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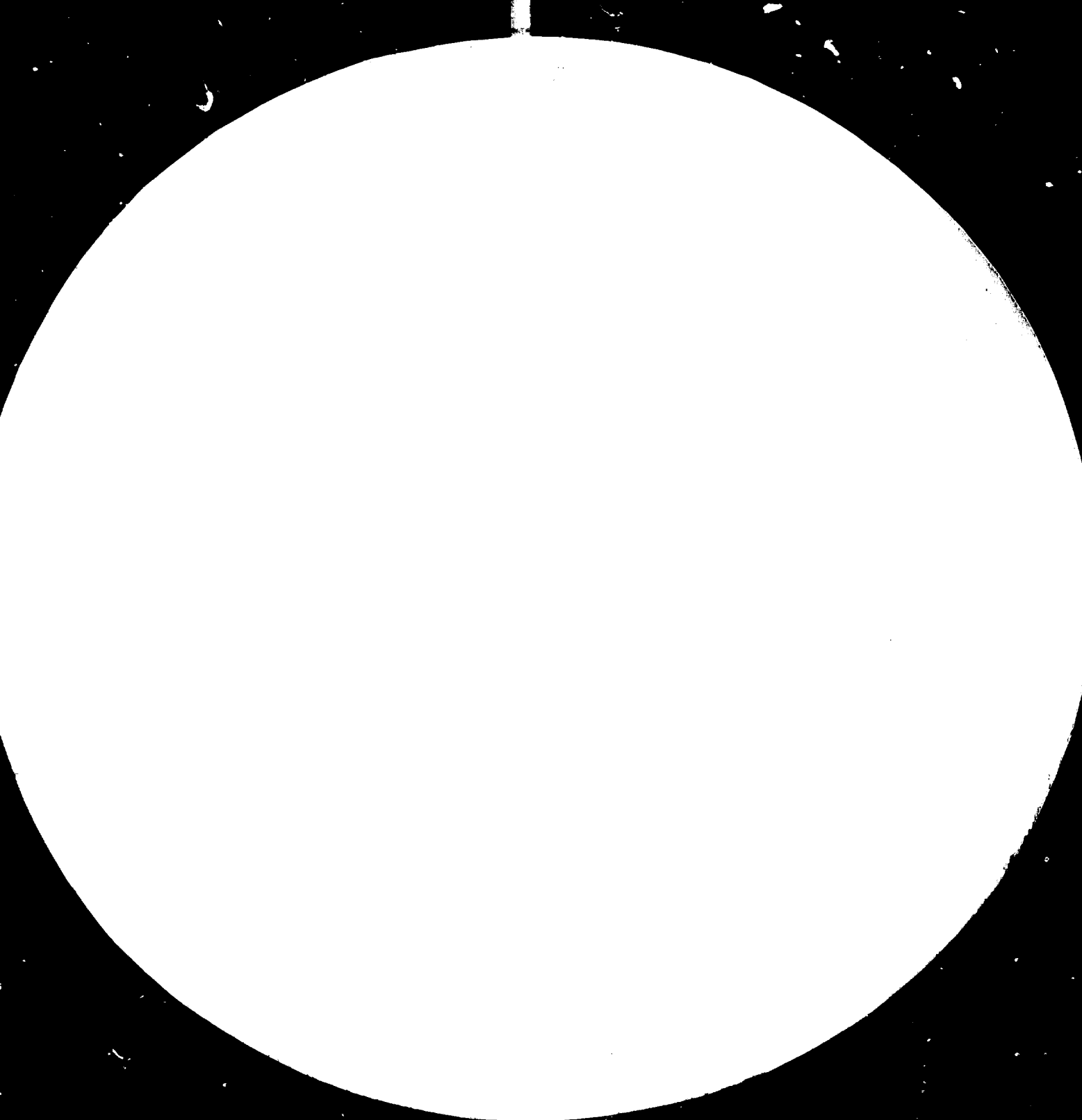

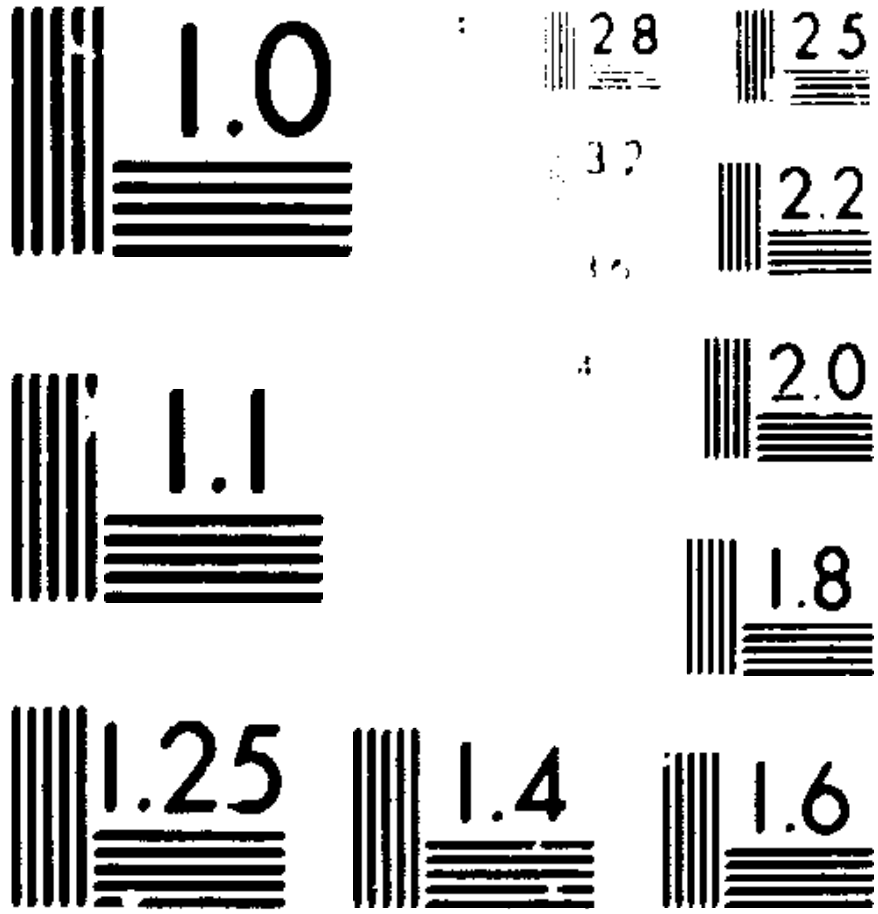

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UNIDO Guidelines on the design and appraisal of Technical Co-operation Projects*

Prepared by the
Division of Policy Co-ordination

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UNIDO Guidelines on
Technical Co-operation Project Design and Appraisal

Definition and Purpose:

1. Project design and appraisal is intended to enable UNIDO to decide whether a project is "worth doing" and whether UNIDO can assist the co-operating government in executing the project. As such, it is a critical function carried out by the Programme Development Branch (PC/DEV) in fulfilling its mission "to develop operational programmes of the Organization". While DEV should and will play a leading role, project design and appraisal is a process which also requires significant contributions from other sections and divisions, particularly in terms of clarifying the principal design elements and project approach. Good design is also a sine qua non for objective evaluation. The purpose of these guidelines is to provide a description of the important elements in the process for help in preparing the required documentation.

Application and Limitations:

2. To do the type of project design and appraisal described below takes (a) adequate data, (b) technical knowledge in depth, (c) skill in the use of programming, design and management techniques, and (d) considerable time - one or all of which may be in short supply depending upon the project and circumstances. In addition, not all projects will require such a thorough design and appraisal and in some, certain elements of project design and appraisal will require emphasis over others. In other words, discretion will be necessary in the application of this approach. Depending upon the cost, duration, size, complexity, innovativeness, importance, risk, etc. of a specific project, the process may be telescoped or used selectively at the option of management. However, for all projects exceeding $400,000 in total costs, a complete description of all project design elements will be required unless this is to be a major output of preparatory assistance or a first phase.

The Logic of Project Design:[1/]

3. An important aspect of project formulation and appraisal concerns the design of a project, i.e., its principal elements, their linkages, and technical or substantive feasibility. Basically, a project involves a means/ends chain which includes the provision of specified resources (inputs) in a plan of work (activities) designed to produce certain recognizable end-results (outputs) within a given time-frame. It is hypothesized or assumed that the successful production of these outputs will lead to the achievement of a higher-level end now called the project objective (or purpose). This means/end sequence is called the causal relationship, linkage, or project hypothesis and approach. In turn, the achievement of the project objective is hypothesized to contribute, but usually only in a partial sense, to the achievement of a higher level objective (HLO) or solution of a larger problem subject to technical assistance, more macro in nature and often but not necessarily of a longer term. For example, a project may involve the use of teachers, consultants, students, and training materials (inputs) in a series of education activities (workplan) to produce qualified tool designers (output)

1/ A handbook on project design and evaluation for use by field and headquarters staff has been prepared by DPC as part of the internal evaluation systems design. It includes definitions and examples of the terms and concepts mentioned in this guideline appropriate for industrial projects of technical assistance. (See UNIDO/PC.31, distributed 5 January 1982).

in order to increase (the project hypothesis) the production of machine tools (project objective). In the long run, achievement of this is expected to contribute (another causal relationship, i.e., the development hypothesis) in some measure to a growth of manufacturing sector production, an increase in exports, a decline in imports, etc. (development objective).

Basic Elements of Project Design: 2/

4. A comprehensive project appraisal involves the analysis of each element in the means-end chain briefly described above, including the important assumptions regarding actions outside the management control of the Chief Technical Adviser (CTA) or National Project Co-ordinator (NPC) (particularly those actions of the cooperating government and/or industry) relevant to each level (i.e., inputs, workplan, outputs) and the underlying project hypothesis or predicted causal relationship between production of the specified outputs and achievement of the project objective. This will provide the basis for an informed judgement on the significance, feasibility and/or validity of the development hypothesis or, in other words, that the project will do what we say it will do and is worth doing to the parties concerned.

5. A brief explanation of the significant areas of project analysis is provided for each design element as follows:

5.1 Development or higher level objective (HLO) - In most cases, particularly in IPF funded projects, these may be accepted as given, since they are the responsibility of the cooperating country and are identified in the country programming process. In any case, they are not usually modified by views expressed in a UNIDO or UNDP appraisal of a particular project. We can and should, however, express an opinion concerning the feasibility and cost-effectiveness of the proposed project as related to the HLO and to mandates given the UN system by its various legislative bodies. In UNIDO-funded projects, if not a country project, the statement should explain the "programme" objective being addressed, e.g., "establishing and strengthening training institutions in developing countries". The basic question to be considered here is whether achieving the purpose or objective of the project will have a significant development impact, e.g.,

- what is the target group to be affected by the project?
- how will project benefits be distributed?
- will the project results affect more than one development or higher level objective?
- is there a better or less expensive way of approaching the problem?
- is the project responsive to the Lima Declaration and Plan of Action, New Delhi, and other UN mandates?
- is it an appropriate project for UNIDO to execute, should it involve a joint approach with a sister organization?

It may be easier and more useful to express the HLO in terms of a problem, susceptible to technical co-operation, which the project is intended to ameliorate or solve. In either event, the linkage between the project and HLO becomes the raison d'être for the project and, for this reason, should be clear to any reviewer of the proposal.

2/ See Appendix No. 4, Vol. I, UNIDO Self-evaluation handbook, for glossary of terms.

5.2 Project objective - This is a statement of what the project is expected to achieve and should be given very careful attention. The purpose, function or objective of the project should not be confused with its outputs or expected results and for this reason multi-objectives should be avoided. For example, the objective of a training project is not to produce a given number of trained people but to enable people to perform a new function or in a better manner than before. Therefore, the design and appraisal of a training project must consider not only the contemplated training itself but more important how it will be utilized and with what effect on the problem which the project is designed to solve or ameliorate.

This is the level where substantive/technical and programming considerations merge and clearly require a joint judgement. The important analytical aspects include:

- is the project objective stated in a clear, succinct, and specific enough way to be recognized when it is successfully achieved?

- is the project hypothesis establishing the causal relationship between the proposed outputs and the project objective reasonable and feasible?

- are there alternative ways to achieve the objective which (a) require fewer or less expensive outputs, (b) take less time, or (c) can produce greater impact for the same level of effort and/or expenditures?

- is there an adequate description of baseline data (i.e., conditions present at the start of project activity) with respect to project purpose, e.g., existing capacities in the case of an institution-building project?

- what will be the end-of-the-project status indicators at the objective level? How long a time-lag, if any, will there be between completion of project operations and project objective achievement?

- what critical assumptions, explicit and implied, affect achievement of the project objective?

5.3 Outputs - At this and lower levels of the project design, technical considerations become paramount and the role of the DIO technical officer, working with his DEV colleague, becomes more crucial to the project appraisal process. The most critical question is an analysis of the implied proposition that IF the described outputs are produced THEN the project's objective will be successfully achieved (i.e., the causal relationship or linkage). In such an analysis, the following points should be considered:

- are the outputs described in specific enough terms, quantitatively and/or qualitatively, that their achievement, i.e., production, occurance or completion, can be recognized at a specific point in time?

- is the causal linkage to the project's objective (purpose) plausible and reasonable?

- what are the critical assumptions concerning (a) the conversion of inputs into outputs and (b) their causal linkage to the project objective? These may include conditions which must be met but which are not directly controlled by the project, e.g., passage of a law, assignment of sufficient civil service posts, etc.

- are the proposed outputs appropriate for the conditions present in the cooperating country, i.e., appropriateness of proposed technology, adequacy of infrastructure, level of sophistication of techniques to be employed and data available? In other words, are they technically, economically and socially feasible?

- what are the verifiable performance indicators and/or interim targets, e.g., milestone events?

- has the baseline data been established or are there plans to gather such data?

5.4 Inputs - This is the easiest design element to describe and quantify. The important point of analysis is the adequacy and sufficiency of the requested inputs to the work or activity to be performed in terms of the targeted outputs to be produced or, again, the plausibility of the causal relationship or linkage between inputs and outputs, i.e., IF UNIDO and the co-operating government provide the required inputs in a timely and sufficient fashion, THEN the project outputs can be produced within the projected time-frame. Some points to consider include:

- are the inputs of (a) UNIDO and (b) the cooperating government sufficiently described in quantity and quality (be careful to distinguish inputs from actual activity)?

- is the causal linkage to the project outputs plausible, i.e., if the inputs are provided as planned, is it reasonable to expect the CTA or NPC to produce the end-results as specified?

- what are the critical assumptions concerning providing the inputs (in particular, the relationship between UNIDO's and the co-operating government's inputs, e.g. training ... available candidates, technology transfer ... counterparts)?

- can UNIDO provide the inputs requested in suitable form and time (e.g., adequate placement of fellows); including any necessary headquarters technical and administrative support?

- should sub-contracting or twinning arrangements be used in lieu of recruiting individual experts?

Additional Project Appraisal Elements

6. An analytical review of the basic elements of project design as suggested above will constitute a major portion of the project appraisal performed at headquarters but additional information and analysis may be required which, although not necessarily included in design statements, should also be a part of the Project Document or subsequent backup documentation, for example:

- does the background statement establish the project relevance, priority and justification?

- what pre-conditions, if any, should be met before implementation can begin? Are they stated and are they reasonable?

- is a project design or formulation phase necessary or desirable before full-scale implementation begins?

- should the project be planned and implemented by phases or stages with the initiation of a subsequent phase being dependent upon successful completion of a prior one?

- when the project is completed, is further UNDP/UNIDO assistance contemplated or necessary? What effect should this have on project approval?

- is there an adequate and practical project management (i.e., implementation) plan which reflects:
  - a feasible workplan including milestones/ indicators at the output(s) level
  - realistic targets and assumptions
  - desirable/necessary headquarter participation and/or support
  - timely and pertinent substantive reporting requirements related directly to expected outputs
  - effective participation of appropriate national officials
  - [illegible] decision as to whether a performance (self- and/or in-depth) or ex post evaluation is required 3/
  - efficient phase-out of UNIDO assistance?

Results of Professional Appraisal

7. In an ideal situation, applying the above criteria of design and appraisal to proposed technical co-operation projects should tell us:

- whether the project is worth doing
- whether UNIDO can and/or should execute the project
- whether the project is cost-effective and technically sound
- whether the design is reasonable
- whether an adequate project management and evaluation plan has been prepared.

8. This, in turn, should allow us to decide whether the project should be (a) approved, (b) rejected, (c) referred to another executing agency, (d) reformulated, or (e) deferred. If the decision is positive, it should help us to increase the probability of success and quality, i.e., the effectiveness and impact of UNIDO technical cooperation assistance. That is the ultimate purpose!

3/ See Chapter 6.0 of Instructions and Guidelines for Self-evaluation of UNIDO-executed Technical Co-operation Field Projects (UNIDO/P.C.31) and paragraph 7 of UNIDO Guidelines for Preparation of Project Proposals (revised on 20.5.82) for guidance on evaluation requirements.

A CHECKLIST FOR THE DESIGN AND APPRAISAL OF TECHNICAL CO-OPERATION PROJECT *)

PROJECT NUMBER AND TITLE:

DATE OF APPRAISAL:

SOURCE OF FINANCING:

PROGRAMME COMPONENT:

PROJECT DESIGN ELEMENTS

Development objective(HLO)	Yes	No	Don't know
-Will project have significant impact?			
-Is project responsive to UNIDO mandates?			
-Is project appropriate for UNIDO to execute?			
-Should other agencies be involved?			

Outputs	Yes	No	Don't know
-Clearly and specifically described?			
-Is linkage to project objective plausible?			
-Are outputs appropriate for country conditions			
-Are interim targets or performance indicators reasonable?			
-Are critical assumptions provided?			
-Is baseline data being provided?			

Project objective	Yes	No	Don't know
-Clearly stated?			
-Are there better alternatives?			
-Are end-of-project indicators included?			
-Are critical assumptions stated?			
-Current conditions described?			

Inputs (UNIDO and cooperating government)	Yes	No	Don't know
-Clear description of quantity and quality?			
-Is causal linkage to outputs plausible?			
-Are critical assumptions plus relationship to country inputs stated?			
-Has sub-contracting or twinning been considered?			
-Can adequate placement of fellows be made?			
-Can UNIDO supply other inputs and necessary technical and administrative backstopping?			

ADDITIONAL PROJECT APPRAISAL ELEMENTS

	Yes	No	Don't know
-Is the background information on project relevance, priority and justification adequate?			
-Are the necessary pre-conditions for project implementation clearly stated?			
-Should the project have an initial design or preparatory phase?			
-Is the project management plan (implementation) realistic and appropriate?			
. feasible workplan and budget?			
. realistic schedules and assumptions?			
. headquarter participation?			
. participation of national officials?			
. performance(self)evaluation required?			
. in-depth evaluation required?			
. efficient phase-out?			
-Is the project related to any other assistance activities undertaken by UNIDO in the country?			

CONCLUSIONS

	Yes	No	Don't know
-Is the project worth doing?			
-Can and should UNIDO execute the project?			
-Is the project cost-effective and technically sound?			
-Is the project design adequate ?			
-Is the project management plan adequate?			
-Is the schedule of expenditures realistic?			
-Is the proposed project duration sufficient to produce outputs?			

RECOMMENDATION: This project should be approved ___ rejected ___ reformulated ___
approved for joint implementation with _____
deferred ___ referred to another agency ___

COMMENTS

(Please provide explanatory or additional comments on the project, if necessary, in an attached narrative. In particular, a comment is specifically requested whenever a negative item is checked above. If an appraisal of all elements is not required, the relevant questions will be circled by DEV and you need only fill in those portions of the form. Please check "don't know" column if information not provided.

*) Please refer to "Guidelines on Technical Co-operation Project Design and Appraisal" dated May 1982 before completing form.