



Ambassade de l'Eau

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4th BEIRUT WATER WEEK

Technological Tools and Financing Mechanisms for IWRM:
Complementing Hydro-diplomacy and Climate Change
Adaptation Efforts

20-22 February 2013

**Notre Dame University-Louaize
Lebanon**

Contact : Jeannette PRETOT j.pretot@orange.fr



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Strateau's genesis

- Constataion of inequal access to water and sanitation, acute water stress, transboundary issues.
- Birth in 2009
- Solution at the 6th World Water Forum, Marseille
- Successful test implementations in Palestine, Marrocco, Lebanon, France
- French Commitment to have Strateau become a reference Decision Support Tool over Mediterranean till 2015
- STRATEAU, a project:
 - **ordered** by the Water Embassy
 - **supported** by the Union for the Mediterranean and the French, Italian, Lebanon and Moroccan States
 - **financed** by the French Water Agencies, the Environment Ministry, the ONEMA (French National Agency for Water and Aquatic Ecosystems) and private operators : Suez and Veolia
 - **developped** by Energies Demain



STRATEAU
Decision support tool

We wish

to thank ...

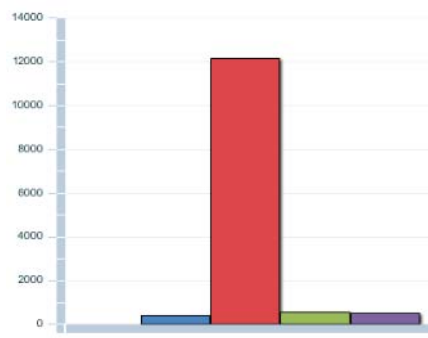
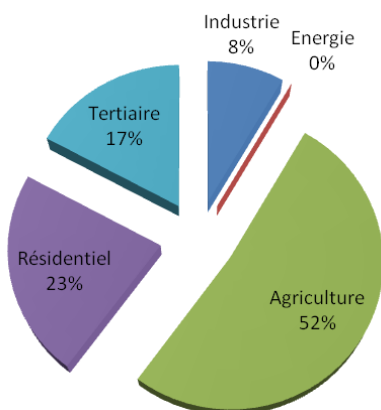
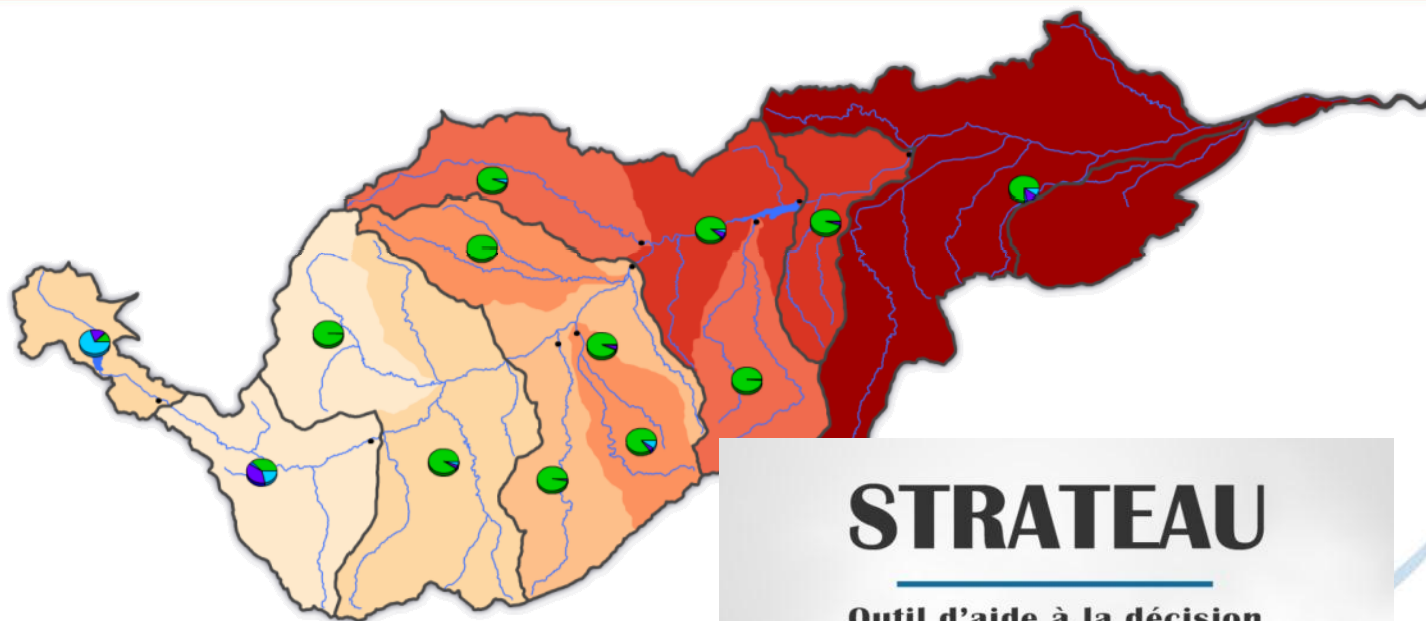
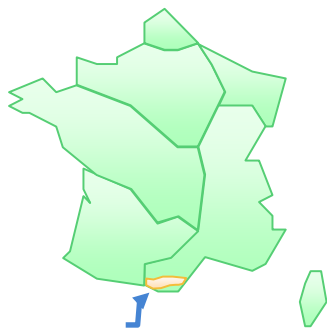
Partners of the Water Embassy



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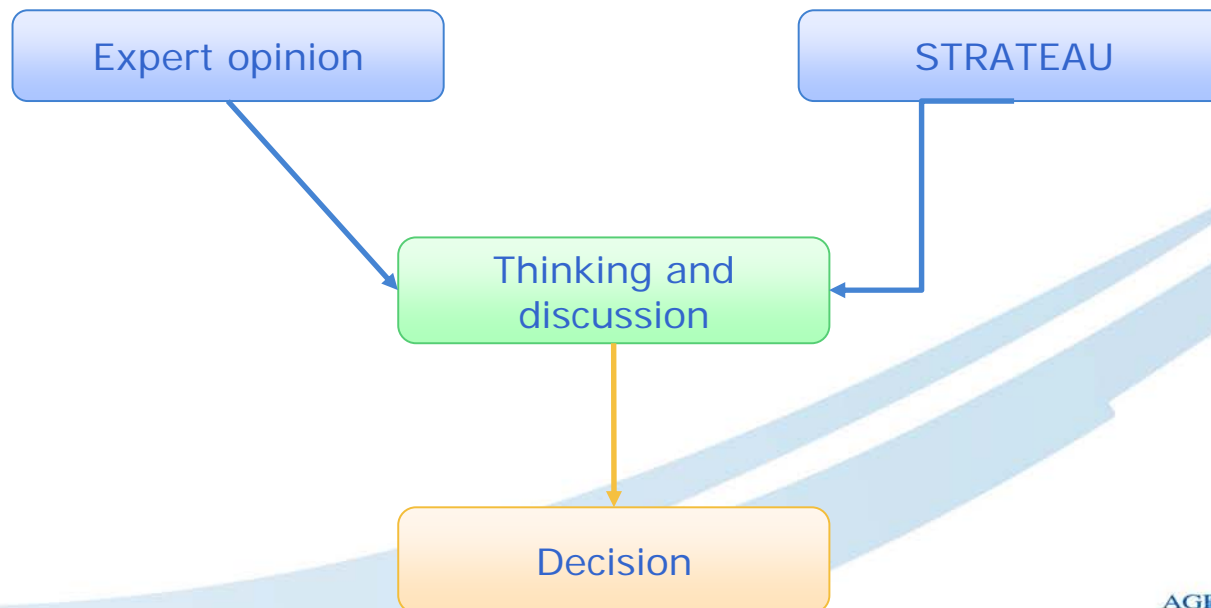
Technical overview of STRATEAU



*Decision Support System
balancing Water supply/demand*

What is STRATEAU?

- Decision Support System to help design and implement water management policies:
 - reconstitution of the **balance between water needs and available resources** from environmental, technological and socio-economic data describing the water ecosystem and human activities
 - **Now**, and in **prospective scenarios** (climate change, pop. growth, territorial mutations and management policies, ...)

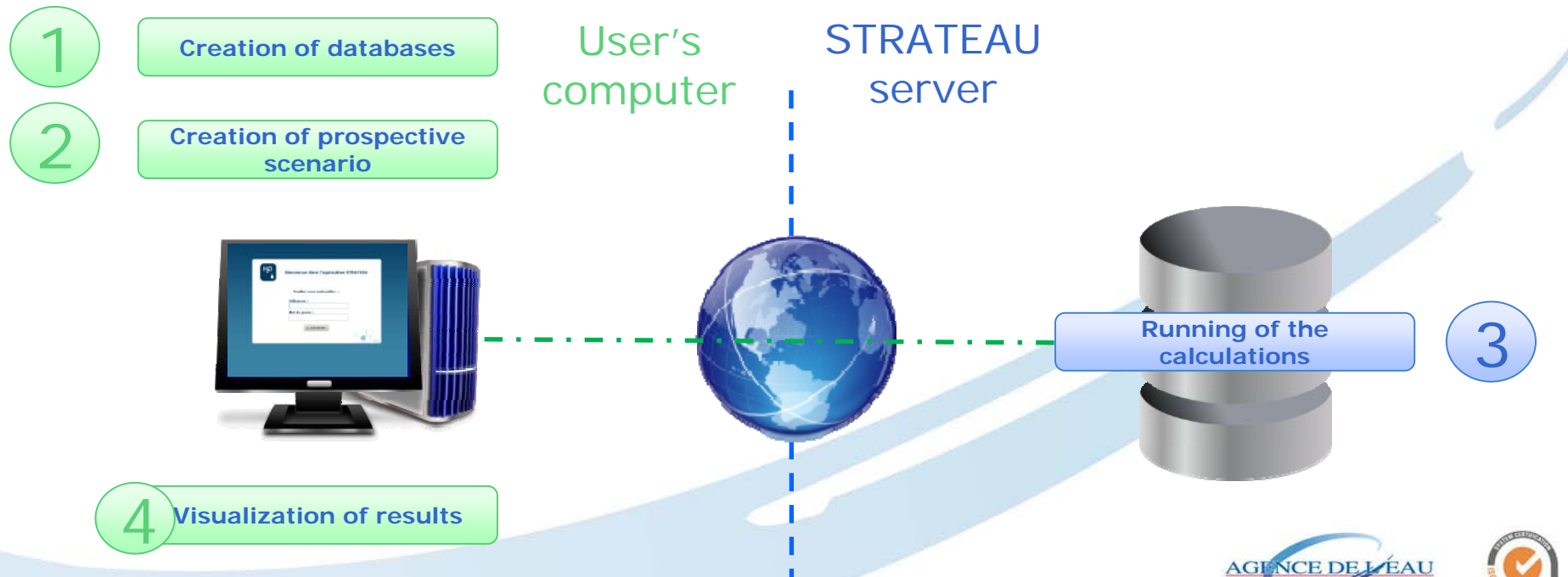


Purposes

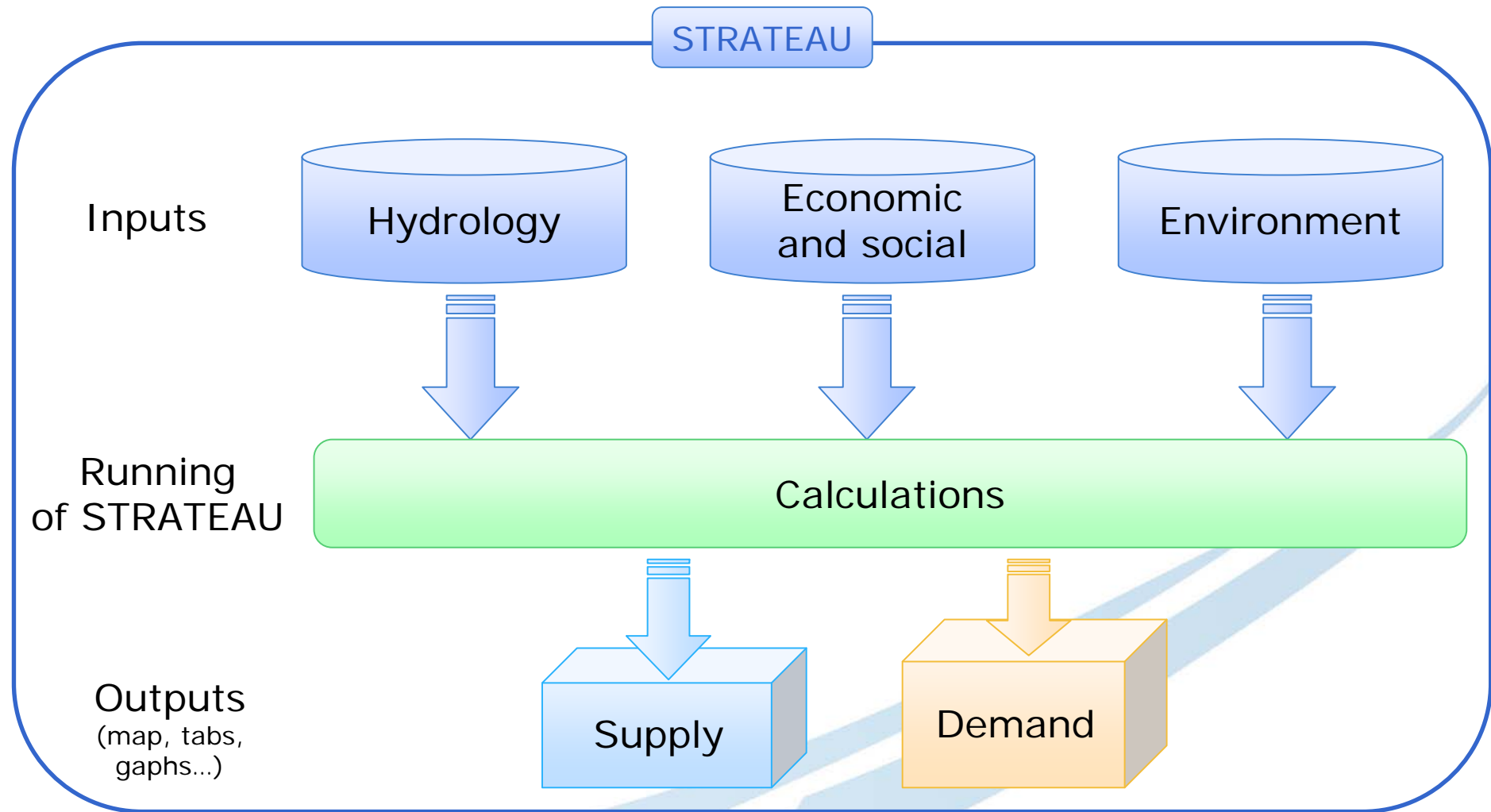
- **Examples of questions** that STRATEAU can address:
 - Are there any risks of water deficits in the territory?
 - What will be the needs for water in 15 years considering demographic growth and climate change?
 - What will be the impacts on the local water demand of a given water management strategy?
- STRATEAU constitutes a **robust basis for dialogue and reflection** about water management policy (production of scientifically-based incentives)
- Diagnoses and valorizes the local knowledge on water and its uses. Enlightens needs and directions to **strengthen/rationalize data networks**

Who can use STRATEAU?

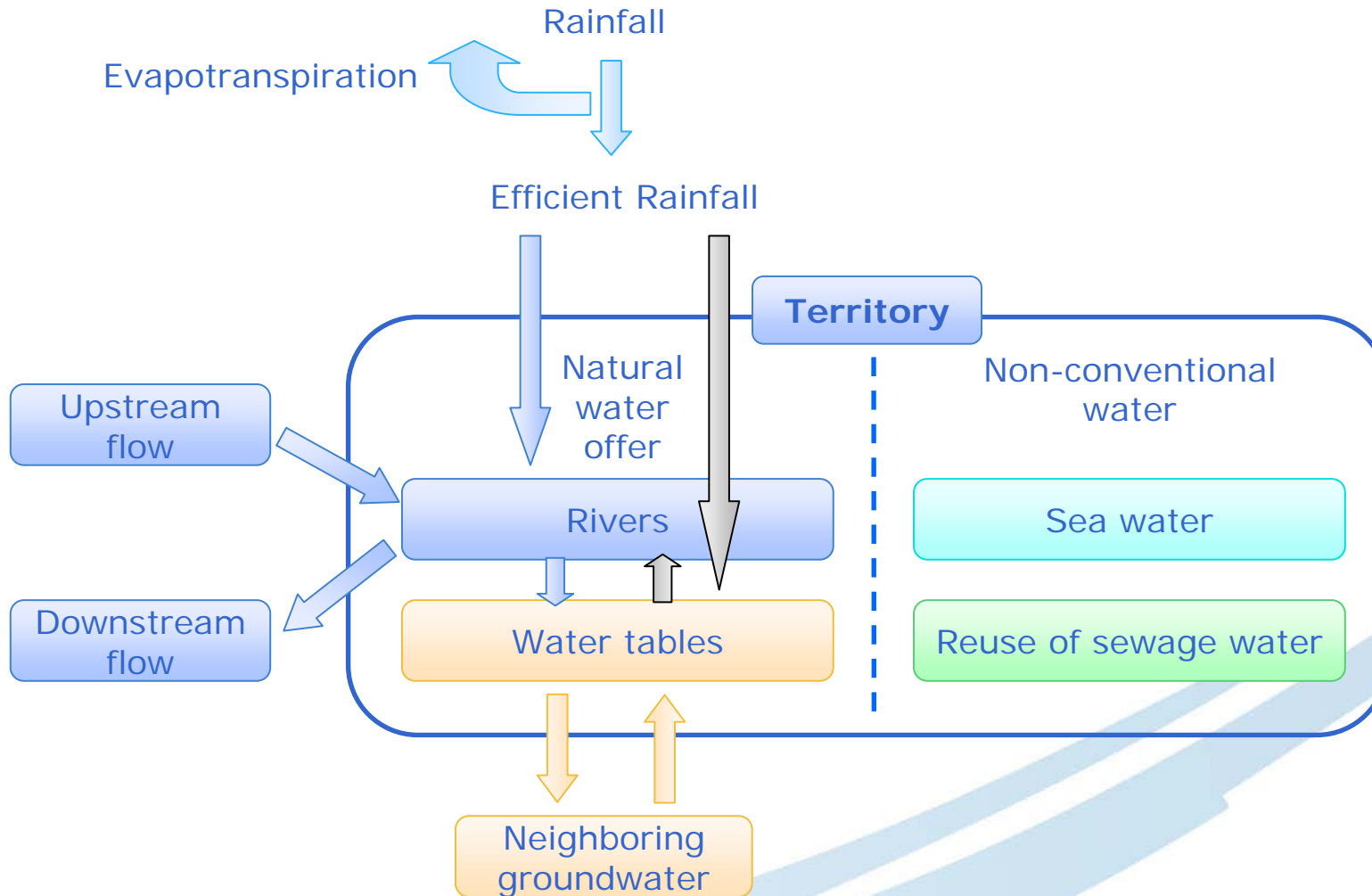
- All stakeholders involved in water management
- What is required to use STRATEAU?
 - ✓ knowledge of water management
 - ✓ be able to use a computer
 - ✓ an internet connection and a web browser



Methodology

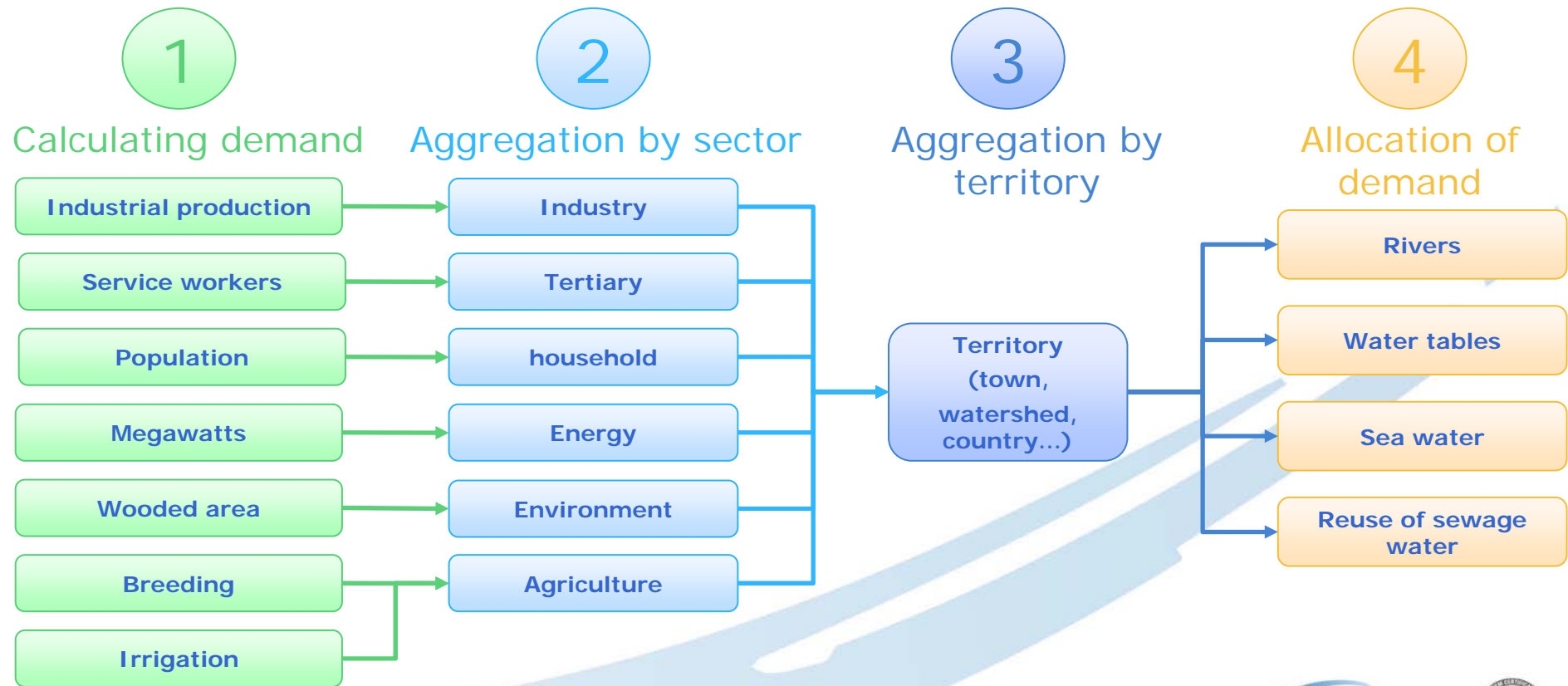


Water resources modeling



Demand modeling

- Methodology « **bottom-up** »: demand calculation to lowest level (population, production, crop ...) and aggregation



Strengths

- Socio-economic and territorial approach
- Simple to implement and user-friendly
- Oriented toward demand management
- Flexible and scalable tool that improves over the use
- Free (no license required)
- Securized data fluxes and storage on server

Demonstration

- Demonstration on the Tet watershed
 - many data
 - ideal size
 - validated results
- Tet watershed:
 - ↻ coastal river
 - ↻ surface area: 1 400 km²
 - ↻ population: 220 000 inhabitants
 - ↻ area of tourism and agriculture



Demonstration

- **Question:** does a modification of irrigation technics allowe absorbing new demographic and touristic pressures ?



- **Hypothesis:**
 - tourism increase during summer (+20%)
 - climate change :
 - rain : +30 mm/month during winter, -10 mm/month other season
 - temperature: +2°C
 - +50% drip irrigation for orchards



Results

- Drip irrigation does not catch up for evaporation increase by peach production, despite the uge investment required
- Tourism increase strengthens the pressure on water during summer but ...
- High vulnerability to climate change and tourism increase in an already water stress basin.





Conclusion



The aim is to implement the STRATEAU tool on different Mediterranean areas to strengthen water governance and build up a community of users





Thank You



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