

Regional implications for 2C

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COP Warsaw

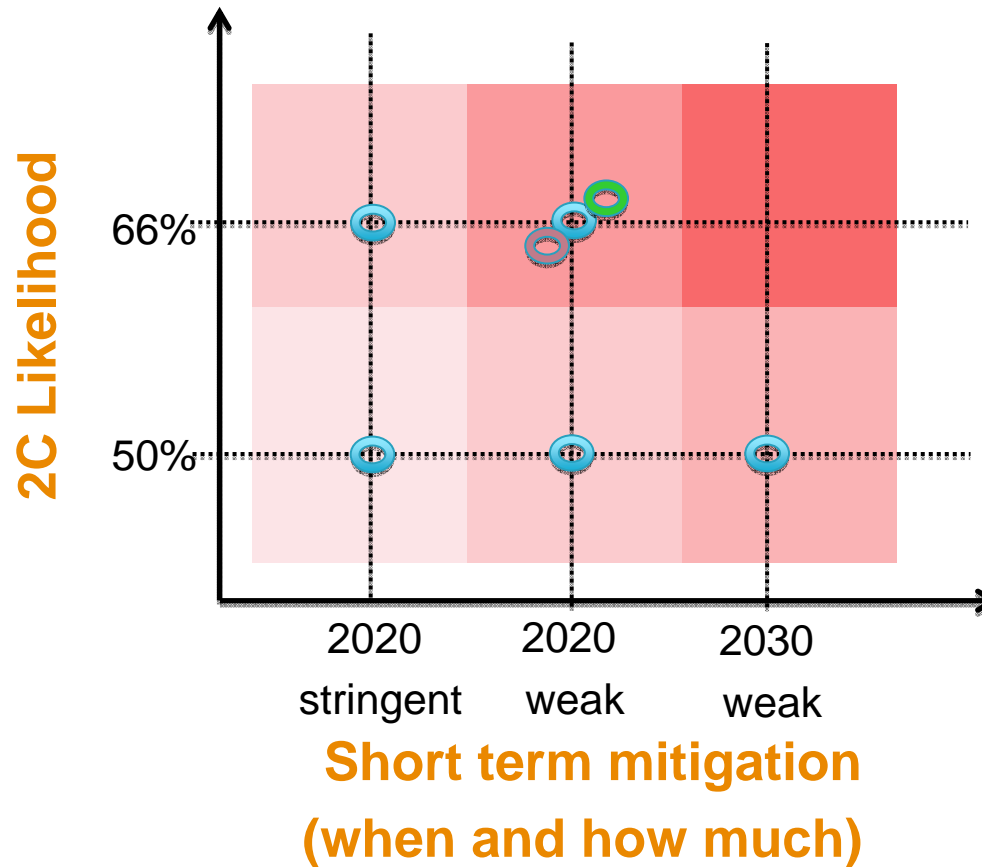


**Low climate Impact scenarios and the Implications of required
Tight emission control Strategies**



The research leading to these results has received funding from the European Community's Seventh Framework Programme FP7/2007-2013 under grant agreement n° 282846 (LIMITS)

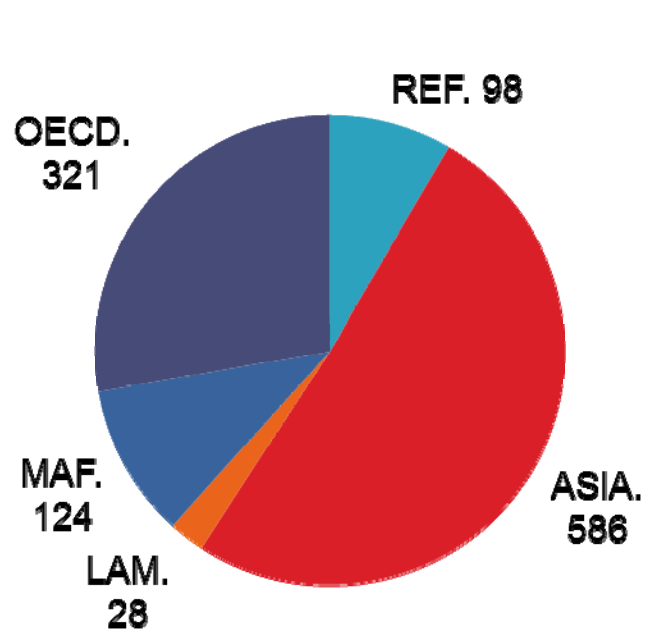
Key dimensions considered



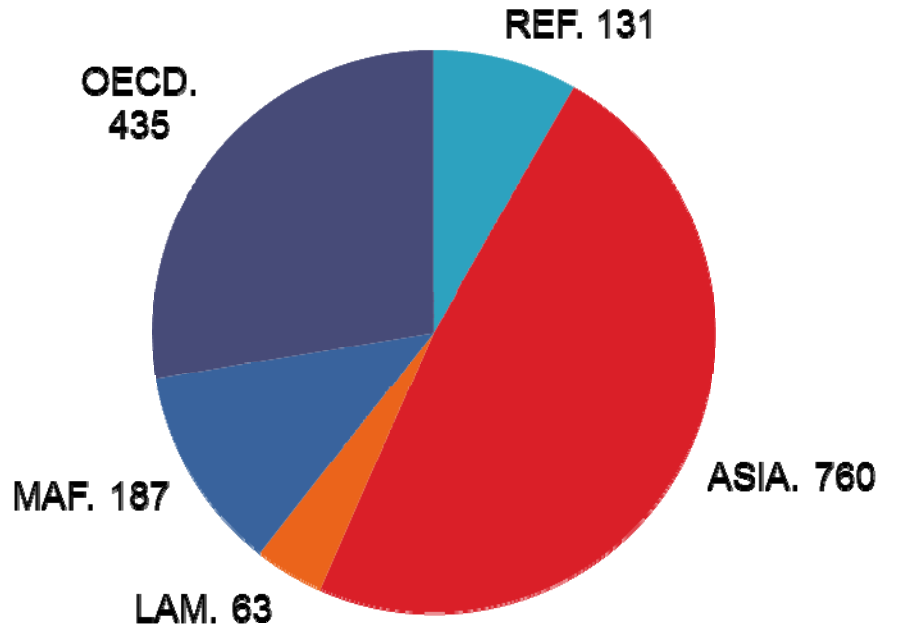
- Carbon tax, no transfer
- Cap and trade, equalization of regional per capita emissions (by 2050)
- Cap and trade, equalization of regional mitigation costs (from 2025)

Regional carbon budgets 2010-2100

2C likely: 1150
GtCO2



2C as likely as not: 1570
GtCO2



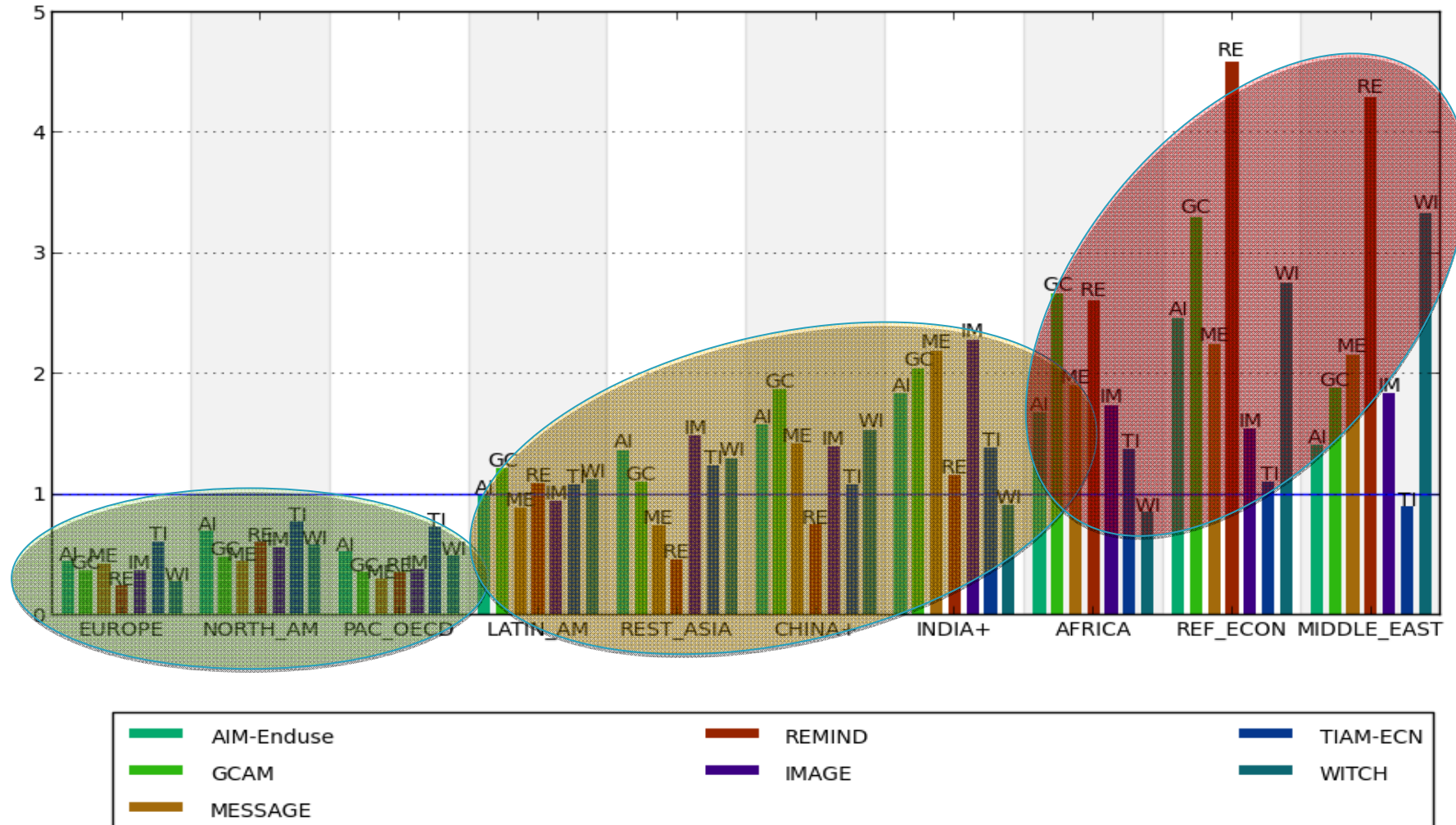
To peak or not to peak?

Year of CO2 emissions peak

| | WORLD | OECD | ASIA | Latin America | Middle East & Africa | Reforming economies |
|---------------------|-------|------|------|---------------|----------------------|---------------------|
| 2C likely | 2030 | now | 2030 | 2023 | 2030 | 2028 |
| 2C as likely as not | 2030 | now | 2033 | 2022 | 2035 | 2027 |

It is the relative economy, stupid!

Regional distribution of mitigation costs, wout transfers



Sharing the burden

Carbon tax, no transfer

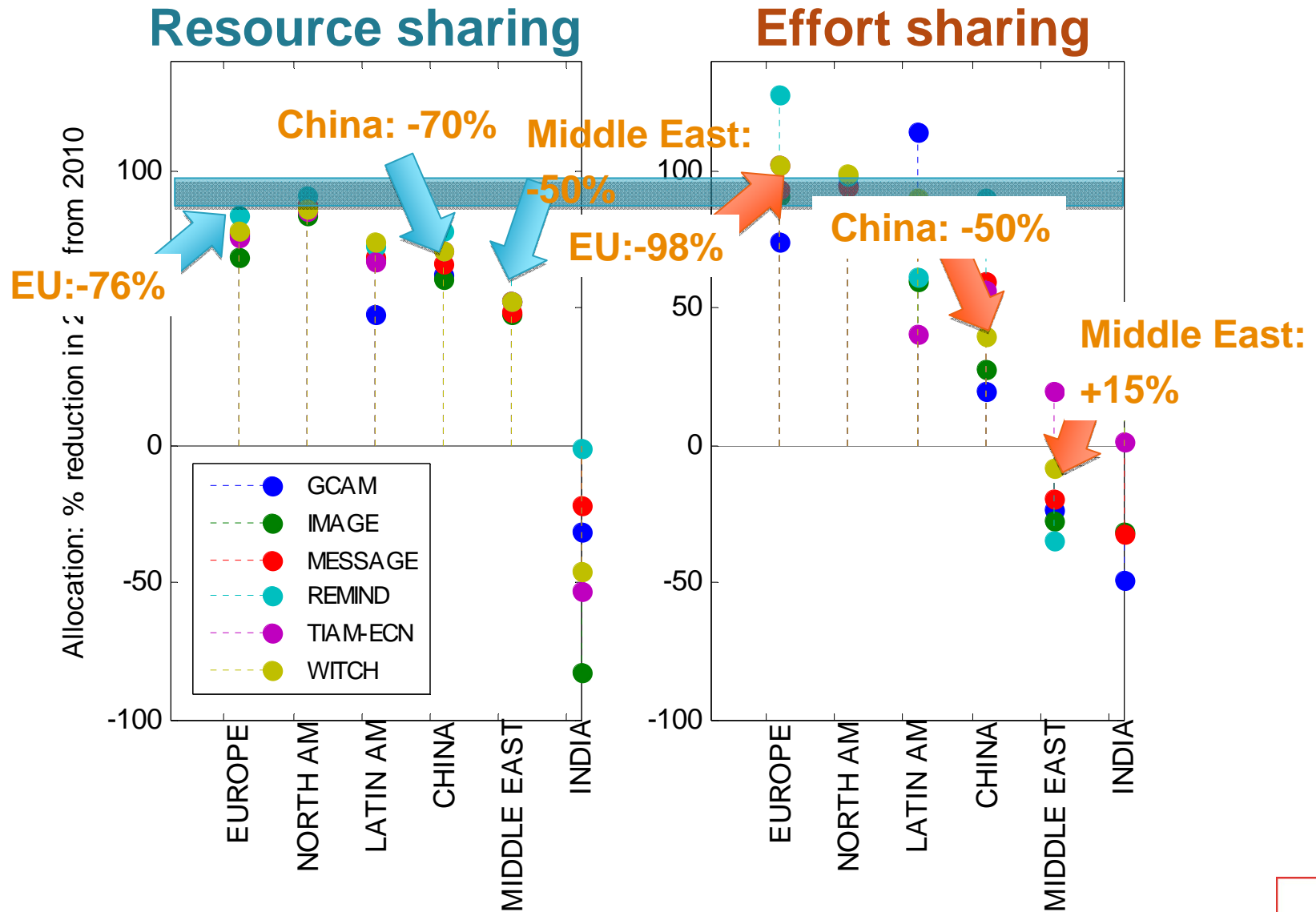
Resource sharing:

Allocation based on the equalization of regional per capita emissions by 2050

Effort sharing:

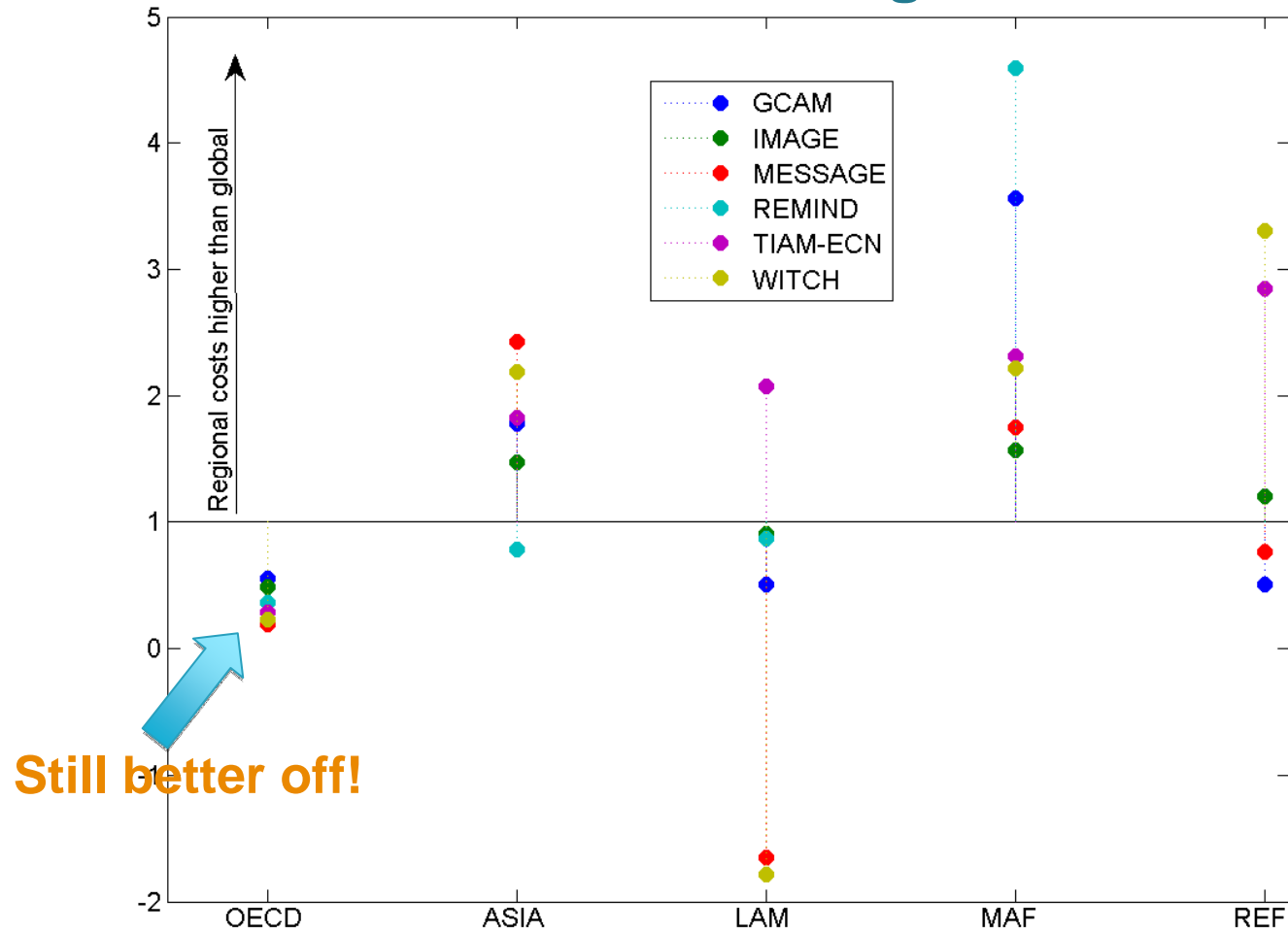
Allocation based on equalization of regional mitigation costs (2025 onwards)

Allocation of allowances: 2050 reductions from 2010



Is 'per capita' fair ?

Resource sharing



Transfers and carbon market

In both schemes, a large carbon market would be needed:

- 4 GtCO₂-yr by 2030 ... in every year, more than twice the CERs issued by all CDM projects to date
- 100 USD Billions-yr of transfers
- Trading positions depend on regional abatement opportunities and allocation scheme: OECD buyers, China/Russia/Middle East sellers only in the effort sharing scheme.

Conclusions

1. Between now and 2035 emissions should peak in all major economies
2. Without transfers, mitigation costs would be distributed unevenly (OECD -, DC +, EEX ++)
3. Carbon markets can alleviate these distributional concerns, but:
 - I. An integrated, large market with significant (4GtCO₂/100 USD Billions) volumes will be eventually needed
 - II. There is no 'right' allocation scheme

2C leaves us with a tight carbon budget: sharing it equitably and efficiently is the biggest challenge

LIMITS special issue

12 papers covering the Durban Platform scenarios:

- financing and investments
- 2C and energy security
- technological transitions
- fiscal policy
- ...

Already available at the project website

Scenario DataBase will be made public shortly

http://www.feem-project.net/limits/03_outreach_01_02.html



Thanks!

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