

A political economy perspective on agriculture in emission trading schemes

February 2, 2011

Gakushuin Women's College
Mikitaro Shobayashi

Outline

1. Climate change and agriculture: Three aspects of relationships
 2. Consistency between agricultural and agri-environmental policies
 3. Agriculture in emission trading schemes
 4. Major issues and their implications from the political economy perspective
-

1. Climate change and agriculture: Three aspects of relationships

- ① Agriculture is the sector that will be damaged the most by climate change
 - ② Agriculture is a major source of emission
 - ③ Agriculture could be a major source of carbon sequestration
-

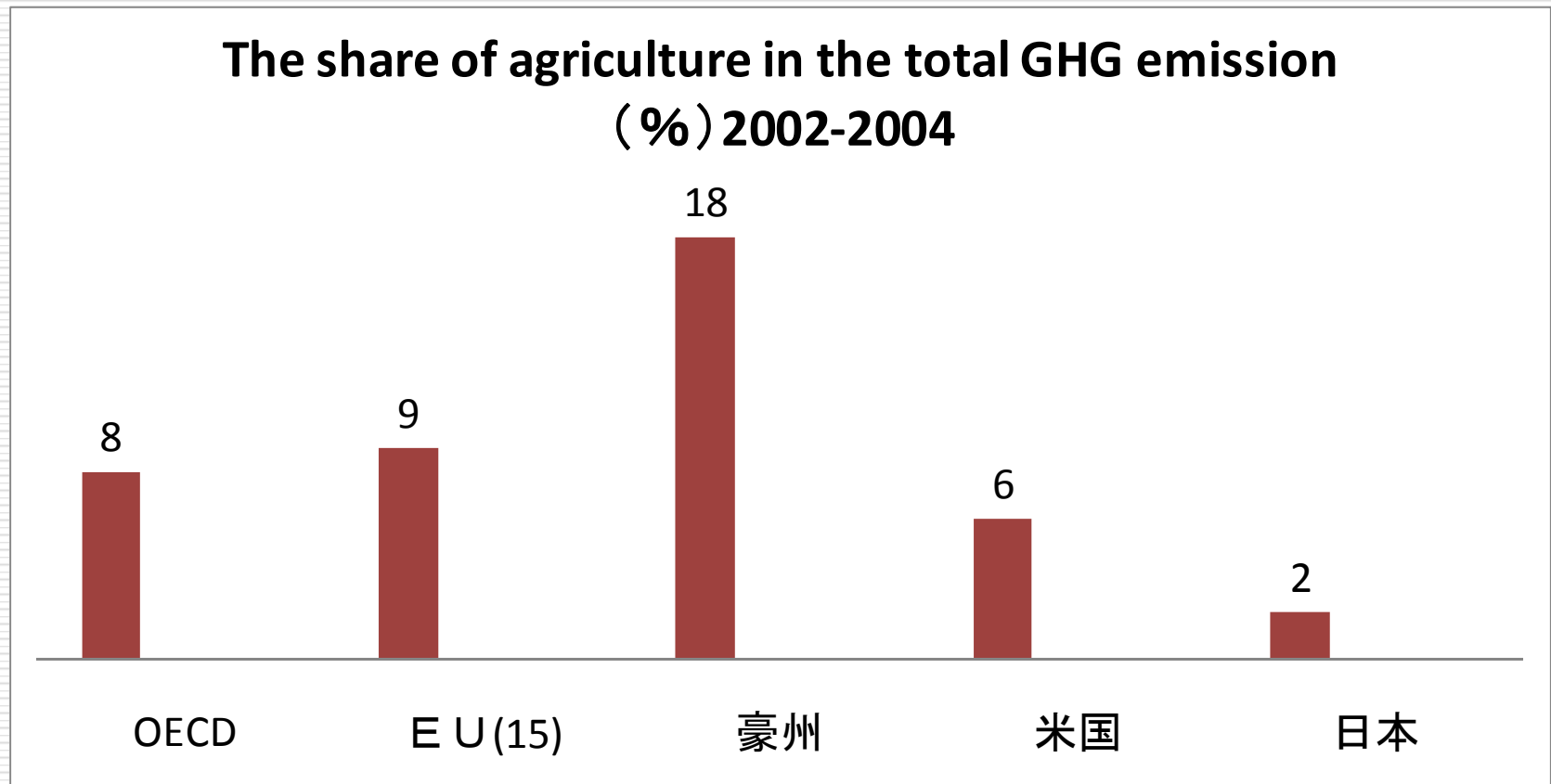
① Agriculture is the sector that will be damaged the most by climate change

- ❑ Agriculture (Food) sector is affected by climate change in various ways
 - e.g., extreme weather such as drought and flood could reduce the level production
 - ❑ This would be unique when compared with the other sectors
-

②Agriculture is a major source of emission

- ❑ Energy supply: 25.9%
- ❑ Industry: 19.4%
- ❑ Forestry: 17.4%
- ❑ Agriculture: 13.5%
- ❑ Transport: 13.1%

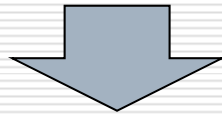
②Agriculture is a major source of emission



Source: OECD Environmental Performance of Agriculture in OECD countries since 1990, 2008

③ Agriculture could be a major source of carbon sequestration

- Agricultural soil carbon sequestration
 - Non-till
 - Organic matters



- How should we harmonize these three different aspects?
 - Regulation, subsidies or emission trading?
-

2. Consistency between agricultural and agri-environmental policies

- ❑ Many OECD countries keep supporting agriculture while changing the ways of support
-

2. Consistency between Agricultural and Agri-environmental Policies

- ❑ Which agri-environmental measures would be consistent with agricultural support policies?
 - ❑ Agri-environmental measures:
 - Regulation: Cross compliance、Regulation under emission trading schemes
 - Economic Instruments : Taxes、Agri-environmental payments、Offset projects under emission trading schemes
 - Others : Labeling, Voluntary contributions ▪
-

3. Agriculture in emission trading schemes

- Since agriculture is one of the major emitters, reduction or sequestration of GHG in agriculture is important
 - Reducing N₂O and CH₄ in agriculture would be required if we take into account the shares of agriculture
 - Agricultural soil carbon sequestration would also be critically important
-

3. Agriculture in emission trading schemes

- Based on the above arguments, offset projects under emission trading or agri-environmental payments would be options for aggressive mitigation in agriculture
 - EU places emphasis on agri-environmental payments⇒2009 Health Check of CAP supports this direction
 - USA is likely to incorporate agriculture as an offset provider in the future trading scheme
-

In fact, many existing and planned trading schemes incorporate agriculture as an offset provider

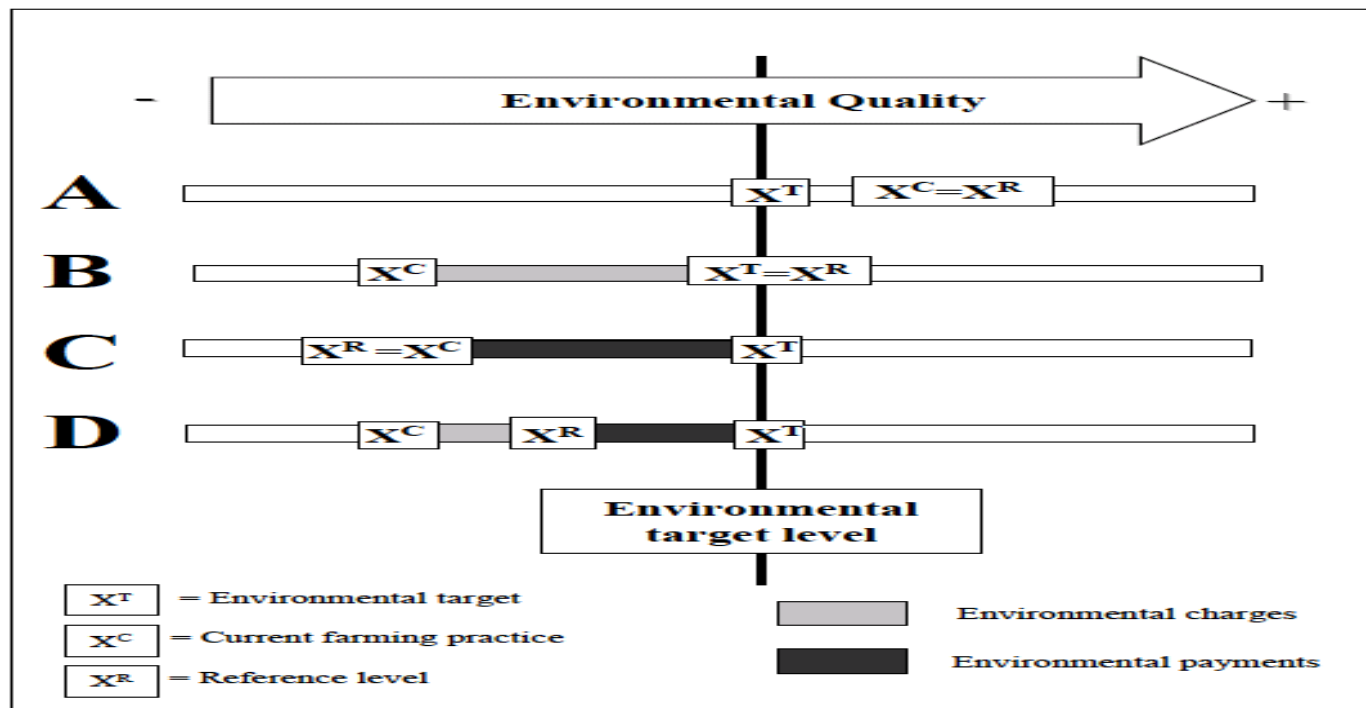
Schemes	Is agriculture regulated?	Do they have offset projects	Do offset projects include agriculture
EU—ETS	×	×	×
NSW	×	○	△ (Forestry)
CCX	×	○	○
RGGI	×	○	○
US Federal	×	○	○
Australia	× (?)	○	?
WCI	×	○	○
California	×	○	? (Consistency Initiative)

4. Major issues and their implications from the political economy perspective

① Agri-environmental payments or offset projects ?

- They could be substitutes of “reference level” is equal to “baseline”

Chart A5.1. Allocation of environmental costs and benefits



Source: OECD (2001), Improving the environmental performance of agriculture: Policy options and market approaches

4. Major issues and their implications from the political economy perspective

① Agri-environmental payments or offset projects ?

□ However, they have different implications

	Agri-environmental payments	Offset project
Cost sharing	Tax payers	Other industries to be regulated
The amount of payments	In principle, income foregone or additional costs	The demand and supply would determine the price
WTO consistency	Consistency with Green Box is required	No relevance
The other environmental benefits	Combining different types of payments would be relatively easy	Combining agri-environmental payments with emission trading would be complicated

4. Major issues and their implications from the political economy perspective

② How should “early actors” be incorporated?

- ☐ Should those who have already taken actions be included as offset providers?
- ☐ Obviously, those who are receiving agri-environmental payments should be excluded
- ☐ How about voluntary actors ? This is basically an “additionality” question. Two views on this:
 - A large number of early actors could hamper the effectiveness of the emission trading
 - ~~Excluding any early actors could cause reversal or create disincentives for innovative approaches~~

4. Major issues and their implications from the political economy perspective

③ Reducing transaction costs

- Aggregation would be required
 - The credit associated with an individual farm would be too small $\Rightarrow$ They need to be aggregated
 - In CCX, farmers' unions and environmental NGO are acting as aggregators
 - Regulating the total volume of transactions associated with offset projects
 - Simplifying the calculation of the amount of reduction or sequestration
-

Regulation on the volume of transactions associated with offset projects in US

Schemes	Types of Offset	Methodologies	Offset limits
CCX	Previous slide	Standardized	Less than 50%
RGGI	Land mill methane, SF6, Forestry, methane in manure management, etc.	Standardized	Less than 3.3% (could be increased to 10%)
WCI (TBD)	Soil carbon sequestration, manure management, forestry, etc.	Standardized	Less than 40%
California (TBD)		Standardized	Less than 50%

4. Major issues and their implications from the political economy perspective

④ Diversitification of methodological developments

- Institutions emerge that develop methodologies for voluntary markets
 - e.g., Voluntary Carbon Standard

 - Could these methodologies be applied in the formal schemes in the future?
 - For example, future federal scheme might include credits associated with VCS?
-

Developing methodologies for agricultural offset projects in Japan

- MAFF has been and is developing methodologies
 - e.g., N₂O reduction in tea cultivation

 - Greater potential lies in:
 - Soil carbon sequestration
 - Methane in paddy fields
 - N₂O associated with the use of fertilizers
-