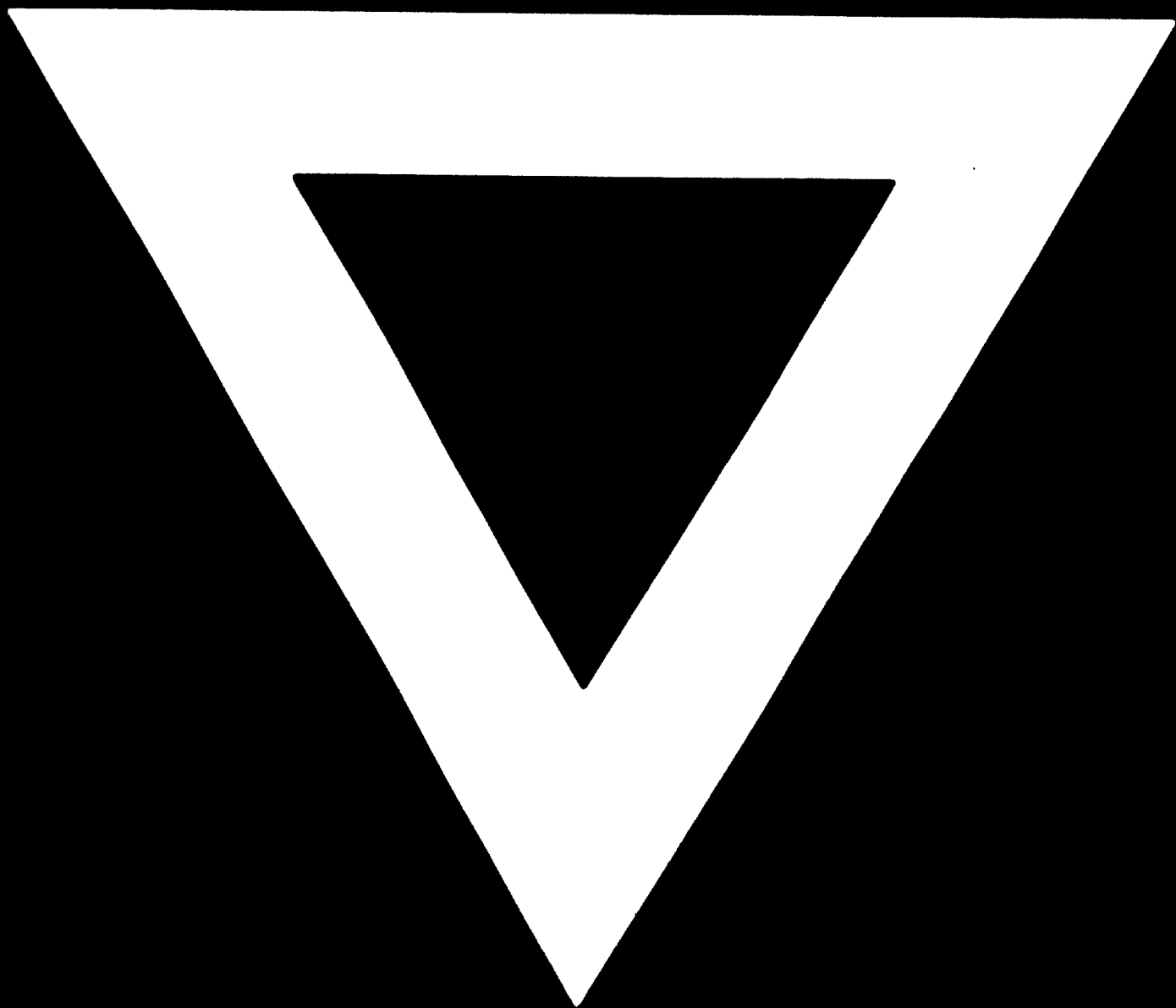
Summarising, assistance can be provided at country level to build up and strengthen the national consultancy services. Such assistance would provide expertise, possibilities of training, operational strengthening and also research. Projects can be designed in such a fashion that they combine various inputs, which permit elasticity of action and alternative solutions at one or the other stage of action. The assistance at country level can include a provision for international co-operation (particularly with other developing countries) through financing of travel, exchange of experience, etc.

Besides, there is a wide scope for UNIDO to assist through sub-regional, regional or interregional projects. These may involve the mobilisation of co-operation, supporting the co-operation itself and also providing the substantive and technical backing to actions resulting from the operational co-operation.

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