Case study Fuzzy Systems

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Water or not?

Decision Support System for the Water Management Authority (WMA)

The problem

- The WMA receives requests to provide water for agricultural purposes
- Water can be drawn from a lake
- The decision should be taken by maintaining an acceptable level of the lake and at the same time not dissatisfying too much the users
- Given the system dynamics, some credit might be given to meteo forecast

Variables

Input

- Water request
- Level of the lake
- Meteo forecast (expected rain)

Output

- Water release

Strategy

- Main decision taken on water request and quantity of water in the lake.
- Meteo forecast modifies the main decision

Evaluation criteria

Satisfy the requests in the long run, by avoiding to exhaust the resource

Let's try this simplified model....