Analysis of the process of collective conversion to drip irrigation in the irrigated perimeter of Tadla (Morocco)

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CONTEXT & CHALLENGES

Importance of irrigated agriculture in Morocco

- Moroccan Agriculture represents 15% of GDP, 23% of exports and employs nearly half the working population (World Bank Report, 2011)

- Irrigated areas represent 15% of the agricultural area and 45% of agricultural added value

High pressure on Water resources

- Drip irrigation is recommended for solving water crises
- Subsidies programs: 100% if under 5ha, 80% if not

- National Irrigation Water Saving Program (PNEEI), a transversal program of Green Morocco Plan, aims to the conversion of 550,000ha into drip irrigation by 2020
CONTEXT & CHALLENGES

Individual

- Based on the initiative of the farmer
- Individual management of its irrigation system usually through a reservoir

Have proven to be more successful because they’re based on an individual use of the system and a personal motivation from the farmer who formulates the need and goes looking for the technique

Collective

Agricultural Development Regional Offices (ORMVA) intervenes to ensure the external equipment and accompany the internal equipment of the plots, in addition to ensuring a collective service to the farmers

Mainly designed for small farms that do not have the means to access individual conversion, either because of financial problems or problems related to land tenure

More challenges both technically and socioeconomically
Main issues of collective projects

- Multiple stakeholders: the state, the engineering firms, the farmers, the WUAs and the financial backers
- Expensive and requires a significant investment and maintenance
- Questions about the water use efficiency
- Accompanying process will stop once the projects are implemented
- Farmers face new crops and irrigation practices
- Represent the future of the large scale irrigated agriculture in Morocco
OBJECTIVE & HYPOTHESES

Objective(s) / Research question(s)
- Secure the sustainability of collective drip irrigation projects in Morocco

Hypotheses and case study
- Tadla is one of the most important agricultural areas in Morocco with a developed area of 325,000 ha of which more than 135,000 ha are irrigated
- The first collective conversion project on an area of 10,000ha
- The involvement of farmers upstream of the project is an essential condition for its success:
  - The State chose to equip with a greater debit: greater freedom (good management)
  - The farmers didn’t have a clear vision of the impact of poor management
  - An example is the absence of plots which proves a lack of training
METHODOLOGY

Evaluation of performance of collective drip irrigation projects in Morocco

- Water efficiency: technical aspects of the plots (yields, efficiencies,...)
- Evaluation of the performance of the entities responsible for monitoring and execution of these projects and specifically the assistance after the project

INVolVEMENT OF Stakeholders

- Insure a better introduction to drip irrigation
- The farmers should take an active part at the conception phase
- Involve younger generation (specific training in favour of the farmers’ sons)
- Insure assistance even after completion of the project
EXPECTED RESULTS / IMPACT

To ensure a better involvement of farmers

- Effective participation of farmers in the process during the conception phase

- Motivation of farmers and long-term training: ensure that irrigation practices of farmers are adapted to drip irrigation

- Collective drip irrigation projects success involves requirements in terms of coordination skills, communication and negotiation between the stakeholders (farmers, State, engineering firms and financial backers)

Effective participatory approach
PROPOSED PARTNERSHIP

Partner 1: The Moroccan Government
- The Ministry of Agriculture
- The Agricultural Development Regional Offices

Partner 2: WUA
- Dispatching information to reach the farmers

Partner 3: Financial bakers
- World Bank, African Development Bank and European Union
Thank you for your attention!