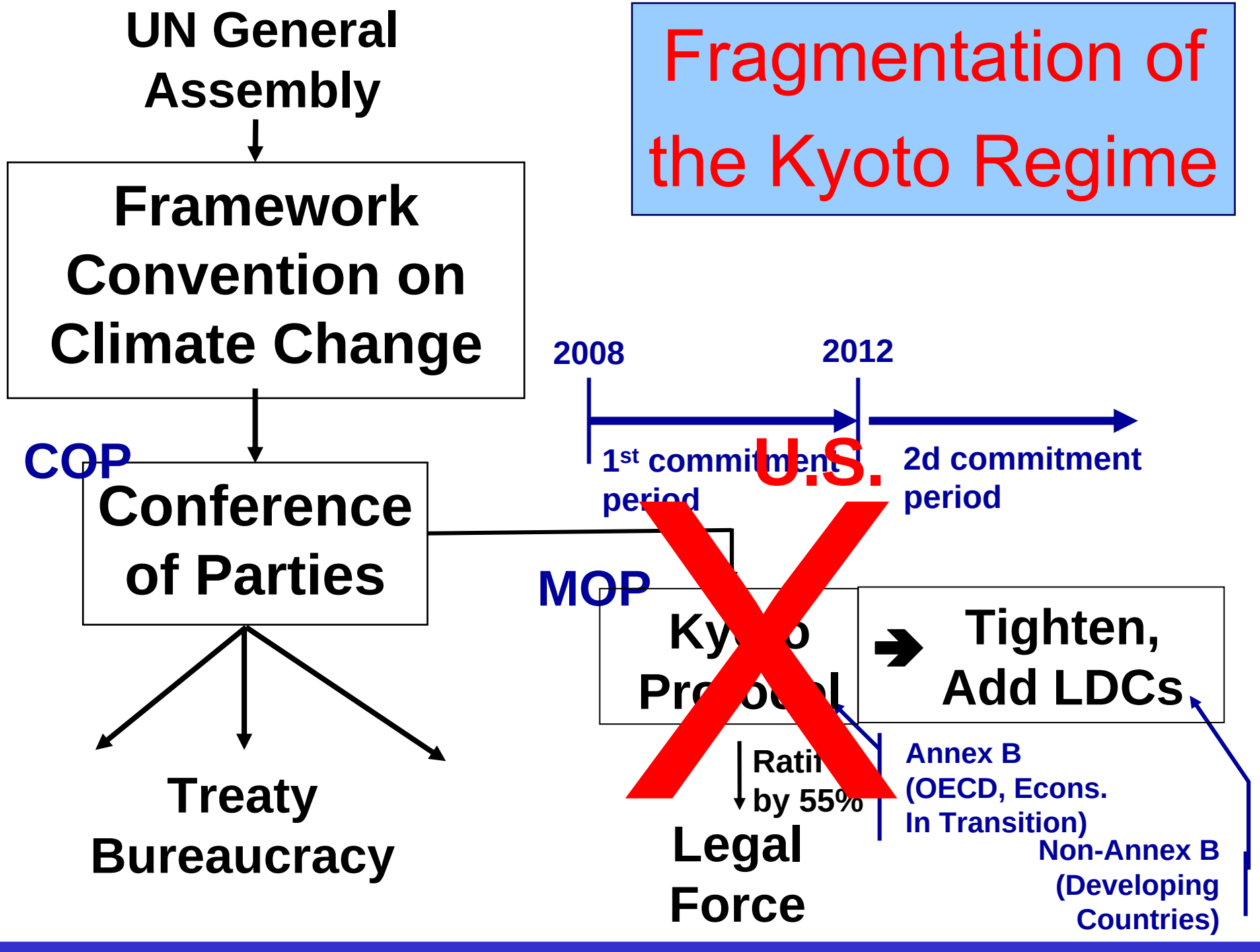
15.023J / 12.848J / ESD.128J Global Climate Change: Economics, Science, and Policy
Spring 2008

Institutions II: International Climate Negotiations

- Evolution of Kyoto "architecture"
  - How might it have gone better?
  - Why the big national differences?
- Venue and architectural alternatives
- The road to Bali
- What path(s) to an international regime?

Fragmentation of the Kyoto Regime



The Evolution: 1992 in Rio

- Negotiations within the U.N. system
  - In the context of UNCED in 1992
- National targets and timetables
  - Concept: national quantity targets
  - "Aim" to return to 1990 by 2000
  - "Grandfathered" emissions at national level
- "Common but differentiated responsibilities"
  - Annex I *vs*. Non-Annex I

Q: What alternatives were available?

The Evolution: COP-1 in Berlin

- Mandated that negotiators agree to
  - Emissions targets for 2005, 2010, 2020
  - Common “policies and measures”
- No discussion allowed of Non-Annex I emissions commitments
- Six-gas bundle
- Protocol to be prepared for agreement by COP-3, in Kyoto in 1997

Q: Were mistakes made here?

The Evolution: 1997 in Kyoto

- Agreed
  - Fixed quantity targets for 2008-2012, unrelated to growth
  - Commitments for Annex B nations only
  - Flexibility mechanisms & ”new effort” sinks
- Not agreed
  - Restrictions on buying reductions abroad
  - “Do nothing” sinks
  - Compliance penalties

Q: What outcomes would have been better?

Final Protocol Steps

- Kyoto → COP-6 (11/00): collapse on details
- Bush rejects Kyoto (3/01), quits negotiations
- Agreement in Bonn (7/01) & Marrakech (11/01) . . . without the US)
  - Relax targets by "do nothing" sinks
    - Bonn: 54 MMtC for Canada, Japan, Russia
    - Marrakech: another 15.4 MMtC for Russia
  - Dropped restrictions on emissions trading
- Deferred issue of compliance penalties

Q: Were opportunities missed in this period?

Why Such Conflict?

- Perception of differences in attitude
  - US, EU, Japan, Canada, Australia, Russia
- Why?
  - Role of industry *vs*. government
  - Public attitudes & environmental politics
  - Fiscal interactions
  - Role of NGOs
  - Culture/traditions
  - National policy structures
  - International negotiating process

Others?

Bush Proposal: Feb. 2002

- R&D and subsidies to new technology
- 10-year GDP-linked reduction target
- Voluntary programs to achieve it
  - Registry of emissions (still being designed)
  - Firms can record reductions, get credit against any follow-on mandatory scheme (?)
- Promise more action in 2012, if intensity goal isn't met and "the science warrants"
- Bilateral and multi-lateral technology agreements

Action in Other Venues

- U.S. multilateral initiatives
  - Methane to Markets
  - Asia-Pacific Partnership on Clean Development and Climate (AP6)
  - Major Emitters Conference(s)
- Initiatives by the EU and others
- Group of 8 (summit meetings)
- Greenland Dialogue

Subsequent COP/MOP Activity

- Many details of implementation
- Compliance
  - Amendment *vs*. "decision"
- CDM
  - Clear bureaucratic underbrush
- Residual sinks issues
  - Credit for stopping deforestation?
- "Dialog" on long-term cooperative action
  - How to address the post-2012 question

The Path to Bali

- "Seminars" in previous COPs
- The conflict in Bali (& the footnote)
- Bali action plan
  - Provisions (& the political fingerprints)
  - Timing

Classification of recent (Post-Third Assessment Report) stabilization scenarios according to different stabilization targets and alternative stabilization metrics

Category	Additional radiative forcing (W/m^2)	CO_2 concentration (ppm)	CO_2 - eq concentration (ppm)	Global mean temperature increase above pre-industrial at equilibrium, using "best estimate" climate sensitivity (^oC)	Peaking year for CO_2 emissions	Change in global CO_2 emissions in 2050 (% of 2000 emissions)	No. of assessed scenarios
I	2.5-3.0	350-400	445-490	2.0-2.4	2000-2015	-85 to -50	6
II	3.0-3.5	400-440	490-535	2.4-2.8	2000-2020	-60 to -30	18
III	3.5-4.0	440-485	535-590	2.8-3.2	2010-2030	-30 to +5	21
IV	4.0-5.0	485-570	590-710	3.2-4.0	2020-2060	+10 to +60	118
V	5.0-6.0	570-660	710-855	4.0-4.9	2050-2080	+25 to +85	9
VI	6.0-7.5	660-790	855-1130	4.9-6.1	2060-2090	+90 to +140	5
						Total	177

No Shortage of Proposals, *e.g.*

- KP-type targets & timetables (Reductions from baseline, rolling negotiations)
  - Wealth trigger for accession
  - Role of "historical responsibility"
  - Path to equal tons per capita
- Targets & timetables with emissions trade
  - Head-room provided to Non-Annex B
  - International safety valve
- Harmonized carbon taxes

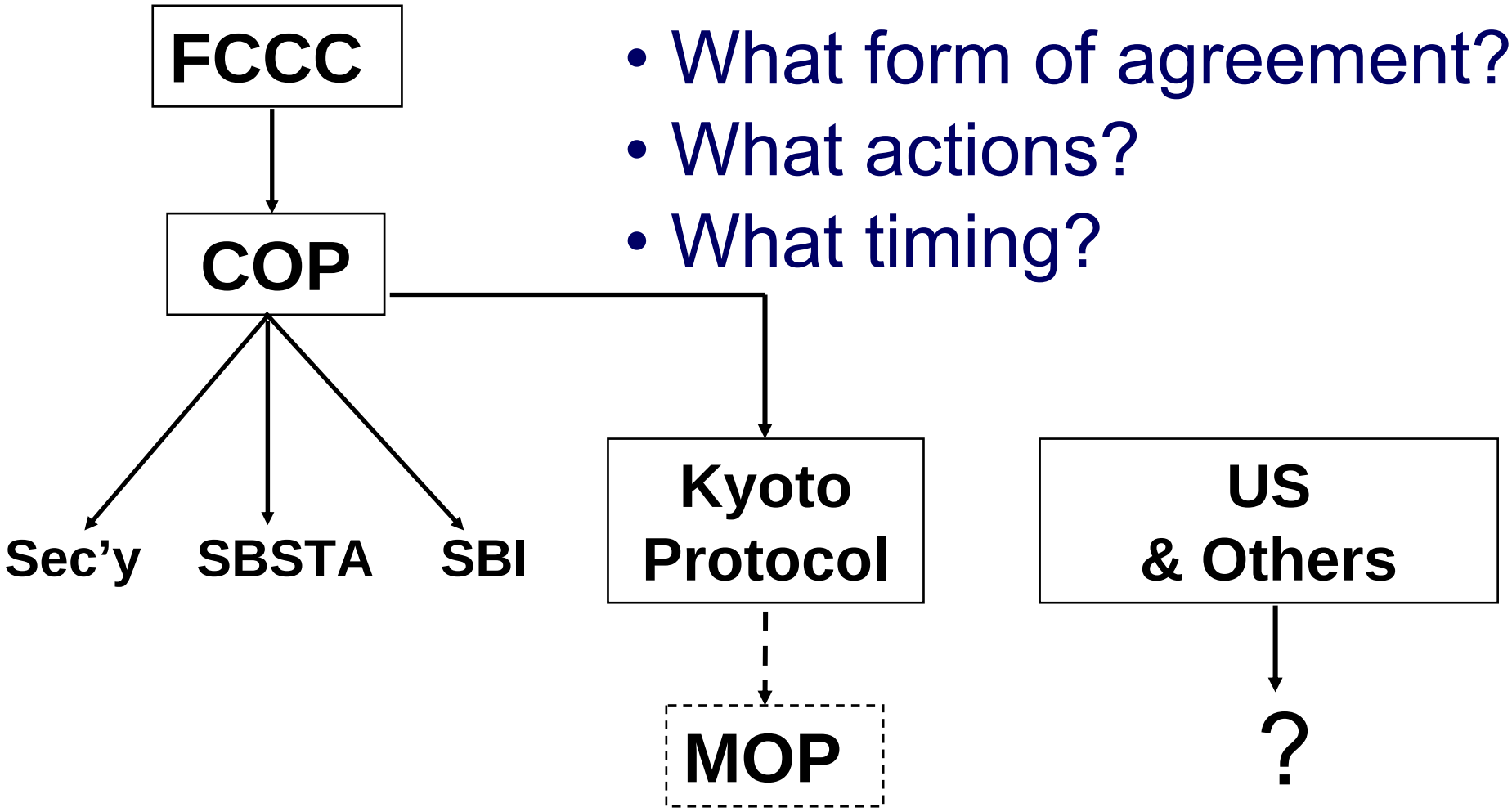
More Proposals

- International fund to buy reductions
  - By direct aid (perhaps development related)
  - Through an emissions trading regime
- Portfolio of policies and measures
  - Implementation by pledge and review
  - Targets and timetables as only a loose guide
- Protocol on R&D and demonstration

Wide open, awaiting the dialogue

What Path to Coherence?

- What venue?
- Who is involved?
- What form of agreement?
- What actions?
- What timing?



Web Sites

- www.ipcc.ch
- www.unfccc.int
- http://globalchange.mit.edu/
- www.weathervane.rff.org
- www.pewclimate.org