

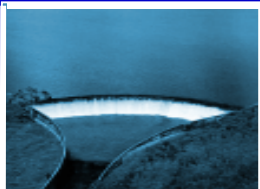
**IWAS AGUA DF**

**Integrated Water Resource Management Concept for the  
Federal District**

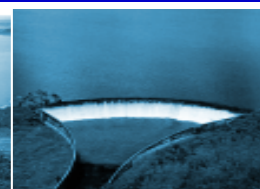
**Final Workshop**

**Water Resources Data Bank**

**June 2013**



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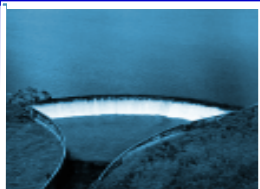


**Water Resources characteristics,  
Quantity and Quality,  
vary in space and time**

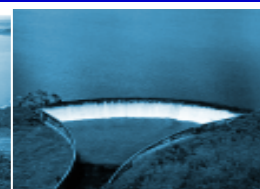
**Data Bank:  
Time series on a geographic base**

**Water quality data**

**Water quantity data**



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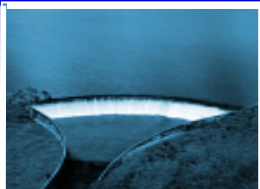


## Use of the data:

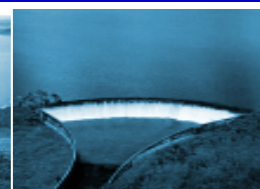
**Monitoring (immediate actions)**

**Planning (future actions)**

**Information is useless when dissociated from  
the context it is originated**



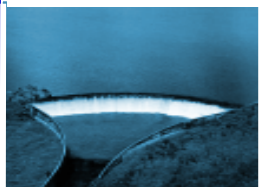
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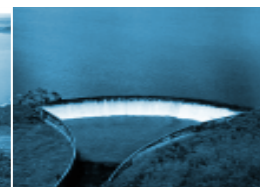


## What factors influence water quantity and quality?

**Data Bank should include the context in which water resources data are generated**



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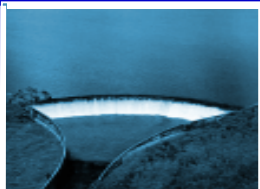
## Context includes factors that hardly change:

Landscape features of the river basin

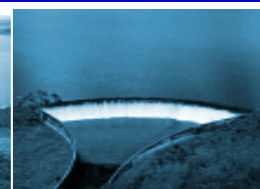
(topography, geology.....)

Hydraulic features of water resources

(extension, slope, geometry, river reservoir network .....



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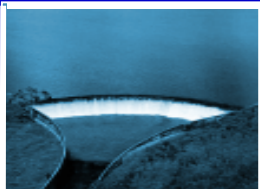
## And factors that constantly change:

**Climate**

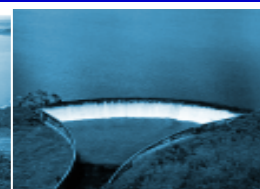
**(temperature, precipitation, wind.....)**

**Land Use**

**(agriculture, mining, urbanization .....)**



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# Water Resources Data Bank should include:

## On a geographical basis:

Landscape features of the river basin

Hydraulic features of water resources

Hardly  
change

Climate data

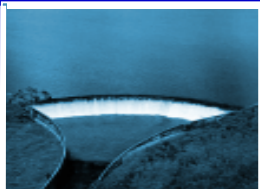
Land Use data

Constantly  
change

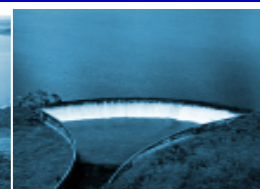
Water quality data

Water quantity data

Constantly  
change



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Physical characteristics of the basin

Physical characteristics of the water resources

**under specific**

Climate

Land Use

**conditions**

**produce**

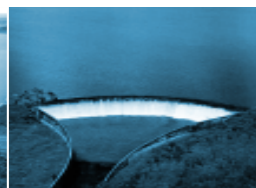
**HOW?**

Water quality data

Water quantity data



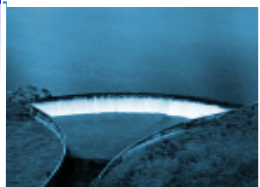
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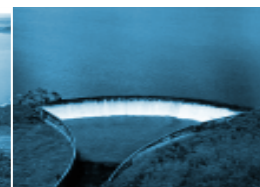




**Modelling the relationship between the context in which water resources are generated and the verified effect in water quantity and quality is necessary to understand the data on water quality and quantity**



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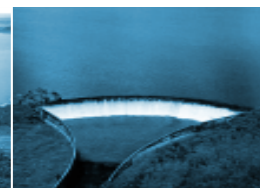


**Water Resources Data Bank should be a  
platform to facilitate the modelling**

**In-build models for main parameters**



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Physical characteristics of the basin

Physical characteristics of the water resources

**under specific**

Climate

Land Use

**conditions**

**Models**

Correlation factors, Reaction coefficients, equations

**produce**

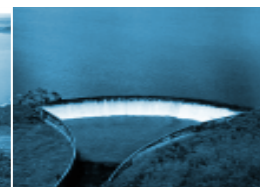


Water quality data

Water quantity data



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# Tool for decision taking

Physical characteristics of the basin

Physical characteristics of the water resources

Climate

Climate scenarios

Land Use

Land Use scenarios

Correlation factors, Reaction coefficients, equations

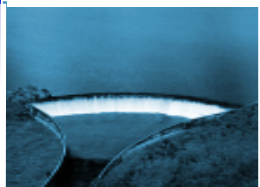
## Models

Water quality data

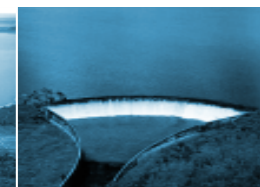
Water quality forecast

Water quantity data

Water quantity forecast



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# Current status

Physical characteristics of the basin

Physical characteristics of the water resources

Climate

Land Use

Climate scenarios

Land Use scenarios

Correlation factors, Reaction coefficients, equations

Water quality data

Water quantity data

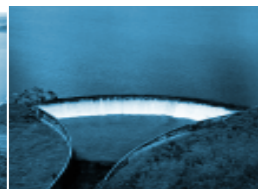
Water quality forecast

Water quantity forecast

# Models



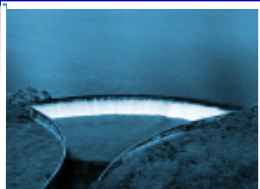
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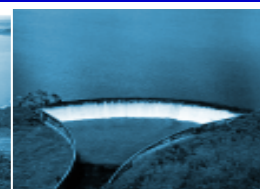


**Water resource models determine the information that is necessary, and the way it should be stored**

**The structuration of a water resources data bank requires the knowledge of the models to be used**



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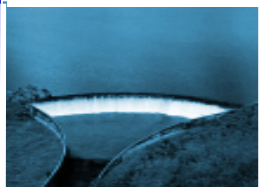


## Caesb/UnB choices:

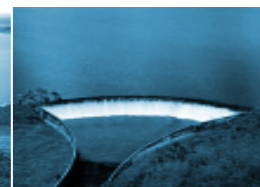
River Basin Management:  
**SWAT & SWMM**

Reservoir management:  
**CE – QUAL W2 & SALMO**

IWRM:  
**WEAP**



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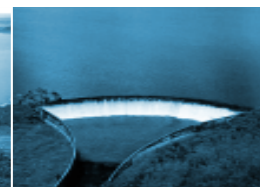


**AGUA-DF has used and produced a lot of  
information**

**Now its time to integrate it!**



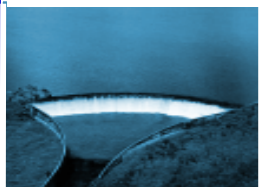
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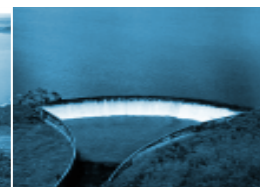


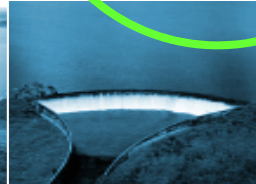
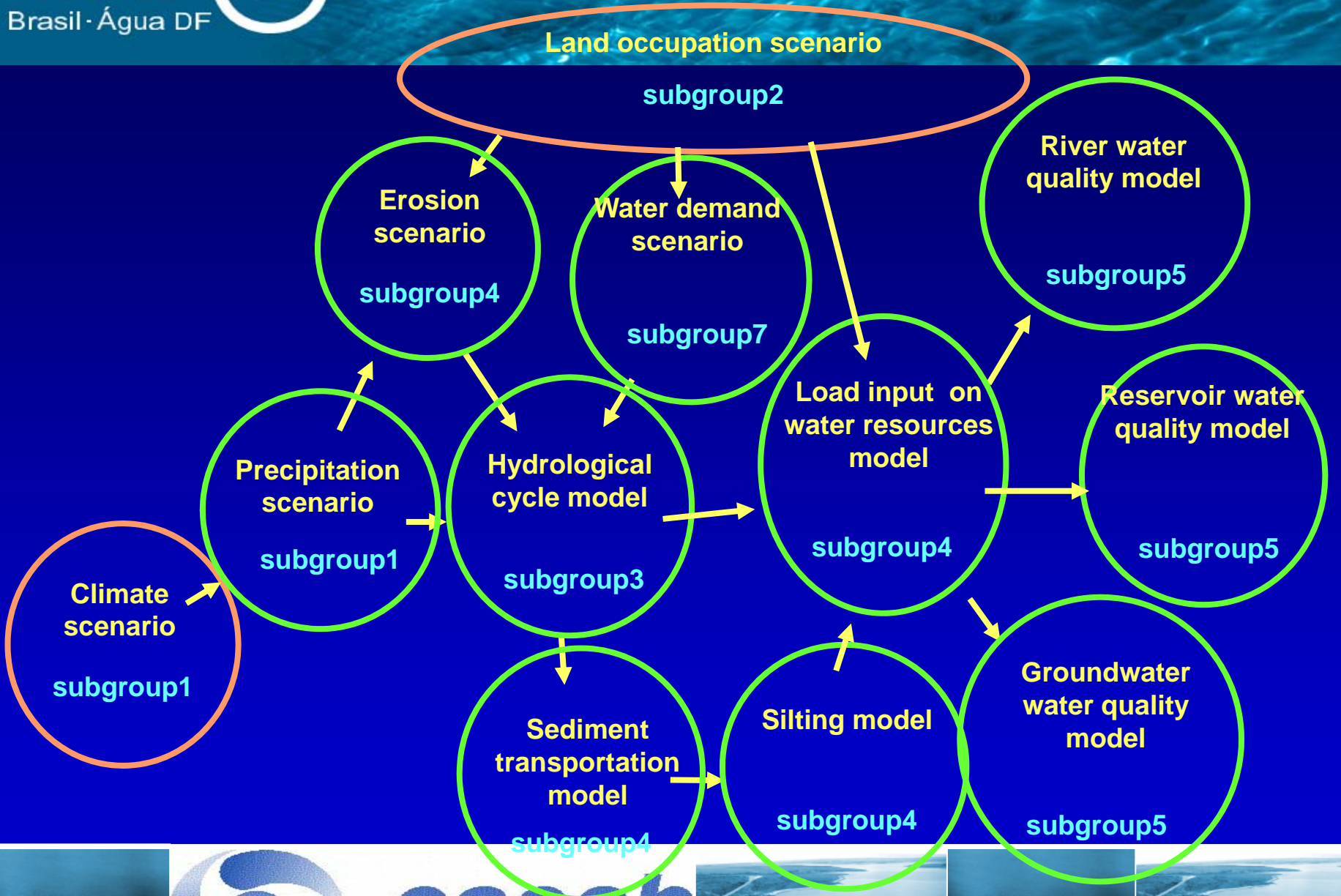
## Challenges:

- **Complexity**



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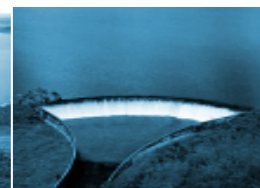


## Challenges:

- **GIS, IT, Models integration, communication protocols, users interface....**



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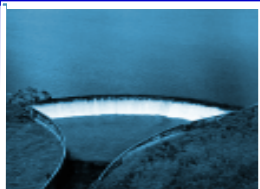


## Challenges:

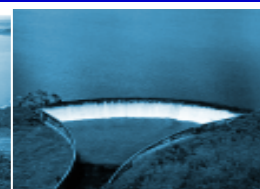
- **Cooperation & participation**

**“A GIS system cannot be successful without the right people involved”**

**“Sharing knowledge does not mean that one should capitulate on the possession of knowledge, but to enjoy and share it with colleagues”**



**caesb**





**Caesb and UnB are looking for partners for this assignment!**

**Thank you**



***caesb***

