

1. Review of Irrigation Project Planning and Implementation Process

BACKGROUND AND JUSTIFICATION

Disappointing results of irrigation development efforts in the past have often been associated with poor planning, appraisal and implementation of investment opportunities in Asia as well as Africa (Nijman 1991; 1992). Inadequate identification of suitable areas, failure to incorporate environmental, social and institutional issues, poor implementation, and absence of or weak data collection and monitoring have often caused low or even negative returns on investment, emergence of environmental and health problems, lack of sustainability, subsequent collapse of infrastructure, and emergence of a rehabilitation-lack of maintenance-rehabilitation cycle. Even where project design has been satisfactory, weak implementation capacity has often led to unsatisfactory results.

Many projects in the past (not only agricultural projects) were designed and implemented in a top-down fashion, with little or no real participation of the supposed ‘beneficiaries’ in designing and implementing projects. Even where an element of ‘participation’ is built into projects, it is all too often largely in terms of inducing local investment of labor and not in real decision-making. Investments have often been driven by donors and governments, and not by the demands and wishes of potential beneficiaries. Even projects specifically intended to enhance farmers’ capacity for scheme management have often not succeeded, in part because of serious project design and implementation weaknesses (Shah et al. 2002).

The main challenge in the sector is to create the environment for increased and sustainable agricultural production through efficient management of the existing irrigated lands and expansion into new areas to meet the food security targets and improve livelihood. This would imply development planning and mobilization of investment resources for implementation and operation of many projects over the coming decades. Weaknesses in the planning and implementation process have been identified at the Harare workshop and in other forums as one of the key issues that should be addressed to facilitate increased development in the sector. This is the justification for this component study.

OBJECTIVES AND SCOPE

The specific objective of the Planning and Implementation component is to identify ways to increase the performance and sustainability of investments in agricultural water, by identifying practical measures to improve project preparation and implementation. This includes planning, appraisal, implementation arrangements, supervision (or ‘implementation support’) and systems for monitoring and evaluation. Special attention will be paid to the institutional framework for project planning, appraisal and implementation, in terms of the incentives the different parties may have with respect to achieving the project goals. Ways to make projects more demand-driven, such that the water users are motivated and enabled to use the infrastructure productively and sustainably will be emphasized. This component will focus on agricultural water use projects funded by multilateral donors (World Bank, African Development Bank, IFAD) as well as 2 to 3 selected bilateral agencies.

METHODOLOGY

Conceptual Framework

Planning and implementation problems are often cited to explain the differences between objectives and achievements in past agricultural water use projects in Sub Saharan Africa. Moreover it is assumed that most of the technical failures have an institutional origin. Criteria used to judge these projects refer to their relevance and their efficacy. The *efficacy* of projects relates to how the results compare to the objectives, i.e., were the things done in the right way. The *relevance* of projects refers to how a set of objectives is defined, i.e., were the right things done¹. These objectives are then compared to the national development plans and strategies. The idea is therefore to explain how planning and implementation processes may have an impact on the relevance and efficacy of the projects.

The planning and implementation problems have already been well documented in many studies, with several contributions dating from the early 1990s (see for example Diemer and Vincent, 1992). Nevertheless, first the ranking of importance between these problems varies from one expert to another. Second, it is currently difficult to assess to what extent the problems diagnosed in the early 1990s still apply today.

In a broad way, many of the problematic issues exposed in the early 1990s have been integrated in new policy frameworks: participation of beneficiaries in the design, attention to gender and the poorer components of the population, design of user associations to take over the operation and maintenance after project completion, relationships between the project management unit (PMU) and the governmental agencies, etc. While these elements are now part of the official discourse and thus more or less compulsorily present in project appraisal documents, more recent projects still show disappointing results vis-à-vis these issues.

Therefore, it may be useful to assess to what extent the planning and implementation processes have really evolved by comparing projects implemented at different periods within the last twenty years. An assessment of some on-going projects may be considered.

The various failures reported in the literature may occur at different stages of the planning and implementation process. Therefore, the proposed conceptual framework will be based on a description of the project life cycle, and on the identification of the different types of failure associated with each stage. Table 1.1 proposes a simplified description of a project cycle.

The effectiveness of each stage is closely linked to the stakeholders involved in implementation and to the way the responsibilities are shared between them. Therefore it is important to clearly identify for each stage its requirements, the institution in charge, the expected outputs and the potential means of monitoring its execution.

The institutional failures can be divided into three types:

- a lack of capacity of one of the actors regarding one or more of the actions (planning, supervision, implementation, etc);
- a lack of incentive to complete successfully the expected actions; and
- a problem within the project lifecycle.

¹ For a precise definition of the terms “relevance”, “efficacy”, “efficiency”, see for instance World Bank, 1996.

There are also often trade-off between the benefits of an improvement of the institutional process and the costs it incurs.

For a specific project, the failures or successes at each stage of the project life cycle can be identified by answering the following questions:

Table 1.1. Stages of a Project Cycle

Stages of Project Cycle	Relevant Project Documents/Reports
Identification	Country/Sector Reviews/Assessments from Identification Missions and country strategic plans and Poverty Reduction Strategy Papers
Preparation	Environmental Assessment Report, Pre-feasibility/Feasibility Studies
Appraisal	Project Appraisal Reports
Negotiation	Proof of Satisfaction of Donor Conditionalities
Approval	Detailed Project Appraisal
Effectiveness	Loan or Credit Agreements
Implementation and Supervision	Project Completion Reports
<i>Ex post</i> Evaluation	Project Evaluation/Performance Audit Reports

Source: Project Cycles adapted from the World Bank, 2002.

- What are the incentives of the various actors involved in the project (e.g., the investor, government officials, politicians, contractors, the presumed ‘beneficiaries’)? Are project objectives and the incentive structures aligned and consistent? Who are the losers and who are the gainers? How do these affect the project outcomes?
- What is the quality of data used in planning, implementation, and monitoring? How effectively are these data used? Do all parties to the project have access to the data they need? How do these issues affect project outcomes?
- How effective are the mechanisms for project management? Do all the key actors have a voice? Is there an effective transparent planning and monitoring process? Does the project have the support from the government, investors, and beneficiaries it requires for effective implementation? Are the decision-making, tendering, financial disbursement, etc. mechanisms effective, transparent, and consistent with best practice? How do these factors affect project outcomes?
- How is the project design and implementation affected by government policies and capacities? Is the project consistent with government policies? Is the capacity of the implementing agency adequate for project implementation as agreed? If not, what is being done to ensure capacity is built? Is the project designed in a way to capture lessons that may be relevant for improving government policies? How do these factors affect project outcomes?

Other issues to be at least partially addressed include the following:

- Application of IWRM principles and treatment of agricultural water within the framework of holistic, integrated river basin management and integrated rural development approach or lack of it;

- Suitability of physical design and choice of technology to the local situation; suitability of scale of project to local capacities and conditions; and
- Strategy for capacity building, awareness and widening the knowledge base including public education; professional services and construction; research and technology adaptation.

This component will compile experiences of countries and the collaborating partners from past and recent project preparation and implementation, and analyze lessons learned to identify key constraints and innovative approaches to enable increased investment in the sector. The methodology will be, broadly, an “institutional analysis” drawing from sociology and institutional economics but focusing on identifying practical implementable suggestions for improvement without indulging in a broad theoretical critique of project design.

The study will analyze the institutional and technical settings wherein projects are conceptualized, developed and implemented and eventually operated. The idea is to understand how these settings have contributed to a project’s success or failure. It will be conducted in **three stages** involving a) desk review, b) fieldwork and analysis and c) consolidation that will result in the final output.

Desk Review

The desk review work will focus on the analysis of past experiences and approaches of financing institutions, donors and countries to identify possible reasons for successes or failures and will take stock of the quality at entry, monitoring and implementation process to ensure project sustainability. The review will include selected projects funded by multilateral agencies such as World Bank, IFAD, and ADB as well as two to three selected bilateral agencies through visits to the offices of these institutions and use of their databases. We will also interview selected project managers to get their views and suggestions.

A quite large and comprehensive sample of projects (20-30) will be selected for the desk review on the basis of an analysis of the data provided by the different agencies. The following selection criteria can be proposed: type of donors (multilateral, bilateral), English / French speaking countries, scheme size in terms of area, diverted water volume, or total cost of the project, date of implementation (to track changes in the planning processes), purpose of the project (large scale irrigation, small scale irrigation, rain fed agriculture, multipurpose use including irrigation).

The review of selected projects will be conducted in the following manner:

(1) Definition of a project lifecycle: First, a general outline of the overall process of planning and implementation will be described. The lifecycle of the project will be detailed using a Quality Management Approach: each step will be defined with its requirements, the institution in charge, the expected outputs and the potential means of monitoring the project. The review will be done for the whole cycle, i.e., both the design of objectives as well as the implementation. The differences among the donors’ systems and processes in conceptualizing/developing up to implementing of projects will be documented.

(2) Qualitative analysis of the different causes of both success and failure for the whole lifecycle: Using the project lifecycle, the analysis will lead to a comprehensive list of causes for both success and failure at the different stages of a project. This qualitative analysis will assess the documented problems both for the relevance and efficacy of a project. Regarding the relevance of the project, the study will use existing assessments: evaluations reports as

well as research reports. The efficacy of projects will be assessed in the short term by the donors' evaluation documents (project completion reports). The long term functioning of the project will be assessed with the donors' documents (e.g., project audit reports), but since they are rare, the bulk of information will come from existing research documents.

(3) The identified solutions and the successful projects: Causes for failure have been already analyzed and, for many of them, a partial or complete solution was proposed. The study will review the different investigations made, the solutions proposed and some potential case studies where the proposed remedies have been applied.

(4) Analysis of the internal quality control set up by the donors and implementing agencies: This previous analysis will partially enable to assess the current quality control mechanisms within the project lifecycle. For instance, it will assess to what extent the Quality at Entry methodology succeeds in assessing the potential risks for failure.

To achieve this analysis, all the available Project Completion Reports, Project Audit Reports, country assessments and other analyses made by the Statistics or Evaluation Department must be made available by selected donors (World Bank, IFAD, ADB, and two to three bilateral donors). The information will be gathered from these studies, from available research done and from direct interviews with evaluators, contractors and Development Agencies representatives. Being a desk analysis, this research will not be able to fully assess potential mistakes or bias in the different project documents. The fieldwork organized for the second component will enable to analyze this issue on a limited amount of case studies. This stage will be completed four months after commencement.

Case studies

The second stage consists of in-depth analysis of selected in-country case studies. Much of this work will be carried out with help from national consultants, who will be provided with questionnaires, guidelines and criteria for making assessments and judgments. Selected projects will be analyzed to evaluate the key aspects of failures and successes and to draw lessons. It is expected that 3-4 cases will be selected for the fieldwork taking into consideration regional balance and relevance. A period of six months may be required to complete the fieldwork. The analysis will cover the full project cycle activities with emphasis on institutional and technical aspects.

This stage has two objectives. First, an evaluation of the relevance of the project will be completed. Second, the analysis will focus on the supervision of the project by the donor and implementation by the national governments or designated (national) agencies.

The evaluation of the relevance will look at how the objectives were chosen and will include looking at relationships between stakeholders, the extent and quality of stakeholder participation in the different aspects of project planning and implementation and even in choosing from various technical options if several options were indeed considered. We hypothesize the extent and quality of stakeholder participation is a key determinant of success. This will enable assessment of the extent to which criteria other than the IRR (e.g., equity, environmental impact) are taken into account and the corresponding consequences. The study will detail the shortcomings of the current criteria (for instance, the fact that the IRR may not take into account heterogeneity among the beneficiaries, externalities and spill over effects such as secondary benefits) but it will not propose a full new set of criteria (a

whole literature exists already on this issue). The World Bank Operation Evaluation Department (WB-OED) for instance can assist in providing the framework and tool for doing an impact evaluation that compares *ex post* the benefits of the project with and without the project (WB-OED, 2002).

The analysis of supervision will look at the possible discrepancies between the projects' successes and failures and the accounts given in the supervision and evaluation documents issued by the donor (see Clements, 1999, for an example of such analysis).

The case studies will be chosen using three criteria: (1) use of evaluation reports and expert knowledge to choose recent completed projects; (2) assessment of different technologies (large-scale and small-scale schemes, treadle pumps for instance); and (3) cooperation with the other component studies to improve the synergies. Some fieldwork will be done, especially to understand *ex post* how the project was designed step by step. The government agency as well as the beneficiaries will be interviewed to get their point of view on the way the project was designed.

Synthesis

The third stage of the study will be an analysis and evaluation of the consolidated results from both the desk review and field work, and comparison of these to results from related studies in Africa and other regions. A draft report on the major lessons learned and providing key recommendations to investors and countries to make project planning and implementation more effective and innovative will be prepared. This will be presented to the general stakeholder workshop together with the results of other components to obtain further ideas for improvement before the report is finalized. The results of the workshop will be incorporated into the main report of the overall study. This stage is expected to be completed about two months after completion of the field studies.

ACTIVITIES

The different activities following submission of this Inception Report include: (1) elaboration and refinement of the approach and conceptual framework; (2) carrying out of a desk review which will include library search within and outside IWMI, literature compilation, contacting of donors and other relevant organizations and searching for databases and required documents, and setting the criteria for choosing case studies; (3) selection of case studies and implementation which will include preparation of terms of reference and identification of regional consultants; (4) writing of component report which will synthesize findings from desk review and field study; and (5) contributing to overall investment study synthesis.

The study will be implemented by IWMI and ADB using in-house capacity and through the engagement of consultants and technical assistance staff. The ADB will finance the major cost of the study through IWMI who will be responsible for executing the study and hence will provide the major inputs required. IWMI will use its own staff and as necessary engage its own experts, using regional and national consultants and other technical and logistical support as necessary. Annex 1.2 provides details on tasks and planned staffing while Annex 1.3 provides details on timing and milestones.

SYNERGIES

Findings of the planning and implementation study will serve as inputs to the other components of the Collaborative Program just as P&I will benefit from their findings. The

qualitative analysis of the P&I will clearly complement the quantitative analysis to be undertaken under the cost study. Specifically, this component will examine how the nature of organizations involved into these processes and their inter-relationships can impact on the costs of a project (for example the procedure for choosing project consultants and contractors, and the capacities of the national irrigation agencies among others). Similarly, the effects of public participation on the costs will be assessed jointly by the both components.

As much as possible, the projects analyzed for the desk review and the case studies will be selected according the same criteria and from the same database as the cost study.

The P&I study will examine how the health and environmental impacts of agricultural water use investments are taken in consideration in the planning and implementation processes, and how the institutional features of agricultural water investments may have positive or negative impacts on human health and the environment

The involvement in the P&I process of different types of decision makers, including farmers themselves, small and medium enterprises, and other private entities, will be assessed. Those decision makers will be interviewed during the field work. This will clearly be relevant to the private sector component.

Using the conceptual framework elaborated under the poverty component, the P&I study will look at how the issue of poverty reduction is addressed in planning and implementation phases. This component will assess to what extent the benefits of the agricultural water investments according to categories of beneficiaries (particularly the poorest and the women) are measured and factored into decision-making. Where available data and information will allow, the project planning and implementation process among NGOs involved in the development of small-scale irrigation technologies, such as Enterprise Works (EW) or Approtec, will be compared with the P&I processes of multilateral donors and national governments.

Finally, this component will assess to what extent the stakeholders' role and their negotiating power can explain the way markets and market opportunities are considered in project planning. For example, were the local agricultural processing and marketing companies involved in the planning process? At which stage of the project are the marketing aspects taken up? On what basis were the hypotheses about demand for agricultural products formulated? These questions will link the P&I to the regional demand for irrigated agricultural products component.

OUTPUTS

This analysis will enable identification of hypotheses concerning the most important reasons for both success and failure due to planning and implementation (P&I) if any; the differences between the donors' P&I processes and any steps that donors have put into effect to address past weaknesses in P&I. More important, it will identify specific practical recommendations to improve planning and implementation of future projects.

The main outputs of the desk review will be: 1) a compilation of data on completed projects, identification of specific issues and hypotheses regarding P&I factors affecting project successes and failures; and 2) a detailed work plan for the field work stage. This work plan will include proposed questionnaires or survey instruments, and criteria to be used in making assessment of such issues as the quality of data used in planning, effectiveness of

management mechanisms, and incentives of the various actors involved in project design and implementation. A report providing the results of the desk study and proposed work plan for the second stage will be submitted for review and comments by the Working Group.

The main outputs from the case studies will be a better understanding of the way agricultural water use projects are planned and implemented at country level and insights into key reasons for project failures and successes as related to project planning and implementation. In addition, the cases will present the point of view of the stakeholders (government, beneficiaries, consultant, and contractors) on issues and concerns within a project's lifecycle. A report describing the cases studied and findings will be submitted at the end of the fieldwork to the Working Group.

To summarize, this component will produce the following outputs:

- Draft and final report on the findings of the desk studies and literature review;
- Draft and final report on the findings of the in-country field studies (as well as reports on each case); and
- Draft and final report on the overall findings and recommendations.