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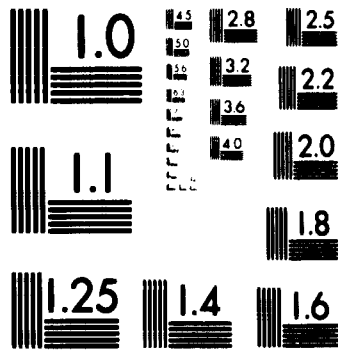
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UNITED NATIONS DEVELOPMENT PROGRAMME

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

UNDP/UNIDO Assessment of Projects in the Fields of  
Industrial Strategy, Programming and Policies 1/

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## INTRODUCTION

1. Industrial planning is an important instrument for the effective mobilization and optimal utilization of resources for the orderly and rapid industrialization of the developing countries. In this context, UNIDO's responsibilities for assisting developing countries in the formulation of appropriate national and multi-national industrial strategies, programmes and policies was recently emphasized in two reports on a long-range strategy for UNIDO.<sup>1/</sup> The Group of High-level Experts, in recommending that UNIDO should develop outstanding competence in this area, felt that this would enhance UNIDO's role as co-ordinator of the activities of the United Nations system in the field of industrialization. This theme was reiterated by the Ad Hoc Committee, which also drew attention, inter alia, to the need to further strengthen UNIDO's organizational capacity to undertake operational programmes for development. The Committee also "attached considerable importance to the development by UNIDO of a system of continuous evaluation of its operational activities in the light of the recommendations on industrial strategies and policies".

2. In order to respond to the recommendations of the Ad Hoc Committee, UNIDO and UNDP jointly agreed to undertake an assessment of projects in the fields of industrial strategy, programming and policies. The subject matter, of the first of what is intended to be a series of similar exercises, brings together two of the recommendations of the Ad Hoc Committee - that pertaining to UNIDO's programme in the field of industrial strategies, programming and policies and that concerned with operational activities.

3. The purpose of the exercise was to review, on the basis of a representative number of projects, the extent to which the United Nations system has contributed towards meeting the technical assistance needs of the developing countries in the area of industrial strategies, programming and policies. It is to be anticipated that the general conclusions derived from an assessment of a group of projects would provide a

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<sup>1/</sup> Report of the Group of High-level Experts on a Long-Range Strategy for UNIDO, ID/B/133 of 23 February 1973.

Report and Conclusions of the Ad Hoc Committee on Long-Range Strategy for UNIDO, ID/E/142 of 19 March 1974.

contribution to the design of similar projects in the future. Moreover, a review of assistance in the field of industrial planning might be of value in considering the manner and extent to which the United Nations system can best assist Governments in selecting high priority projects in the industrial sector for inclusion in the UNDP country programme.

4. The terms of reference for the assessment exercise, and the list of projects reviewed, are attached as Annex I and Annex II, respectively. The work of the exercise was undertaken jointly by staff of UNDP and UNIDO. Various aspects of each project were reviewed and assessed by UNIDO, the findings generalized and a draft note prepared. At the same time UNDP reviewed the design of the projects, and brought forward certain conceptual aspects of the assessment exercise. In late November 1974, a working-level meeting was held in New York between the officials of UNIDO and UNDP directly concerned with the exercise. The present paper draws upon the earlier work undertaken by UNIDO and UNDP,<sup>2/</sup> and upon the discussion held in New York.

5. In the sections that follow, section I presents the overall findings of the assessment and emphasizes the difficulties of measuring the impact and effectiveness of the various projects; section II discusses the formulation of the projects and advances a number of recommendations which, if implemented, should materially improve the design of similar projects in the future, section III examines some of the problems faced in implementing and supervising projects in the field of industrial planning and makes appropriate recommendations; and section IV makes certain proposals to facilitate the "intercountry generalization and utilization of experience".

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<sup>2/</sup> Draft note by the UNIDO Secretariat, "UNDP/UNIDO Assessment of Projects in the fields of Industrial Strategy, Programming and Policies"; from UNDP - "The Conceptual Framework for the Exercise" and "The Design of Projects". In addition, the UNIDO monograph No. 17 "Industrial Planning" was useful, (United Nations, New York, 1969, Sales No. E.69.II.B.39, Vol. 17).

## I. OVERALL ASSESSMENT OF THE PROJECTS

6. One way of measuring the significance and value of UNDP/UNIDO assistance in industrial planning would be to assess the contribution of each project to the process of industrialization in the various countries, particularly with respect to reviewing the strategies prepared, and policies recommended in terms of the actual course of industrial development. A more limited concern would be an assessment of the extent to which the policy recommendations made appear to be well conceived in terms of the current problems of and future prospects for industrial development in the countries under study. A review along these lines would consider such issues as the appropriateness of the policy recommendation, the extent to which UNIDO was able to provide guidance in the development of the recommendations, and the degree to which the recommendations made by the project teams have in fact been adopted. In a slightly different context, a further criterion against which to assess the projects would be an examination of the extent to which the projects contributed, first, to an upgrading of the technical know-how and skills of the national industrial planning officials; second, to the overall process of industrial planning; and, third, to the strengthening of the institutional structure for industrial planning.

7. For a number of reasons, it is not possible, within the context of the present exercise, to provide satisfactory answers to all of the above points. Apart from the issues mentioned in paragraph 8, a serious obstacle to a proper assessment is the unavailability at UNDP or UNIDO headquarters of pertinent information on the substantive activities and results of the various projects. To a certain extent, the absence of sufficient information and data is because several of the projects have only been operational for a comparatively short time, and it is too soon to expect to see any significant results. The problem of the availability of information is, however, more serious than this, and the nature of the present reporting system on projects and on ways to improve the flow of substantive information from the field to headquarters is at the heart of the problem and is discussed in section III below.

8. However, even if the required information were available, there are formidable difficulties in reaching a firm conclusion on the contribution of these projects to industrial development. It is evident that the process of industrialization is not simply dependent upon the formulation of an industrial strategy or programme. There are a number of other factors (e.g., the investment rate, the general political environment, resource endowments, available infrastructure, attitudes of the population



towards production and productivity increases, the availability of foreign exchange, the access to foreign markets) which will influence the speed and scope of industrialization and from which it is not possible to isolate the unique contribution of an industrial planning exercise. Furthermore, a considerable time lag inevitably exists between the formulation of a strategy, or programme, and its possible impact on the course of future industrial development. Moreover, the policy recommendations of advisory teams are never followed in every detail, and it is then arguable that, if the outcome was not as anticipated, then this is because of the setting aside of certain of the recommendations. A further reason for the difficulties in assessing the impact of the projects rests with the recognition that the UNDP/UNIDO acceptance is often but one element of the entire industrial programming exercise; it is not possible to isolate any one particular component.

9. For all these various reasons, the assessment exercise is not in a position to identify and isolate the contribution of UNDP/UNIDO assistance in industrial planning to the process of industrialization; nor is it possible to assess the extent to which the output furnished by the projects has been utilized. Clearly, however, it is desirable that a review be made of these important issues. Although there are significant problems involved in undertaking such an exercise - particularly those described in paragraph 8 - it is recommended that a review be conducted on the substantive contribution of a selected number of projects to the course of industrial development. Such a study is clearly in line with the relevant recommendations of the Ad Hoc Committee on Long-Range Strategy for UNIDO.

10. The overall conclusions to be drawn from the assessment exercise are, therefore, somewhat more limited in scope. The detailed analysis of the projects in the sample has been the basis for recommendations which have a general validity for the projects in the fields of industrial strategy, programming and policies. However, the quantitative weights expressed in the exercise necessarily incorporate an element of subjective judgement of the participants of the exercise, and do not necessarily reflect the views of either UNIDO or UNDP. Consequently, precise quantitative data have been avoided while an attempt has been made not to sacrifice any element of critical analysis. The main conclusions are the following: first, in the context of the (planned) quality, quantity and timeliness of the inputs and activities, and of the project's objectives, a fair proportion of the projects was considered to have attained, or have prospects of attaining, a satisfactory output in terms of an adequate industrial strategy, industrial development programme, or identification and selection of investment opportunities. Of the satisfactory projects, a part may be regarded as having a potential impact on industrial

development if a number of complementary conditions are fulfilled. For the projects judged as having had an inadequate result in terms of output, this is mainly as a result of deficiencies in the expert component, and/or in the lack of Government support, and/or because of drawbacks in the original design of the project. Second, the contribution of the projects to the upgrading of the industrial planning skills of the (national) officials was disappointingly limited: only a few projects obtained significant achievements and for reasons explained below, in most projects the training was inadequate. A number of recommendations are made in section II (D) below to enhance the usefulness of the training component in UNDP/UNIDO industrial planning projects. Third, the contribution of the projects toward strengthening the institutional structure for industrial planning and for further developing the process of industrial programming is rather limited, although several projects were of particular value in laying the foundations for more significant industrial programming exercises in the future. In other cases, however, projects were not fully integrated into the policy- and decision-making processes of the Government, thus making it unlikely that these projects will have had a significant positive impact on the institution-building aspects of industrial planning.

11. There were a number of factors which adversely affected the effectiveness and impact of the projects. First, the main purposes and the nature of the desired output were not adequately or clearly defined chiefly due to the absence of proper exploratory mission of the preparatory assistance to the project; consequently, the activities and inputs to attain the output were not fully identified. Furthermore, essential pre-requisites such as indispensable data, knowledge about the socio-economic priorities of the Government, etc., were not always available and/or recognised. Second, the contribution of the projects to the development of skills and the transfer of know-how was generally limited. Both of these issues are discussed in section II below. Third, the quality of international expertise fielded for the projects was not always up to standard, a reflexion of the world-wide shortage of well qualified and experienced industrial planners available at current United Nations terms of service. This matter is considered, and recommendations advanced, in section III below. Fourth, the substantive backstopping of the projects had generally little impact on their progress. This problem is discussed in section III below.

## II. THE DESIGN OF PROJECTS

12. Of the 25 projects reviewed, 13 are national in character and orientation, and the balance regional. There are relatively more projects in Africa (nine) and in Latin America (eight), than in Asia and the Pacific (five) and in Europe, Mediterranean and Middle East (three). In the last case, all three projects were in the area of the Middle East. Of the national projects, three were in least-developed countries and four in countries with a relatively well advanced industrial structure. Two of the projects were but components of major multidisciplinary planning teams; the larger projects were executed by the United Nations and the posts of industrial economists subcontracted to UNIDO. A further two projects were conducting a variety of industrial programming, industrial promotion and industrial development type activities; only the industrial programming component of these projects have been reviewed in the present exercise. The single-adviser small-scale type project was a significant feature of the sample of projects: of the 25 projects, 11 were of this character. As would be expected, virtually all projects had a heavy expert component, and one project was subcontracted.

13. In terms of their activities, the projects chosen for the assessment represent a varied sample. The majority of projects, whether financed from national or regional IPFs, are multi-purpose in character, and cover several differing activities in the fields of strategy, programming and policies. Other projects have a narrower orientation: one project is solely concerned with the preparation of an industrial strategy, two projects are concerned with sub-sectoral planning matters, and a further two projects with the programming of industrial development at a regional (sub-national) level. Few projects are mainly concerned with the development of skills in industrial programming techniques. In the paragraphs that follow, consideration is given, first, to the need to more clearly define the essential purpose of an industrial programming project; second, to bringing out the essential requisites for undertaking a programming exercise; third, to the need to establish effective relationships between the international staff and the senior Government officials; fourth, to the importance of developing an effective training programme in techniques of industrial planning; and, fifth, to the administrative arrangements for preparing the project document.

A. DESCRIPTION OF THE OUTPUT OF THE PROJECTS

14. It was not possible in many cases in the absence of an exploratory mission of substantive nature to take into account in the design of the project the specific stage of industrial development, resource endowment, and the specific policy and institutional framework of the country's economy. Therefore, in those cases the essential character and specific output of each project could not be clearly identified and defined. In some cases, this lack of precision was intended to retain flexibility to take into account those very issues in the course of project execution. In other cases, and in particular in the single-adviser type projects, it may not always be possible to closely define the purposes of the project, since the UNDP/UNIDO assistance may be a small element in the total planning effort. Although these difficulties should be recognised, there is undoubtedly considerable scope for more clearly identifying and expressing the raison d'être of the project, particularly by carrying out specific studies as a part of the preparatory assistance to the project or by an exploratory mission of substantive nature.

15. Industrial programmes and policies should be set as far as possible within the context of an industrial strategy and an industrial strategy can only be formulated on the basis of the definition of the macro and subsector level objectives. In either case, it is necessary to take into account and identify the specific stages and mechanism of planning and to undertake a brief review of the recent performance of the economy in general and the industrial sector in particular and to analyse the problems confronting the Government in its efforts to industrialize the economy. The project documents should contain, inter alia, a brief review of recent industrial performance and prospects, and the statement of objectives if readily available, and should establish the desired outputs of the UNDP/UNIDO projects in specific terms such as the definition of the Government's objectives; the formulation of strategy including identification of the priority subsectors, range of investment, output and employment in these subsectors, measures necessary for skill formation and technology transfer, adaptation and development and the policies and institutional framework necessary to implement the strategy; and the preparation of an industrial development plan encompassing just a subsectoral and sectoral targets of investment, foreign exchange, output, employment; second, the micro-level project proposals with varying degrees of detail and accuracy; third, an industrial skill formation programme; fourth, a programme for improving performance of existing enterprises including financial and technical assistance needed by them; fifth, the formulation of industrial policies including financial,

fiscal, tariff, technology transfer, wages, etc., and administrative, legislative and institutional measures necessary to implement the industrial development plan, and sixth, the preparation of medium-term and annual financial budgets, in both domestic and foreign currencies. The substantive exploratory mission or the preparatory assistance to the project as appropriate is a necessary tool to prepare the project documents which would, inter alia, define the project outputs in such specific terms. Such definition of the project outputs will also provide the benchmarks for the terminal assessment of the project.

16. A few project documents are concerned with the planning of industrial development at the regional (sub-national) level. On the one hand, the preparation of a regional industrial development strategy or programme should be consistent with complementary proposals in other sectors to develop the region in question: clearly the development of the industrial sector is partly dependent upon the development of the agricultural and rural sectors (both for the supply of raw materials, and as a source of demand and of savings), on the education and training sector, and on the transport sector. On the other hand, the industrial development proposals for the region should be consistent with the overall sector plan, particularly from the point of view of the allocation of industries serving the (total) domestic market, of investable funds, and of trained manpower. Sector planning in a particular region should as far as possible be coordinated with the appropriate sectoral and macro-planning bureaux.

17. One project, a subsectoral planning activity, appears to be fully integrated with a number of complementary activities. In this case, a review was conducted of the present structure and future prospects of the subsector, domestic and foreign demand estimated, and matched, with existing capacity. Specific projects were then technically, financially and economically appraised. Advice was also to be given in developing contacts with potential investors, and with the technical and financial aspects of the ensuing negotiations.

18. One basic conclusion which emerges from the review of the project documents is that the essential character and specific output of the projects could not be clearly identified and expressed. In designing projects of a similar nature in the future, maximum attention should be given to defining the essential character of the project, and its appropriateness and relevance in the light of the real needs of the Government.

19. It is necessary at this stage to introduce the concept of defining the output of an industrial planning project according to two complementary categories. First, the preparation of a specific service or product embodying a long-term industrial development strategy, a medium-term industrial development programme - whether sector-wide, subsectoral, or subregional - or a set of policies for the implementation of the programmes, and second, the development of skills - the transfer of know-how - in a relevant set of industrial programming techniques and the creation, expansion or upgrading of an institutional capacity to undertake industrial programming. However, the primary emphasis in some projects is on the former category output while the latter category of output, viz. the transfer of know-how, receives predominant emphasis in other projects.

20. As noted earlier, the great majority of projects under review were primarily concerned with the first type of output - the formulation of a strategy, the preparation of a plan or programme and the development of a set of policy recommendations. However, the types of services or products prepared do not in any way embody a set of common characteristics. Consequently, in designing these projects, the first task is the clear definition of the essential specifications of the service or the product required. A second task is to establish that the essential prerequisites for industrial programming - particularly the various types of data and the definition of the national development objectives - are available (see paragraphs 25-26 below). A third task for the design of the project is to identify and select at least tentatively methodologies and procedures for obtaining the necessary additional factual data, clarifying the policy objectives and undertaking the programming exercise. The final task is the estimation - on the basis of the first three points - of the desirable quantity, quality and duration of inputs required, and the formulation of the necessary work programmes.

21. The projects which are geared chiefly to training and institution-building activities may include the preparation of an industrial programme or plan for the purpose of on-the-job training and as a basis for organising the work programme of the industrial planning unit. Projects of this kind are likely to become more important in the future, as countries increasingly develop a capability for undertaking more sophisticated types of industrial programming.

22. After the formulation of the essential specifications of the scope and type of planning or programme which is required, the design of the "transfer of know-how" project should focus particular attention upon the following issues. First a national

staff-building programme should be prepared; this should include in particular the definition of the size and skill composition of the national staff required to conduct industrial programming, and the preparation of an appropriate, tailor-made training programme. Various recommendations pertaining to the contribution of technical assistance to training activities are described in paragraphs 30-35 below. Second, an orderly programme for the creation, upgrading and/or expansion of the industrial planning unit should be prepared, including the definition of its responsibilities and obligations, its relationships with other Government ministries and departments, and its internal organization and management. In particular, a realistic salary structure and conditions of work will have to be established so that the industrial planning unit will be able to attract and retain experienced national staff.

23. Paragraphs 20 and 22 summarize some of the issues which should be considered when designing projects in the fields of industrial strategies, programmes and policies. If such issues are brought out, it would help in clarifying the essential characteristics of the proposed project. To assist in the design of similar projects, it is recommended that a paper be prepared for the use of the staff of UNDP and UNIDO - in particular the Resident Representative - which, inter alia, could expand on the ideas advanced in paragraphs 20 and 22.

## B. ESSENTIAL PREREQUISITES FOR INDUSTRIAL PROGRAMMING

24. There are a number of issues which will affect the character of an industrial programming exercise, and consequently the design of a technical assistance project. These may be broadly characterised as essential prerequisites. A review of the project documents suggests that such prerequisites were not always available or indeed recognised.

25. The following are the more important prerequisites which should generally be considered at the time of designing the technical assistance project. First, relevant and sufficient data and information should be readily available in a form usable by the industrial planning adviser. Second, projects of the type under review will generally require the specification by the Government of its major socio-economic goals and objectives. Such objectives generally involve value judgements and/or goals which might possibly be inconsistent with each other. By way of an example, the relative importance of private and public ownership, the areas exclusively reserved for the public sector, the degree of permitted concentration of ownership, and the role of private foreign investment are objectives involving value judgements. Maximization of the growth rate and employment in a wage economy are examples of possibly partially inconsistent or conflicting objectives involving a trade-off or policy choice. In some of the projects under review determination of the major social objectives of the country would be a desirable prelude to a technical assistance project; in any event, it is of course recognized that such a determination is clearly the role and exclusive responsibility of the Government concerned. Third, the project should be timed to be fully integrated with the overall process of industrial programming, and in a more general context, with the nature and scope of overall planning. A determination of the correct timing and duration of the project is therefore an important element to be considered at the stage of the design of the project.

26. In the design of similar projects in the future, particular attention should be paid to identifying the necessary prerequisites. If it is likely that the data and basic information are not easily available, consideration should be given to enlarging the scope of the proposed project. In such cases, as an initial phase, perhaps lasting for six months or so, assistance should be provided to collect and analyse the necessary data, whether it be from local or international sources. Much the same argument applies in the context of the determination of policy objectives. Should the Government so request, an initial step in an industrial programming activity would be to advise the Government - perhaps by providing a range of alternative options - on the relative



weights to be attached to its basic objectives or an appropriate strategy in the sense of socio-economic and subsectoral priorities and choice of policy instruments. Finally, in the context of the proposed paper for use by the Resident Representative (para. 23) particular attention should be paid to elaborating and defining more closely the nature of the essential prerequisites.

### C. LOCATION OF THE INDUSTRIAL PLANNING UNIT

27. The word "location" is used to describe both the institutional functioning of the unit, and, more importantly, the nature and scope of communication between the industrial planners and the senior officials of the Government. In a number of cases under review, much of the technical work of the projects was carried out in isolation from the senior civil servants of the Governments concerned. The full integration of the technical aspects of industrial programming with the policy-making processes of the Government is an essential pre-condition for the proper functioning of technical assistance in this field. In few of the projects under review was this the case. Yet the majority of projects were dealing in one way or another with a number of sensitive policy issues - such as the generation of employment, the location of new industries and the financing of industrial investment. The failure to be in satisfactory communication with the policy-makers reduced the potential impact and effectiveness of the projects and, partly for this reason, Governments were not as fully involved in the various projects as perhaps they might have been.<sup>3/</sup>

28. Projects falling within the general character of industrial strategy, programming and policies deal with some of the highest issues of public policy. For these projects a standard format for UNDP projects seems to be inadequate. Therefore, industrial programming projects should be located at the highest possible level within the appropriate ministry or department. They should be genuine national projects headed as appropriate by the minister/senior Government official concerned. Within this framework and bearing in mind the emphasis to be placed on establishing the essential purposes of the technical assistance project, UNDP/UNIDO should provide agreed inputs and conduct a set of specific and agreed functions. At the time of designing the project, particular attention should be paid to establishing the precise relationship between the project team and the senior Government officials.

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<sup>3/</sup> It might be mentioned here that Government officials have not participated in the present assessment exercise, and arrangements should be made to secure their participation should the exercise be continued.

D. THE TRAINING OF NATIONAL STAFF IN INDUSTRIAL PROGRAMMING

29. Taken as a group, the contribution of the projects examined to the transfer of know-how and the development of skills is likely to be limited. It is improbable in the particular projects under review that national staff will be able to assume effective responsibility for undertaking a full range of industrial programming activities when the assistance is terminated. The reasons for this state of affairs are varied - for example, rapid turnover of national staff, shortage of qualified trainees, pressures on the international staff to fulfil the other requirements of the projects within short deadlines and also low pedagogical qualities of some of them - and are not necessarily unique to this particular group of projects. The fundamental reason, however, is that at the time the project was developed, the twin issues of the availability and trainability<sup>4/</sup> of the national staff were insufficiently explored. As a result and with the benefit of hindsight the projects were unlikely to have had favourable prospects of attaining satisfactory progress in the field of training.

30. One way of tackling the problem of training might be to consider the issue in the context of three different situations. First, when national staff are not available to participate in the proposed project, associate experts/volunteers might be used more frequently. Such personnel would, in effect, substitute for the national staff by performing a variety of functions - data collection and analysis, projections and so on. The situation of the non-availability of national staff will only prevail in those countries with a relatively small graduate population (e.g., some least-developed countries) and will, in any event, gradually disappear. Second, there will be some countries where national staff are available, but not yet at the educational level where they can be trained in industrial planning. In these circumstances a satellite training project should be established to prepare the national staff to that level where training can be provided in advanced industrial programming techniques. Both of these two categories of situations are likely to arise in those countries where an industrial programming project will probably be primarily concerned with the preparation of a particular plan document or programme. It should also be recognized that if the purpose

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<sup>4/</sup> The term "trainable" is used to identify those national staff who, on the basis of their past educational attainments, are able and motivated to absorb, acquire and practice designated types of knowledge in the field of industrial programming.

of UNDP/UNIDO assistance is to so firmly establish the concept, processes and procedures of industrial planning, and to accordingly train a group of national officials, it may be necessary to envisage an extended programme of technical assistance lasting for perhaps as much as ten years.

31. A third situation would arise when national staff are both available and trainable, a position likely to be increasingly the case as university education expands and develops. In these cases, technical assistance to an industrial programming project should emphasize the concept of transfer of know-how, and should be based upon the present and potential capabilities of the national personnel. The nature and scope of the training programme should be based upon the current and anticipated work programme of the industrial planning unit and should be tailor-made to the particular skill development needs of the national staff concerned. To this end, the recommendations made in paragraphs 32-34 below are intended to enhance UNIDO's capacity to prepare and execute appropriate training programmes in the general field of planning and programming.

32. There are only a few training institutions capable of offering suitable courses on industrial programming, and, if demand warrants, it may well be necessary for UNIDO to encourage other institutions to develop the capability to provide similar courses. In any event, UNIDO's Industrial Programming Section (IPS) should approach suitable institutions and specific courses should be developed with their collaboration and support for training in industrial programming. The preparation of appropriate curricula and training materials would be an important part of such an exercise. In addition, UNIDO should explore the possibilities of entering into UNDP-financed open-ended contracts with these institutions, such that regular courses in industrial programming would be offered each year. The courses would be given to all qualified personnel, whether or not they were formally participating in a UNDP/UNIDO industrial programming project.

33. As part of its training programmes, UNIDO sometimes places trainees in the Ministries of Planning or of Industry of industrialized and developing countries for specific on-the-job training. Even when the formal training is conducted at a specialized training institution, arrangements are subsequently made to attach the trainees to appropriate ministries, industrial development agencies and industrial enterprises for actual practical training. This policy is to be welcomed and, to the extent necessary, the practice should be further developed and strengthened, perhaps by diversifying the range of potential industrial planning offices able and willing to provide on-the-job training.

34. One feature of the projects under review was the difficulties experienced by a number of Governments in associating high-level national staff with the work of the projects. When the national personnel are required to devote their full attention to the resolution of all the numerous problems pertaining to the development of the industrial sector, it may be too much to expect them to give undivided attention to the particular technical assistance project. To help in overcoming this problem and to provide a mechanism for disseminating the results of the project to an important audience, country level seminars might be arranged by project staff, with the assistance as appropriate of the staff of the Industrial Programming Section and/or consultants; any necessary expenditure could be financed from the project budgets.

35. It is recognized that each Government, if it wishes to undertake industrial planning as a permanent feature of its efforts to accelerate the process of industrialization, must establish a cadre of well-qualified industrial programmers. Attractive terms of service, together with long-term career opportunities, must be offered to the most able industrial planners. While the United Nations system can assist Governments in the training of its staff, in the development of appropriate methodologies and in the strengthening of the procedures for industrial planning, it is primarily the Governments that have the capacity to create the conditions under which industrial planning will flourish.

F. THE CHARACTER OF THE PROJECT DOCUMENT AND  
ADMINISTRATIVE ARRANGEMENTS FOR ITS PREPARATION

36. Due to the absence of the exploratory mission of substantive nature, the description of the activities of the projects and the relationship between inputs, activities and outputs were inadequately identified and isolated. Furthermore, the time required for the satisfactory attainment of the objectives of the project was generally underestimated, or put differently, the projects were often under-costed. In essence, if the essential prerequisites are available, and the necessary inputs provided (national and international staff, Government and UNIDO support, funds for training and equipment), a set of well-defined activities should produce the desired output. In fact, of course, partly because of the difficulties of defining the essential characteristics of each project and partly for the other reasons identified elsewhere in this paper (in particular paragraph 37), the underlying structure and theme of the project documents were not properly defined.

37. The form and content of the project document, as described in Chapter IV of the Operational and Financial Manual,<sup>5/</sup> may not lend themselves to the kind of project under review. The project document is essentially an administrative device for assembling in one place the necessary information required for the approval of the project. There is no real place for the kind of technical and substantive discussion necessary for the proper consideration of an industrial programming project. Such topics might include for example, a review of the problems and prospects of industrial development; the determination of those policy objectives involving value judgements; a critique of the available background information and data; a discussion of the methodologies the Government might wish to consider adopting when conducting the industrial programming exercise; and the character of the required training programmes.

38. The most appropriate way of responding to this situation is to encourage the preparation of appropriate annexes to the project document. One or more annexes could explore the purely technical issues related to the project, such as those described in paragraph 37. There need be no standard format in which the material is presented, nor would the annex(es) require approval in the sense that project documents are approved. In effect, a purely working document would be prepared, for use primarily by the appropriate Government officials, the international staff and the staff of the

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<sup>5/</sup> i.e., the instructions describing the standard format of the project document, and the procedures to be followed for its processing.

Industrial Programming Section: in particular the annex(es) could explain in greater detail than appears in Section III of the project document the time schedule of activities of the project. Clearly, material of the kind which should appear in such an annex or annexes can only be prepared by those intimately familiar with the techniques of industrial planning.

39. It was rare for the concerned substantive officers of UNIDO, or of UNDP, to participate to the extent desirable in the problems of formulating or reviewing (before approval) the project documents. As a result, it is probable that the quality of the design of the projects was adversely affected, and subsequent technical supervision and substantive backstopping by UNIDO was rendered more difficult.

40. UNDP is currently considering ways and means of providing adequate technical support to Resident Representatives, within the context of the present policy of decentralization. It is, however, clear that in dealing with projects of the character under review and for which the required technical expertise is unlikely to be available in the Office of the Resident Representative, the UNIDO substantive officer should participate, to the extent desirable, in exploratory project design missions. A certain amount of preliminary work can be undertaken by Resident Representatives, with guidance from UNIDO and UNDP, in reviewing the nature of the request of the Government, and in assembling background data, information and documents. Moreover, missions should not be fielded unless certain important preconditions have been satisfactorily met - for example, the identification of the real needs of the Government and the willingness in principle of UNDP to finance the eventual project. However, the annex to the project document referred to in paragraph 39 above can best be prepared following a technical mission, and consequently, the necessary funds must be available for this purpose.

### III. THE EXECUTION AND SUPERVISION OF PROJECTS

#### A. THE RECRUITMENT OF INTERNATIONAL STAFF

41. The single most important factor influencing a success of the industrial programming project is probably the technical quality of the work of the international adviser. Of course, the work of the adviser is not independent of the relationships established with Government staff and the substantive support available from UNIDO, nevertheless, the understanding of the needs of developing countries, the experience in industrial programming and the pedagogical qualities the adviser can bring to bear will determine the degree of excellence of the project.

42. Although there are difficulties in judging the work of the international staff, in a number of the projects under review the performance of the adviser left something to be desired. There were a few cases in which the adviser was totally inadequate, largely because his professional or personal qualifications did not match the tasks in hand, and there were other occasions when an otherwise competent adviser had been placed in a post which required different qualifications than he possessed. In these situations, the quality of the output of the project directly suffered. In the majority of cases, however, it is felt that the quality of the adviser's work ranged from adequate to very good.

43. In several of the projects under review, there were considerable difficulties in recruiting the international staff. In one case, over 80 candidates were substantively evaluated, of whom 16 were submitted to the Government concerned, yet the Government felt unable to accept any recommendation. This process took about two and a half years. In another case, the substantive officer of UNIDO was required to spend over 80 hours recruiting for a specialized consultancy assignment lasting about three months. In a third example, a total of 47 candidates were evaluated, of which 17 were recommended and seven submitted to the Government for a two year assignment; this process took 18 months.

44. The review of the difficulties experienced in recruiting international staff, and of their subsequent performance, tends to confirm that there is a world-wide shortage of well-qualified and experienced industrial planners available for long-term assignment at current United Nations terms of service. The source of recruitment is small, since most developing countries request planners from developed market economies. These countries, however, generally do not undertake industrial programming, and the few experienced planners often occupy high positions with their Governments and feel little incentive to accept United Nations assignments. Moreover, taken as a group, developing



countries themselves do not possess any surplus capacity of experienced industrial planners. As a result, the advisers that are recruited are generally at a medium level. The recommendations in paragraphs 45-50 are intended to strengthen UNIDO's capacity to attract and retain for work in developing countries well-qualified industrial planners.

45. The Industrial Programming Section should continuously expand, as far as may be possible, its roster of potential candidates for industrial programming posts. It is highly desirable that the Industrial Programming Section should interview each candidate whose name is being submitted to the Government for a particular post. This practice would permit a substantive assessment to be made of the candidate. The fact that candidates were submitted for a particular post without such a prior interview resulted in incorrect placement, and it is not possible to correct the error during the briefing stage.

46. One possible way for UNIDO to expand the potential supply of qualified planners is by developing appropriate relationships with consultancy firms, universities, development institutions and the like. In particular, the feasibility should be explored by entering into open-ended contracts with consultancy firms and/or borrow personnel on a reimbursable loan basis from universities, institutions and firms.

47. As a further possibility, the idea should be explored of executing projects through twinning arrangements. An appropriate institution of a third country, engaged in research and development of relevant industrial programming matters, would undertake to maintain regular contact with (i.e. would "adopt") the industrial planning unit of a developing country both during the life of the technical assistance project and after its termination. The foreign institution would help the national staff keep abreast of the latest advances of the state of the art, upgrade the theoretical knowledge and operational skills of the national staff, help in solving practical problems and provide a regular and direct access, as and when appropriate, to high-level consultation and advice. UNDP/UNIDO should be prepared to finance over a period of several years both exchanges between the staff of the foreign institution and of the (national) industrial planning unit, and the supply of technical literature. By doing so, UNDP/UNIDO would help in developing professional relationships between similar institutions; it is also a way of enabling UNDP/UNIDO to make an indirect contribution to the terms of service and conditions of work the Government must offer to retain the highly qualified staff required for the industrial planning institution.

48. Insofar as direct recruitment of international personnel continues to be one way of executing industrial programming projects, consideration should be given to so improving the terms and conditions of service offered to potential candidates that the highly qualified and experienced industrial planners may be recruited. Of course, the issue of the terms of service is by no means a problem unique to this particular group of projects. Nevertheless, it must be recognized that in a situation where highly-experienced planners are a scarce commodity, and where the quality of the work is the essence, the terms and conditions of service offered to international staff must be established at the level required to attract the very best expertise available.

49. Of the 25 projects reviewed, only one project was executed through a subcontract. In this particular case, the members of the project team were of a high professional standard. With only one project, no conclusion may be drawn on the desirability, efficacy or relative cost of executing industrial programming projects under a subcontractual arrangement as compared with direct recruitment. Although there appear to be only a few consulting firms and institutions able to provide services of the kind envisaged, and although there is sometimes a preference on behalf of some Governments for the individual recruitment of a project team on as wide a geographical basis as possible, UNIDO should investigate the advantages and disadvantages of a more extended use of subcontracting. In particular, a list should be drawn up and contact established with those consultancy firms able to undertake industrial programming work through subcontracts.

50. During the course of the assessment of the various projects, there was a brief review of the time lag between the approval of the project and the commencement of project operations. In a number of cases this amounted to 10 months or more. Within the context of the present procedures for the recruitment of international staff, there does not appear to be any realistic possibility of significantly shortening this period. In the considered opinion of the two Secretariats, the only really satisfactory and permanent solution to the perpetual problem of recruitment is to establish an international cadre of highly qualified and experienced industrial programmers, who should have good career development prospects. UNIDO should examine technical and organizational arrangements for such a proposal and UNDP should consider funding it in association with other appropriate sources of finance. If successful, the scheme could well form the beginnings of what might become an international consultancy service in industrial planning.

## B. THE TECHNICAL SUPERVISION OF PROJECTS

51. An assessment of the adequacy of UNIDO's substantive backstopping services should be carried out by the international staff on the various projects. Since the views of the international staff have not, as yet, been obtained, the following remarks will remain somewhat tentative. Effective substantive backstopping requires, first, full and timely reporting by the international staff on the substantive problems, achievements and prospects of the projects. In a number of the projects under review the reporting cannot be said to have been adequate. The second requirement is that a full and timely response and comment should be forthcoming from the substantive offices. The third requirement is that in view of the fact that reporting due to its nature of written communication can never be very extensive or precise, regular personal contacts should be established between field staff and substantive backstopping officers: in fact, a majority of projects was never visited by the officers that were responsible for them. It is, therefore, necessary to make adequate provision for travel of substantive officers to visit the projects in the field. Fourth, the international staff should have access to research and studies on industrial programming and on the relevant experience of other countries. This matter is already the subject of the first recommendation of the ad hoc Committee on a long-range strategy for UNIDO (ID/B/142).

52. There are three reasons which might be advanced to explain some of the deficiencies in the reporting by the international staff. First, because of their ad hoc nature the reporting on industrial programming projects is more difficult than for highly specific projects, e.g., a study on the technical problems of a particular industry. Second, Governments generally regard the papers and findings of international staff as confidential and do not authorize their release to UNIDO. Third, the new system of reporting on projects (Chapter VI of the Operational and Financial Manual) may hinder the proper description of substantive issues since the character of the forms to be completed is limited to providing the administrative, financial and managerial information required to check the implementation of the project.

53. To overcome this problem, it may be necessary to issue further instructions for the reporting on substantive issues. In essence, the international staff should be encouraged to forward directly to the IPS those significant papers of a substantive nature that have been prepared. This is felt to be needed, as a review of such papers will provide IPS

with a source of information from which intercountry experience can be generalized, and on the basis of which more effective technical backstopping may be provided to each project. The need for this should be explained to Governments hosting industrial programming projects, and their agreement sought. Furthermore, to permit the greater involvement of IPS in the support of the projects, and to improve the reporting and backstopping process, projects should be regularly visited by the substantive officer concerned. The necessary funds should be made available for this purpose. Finally, to improve technical backstopping it is recommended that direct contact between the staff of the project and IPS on purely technical issues should be made a routine practice.

#### IV. INTERCOUNTRY GENERALIZATION AND UTILIZATION OF EXPERIENCE

54. Intercountry generalization and utilization of experience of the projects in the fields of industrial strategy, programming and policies are potentially important means to upgrade substantive design, servicing and auditing of this group of projects. They will also increase the relevance, quality and usefulness of the UNDP/UNIDO assistance in these areas. Such generalization and utilization of experience are of deep interest to the national planning and development authorities of the developing countries, private and public agencies engaged in technical assistance work and the individuals and institutes conducting adaptive and developmental research in these areas. On account of its access to a wide range and depth of field experience, UNIDO is in the most strategic position to acquire international experience on substantive issues and to feed it into its operational activities. In this context, the following paragraphs suggest some of the more important areas of concern.

55. The first important area of research and study is the review of current approaches to and orientations of industrialization. This will necessarily encompass such issues as the means for gearing the processes of industrialization for meeting the basic needs of the whole population for both consumption and production, especially for the low income groups rather than for serving the needs of the small elites; the pace and pattern of industrial development of small countries, with special reference to the least developed countries in the context of the international division of labour based on modern technology and the exigencies of foreign investment and trade; and the adaptation of technology and the development of technological self-reliance in the more important branches of industry. Environmental considerations may also be examined in depth. A second important area of research is a review of those methods facilitating the adoption of policy decisions, on the one hand, embodying value judgements such as the respective roles of the private and public sectors; the place of foreign investment and the degree of self-sufficiency; and the extent of participation in the international division of labour; and, on the other hand, reconciling partially inconsistent objectives such as the maximization of growth based on the use of the economies of scale and immediate massive expansion of employment opportunities.

56. Third, testing of the current methodologies for industrial strategy and programming for suitability and validity in the context of the available data and defined objectives, modification and refining of the methodologies, and identification of the needs for new

methodologies and their development constitute a highly productive area for the inter-country generalization and utilization of experience. This area of research has acquired new urgency in the context of the increasing importance being attached to such policy objectives as the more egalitarian distribution of income; the scale and pattern of employment generation; and the skill and foreign exchange requirements and other specific measures necessary to effect a transfer of those technologies required as inputs in the process of industrialization. There is also a necessity to develop, on the basis of the selected methodologies, blueprints or at least a checklist of major activities, with time-frames for preparing industrial programmes.

57. A fourth area of research and study is issues concerned with skill formation. Planning for a wide range and hierarchy of operational skills required for industrialization is a critical dimension of industrial programming for the developing countries in general and the least developed among them in particular. Yet, it is one of the most neglected aspects of industrial programming. Grouping of the required skills into broadly homogenous categories, the identification of the skilled manpower needs by such categories of skills, conversion of each category of skills into requirements of formal education, operating experience and on-the-job or in-plant training, and a set of proposals to create, expand and restructure educational and training facilities to meet the identified needs are the most fruitful areas of research for the intercountry generalization and utilization of experience.

58. Fifth, the experience of the developing countries has brought into prominence the need for another non-traditional dimension of industrial programming, viz., the selection and programming of institutional inputs for systematically undertaking the functions of preparing pre-investment studies (including preliminary engineering drawings); constructing projects; and operating enterprises. The institutional inputs include, among others, industrial extension services, institutions for industrial finance, standards and quality control, management and engineering consultancy services, and the facilities for adaptive and developmental research. The identification of the needs and feasibility of the institutional inputs appropriate to the stage and pattern of industrial development, planning for them and providing for their orderly expansion and upgrading constitute important areas for the intercountry generalization and utilization of experience.

59. A sixth area of concern is a review of the instruments of economic management required to implement industrial programmes and promote industrial development. The analysis of effectiveness of the policy tools actually employed in the developing countries and the development of internally consistent sets of policy tools deserve detailed investigation.

60. Finally, it would be useful to mention three other areas of potentially useful research and development. First, the data requirements and parameters for programming, and the availability of international reference data; second, the design of systems for monitoring the implementation of individual projects and programmes; and third, the identification of proposals to ensure the effective and efficient integration of the industrial sector with other sectors of the economy, especially with agriculture, construction and the urban informal sector.

61. In the opinion of UNDP, a specific work programme based upon the issues identified in paragraphs 55-60 covering perhaps a three-year period and supported by cost estimates should be prepared as a complement to UNIDO's current work programme. The programme should be carried out partly by the UNIDO secretariat itself; partly, as appropriate, by consultants for UNIDO; partly by commissioning special reports from international staff at the completion of their technical assistance assignments; and partly by research institutions, universities, and relevant international organizations with which UNIDO might establish appropriate relationships.

62. UNDP feels that UNIDO will need considerably increased resources if it is to be able to adequately respond to the pertinent recommendations of the Ad Hoc Committee and of the present exercise, particularly with regard to the proposals for an expanded research and study programme in the fields of industrial strategy, programming and policies. It is strongly recommended that the necessary resources be made available, from an increase in and/or reallocations of regular budget funds or overhead costs. Consideration might also be given to providing UNDP with resources with which to support the kind of programme that is envisaged.

ANNEX I

UNDP/UNIDO ASSESSMENT OF PROJECTS  
IN THE FIELDS OF  
INDUSTRIAL STRATEGY, PROGRAMMING AND POLICIES

Terms of Reference

I. Preamble

The assessment will be confined to the on-going UNIDO-executed mainly large-scale projects chiefly dealing with industrial strategy, industrial programming and industrial policies. It will exclude, for the purpose of this exercise, projects concerned with industrial sub-sector studies, industrial potential surveys and the projects pertaining to the institutional means to implement the strategies, programmes and policies such as the investment and credit institutions, extension services, industrial development centres and industrial research institutes.

II. Introduction

Generation of Requests

III. Design of projects (accuracy, completeness, practicality, clarity and form of project as laid down in the project document)

1. Project objectives - accuracy of definition
  - concordance with Government objectives
  - practicality
2. Definition of project activities to secure desired outputs
3. UNDP/UNIDO inputs (in terms of quantity, quality, form, composition and duration)
4. Definition of Government pre-requisites and inputs
5. Definition of desired main outputs - in terms of the preparation of an industrial strategy, a plan and/or set of policies
  - in terms of established planning processes
  - in terms of trained personnel
6. Timing
7. Institutional location - accuracy of definition
  - appropriateness for project execution and/or for follow-up



IV. Adequacy of desirable pre-requisites (from the side of the recipient Government)

1. Institutional pre-requisites
2. Definition of overall development objectives and of the role of industry
3. Development strategies and programmes for other economic sectors
4. Determination of precise tasks and a Government time-table for corresponding decisions and actions
5. Data pre-requisites.

V. Project execution

1. Delivery of UNIDO/UNDP inputs (quantity, quality, time, synchronization)
2. Delivery of Government support (quantity, quality, time, synchronization)
3. Execution of activities according to time schedule
4. Actual and envisaged achievements
  - Approach and methodology applied
  - Output in terms of elaboration of industrial strategy, the preparation of industrial programme and formulation of consistent policies
  - Establishment and development of processes and procedures for carrying out the above tasks
  - Institutional achievements (establishing/improving Government planning machinery)
  - Counterpart training; possibility for local staff to take over and follow up project activities.
5. Actual liaison with related projects
6. Fulfilment of provision for follow-up (if project completed).

VI. Backstopping

1. UNIDO's substantive backstopping
2. UNIDO's administrative backstopping

VII. Monitoring, revision and re-scheduling by:

1. UNDP
2. UNIDO
3. Government
4. Project Manager

VIII. Summary of project assessment

1. Fulfilment of the project objective

2. Contribution to the specific stage of the Government programming process
3. Significance and impact on industrial development process
4. Integration of project in Government decision-making process
5. Summary of delivery problems.

IX. Impact of the international development strategy on project outputs

X. Intercountry generalization of experience and its use

XI. Development of UNIDO capacity in industrial strategy, programming and policies projects

XII. Conclusions and recommendations

ANNEX II  
UNDP/UNIDO ASSESSMENT OF PROJECTS  
IN THE FIELDS OF  
INDUSTRIAL STRATEGY, PROGRAMMING AND POLICIES

List of Projects

AFRICA

1. ETH/71/007 Assistance to the Industry Department
2. LIR/70/005 Social and Industrial Planning
3. MAG/68/009 Industrial Planning
4. MAG/71/017 Industrial Adviser
5. SIL/70/510\* Assistance in Development Planning
6. URT/71/005 Industrial Strategy
7. ZAM/72/012\* Assistance to the Development Planning Division
8. RAF/68/011 Chief of Industrial Unit
9. RAF/70/004 Industrial Policy and Statistical Analysis

ASIA

1. INS/72/055 Basic Industries Adviser
2. IRA/67/516)  
IRA/73/007) Research Centre for Industrial Trade Development
3. NEP/70/006 Industrial Advisory Mission
4. RAS/70/619 Assistance to the Asian Industrial Survey

EUROPE AND MIDDLE EAST

1. SAU/70/005 Industrial Development and Policy
2. SAU/73/004 Industrial Studies and Development Centre
3. REM/71/288 Central Advisory Services, IDCAS

LATIN AMERICA

1. ANT/73/001 Industrial Project Evaluation and Promotion
2. ARG/71/546 Industrial Development of the Northwest Region
3. GUA/72/015 Industrial Investigations

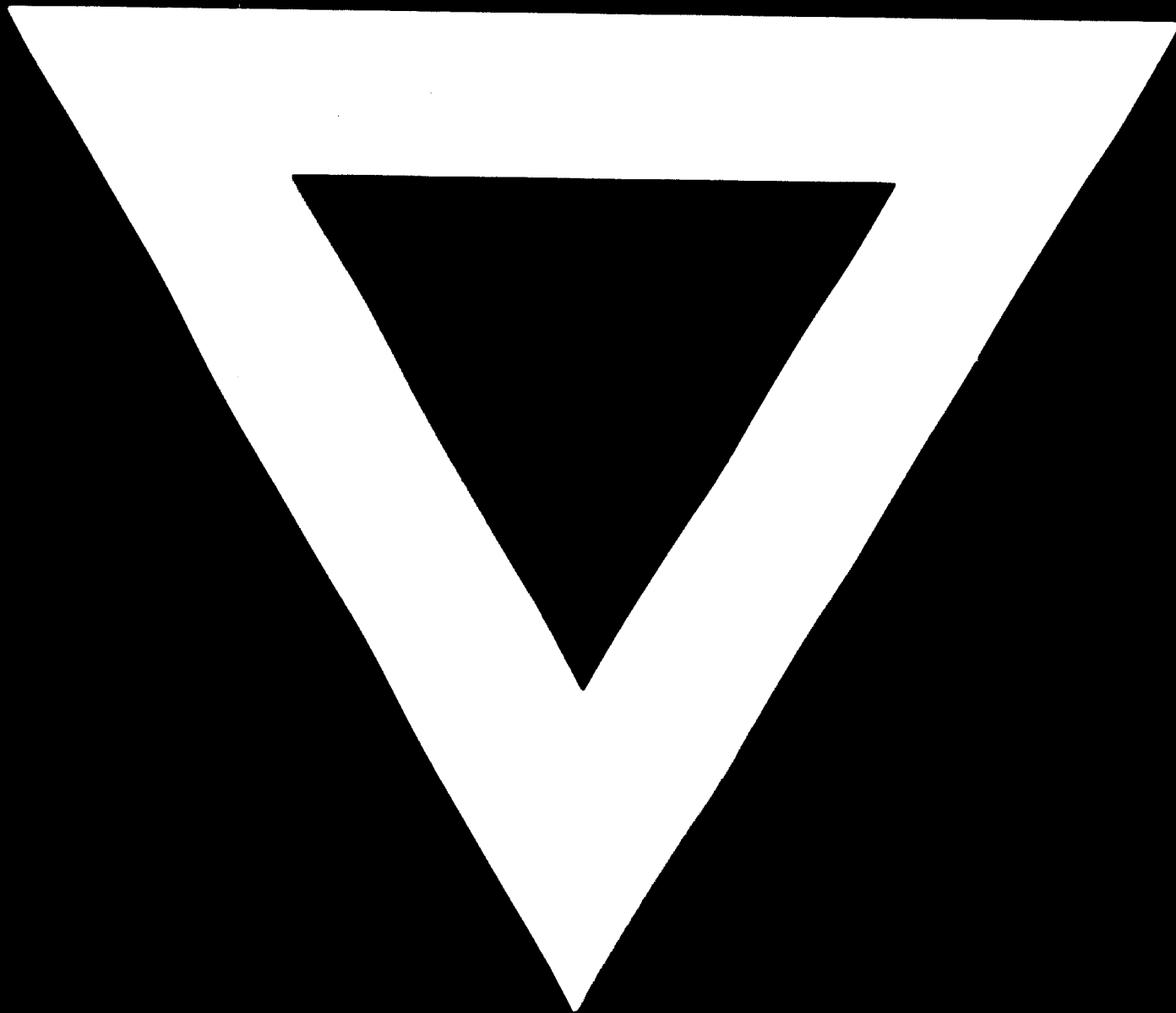
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\* These projects are executed by the United Nations; the post of Industrial Economist is subcontracted to UNIDO.

4. MEX/72/014 Capital Goods
5. MEX/73/011 Industrial Programming
6. PER/72/014 Formulation and Evaluation of Industrial Policies and Plans
7. RLA/70/622 Central American Integration Programme
8. RLA/73/047 CARIFTA Perspective Plan



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