Uncertainty in water management

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NeWater: New Approaches to Adaptive Water Management under Uncertainty

www.newater.info
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Variability

Information ...

Too little Too much

Too complex

Lack of theory

Measurement errors

Things that are ignored

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Uncertainty = Not knowing enough
(Information Deficit)

More research, collect better data, uncertainty analyses etc.
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There can be more than one sensible way of framing a problem, resulting in **ambiguities** about what the problem is and what its solution
There are many different ways of framing a problem. 

*Ambiguity* may result from the encounter of multiple frames that are incompatible or not in complete agreement.
In these situations it is not clear:

- First, if there is a problem
- Second, if it is clear that there is a problem, it may not be so clear what the problem is
- Or, what it's solution is
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An example. The Upper Guadiana Basin

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Uncertainty = Not knowing enough
(Information Deficit)

Uncertainty = Knowing differently
Uncertainty = Knowing differently

More information is not always better
• Unpredictability
• Incomplete knowledge
• Multiple knowledge frames: Ambiguity
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