

Why so little progress on international climate negotiations?

John Reilly

Cited reports and reprints at:
<http://globalchange.mit.edu/pubs/>



The State of Affairs

- The Kyoto Framework of binding commitments with option of international trading is for all practical purposes dead.
 - Proximate cause—US withdrawal
 - But Japan, Canada, Russia, Australia while ratifying are not fully committed—If US had stayed in?
 - Developing country and Annex I/B designations became a near impenetrable wall to coverage expansion.
- Overriding issue.
 - Negotiating both about how much to do overall, and how to share the burden.
 - Particularly with trading it is very complex to estimate whether a country might gain or lose from a particular commitment and it depends on what other's commitment are and whether they live up to them

The State of Affairs II

- The success of international negotiations depend on the negotiators ability to implement measures within their own countries to achieve agreed reductions
 - Hard for negotiators to negotiate both internationally and with domestic actors that need to pass domestic legislation.
- Most successful international agreements ratify or codify what countries are already doing.
- Copenhagen finally accepted this fact, and included a list of what countries were willing to commit (kind of) to do.
 - Nowhere near achieving the 2 degree target.
 - Most commitments highly conditional. E.g. US,
 - A step backward or forward?

State of Affairs III

- Copenhagen finally, more or less, was an admission that the Kyoto Framework was not workable.
 - Kyoto process was a path to ever more “success” in negotiating worthless agreements.
- What could have we have expected from Cancun?
 - We have is the patchwork of Copenhagen commitments—the issue is to implement them.
 - No reason to expect an ever bigger or broader commitment—a few more countries committing.
 - “Success” is just making progress in implementing, avoiding backsliding, working out details, reaffirming—even if we could do that there is not much “headline” in it.
 - The collapse of cap and trade legislation in the US sucked any air there might have been out of Cancun.
 - If US is not living up to commitment its not possible to pressure others that are much smaller, poorer, etc. and who’s pressing.
 - Can Europe carry the ball alone? Is Europe a success?

Some illustrative results on two key issues in negotiations

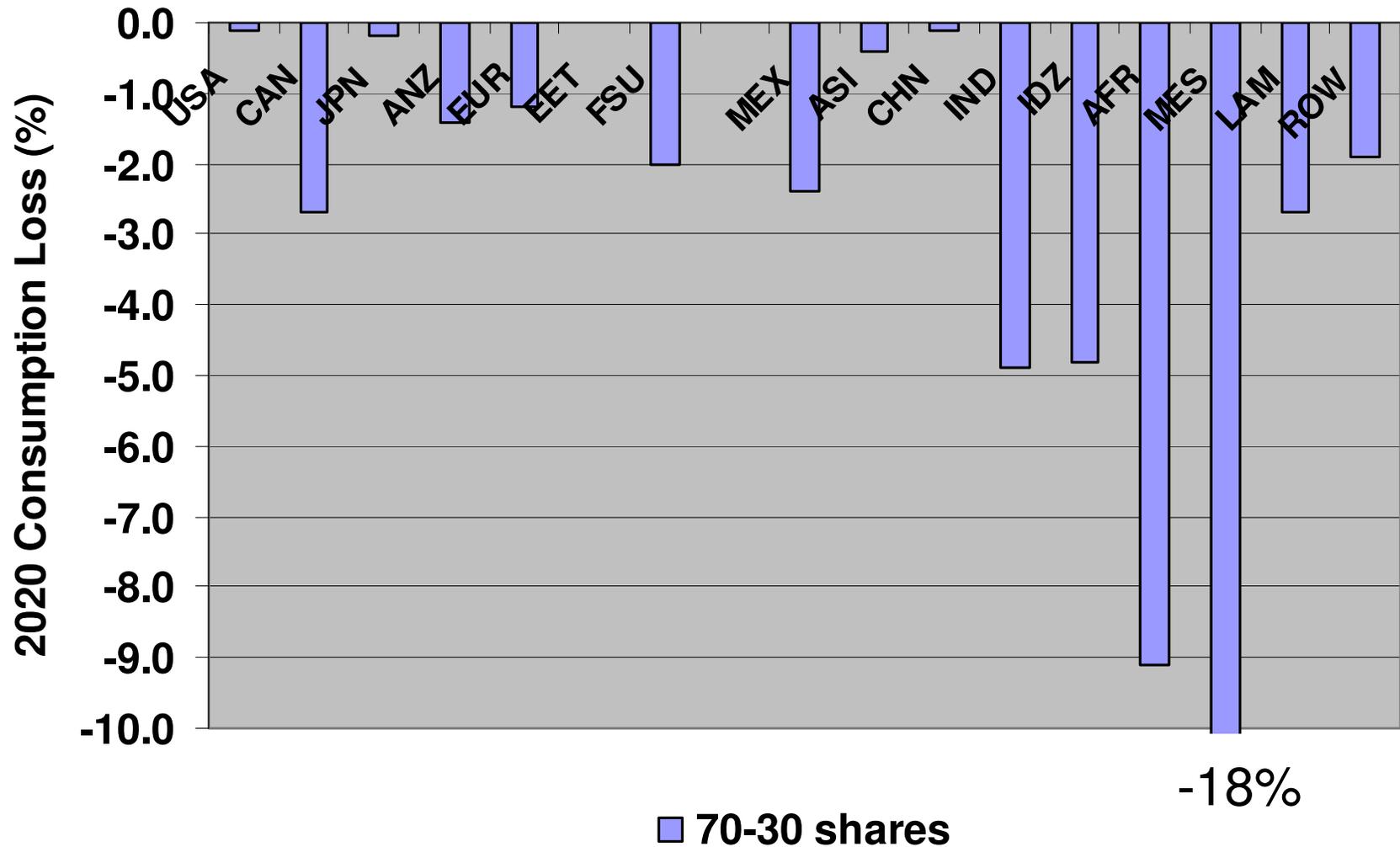
- Burden-sharing.
 - If the whole world participates it's less costly to achieve a given goal.
 - But if developed countries must pay the full cost how much is the transfer?
- REDD
 - Are forests as carbon sinks a lever and what are the implications of creating incentives for reforestation?

What about burden-sharing among regions?

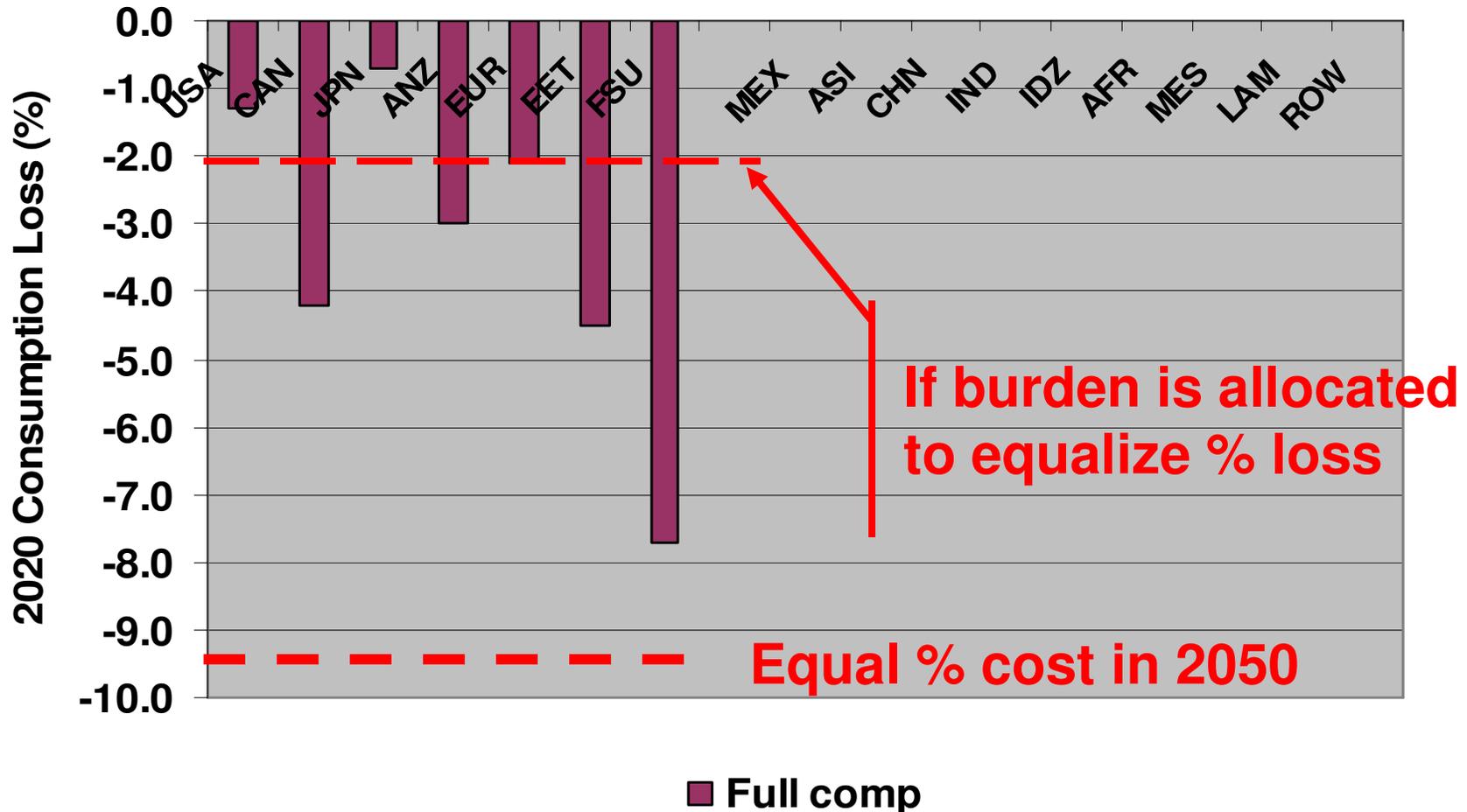
- G8-Global emissions should be 50% below current/1990 by 2050
 - Suppose Developed cut by 70%»Developing must cut only 30%
- International Negotiations under the Framework Convention on Climate Change have differentiated responsibilities:
 - Highly simplified...
 - Developing countries need positive incentives to reduce emissions—i.e. Developed countries need to pay for their own emission abatement and abatement in Developing Countries

See: Report 167. Sharing the Burden of GHG Reductions

2020 Consumption Loss 70-30 Shares



2020 Consumption Loss Full Compensation



Net Financial Flows from Developed to Developing:
~\$430 billion/year in 2020; \$3.3 trillion/year in 2050

One issue to be addressed in Cancun—REDD- Reducing Emissions from Deforestation and Forest Degradation

Using Land to Mitigate Climate Change: Hitting the Target, Recognizing the Tradeoffs

John Reilly¹, Jerry Melillo², Yongxia Cai¹, David Kicklighter², Angelo Gurgel^{1,3}, Sergey Paltsev¹, Timothy Cronin¹, Andrei Sokolov¹, Adam Schlosser¹This Paper

Goal: Consider a Climate Mitigation Policy that is
About as Stringent as Possible, keeping CO₂
concentrations below 500 ppm

If we extend CO₂ pricing to land does that bring us closer to the 2 degree C target?

What is the role of biofuels vs. reforestation for carbon sequestration?

What are the impacts on agricultural prices?

Temperature and Atmospheric CO₂ levels.

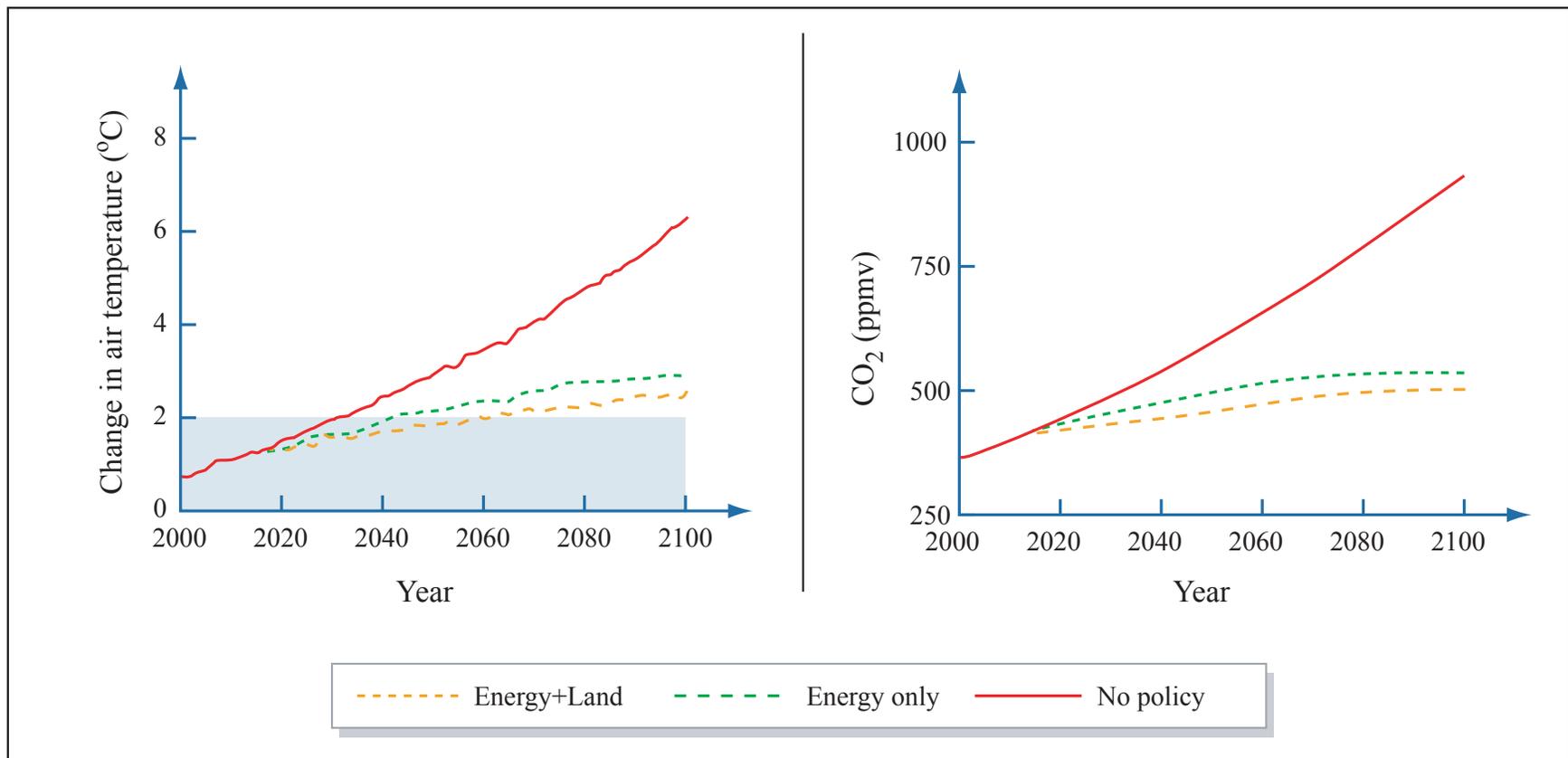
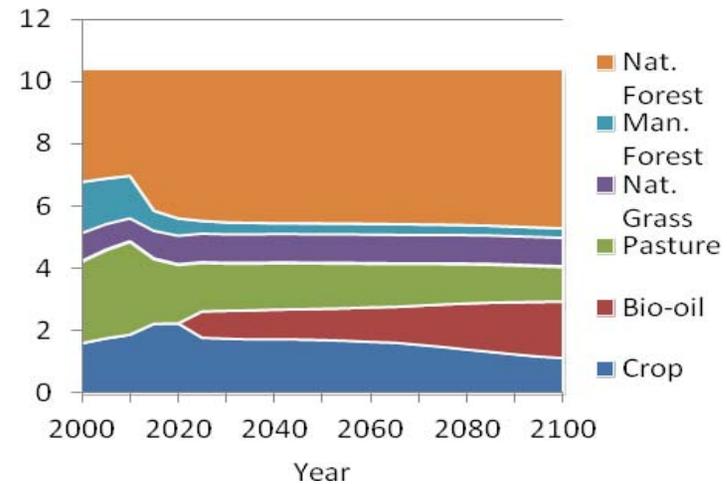
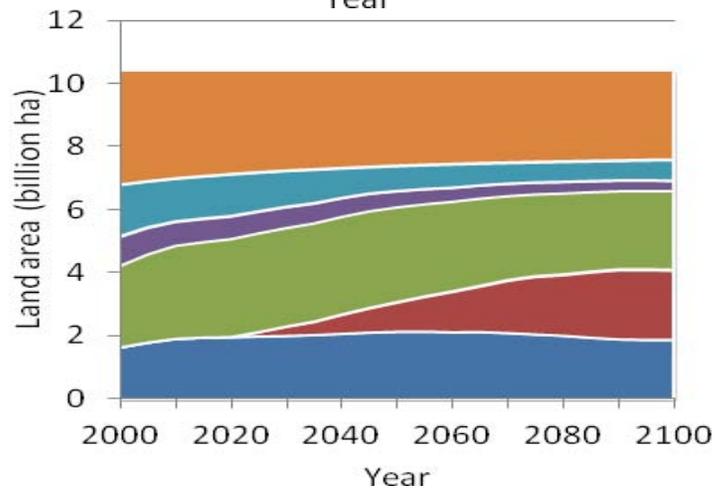
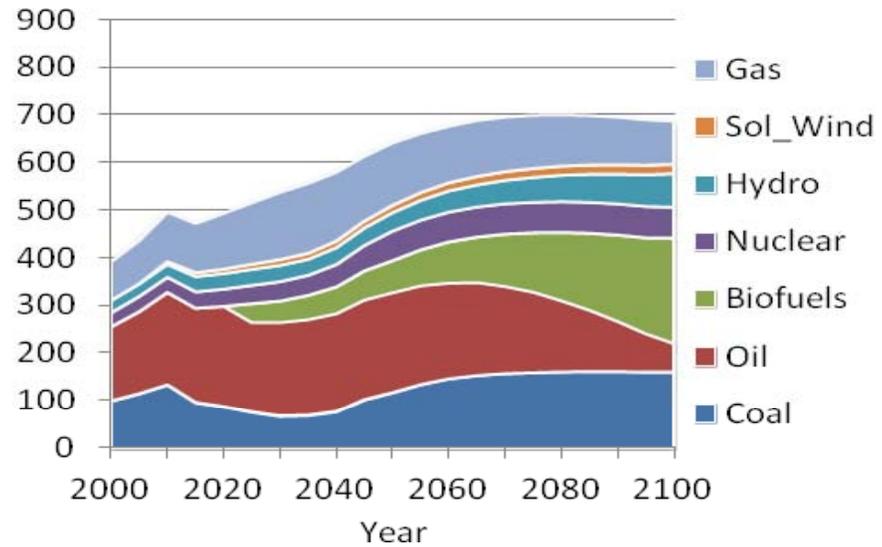
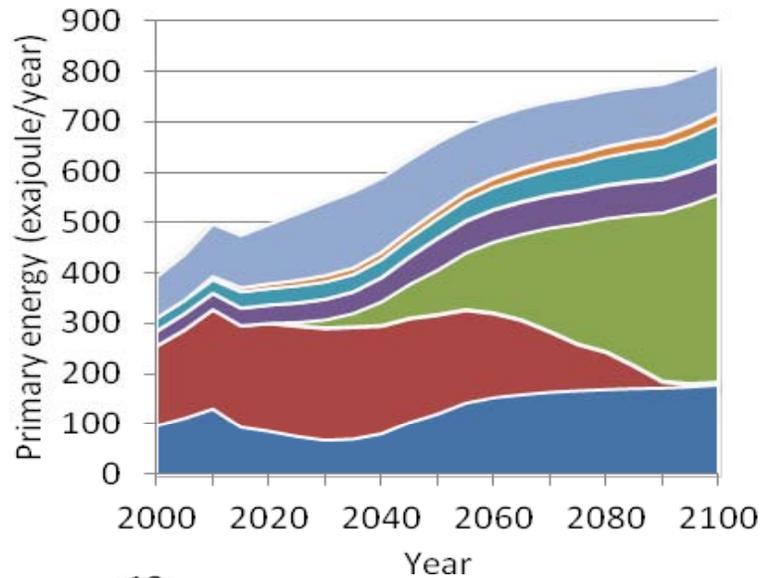


Image by MIT OpenCourseWare.

Global energy use top and land use bottom, with energy only policy left, and energy+land policy right



Food, crop, livestock, and forestry price impacts

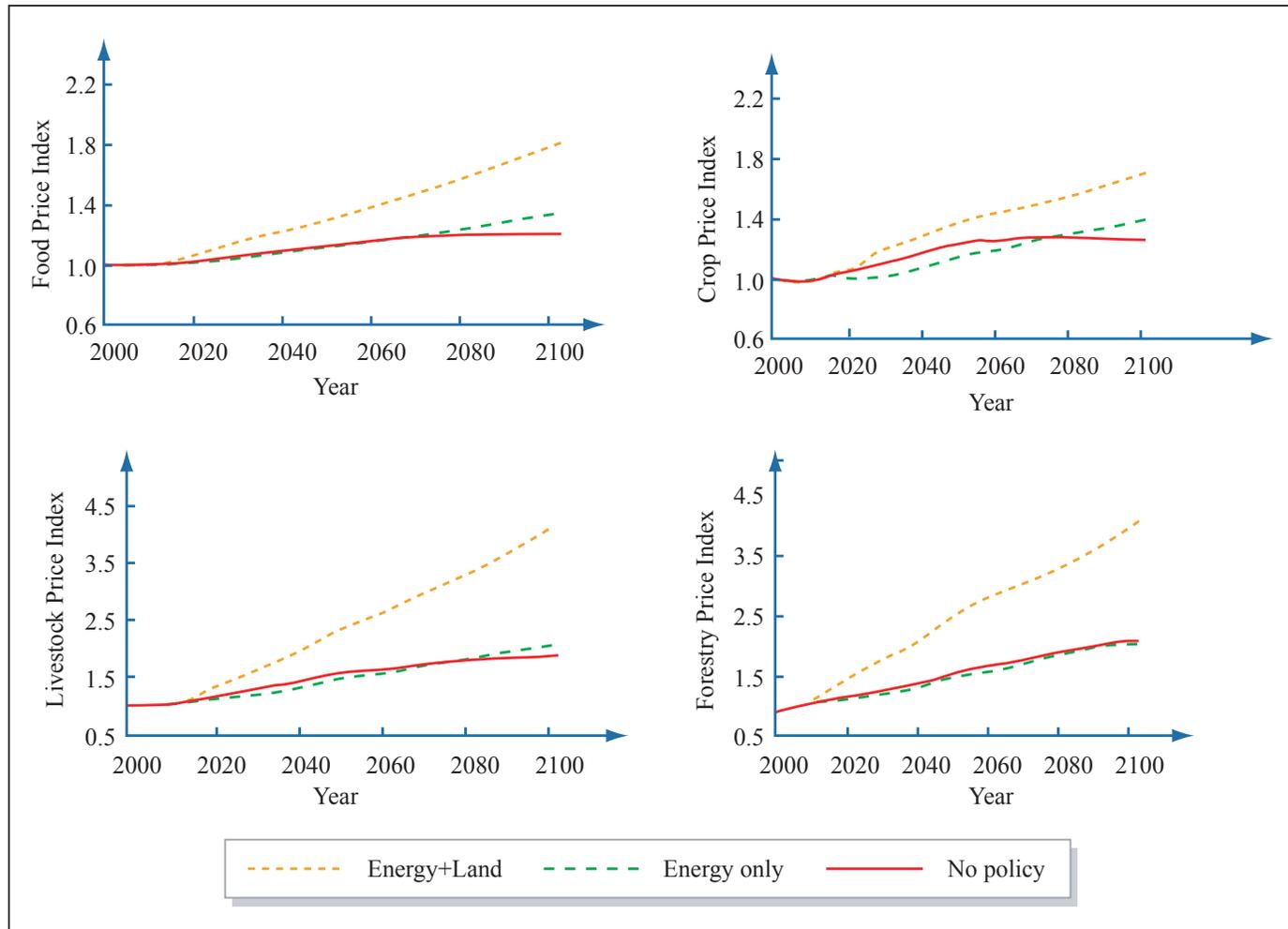


Image by MIT OpenCourseWare.

Non-governmental Action?

- Most companies want to look like they are environmentally responsible, and many even mean it.
- In a competitive economy, its hard to sell “green” that costs more—companies are required to operate in shareholders interests.
 - Threat of climate legislation makes fossil intensive investments risky and so in shareholders interests to think hard and maybe avoid.
 - But even that depends on credible threat of legislation

Summary

- It's not just the cost of the policy it's the broader implications on distribution among countries and among different types of households within countries.
- Do you trust that all parties hold to the deal—Russian hot air—US withdrawal from Kyoto.
- Energy price and food impacts—even if countries are compensated will households within the country be compensated.
- It's not just abatement cost but benefits or costs imposed through macroeconomic relationships—reduced demand for fuels undermines a value of oil resources in Middle East, Canada, Russia, etc.
- Very different perceptions of equity and responsibility
 - Developed countries—past is past, lets fix the problem from here on
 - Developing countries—you became rich by using fuels and forests without consideration of GHG implications so that is our right too.

MIT OpenCourseWare
<http://ocw.mit.edu>

22.081J / 2.650J / 10.291J / 1.818J / 2.65J / 10.391J / 11.371J / 22.811J / ESD.166J

Introduction to Sustainable Energy

Fall 2010

For information about citing these materials or our Terms of Use, visit: <http://ocw.mit.edu/terms>.