



Combating climate change in Mediterranean and African countries and in the Middle East

COP22 Side Event - Room Pacific - 16h45 - 18h15

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¹MINES ParisTech www.cma.mines-paristech.fr

²Chair Modeling for Sustainable Development www.modelisation-prospective.org

Prospective tool

"What we have the right to ask a conceptual model is that it seize on the strategic relationships that control the phenomenon it describes and that it thereby permit us to manipulate, i.e., **think about the situation**"

Source: R. Dorfman, P. A. Samuelson, R. M. Solow

Chair Modelling for sustainable development



ParisTech's Chair Modeling for
sustainable development

Prospective versus Prediction

Whilst Prediction **imposes** the future.

Prospective

- **envisions** all the possible futures
- in order to **lighten** tomorrow's consequences of today's choices and decisions

In other words Prospective exercises enable to :

- **be prepared** to unexpected trends or events thanks to the assessment of a **diversity of imagined futures**
- i.e. **to build a prosthesis** for the stake-holders or decision-makers who desire a **calculated adventure**

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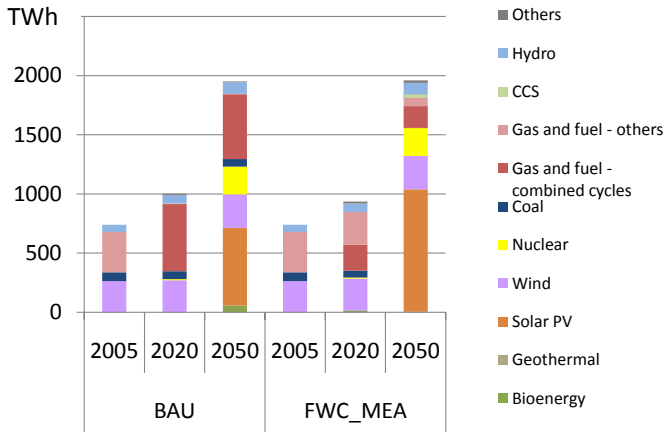
Energy planning modelling approach through TIMES *A technological energy-sector model* handle issues such as :

- **future investments** for the mix?
- **measures** for the environmental impact?
- what **substitution** between energies?

☞ According to this approach stake holder and decision maker community might question the implementation **relevance** and **plausibility** of the energy mix assessed and impacts of climate change.

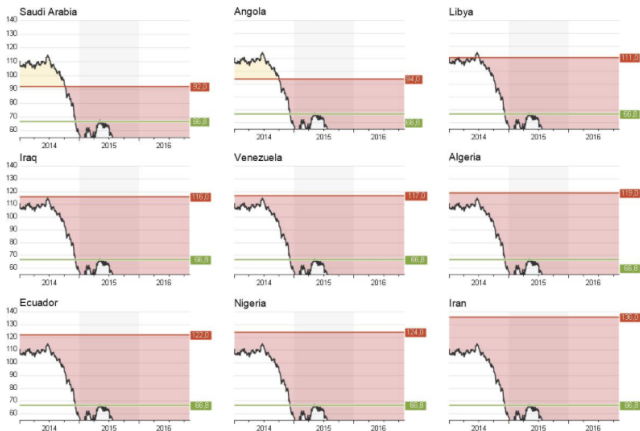
Water as a constraint

- *FWC_MEA*: fresh water consumptions in Middle East until 2100
 \leq consumptions in 2005



Economic diversification to prevent impact of falling oil prices

Oil export losses in 2015 are expected to reach about \$300bn or 21% of GDP in the GCC (Gulf Cooperation Council) and the oil price decline is likely to result in a fiscal deficit.



*Saudi riyal, UAE dirham, and Qatari riyal are pegged to the U.S. dollar.

Sources: Thomson Reuters Datastream, IEA, Nov. 27 data for oil price and foreign exchange. Graphics by Vincent Flassieur/Reuters

A joint side event: ParisTech, CIRED and ASEED

- **Nadia Maïzi**, MINES ParisTech, France: Introduction
- **El Hadi Benyoussef**, Ecole Polytechnique, Algeria: Climate change and consequences in Algeria (Skype)
- **Edi Assoumou**, CMA/MINES ParisTech, France: Technology transfer challenges
- **Youba Sokona**, AREI (Africa Renewable Energy Initiative): Low carbon energy access for Africa: challenges and initiatives in the power sector after COP21
- **Samir Amous**, APEX Conseil, Tunisia: A review of African INDCs : key features and ways to finance them
- **Jui Wen CHEN**, ASEED: How to build a sponge city in order to bring water resources?
- **Jean Charles Hourcade**, CIRED, France: Conclusion