Small-scale Water Development Projects:

the FAO-ICID check-list

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BACKGROUND

There is a general perception that **irrigation** developments in Africa have **failed**. This perception of poor performance has derived mainly from experience with **larger scale projects**.

For a variety of reasons, funding requirements of large-scale irrigation developments in Africa tend to be high compared to other parts of the world.

Failure to achieve predicted production levels and declining prices for agricultural products have led to low returns.

BACKGROUND

Future development of irrigation is likely to be mainly **at village or community level.**

A **participatory approach**, enabling the beneficiaries to contribute to the development of a proposed scheme, thereby generating a sense of involvement, is essential for long term sustainability.

SMALL SCALE VILLAGE LEVEL SCHEMES:

- funding requirements can be reduced substantially
- time required for implementation is also much shorter
- Integration into the local agricultural economy

THE CHECKLIST

Food and Agriculture Organization of the United Nations

ICID·CIID

Document designed by FAO and ICID for appraisal of small-scale irrigation projects and rural development projects.

New developments, extension or rehabilitation of existing schemes.

THE CHECKLIST

1. **Project Proposal :** principal features of the project
2. **Preparatory Data Sheets :** background and technical data for the team undertaking the field visit
3. **Field Data Sheets :** check and complete on the ground the Preparatory Data Sheets
4. **Checklist Summary :** existence or otherwise of possible constraints

Date		d/m/y _____
Project Name		Specify _____
Location (village, district)		Specify _____
Local agricultural extension office		Specify _____
Project proposer (e.g. farmers, village committee etc.)		Specify _____
Approved in principle by village committee		Y/N _____
Membership of committee	: Male	No _____
	: Female	No _____
Area to be irrigated		ha _____
Current status/use (e.g. rainfed farmed, forest etc.)		Specify _____
Proposed method of irrigation (surface, sprinkler, drip)		Specify _____
Proposed crops	: Wet season	Specify _____
	: Dry season	Specify _____
Water source (well, stream, river. Where appropriate give name)		Specify _____
Existing right to abstract water for irrigation		Y/N _____
If right officially registered, give date and reference		Specify _____
Method of abstraction (e.g. pump, gravity diversion)		Specify _____
Abstraction site identified		Y/N _____
Sketch map attached		Y/N _____

PREPARATORY DATA SHEETS

The Project Proposal should list principal features of the project as put forward by the proposers. A sketch map, based on the largest scale mapping to hand, should be attached showing the location of the propose irrigated area, source and abstraction point in relation to main topographic features.

PREPARATORY DATA SHEETS
P1 Topographic Data

P1.1 Project Location

P1.2 Communications

P1.3 Survey Maps

Scale : obtain the most detailed maps available.
Vertical Interval : Steepness of slope and variability of terrain both have important consequences for location of the irrigation delivery system

P1.4 Air Photographs

- surface drainage patterns, rivers and streams
- wet areas, lakes and possibly swamps
- land use, cultivation, roads, tracks and villages
- eroded land, especially gullies
- rock outcrop
- vegetation

Information obtained from air photographs should be checked during the field visit

PREPARATORY DATA SHEETS
P2 Previous Investigations

P2.1 Available Documentation

FAO, United Nations Development Programme (UNDP) or United Nations Environment Programme (UNEP), consultants

P2.2 Relevant Aspects

performance of ongoing schemes
research/trials of irrigated crops,
environmental impact assessments

PREPARATORY DATA SHEETS
P3 Irrigation Schemes

Ongoing irrigation schemes in the locality are likely to be set within the same agronomic and socio-economic context, and can provide a good indication of the likelihood of success of the proposed development.

PREPARATORY DATA SHEETS
P4 Environmental Aspects

P4.1 Fauna, P4.2 Flora

P4.3 Archaeological Remains

PREPARATORY DATA SHEETS
P5 Socio-Economic Aspects

P5.1 Demography *(gender, age)*

P5.2 Wealth Indicators

P5.3 Health

PREPARATORY DATA SHEETS
P6 Geology And Soils

P6.1 Soil Origin : Rock *(Igneous, Sedimentary),* Unconsolidated Material *(Volcanic Ash, Windblown Sand, Alluvium, Peat*)

P6.2 General Land Features : terrain, physiographic position, vegetation

P6.3 Soil Characteristics

PREPARATORY DATA SHEETS
P7 Climate Data (water balance)

- rainfall
- maximum and minimum temperature
- humidity
- run of wind
- sunshine hours and solar radiation

PREPARATORY DATA SHEETS

P8 Agriculture

P8.1 Principal Crops

P8.2 Livestock

PREPARATORY DATA SHEETS

P9 Sub-Catchment Water Demands

P9.1 Demands Upstream of Proposed Abstraction Site

P9.2 Demands Downstream of Proposed Abstraction Site

P9.3 Total Equivalent Non-Project Demand at Abstraction Site

PREPARATORY DATA SHEETS
P10 Hydrology of Supply Source (surface water)

P10.1 Catchment Upstream of Proposed Abstraction Site (*erosion problems*)

P10.2 Discharges

P10.3 Water Rights of Project Villages

PREPARATORY DATA SHEETS

P11 Hydrogeology of Groundwater Supply Source

P11.1 Geology *(Alluvial aquifers, Basement aquifers. Sedimentary aquifers)*

P11.2 Existing Wells

P11.3 Estimated Yield Potential

FIELD DATA SHEETS

1) to check on the ground, information entered in the Preparatory Data Sheets;
2) to obtain more detailed information on the physical and socio-economic contexts which will determine the parameters of the proposed development
3) to allow completion of the Checklist Summary which will highlight any aspects likely to have an adverse effect on the project's sustainability.