



How to get the best mix between water for energy and energy for water?

Yves Cousquer,
Senior Adviser to the Minister for Sustainable development,
and
Senior adviser to the ParisTech Chair
(Paris Institute of Technology)

How to get the best mix between water for energy and energy for water?

I. Why should we consider the question?

II. How do we look at the question?

III. How can we deal with the Water and Energy Nexus ?

IV. Which governance to deal with the Water and Energy Nexus ?

V. Which actors to deal with the Water and Energy Nexus ?

How to get the best mix between water for energy and energy for water?

I. Why should we consider the question?

1. Water and Energy used to be considered separately by governments and end users, and Air as well

Energy

Air

Water

2. Energy from fossil sources nourished human development for two centuries, especially in the western world and nowadays quite everywhere.
Market for energy became worldwide.

3. Water is life: it's vital.
It's renewable. Globally it's abundant.
But its distribution over the planet does not fit spontaneously human needs. **Good local management of water is its key problem.**
But through agriculture needs it becomes also a worldwide problem

4. But now lifetime of fossil resources counts in decades and climate change challenges our gas emissions.
Beyond Energy market, innovations and new regulations are at stake and perhaps our civilization as well : Copenhagen Summit shows !

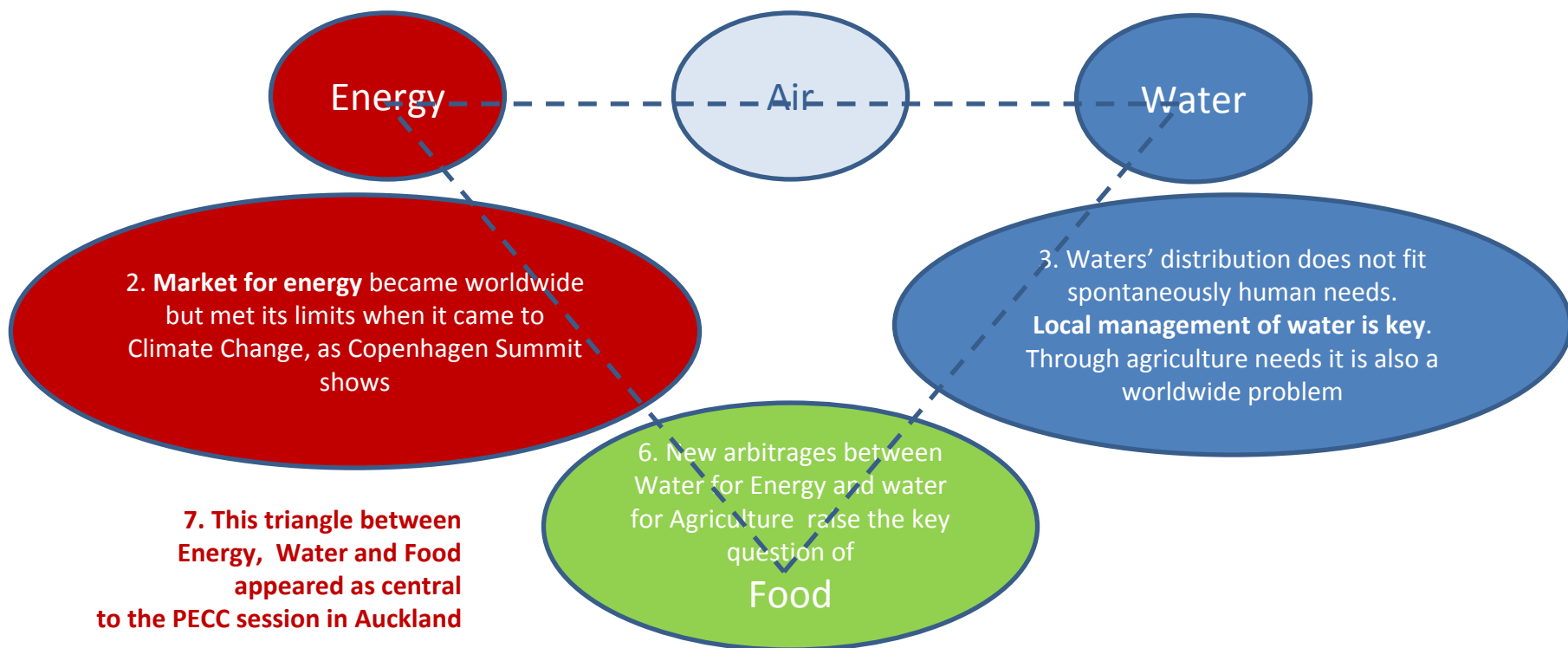
5. Then articulation between energy and water asks for a review from global to local :

CO₂ & fossil limits constraints are **global**,
while energy mix is still a **national** matter and
water management should remain **local** (basins).

How to get the best mix between water for energy and energy for water?

II. How do we look at the question?

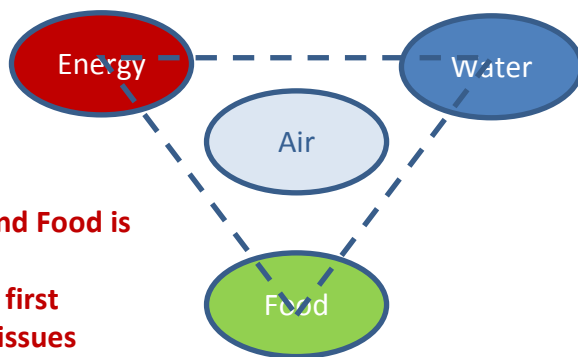
5. The Water and Energy Nexus is to be considered from Global to Local under Global Air Constraint



8. Now there is a growing awareness among the people that Market forces , which worked well to arbitrate when systems looked stable, are meeting in many domains their limits, that local governments cannot correct as they used to... And as Financial crisis, Climate change and Food problems demonstrate to everyone

How to get the best mix between water for energy and energy for water?

III. How can we deal with the Water and Energy Nexus ?



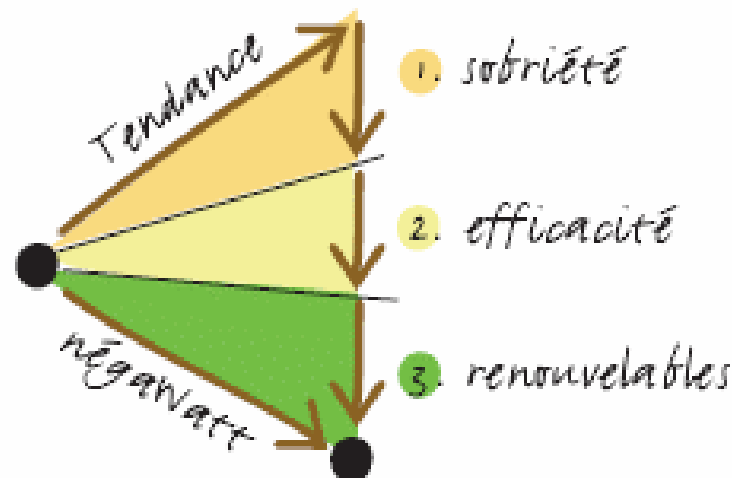
7. This triangle between Energy, Water and Food is central to governments .
They have to secure their provision in the first place, before addressing Climate change issues



This asks for :

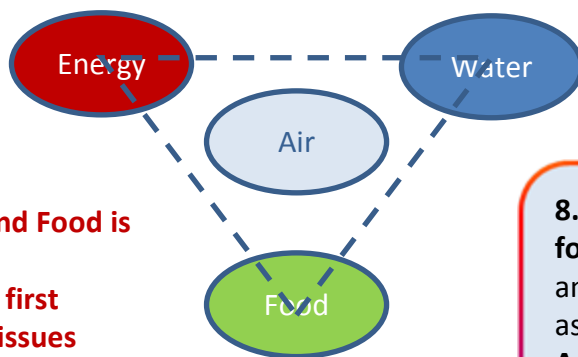
1. Joint planning of water and energy issues at local & regional levels
 2. A wide set of relevant measures and figures
 3. Mapping alternative futures through a large set of scenarios
- To develop a common knowledge and enforce sharp solutions

The **negawatt scheme** is the cornerstone of the necessary changes we have to enforce collectively



How to get the best mix between water for energy and energy for water?

IV. Which governance to deal with the Water and Energy Nexus ?



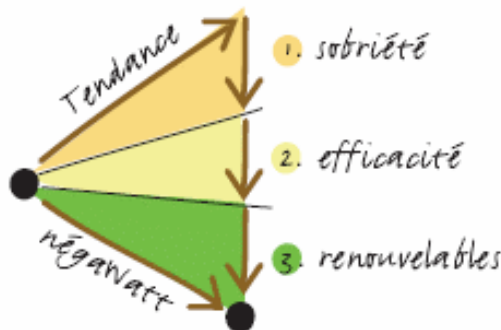
7. This triangle between Energy, Water and Food is central to governments .
They have to secure their provision in the first place, before addressing Climate change issues



This asks for :

1. Joint planning of water and energy issues at local & regional levels
 2. A wide set of relevant measures and figures
 3. Mapping alternative futures through a large set of scenarios
- To develop a common knowledge and enforce sharp solutions

The **negawatt scheme** is the cornerstone of the necessary changes we have to enforce collectively



8. There is a growing awareness that Market forces met their limits in many domains, and that local governments cannot correct them as they used to...
And Financial crisis, Climate change and Food problems show this altogether to the people...

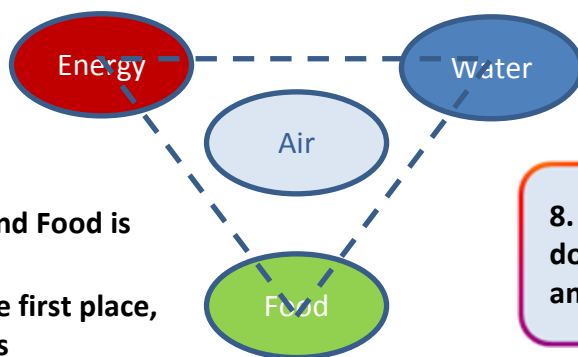


In front of this growing awareness there is a growing demand that:

1. Summit shows a cap, when it meets in Copenhagen
2. Governments define adequate frameworks for plans, operators and markets
3. Experts and Professors play their role towards people and students,
4. who also have to open their eyes and minds and act in a responsive way to the hard challenges ahead

How to get the best mix between water for energy and energy for water?

V. Which actors to deal with the Water and Energy Nexus ?



7. This triangle between Energy, Water and Food is central to **governments**

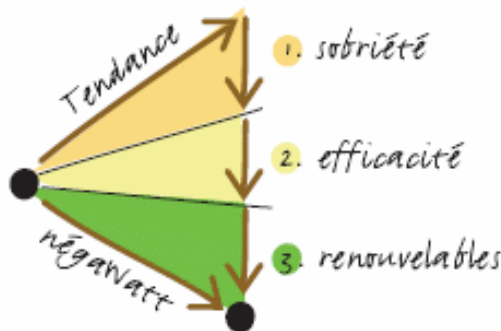
- who have to secure their provision in the first place,
- before addressing Climate change issues



This asks for

1. **Local governments** and **operators** (either public or private) to jointly plan water and energy issues , at local & regional levels
2. **World experts** to agree on a wide set of relevant measures and figures
3. **Governments** and **experts** to map alternative futures through a large set of scenarios and enforce sharp and adaptive solutions

The **negawatt scheme** is the cornerstone of the necessary changes we have to enforce collectively
It reminds that we should not wait for or rely exclusively upon New Technologies



8. As Market forces meet their limits in many domains and as Financial crisis, Climate change and Food problems ask for...



There is a growing demand that:

1. **Summit shows a cap**, when it meets
2. **Governments** define adequate **frameworks** for plans, operators and markets
3. **Experts, Professors** and **Teachers** play their role towards **people** and **students** to develop knowledge and research

1. **Sobriety** should be a concern for **everybody**: then it's a matter of **Education** as well as **Market price**

2. **Efficiency** is a matter of **knowledge**, in the first place for **operators**

3. **Renewable energies** ask for **innovation** a mix of **culture** and **smart people**, able to turn dreams into reality through **entrepreneurship**