

# HYDROAGRICULTURAL REHABILITATION OF SMALL AND MEDIUM-SIZED IRRIGATION NETWORKS IN TOUGHZA

2013

## Location

Rural Commune of Sidi Kacem, Tétouan Province, Morocco

## Client

Provincial Directorate of Agriculture of Tétouan

## Stage

Basic design  
Detailed design  
Tender procedure  
Project management  
Construction supervision

## Length

3061 m

A1V2 Maroc carried out the following missions:

### Mission I. Basic design:

Diagnosis of existing irrigation networks, study of the rehabilitation work to be carried out, preliminary measurements of work.

### Mission II. Detailed design:

- Written parts: synthesis, calculation of the sizes of cross drainage systems and irrigation network, detailed bill of quantities and cost estimate;

- Drawn parts: implantation plans, detailing of reinforced concrete structures, formworks dimensioning drawings, plan and longitudinal profile of the rural paths, detailed drawings of connections to the existing road network, rainwater drainage network drawings;
- Tender documents: rules for the consultation of tender documents, contract specifications and special prescriptions, bill of quantities and cost estimate.

DIAGNOSIS OF AN EXISTING IRRIGATION CANAL



CONSTRUCTION OF AN IRRIGATION CANAL







LAB TESTING AND INSPECTION

**Mission III. Project management and construction supervision:**

To carry out this project, a rural engineer was assigned as mission leader and a civil engineering technician was responsible for the project design and construction supervision.

The team performed the following tasks: project planning and coordination; update of the written and drawn parts; project management; construction supervision and acceptance of

works; preparation of the final bill of quantities and final job accounting; provisional acceptance of works.

Among the works supervised, the following stand out: earthworks (landfills and excavations), demolition of existing hydraulic works, riprap, construction of gabion walls, masonry walls, expansion joints, waterproofing, supply and installation of metal sheets, supply and placement of PVC pipes, installation in the construction site and signage.

FINAL IRRIGATION CANAL

