



Wissenschaftszentrum  
Nordrhein-Westfalen

Institut Arbeit  
und Technik



Kulturwissenschaftliches  
Institut

Wuppertal Institut für  
Klima, Umwelt, Energie  
GmbH

# JET-SET

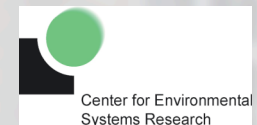
Joint Emissions Trading as a  
Socio-Ecological Transformation

Side - Event

## Linking Emissions Trading Schemes - Assessment of Institutional, Environmental and Economic Considerations

COP11/MOP1, Montreal

3 December 2005, 10.30-12.30



## Presentations

### **1. Research Framework and Project Design**

**Ralf Schüle** (Wuppertal Institute)

### **2. Economic and Environmental Effects**

**Niels Anger** (Center for European Economic Research)

### **3. Fairness Aspects of Linking**

**Janina Onigkeit** (Center for Environmental Systems Research)

### **4. Implications of Design Differences**

**Wolfgang Sterk** (Wuppertal Institute)



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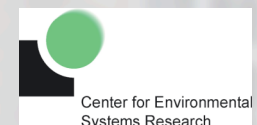
Joint Emissions Trading as a  
Socio-Ecological Transformation

## Linking Emissions Trading Schemes - Research Framework and Project Design

Ralf Schüle

Side - Event COP11/MOP1, Montreal

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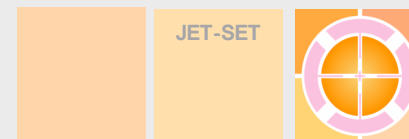


## 0. Contents

- 1. Why analysis of linking schemes?**
- 2. Project Design**
- 3. Methodology**
- 4. Policy Scenarios**
- 5. Assessment of Scenarios**

# Linking Schemes

## 2.1 Emerging domestic schemes



Mandatory Schemes	EU, Canada, RGGI
Voluntary System	Japan
Cap and Trade Schemes	EU
Credit-and-Baseline Schemes	Canada
ETS combined with Tax Systems	Switzerland
ETS combined with Subsidies	Japan

- **Linking institutionally possible?**
- **Barriers and Obstacles?**
- **Recommendations?**

# Linking Schemes

## 2.2 Institutional Conditions

<input type="checkbox"/> Coverage of the Scheme	<input type="checkbox"/> Allocation Methodology
<input type="checkbox"/> Definition and Recognition of Units	<input type="checkbox"/> Compliance Period, Allowance Validity and Banking
<input type="checkbox"/> Absolute versus Relative Targets	<input type="checkbox"/> Monitoring, Reporting, Verification and Accounting
<input type="checkbox"/> Stringency of Targets	<input type="checkbox"/> Compliance Framework, Penalties



### Sensitive Issues?

## Linking Schemes

### 2.3 Economic Assessments of Market Designs

- Crucial role of General Equilibrium Models (GEM)
- Focus on *governmental trade* (Kyoto trade)
- Research Issues:
  - Different incentive structures for participating in IET
  - Binding commitments for all parties (also for DC)
  - Dimensions of international equity

- **Economic effects of bottom-up linking?**
- **Comparability with findings for gov. trade?**
- **Partial Equilibrium Approach**



## Linking Schemes

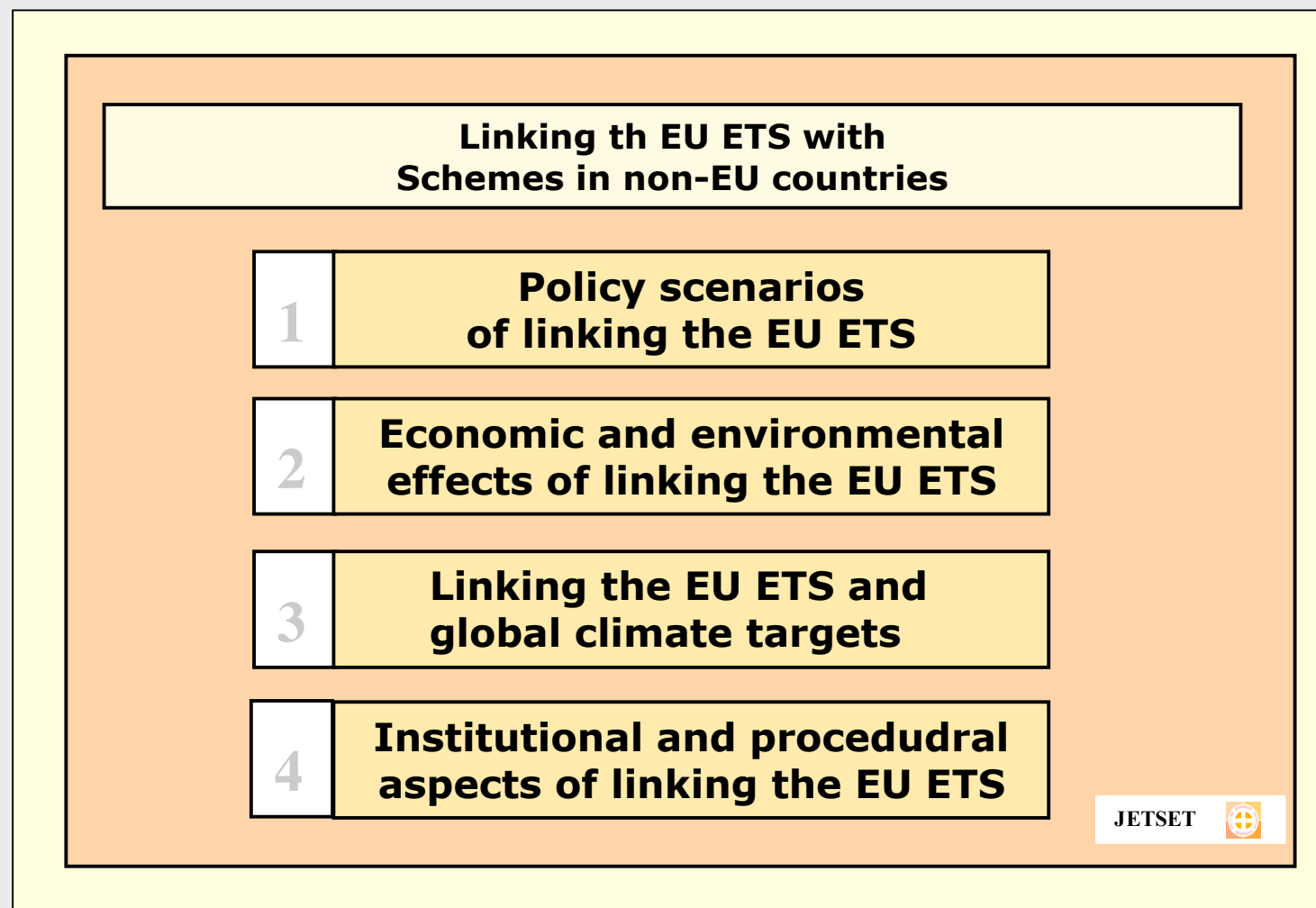
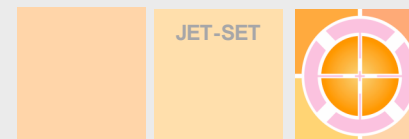
### 2.4 Post 2012 targets and global climate regime

Decoupled debates:

- Future design of emission trading schemes
  - Post-2012 discussions about future targets and international climate regime
- 
- **Relationship of bottom-up process to post 2012-climate regime?**
  - **Equity dimensions of linking**

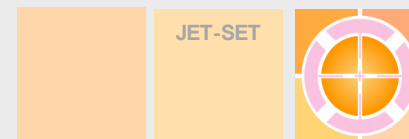
# Linking Schemes

## 3. Project Design



# Linking Schemes

## 4. Methodology



### Assessing the effects of linking

#### ■ Scenario technique

- Developing policy scenarios (specified by storylines)
- Assessment in economic, environmental and institutional terms

#### ■ Basic variables

- Participating countries (realistic perspective)
- Institutional status with regard to the climate regime
- Temporal Dimension

(by when domestic schemes will be developed and probably linked to an emerging multi-national ETS)

# Linking Schemes

## 5. Policy Scenarios

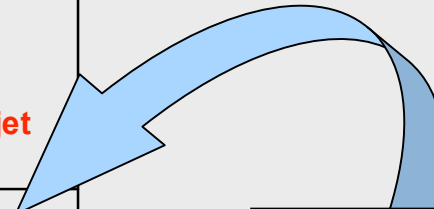


Scenario \ Time	2010	2020
1. ETS EUROPE	EU-27	EU-27
2. ETS KYOTO	EU-27 Japan Canada	EU-27 Japan Canada Former Sowjet Union
3. ETS Current ANNEX B	EU-27 Japan Canada Former Sowjet Union	EU-27 Japan Canada Former Sowjet Union Australia + New Zealand USA
CDM host countries	Brazil Mexico India China South Korea	Brazil Mexico India China South Korea

## 5. Differentiating Policy Scenarios



Time Scenario	2010	2020
ETS EUROPE	EU-27	EU-27
ETS KYOTO	EU-27 Japan Canada	EU-27 Japan Canada Former Sowjet Union
ETS ANNEX B	EU-27 Japan Canada Former Sowjet Union	EU-27 Japan Canada Former Sowjet Union Australia + New Zealand USA
CDM host countries	Brazil Mexico India China South Korea	Brazil Mexico India China South Korea



### Additional Variables:

- Targets (e.g. 450 ppm)
- Instruments (e.g. CDM)

## Linking Schemes

### 6. Assessing Policy Scenarios

- Compliance Costs
- Level of emission abatement
- Distributional effects
- Compatibility in design
- Equity dimensions



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# Thank you for your attention!

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