



From Kyoto to Paris: evolution of climate governance and researches

IIASA YSSP: 40 Years and Beyond

Tuesday 20 June 2017

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Evolution of climate governance

1992
United Nations
Framework Convention on
Climate Change (UNFCCC)



1995
COP1

1997
Kyoto Protocol
Emission targets for
Annex I countries only

COP3



2015
Paris Agreement
Almost universal
participation

COP21



1995 YSSP!

Research Questions raised in 1995

- Why are some countries more willing to reduce GHG emission than others?
- How can countries become more willing to reduce emissions?
- How do countries perceive “cost” of GHG emission reduction?
- How can “science” influence decision making of countries on climate change?
- Should international agreements be “legally-binding” to exert effectiveness of the agreements?
- What would be the most equitable way to set emission reduction targets among Annex I countries?

Factors that could affect countries' decision making on GHG emission reduction target setting

Factor	Hypothesis (Countries set ambitious emission reduction targets when....)
Impact of climate change	impact of climate change is considered to be serious.
Cost of GHG emission reduction	cost of GHG reduction is considered to be negative or negligible
Domestic politics	the people, including politicians, are interested in the climate change problem.
International relations	countries wanted to exert leadership in global environmental issues.
Effectiveness of agreements	countries considered target-setting to be the most effective means to tackle climate change.
Learning from other negotiations in the past	countries had good/ bad experiences in past negotiations related to global environmental problems

Comparison of decision making factors

1989-1995	Impact of climate change	Cost of emission reduction	Domestic politics	International relations	Effectiveness of agreements	Learning from other negotiations
Netherlands	★		★★		★	
Germany			★★			
United Kingdom		★★		★		
Japan				★★		
United States	★	★★				

Remarks from the comparative study

- The “leader” countries were motivated by domestic politics to set GHG emission reduction targets.
High awareness of the people is a prerequisite for countries to lead international actions against climate change.
- The “follower” countries were motivated by international relations.
Building international institutions is an effective way to influence (or pressure) “follower” countries to take actions similar to “leader” countries.
- The “laggard” countries were influenced by economic costs required to achieve GHG emission reduction.
Technological breakthrough is needed for “laggard” countries to be able to reduce emission mitigation costs.

Dynamic changes in factors between 1995 and 2015

Factor	Changes
Impact of climate change	Impact of climate change has become more evident. Scientific uncertainty has decreased.
Cost of GHG emission reduction	Renewable energy and other technologies related to decarbonization has become less costly.
Domestic politics	People's awareness has increased or decreased, depending on each country.
International relations	Some countries wants to exert leadership in global environmental issues.
Effectiveness of agreements	Targets are less legally binding in nature to include all countries.
Learning from other negotiations in the past	Countries had good/ bad experiences in past negotiations, i.e. COP15 Copenhagen in 2009

Remarks at the time of 2015

- The “leader” countries continue to be motivated by domestic politics to set GHG emission reduction targets.
Scientific uncertainty has declined, and there are now more evidence of climate change.
- The “follower” countries continue to be motivated by international relations.
Building international institutions (Paris Agreement) is an effective way to include “follower” countries to take actions similar to “leader” countries.
- The “laggard” countries continue to be influenced by economic costs required to achieve GHG emission reduction.
Perception of “cost” can be altered by engagement of private sector.

Research Questions after Paris

- How can countries become even more willing to reduce emissions?
- Involvement of non-state actors: how can diffusion of low carbon technologies be stimulated by the private sector?
- What is “low carbon development”? How does it fit within the SDGs, and how does climate policies relate to other policy goals?