

**A method for studying feasibility and
prioritization of construction of small and
medium dams in arid environments
Technical & Financial Proposal**

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A new method for determining feasibility and prioritizing investments for agricultural and domestic recharge dam construction in arid regions is developed and presented. The method is based on identifying the factors affecting the decision making process and evaluating these factors. This is followed by determining the indices and the weights of the factors. Evaluated parameters include results from field surveys and site visits, land cover and soils data, precipitation data, runoff data and modeling, number of beneficiaries, domestic irrigation demand, reservoir objectives, demography, reservoirs capacity and reliability, dam structures and site geological, construction costs, and operation and maintenance costs. Rainfall-runoff modeling and sedimentation analysis will be checked against existing records whenever available. Several weighting scenarios will be compared. Results will highlight the main factors affecting dam feasibility (possibly reliability, yield and cost of water productivity) and the prioritization process. Several proposed dams will be examined as a case study and the feasibility and ranking of these dams will be provided