

Water network rehabilitation: A group decision-making approach

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Abstract

Rehabilitation of water networks is a complex problem which may require a range of different water management actions, involving groups or institutions having differing objectives, responsibilities and interests, and requiring collaboration for conflict resolution. Group decision making can play a vital role in situations where multiple actors are involved, each having their own private perceptions of the context and the decision problem to be tackled. This paper proposes a group decision-making model based on an analysis of individual rankings, with the aim of choosing an appropriate alternative which is the best compromise of the points of view of the actors involved in the decision problem. An application with 4 influence groups was conducted based on the proposed method.

Keywords: group decision, individual preferences, water losses, leakage