



Chaire Modélisation prospective
au service du développement durable



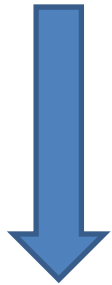
1.5°C FOR THE WG III

An opportunity to reframe the economics of mitigation ?

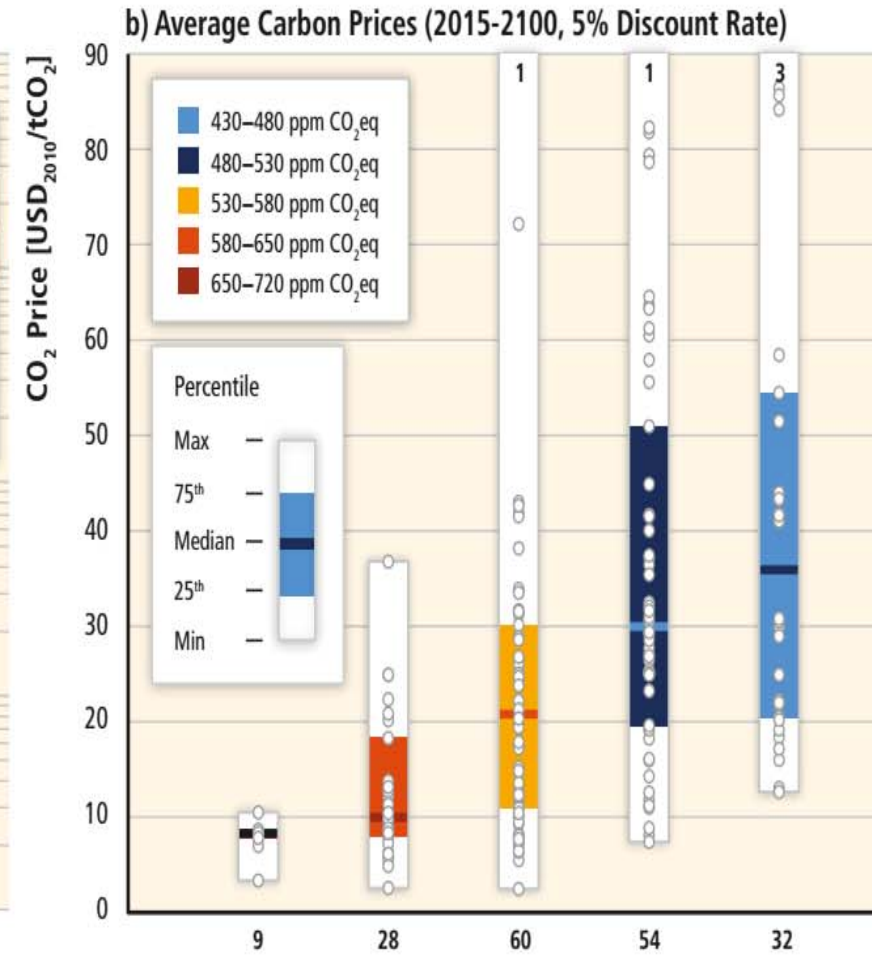
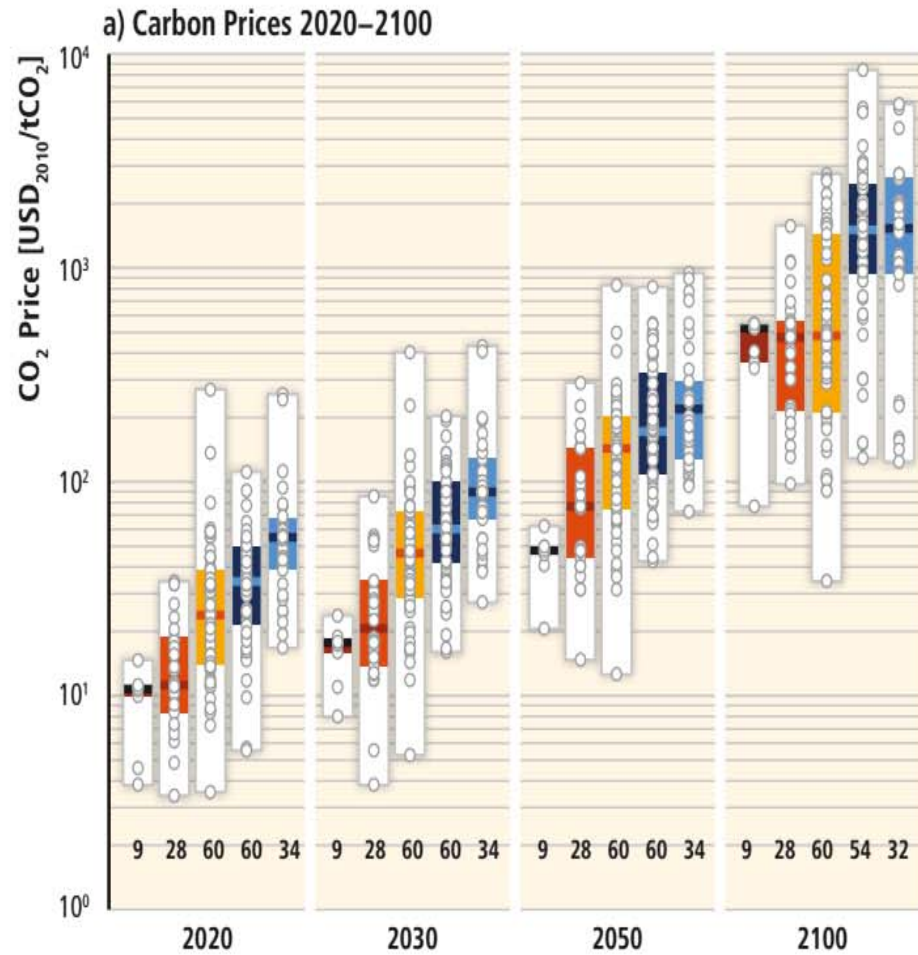
Jean-Charles Hourcade

TURNING POINTS IN THE ECONOMICS OF MITIGATION

- **1992, Rio, UNFCCC** - Climate policies ‘in the perspective of sustainable development’
- **1995, Berlin, COP1** shift towards a ‘carbon budget approach’
 - Where and when economic flexibility + fair burden sharing
 - Gap between the content of WG III and the economic vulgate
 - Unresolved disputes between BU and TD analysis
 - Climate centrism : the forgotten climate development Gordian knot
- **2010, Cancun, COP 16** - paradigm shift : seizing opportunities towards ‘equitable access to low carbon development’
- **2015, Paris, COP 21** - out of the TD burden sharing approach
 - Reaffirmation of the 2°C target
 - Exploration of the 1.5°C target



CARBON PRICE TRAJECTORIES



20 YEARS LATER: CHEAP 2K?

« *The most ambitious pathways [350-450 ppm CO₂] are possible* » with a macroeconomic impact comprised between +0.5 and -3% of the GDP in 2030 with technologies currently known and a uniform carbon price between 5 and 80 \$/tCO₂ in 2030

... a good news subject to a **‘never read’ caveat** :

*‘Most models use a global **least cost approach** to mitigation portfolios and with universal emissions trading, assuming **transparent markets**, **no transaction cost**, and thus **perfect implementation** of mitigation measures throughout the 21st century.’ (AR4 WGIII SPM Box 3) (200?°*

... to which one should add

*And **widespread benevolence** to compensate the losers*

QUESTIONS RAISED BY 1.5 C, FOR 2°C...AND 2.5°C

- **Almost not budget to be shared**
- **Structural changes needed and/or technological breakthroughs in negative emission techniques**
- **No triggering of structural changes for climate only objectives**
- **A huge risk of ‘increasing implementation gap’ without deep institutional changes**

AFTER COP21: MIND THE IMPLEMENTATION GAP

- **A temptation to postpone climate action** until after the end of the current economic doldrums and social alarms
- **How to convince ‘climate agnostic’ policy-makers to go beyond symbolic announces**
 - Aligning LCT with **Sustainable Development Goals**
 - LCT as a way of responding the **alerts of prominent economists** against the risks of ‘secular stagnation’
 - Guarantee **no** immediate and future **negative impact on unemployment and on public debt**

THE 'FAULT LINES' OF THE WORLD ECONOMY

- **Chronic excess of savings over (productive) investment**
 - 'Propensity to save' > 'propensity to invest'
 - 'Weak intermediation between long term assets and short term cash balances,
- **Type of globalisation:**
 - 'overly export-led strategy in emerging economies (R. Rajan)
 - Dualistic development
 - Risks of « *currency cold war* »
- **Cumulated wedge between potential growth and real growth**, shortfall of infrastructure investments (World Bank, OECD)

THE COP21'S SURPRISE

- **The article 2 of the Agreement:** aligning financial flows along a new trajectory of global economic development
- **The article 108 of the decision:** *“recognizes the social, economic, and environmental value of mitigation activities and their co-benefits to adaptation, health, and sustainable development” (SVMA)*

KEY SCIENCE BASED INFORMATION WHY AND HOW TO COMBATE THE POSTPONMENT TEMPTATION

Detection of the ‘bifurcation points’ and their underlying drivers

Wave of innovation within and beyond the energy sector **vs** negative emissions

What long term implications of the Low Carbon Transition for:

- Sustainability of Development : urban dynamics, Rural drift, material metabolism, nature based options, infrastructures and poverty alleviation, energy security
- LT growth patterns: trade regimes, financial tensions, capital and labor flows

Emphasis on the ‘trigger phase’ of the low carbon transition

- Short term Economic costs and benefits of alternative policy packages
- Compensate/dismantle **vested interests**
- Integrating the (so far almost absent) **financial dimension**

Building a confidence Circle with 1,5°C as an aspirational goal :

- Dialogue between BU (national and sector based) information and TD analysis
- Involving new disciplines in the discussion from macro-finance to grassroots development analysis