Social implications of transition to low-carbon economy – COP21 RIPPLES

Annela Anger-Kraavi
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Background

- COP21 → general consensus that transition to low/zero-carbon economy is essential

- Transition to a low-carbon economy will involve changes affecting various actors/groups of actors

- Transition to a low-carbon economy has the potential to improve quality of life and to contribute to a more sustainable, resource-light economy

- Poorly managed transition could affect various actors unequally leading to public backlash, social upheaval and even greater inequality

- It is widely recognised that transition to low carbon economy needs to address existing inequalities and avoid generating new inequalities
Background

- The Paris Agreement – Preamble

‘Taking into account the imperatives of a just transition of the workforce and the creation of decent work and quality jobs in accordance with nationally defined development priorities

Acknowledging that climate change is a common concern of humankind, Parties should, when taking action to address climate change, respect, promote and consider their respective obligations on human rights, the right to health, the rights of indigenous peoples, local communities, migrants, children, persons with disabilities and people in vulnerable situations and the right to development, as well as gender equality, empowerment of women and intergenerational equity,’
Why is inequality a problem?

Inequalities in terms of
- Wealth and income
- Health
- Access to employment
- Access to social participation and democratic processes
- Access to new technologies and finance
- Quality of the environment and impacts of climate change

Leading to
- Eroding of social cohesion
- Increase in social polarisation
- Mass unemployment

Leading to
- Challenges for the stability of communities and nations
- Involuntary migration

Transition pathways limiting global warming to 1.5 C

Global total net CO₂ emissions

Million tonnes of CO₂/yr

In pathways limiting global warming to 1.5°C with no or limited overshoot as well as in pathways with a high overshoot, CO₂ emissions are reduced to net zero globally around 2050.

Source: IPCC SR1.5, 2018
Inequalities of transition

Transition to low-carbon economy

- Recalibration of the existing economic, energy and industrial agendas
- Decline in carbon-intensive industries
- Some business models will be radically altered (e.g. power sector, construction)
- Some occupations and business models will be eliminated or diminished (for e.g. coal mining, refineries)
- Changes in land use

Implications for Inequalities, including

- Income disparity
- Wealth disparity
- Health inequality
- Ethnic inequality
- Unequal access to opportunities
- Gender inequality and gendered patterns of employment
- Environment and climate
Overview of methodology

1) Poverty
2) Corruption
3) Existing inequalities
4) Absence of mitigating action
## Overview of methodology

<table>
<thead>
<tr>
<th>Overall policy objective</th>
<th>Policy measure</th>
<th>Potential equality outcome(s)</th>
<th>Factors influencing the extent and direction of impacts</th>
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<tbody>
<tr>
<td></td>
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<td>Health</td>
<td>Wealth/ income</td>
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<tr>
<td>Reduced energy consumption</td>
<td>Programmes to improve energy efficiency in homes</td>
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<td>Removal of fossil fuel subsidies</td>
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<td>Improved public transport networks</td>
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<td>Improved modal choice</td>
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## Preliminary ICES results for Brazil

<table>
<thead>
<tr>
<th></th>
<th>2010-30</th>
<th>2030-50</th>
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<tbody>
<tr>
<td><strong>Energy Intensity of GDP</strong></td>
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<tr>
<td><strong>NDC Ambition to 2°C</strong></td>
<td>-36%</td>
<td>-54%</td>
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<tr>
<td><strong>Accelerated ambition to 2°C</strong></td>
<td>-31%</td>
<td>-32%</td>
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<tr>
<td><strong>Carbon Intensity of final energy</strong></td>
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<tr>
<td><strong>NDC Ambition to 2°C</strong></td>
<td>-1%</td>
<td>-69%</td>
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<tr>
<td><strong>Accelerated ambition to 2°C</strong></td>
<td>-22%</td>
<td>-69%</td>
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</tbody>
</table>
Preliminary ICES results for Brazil

NDCs 2C scenario sectoral output relative to the baseline

2011  2020  2030  2040  2050

Agriculture  AirTransport  Chemicals  Coal  Construction  Ely-CCS  Ely-Nuclear
Ely-Renew  Fishing  Food  Forestry  Gas  Iron-Steel  Ely-Other
MetalMechani  Mining  NonFeMin  NonMetalMin  Oil  Oil-Pcts  Machinery-Eq
Paper-Pulp  PubServ  Services  Textiles  TnDist  Other-Ind
WtrTransport

%
Preliminary ICES results for Brazil

NDCs 2C scenario sectoral employment – unskilled labour

- Agriculture
- Ely-Other
- Lumber
- Machinery-Eq
- Oil-Pcts
- TnDist
- AirTransport
- Ely-Renew
- Chemicals
- Fishing
- MetalMechani
- OtrTransport
- Other-Ind
- Paper-Pulp
- Construction
- Ely-CCS
- Ely-Nuclear
- Forestry
- Gas
- Mining
- NonFeMin
- NonMetalMin
- Oil
- Oil-Pcts
- OtrTransport
- PubServ
- Paper-Pulp
- pubServ
- Services
- Textiles
- Vehicles
- WtrTransport
Overview of methodology

CGE model results

- Analysis of the models results in the light of existing literature to identify key issues for selected countries

- Identification of issues/sectors for more detailed analysis

- Identification of ‘high impact’ locations within countries

- Qualitative inquiry

Case-study write-up
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Thank you