

U.S.
Framing Policy under
Uncertainty

In a post-
Copenhagen
world

Henry D. Jacoby

Joint Program on the Science and Policy of Global Change
Massachusetts Institute of Technology

EPRI Global Change Research Seminar
19 May 2010

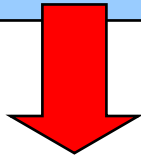


Steps in a Meditation

- The nature of the climate problem
 - The commons, free riders & coalitions
- How the negotiations affected analyses
- Uncertainty analyses, and insights
 - Effects studies and long-term targets
 - Scenarios
 - Formal risk analysis
 - Studies of sequential decision
- The post-Copenhagen world
- Thinking about U.S. action under uncertainty

“Montreal” Framing

UN
FCCC



Kyoto
Protocol

Prevent “Danger”

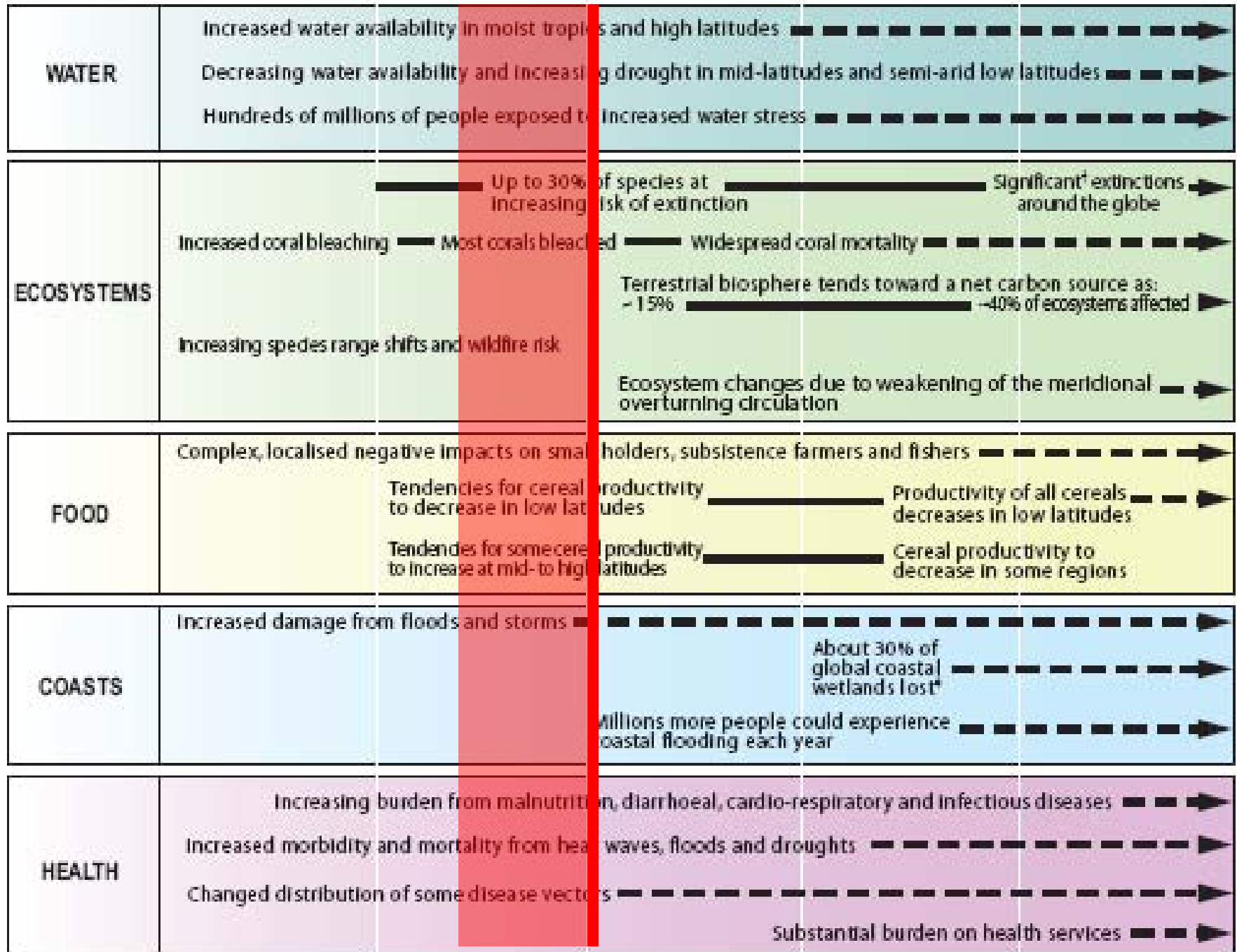


Implicit Coalition

All emitters
All sources
All gases

Global average annual temperature change relative to 1980-1999 (°C)

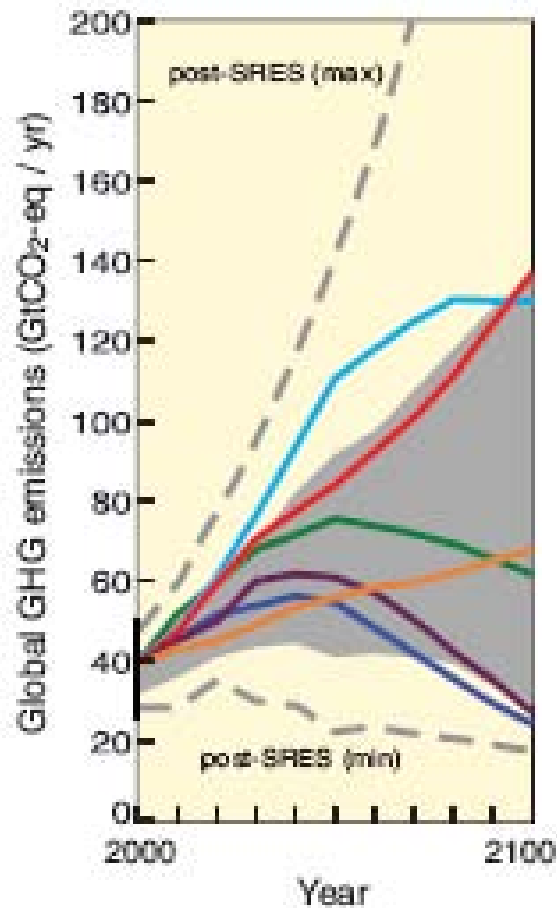
0 1 2 3 4 5 °C



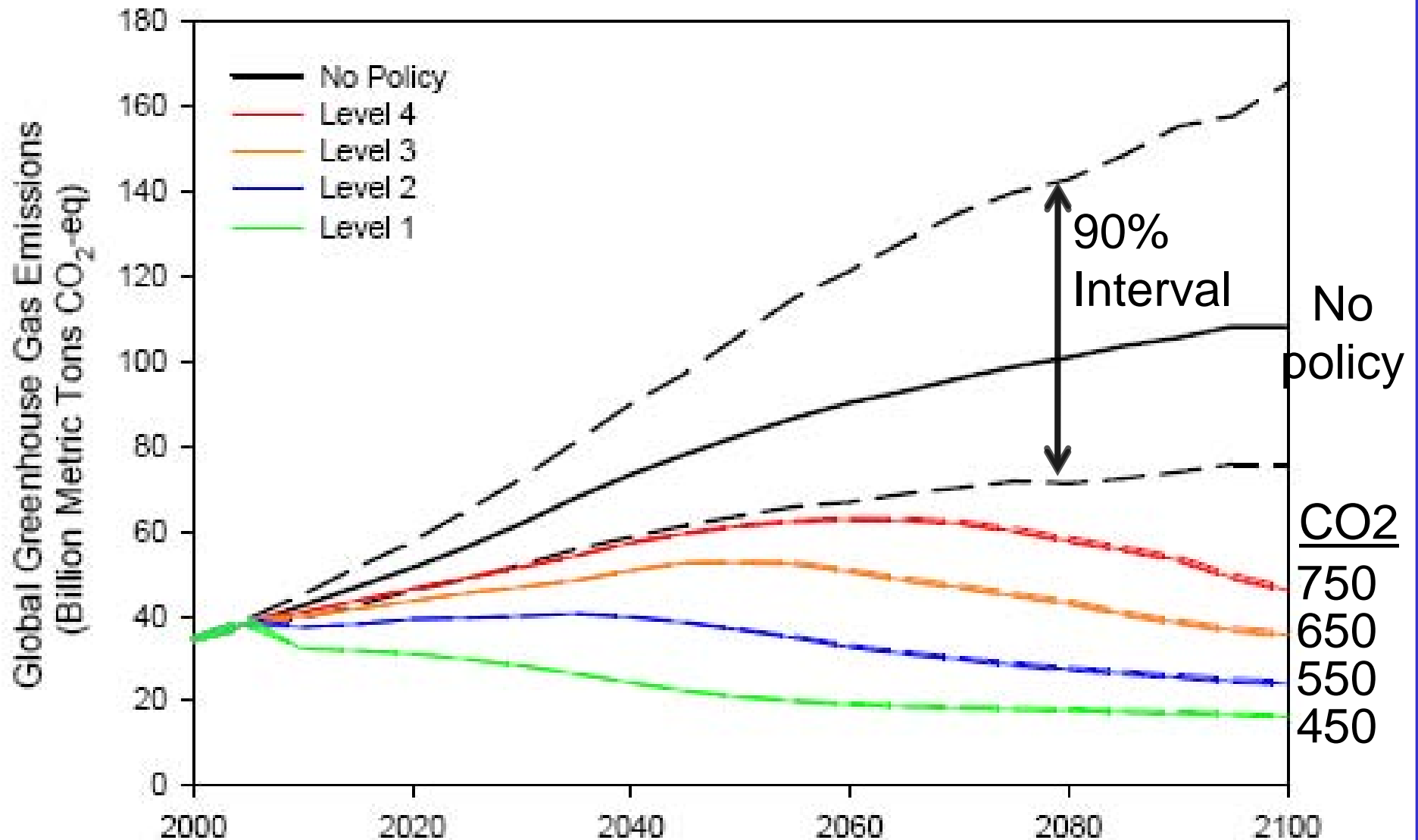
0 1 2 3 4 5 °C

Scenario Analysis

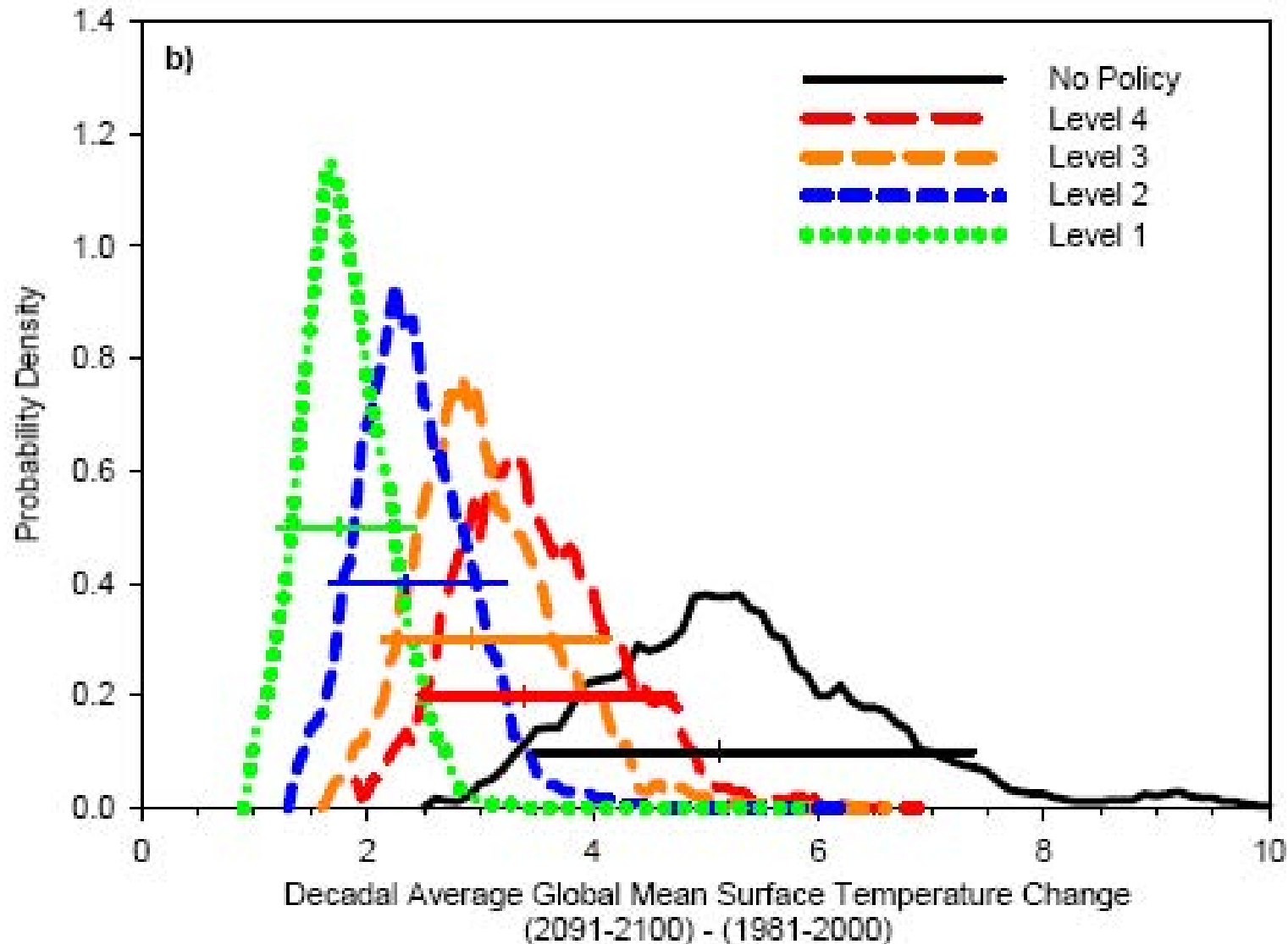
Scenarios for GHG emissions from 2000 to 2100 (in the absence of additional climate policies) and projections of surface temperatures



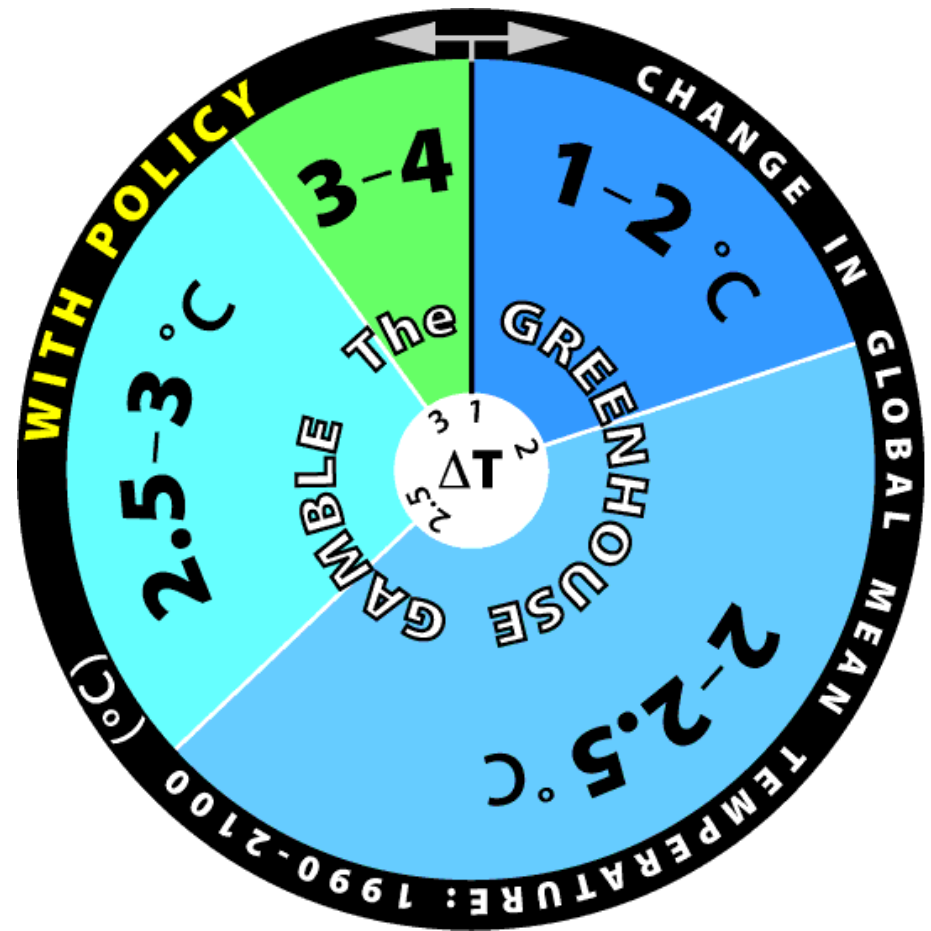
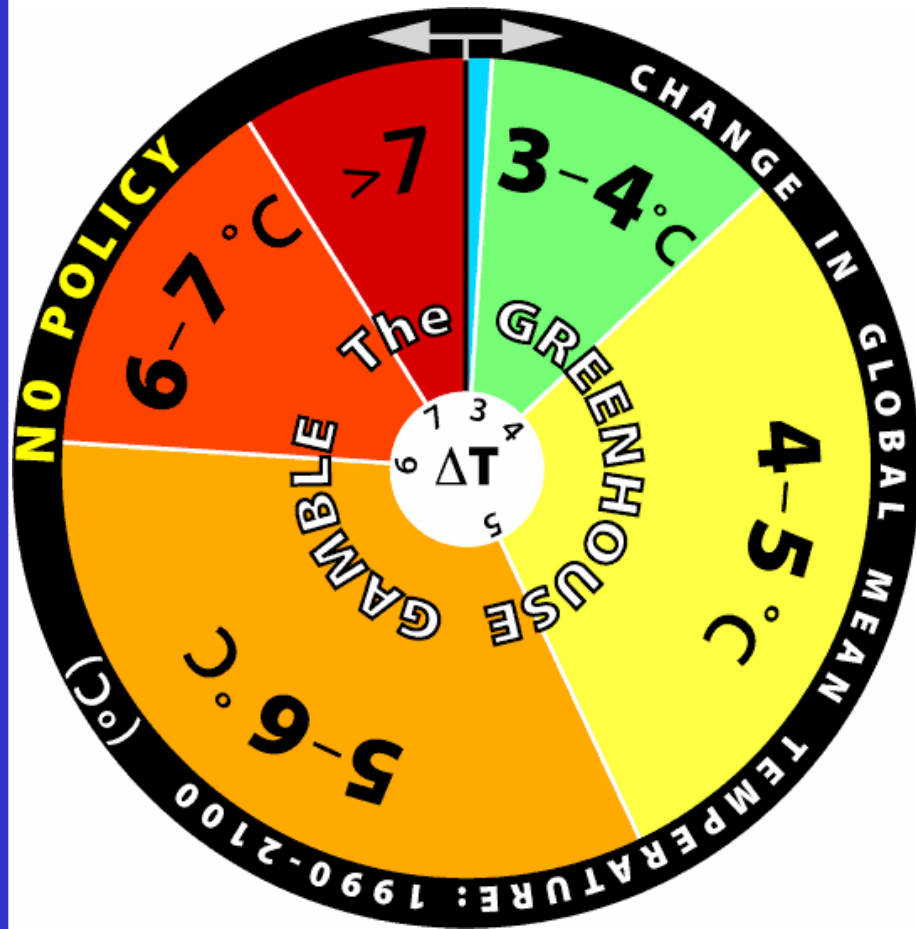
Stabilization Scenarios

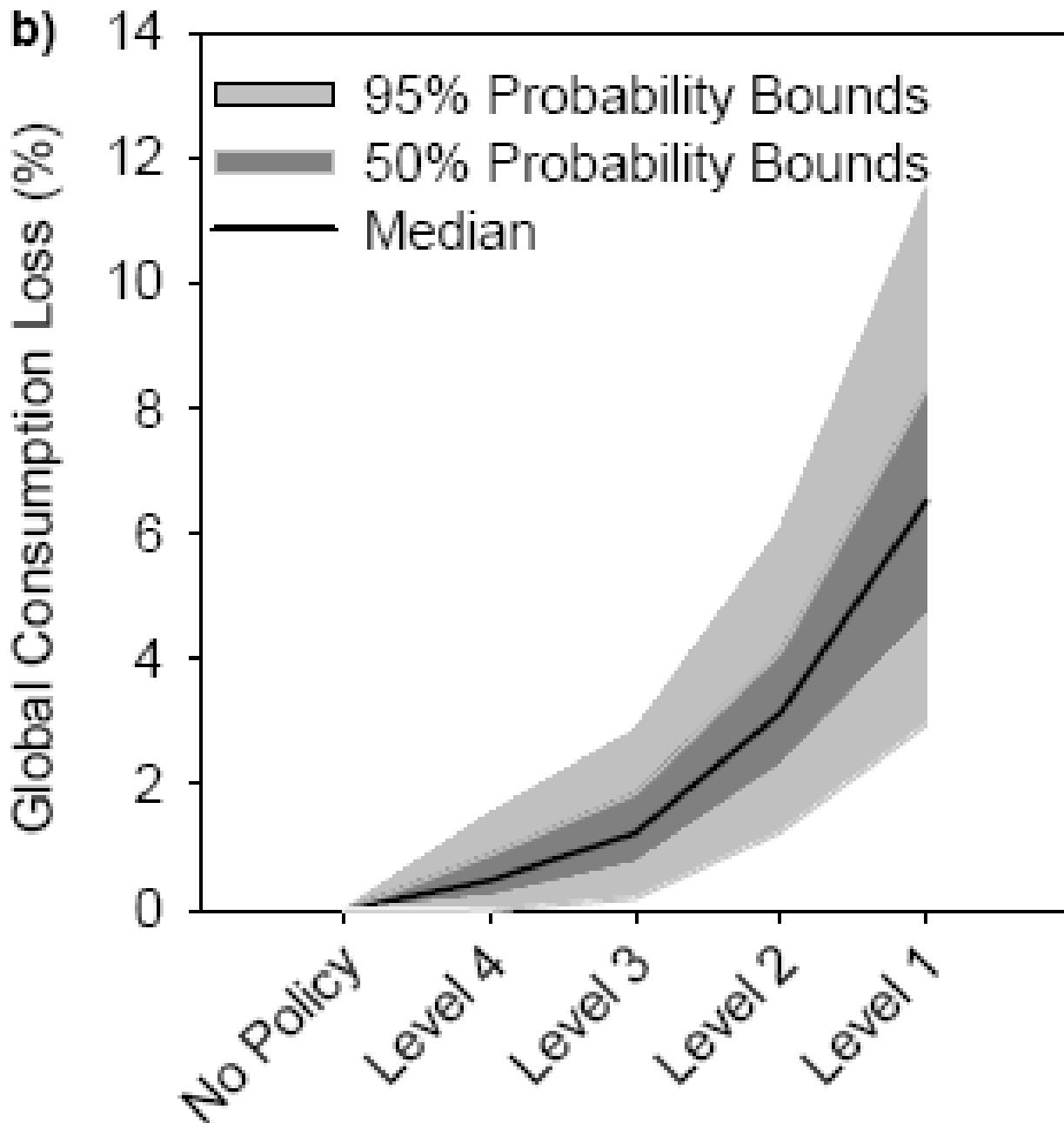


Frame as Risk Management



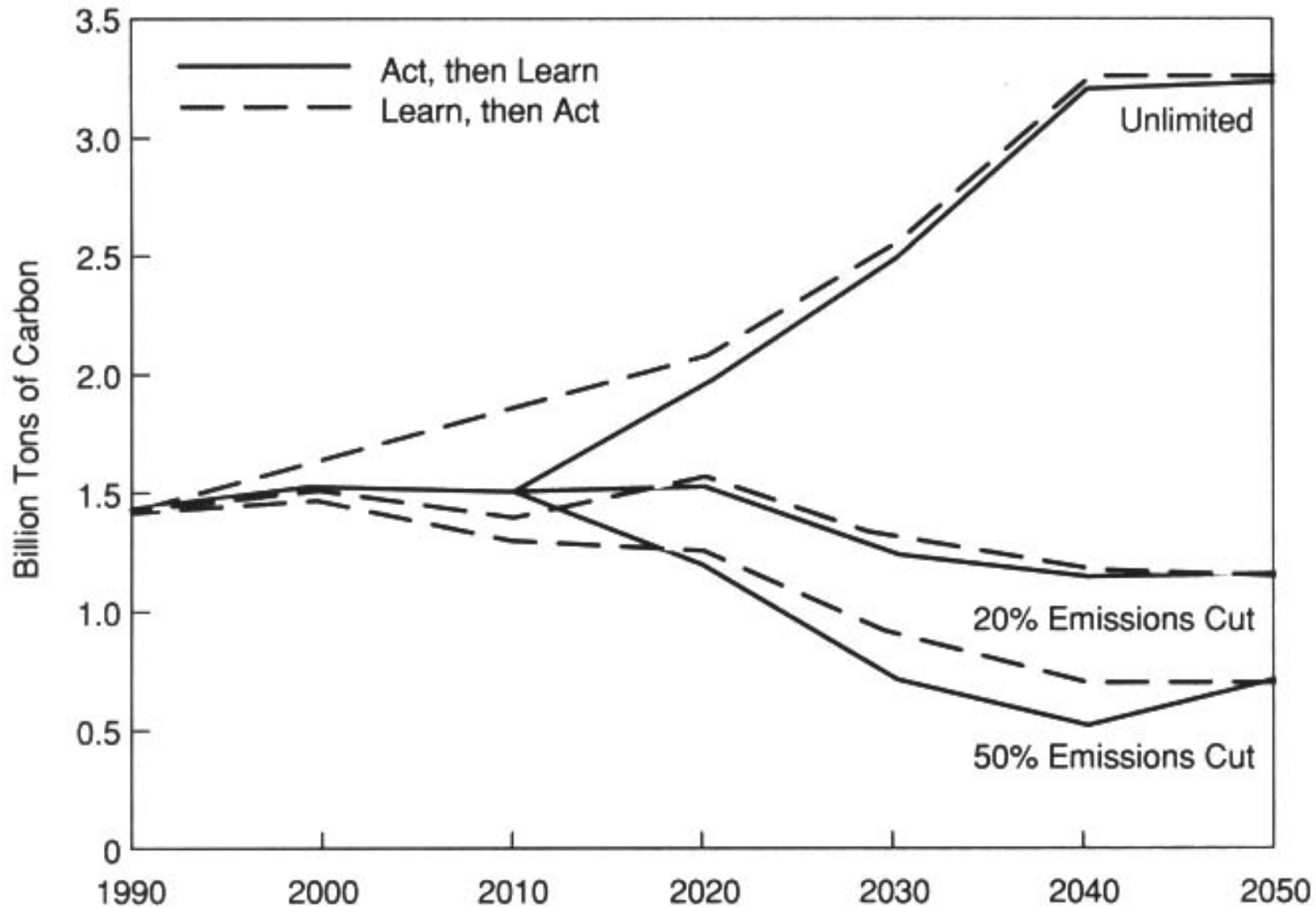
Attempts at Lay Communication



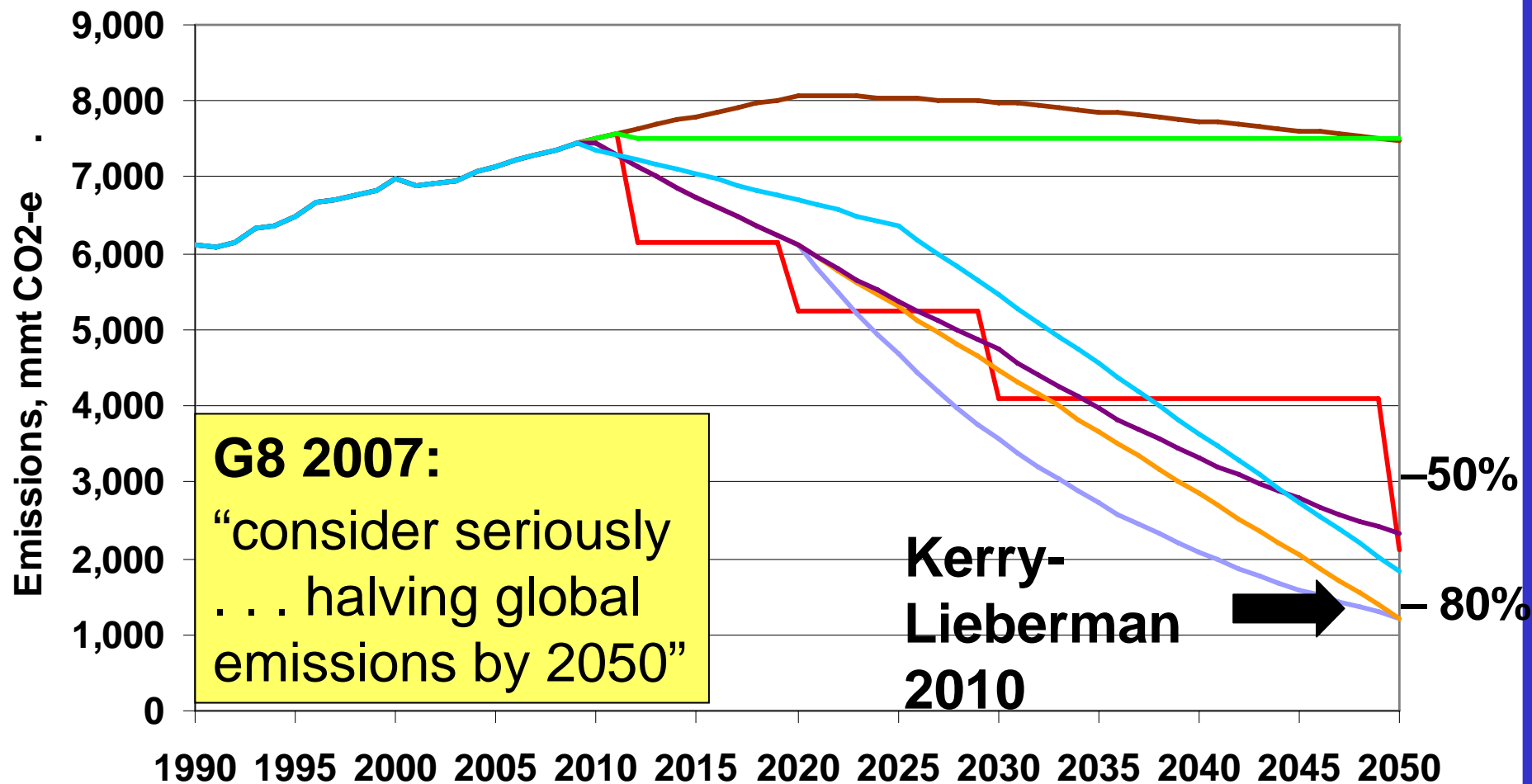


Analysis of Cost

Hedging Under Uncertainty



What Emerges Politically



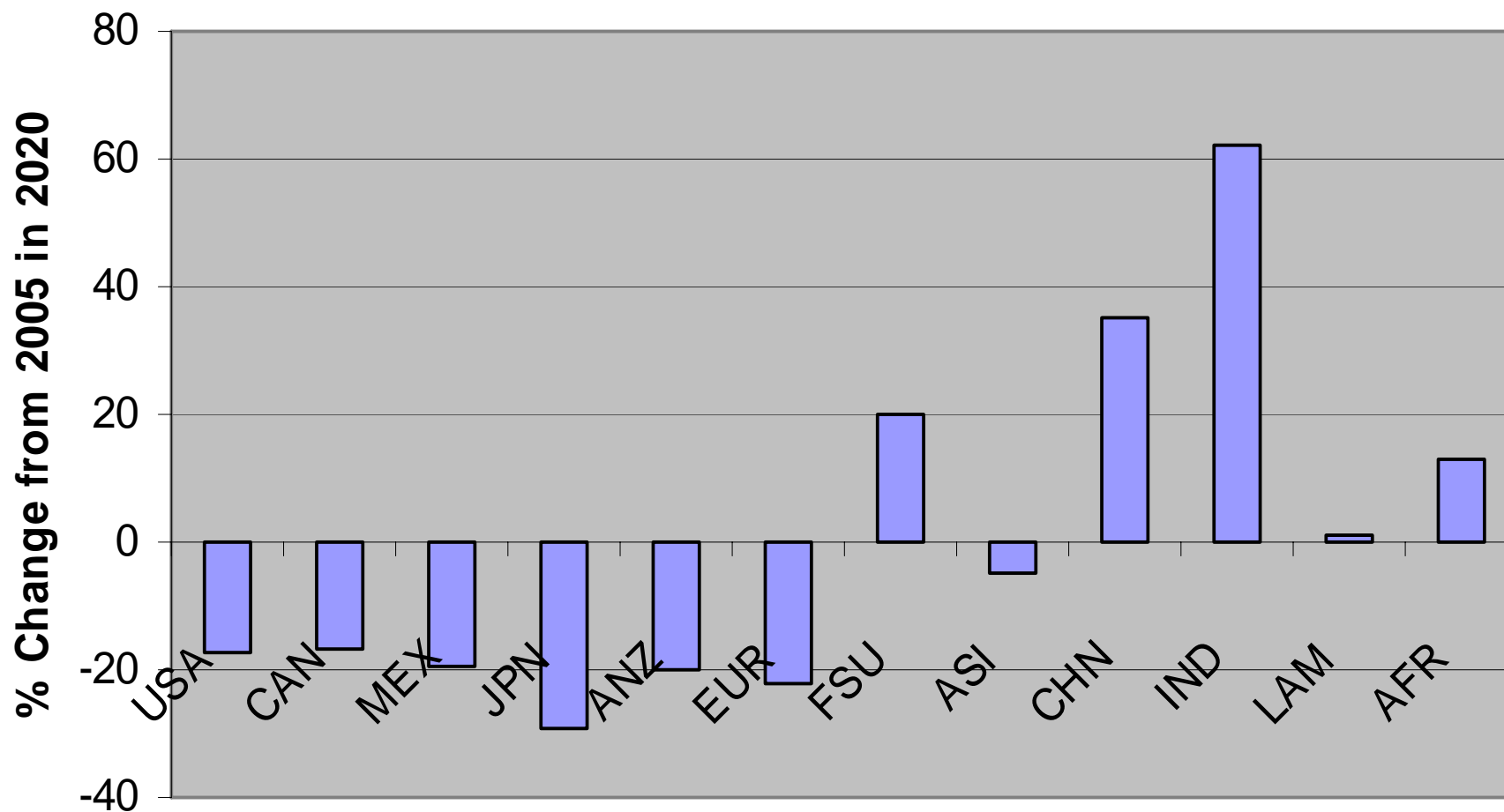
- Bingaman-Specter Draft 2007
- Udall-Petri 2006
- Sanders-Boxer 2007
- Feinstein August 2006

- Lieberman-McCain 2007*
- Waxman 2007
- Kerry-Snowe 2007

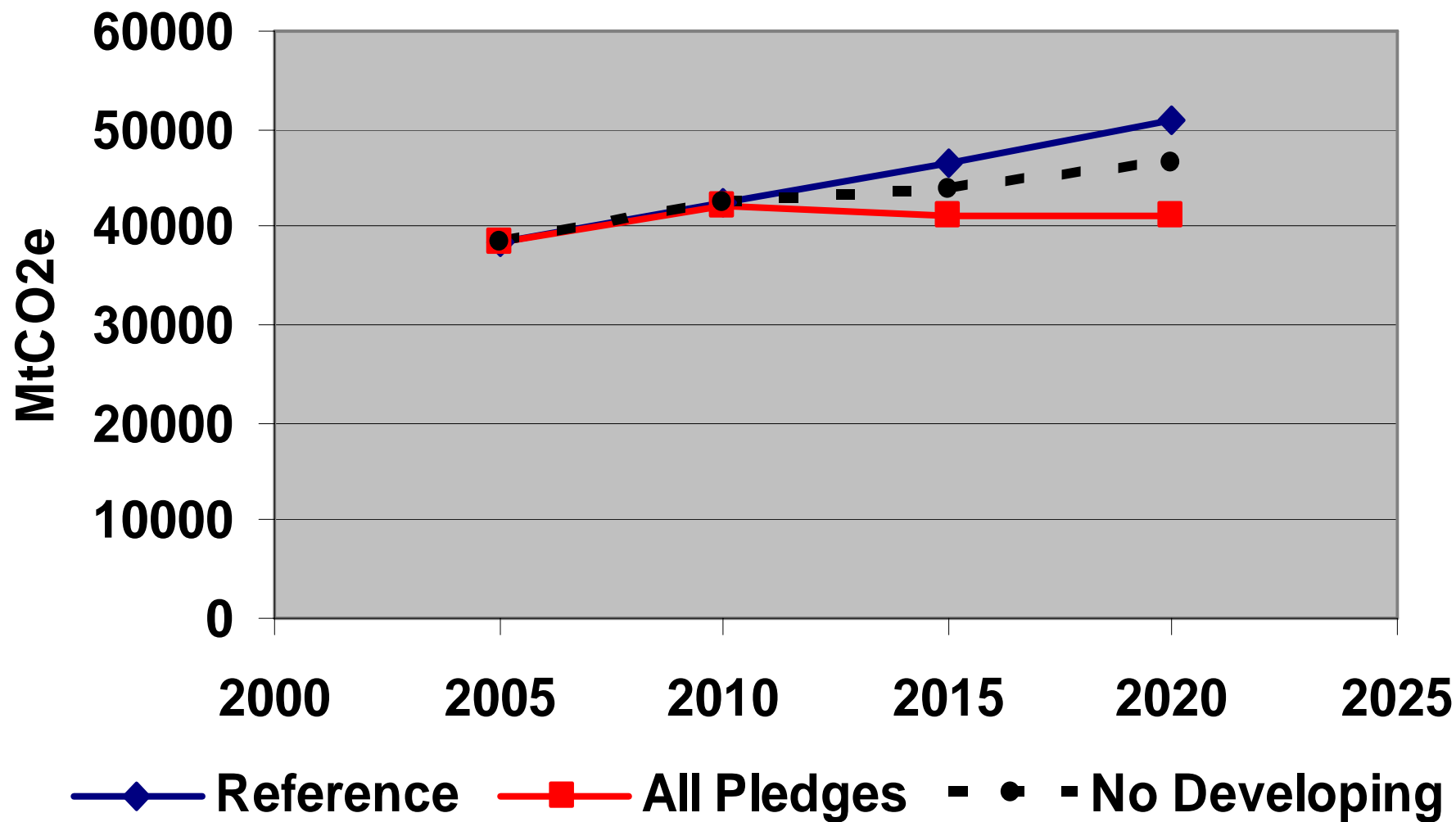
In Copenhagen

- The Copenhagen Accord
 - Recognize “scientific view” of 2°C target
 - Pledges by **individual** parties (to 2020 only)
 - Economy-wide targets for Annex I
 - Actions (NAMAs) for Non-Annex I
 - Financial aid
- Other outcomes
 - Resistance to global emissions targets
 - China, India etc. broken out of the G77
 - Breakdown over continuance of Kyoto
 - US/China replace the EU as the heart

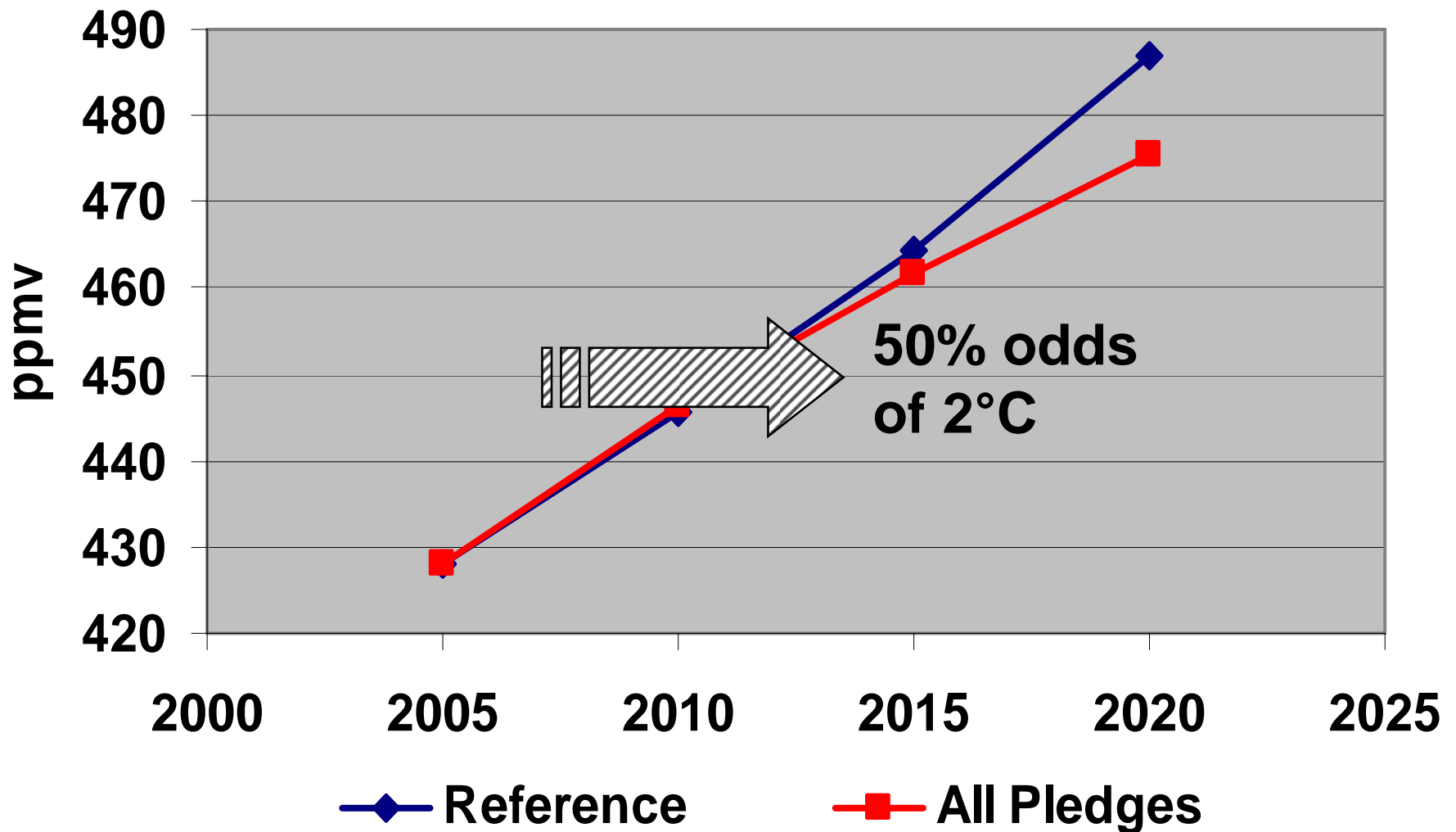
Pledged Emissions Reductions in 2020, from 2005 Levels



Global Emissions with and without Pledged Reductions, Kyoto Gases



Projected Concentrations with and without Pledges (CO₂-e)



Sample of Pledge Texts

- USA: “. . . recognizing that the final target will be reported . . . in the light of enacted legislation”
- Can: “. . . to be aligned with the final economy-wide emissions target of the US in enacted legislation”
- Aus: “. . . if the world agrees to a global deal capable of stabilizing . . . at 450 ppm CO₂-eq or lower”
- EU: “. . . provided that other developed countries commit themselves to comparable emissions reductions”

More Pledge Texts

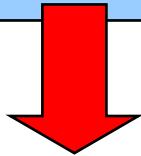
Japan: “. . . premised on the establishment of a fair and effective international framework in which all major economies commit [with] ambitious targets”

China: “. . . actions are voluntary and will be implemented in accordance with . . . UNFCCC §4.7” [i.e., developed countries provide financial assistance and technology transfer]

India: “. . . Will be implemented in accordance with . . . relevant legislation as well as . . . UNFCCC §4.7”

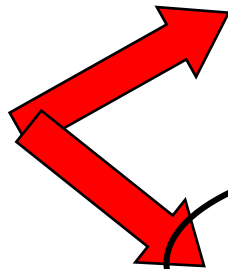
What Copenhagen Revealed

UN
FCCC



Kyoto
Protocol

Prevent "Danger"

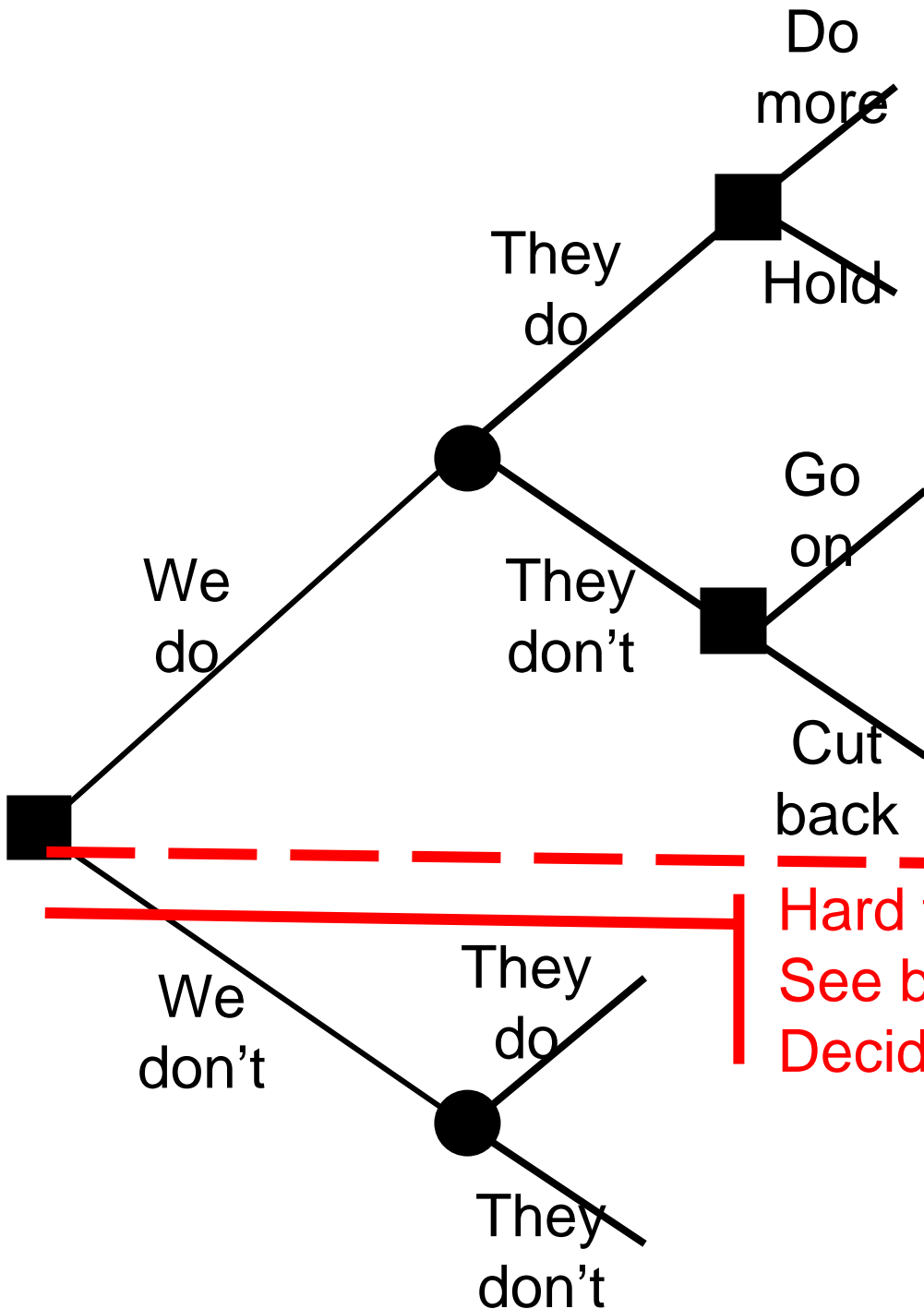


Implicit Coalition

Mosaic
World

Policies set on national circumstances
Different policy frameworks, venues
Economy-wide and sectoral approaches
Partial linkage among systems
Multiple offset regimes

Thinking about U.S. Policy Choice under Uncertainty



Medium term
 Hard target
 Soft target
 See ben's & risks
 Indicative
 Decide next step

- PUZZLES**
- Formal analysis?
 - Investment incentives?

Thank You!