Food and Agriculture Organization
of the United Nations

RAPID APPRAISAL PROCEDURE OF MASSPRES AND MASSCOTE APPROACH

BASELINE PERFORMANCE OF IRRIGATION SYSTEMS

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OUTLINE

- The Rapid Appraisal Procedure (RAP): state of the art
- Objectives of the RAP
- The timeframe for the RAP application
- Design and methodology:
  - Scale
  - Frames
  - Time horizon
  - Stakeholders and target groups
- Structure and long-term goal of the RAP

RAP – A HISTORY IN DEVELOPMENT

The origin of RAP

RAP and Benchmarking methodology for evaluation of irrigation systems performance

(FAO with Irrigation Training and Research Center (ITRC) of California Polytechnic State University)

Nowadays: Application of RAP

Appraisal of medium-and large-scale, open-canal irrigation system: Mapping System and Services for Canal Operation Techniques approach (MASSCOTE)

Development: “revamped” RAP

Performance analysis and assessment of pressurized irrigation systems: Mapping System and Services for Pressurized Irrigation methodology (MASSPRESS)

OBJECTIVES OF DIAGNOSIS AND EVALUATION

Diagnosis of system performance key to define effective pathways for development

Multiple objectives:

- Stocktake assets (water and institutional resources, irrigation infrastructure) for baseline study
- Detect design flaws to enhance performance through re-engineering
- Indicate optimal physical condition/system performance, under given conditions, through explanatory guides
- Evaluate system capacity/performance/condition to identify factors for underperformance

STRUCTURE AND SCOPE OF THE RAP

RAP chapters are closely related but investigated separately to identify constraints under each one

RAP for pressurized systems assesses:

- **Water balance** → Appraisal of water resource allocation through water balancing approach between water supply and water demand
- **System management** → Analysis of the institutional and organizational mechanism
- **Water Service** → Evaluation of the physical water distribution system through the assessment of general characteristics, performance, operation policy, condition and maintenance of physical system components

THE *RAPIDITY* OF THE RAP

Time for thorough appraisal is variable and depends on:

- Size/complexity of irrigation scheme
- Data availability
- Collaborative environment
- Timing of assessment

Average time for appraisal: 1-1.5 months. Steps required:

1. Data/info collection (2-3 weeks)
2. Field visits (2-3 weeks)
3. Write up (2 weeks)

RAP should be complemented with further in-depth analytic methods whenever any management dimension requires more detailed assessment

SCALE OF IRRIGATION SCHEMES

The development: from original design and methodology to the "Revamped" approach

Large-scale systems

Optimal scheme size to reflect significance of small-scale systems

Revamped RAP: sufficiently scale-neutral to appraise public systems of multiple sizes

FRAMING THE APPRAISAL

Appraisal conducted at system level: from water intake to final deliveries

Constraint: Characterization of on-farm production is needed to enhance understanding.
However, RAP is limited to distribution systems

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Even if the on-farm system consists of pipe networks, it should be appraised separately

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Multiple systems from same source need to be examined through individual RAPs

TIME HORIZON OF THE RAP APPLICATION

One-time, end-year assessment to provide a a year-round snapshot of recent agricultural season/s along the three strands

RAP is NOT a trend analysis
It provides a retrospective picture of systems' performance

Unpredictable events can affect yield gains, positively or negatively

RAP application is recommended in a year under normal circumstances

TARGET GROUPS AND STAKEHOLDERS

Agriculture, irrigation and water management professionals are key resources in RAP application

Data and results elaborated through RAP require professional analysis

Correct interpretation allows correct estimation of systems' physical performance

Right evaluations support management for informed decision-making

OUTPUT: Iterative appraisal process to include the widest number of stakeholders and reduce potential discords between managers and end-users

THANK YOU

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