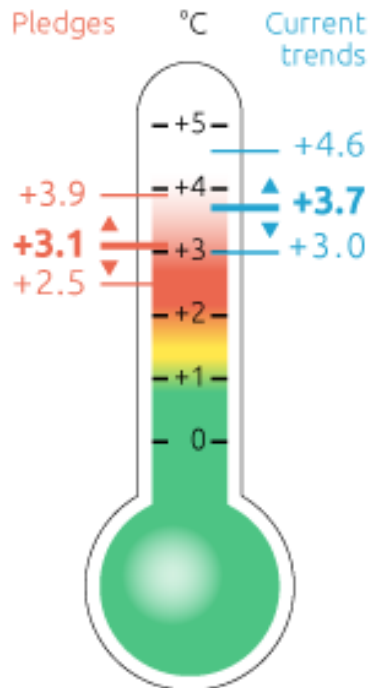


# CLIMATE ACTION TRACKER



## Climate Policy Tracking: Evaluating Policy and Portfolio Level Impacts Real-Time

IEPEC 2014

Hanna Fekete, 9 September 2014

Presentation and paper based on:

Hanna F., M. Vieweg, M. Rocha, N. Braun, M. Lindberg, J. Gütschow, L. Jeffery, N. Höhne, B. Hare, M. Schaeffer, K. Macey, J. Larkin. (2013). *Analysis of current greenhouse gas emission trends*.

# Outline

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- ▶ Background and motivation for the analysis
- ▶ Approach to quantifying emissions levels including policies
  - ▶ Method
  - ▶ Exemplary country results
- ▶ Challenges of the approach and solutions
- ▶ Conclusions

# Background and motivation

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The Climate Action Tracker project:

- Quantification and evaluation of emission reduction pledges under the UN Framework Convention on Climate Change



- Current policy projections to tell:
  - Are countries on track for reaching their pledges?
  - Are global emissions on track to limit temperature increase to max. 2° C above pre-industrial levels?

# Conditions and resulting approach

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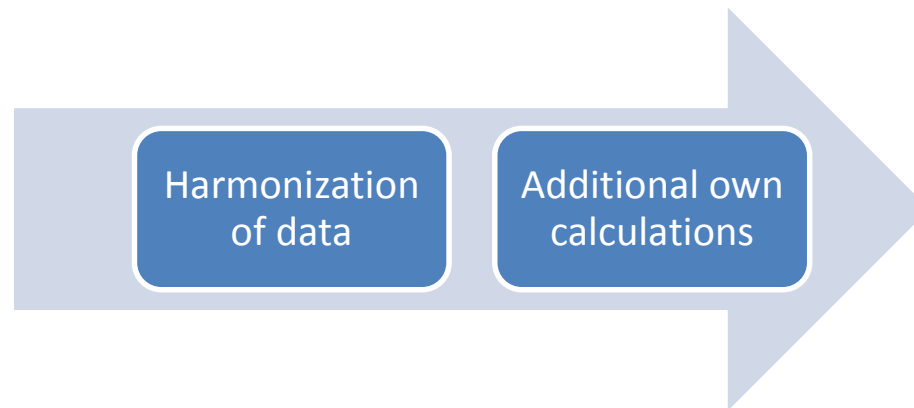
## General principles

- Comparability of results
- Transparency and robustness
- Compatibility of data within projects
- Simplicity

## Overall approach:

### Inputs

- Data on emissions, energy and activity level (projections and historic data)
- Breakdown of data by sector/sub-sector or gas
- Information on assumptions, scope and currentness of data
- Up to date information on current policies and their effectiveness



### Outputs

- Consolidated range of economy wide GHG emissions in 2020
- Other indicators depending on country, e.g. share of renewables, carbon intensity etc.

# Zoom in on own calculations

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General:

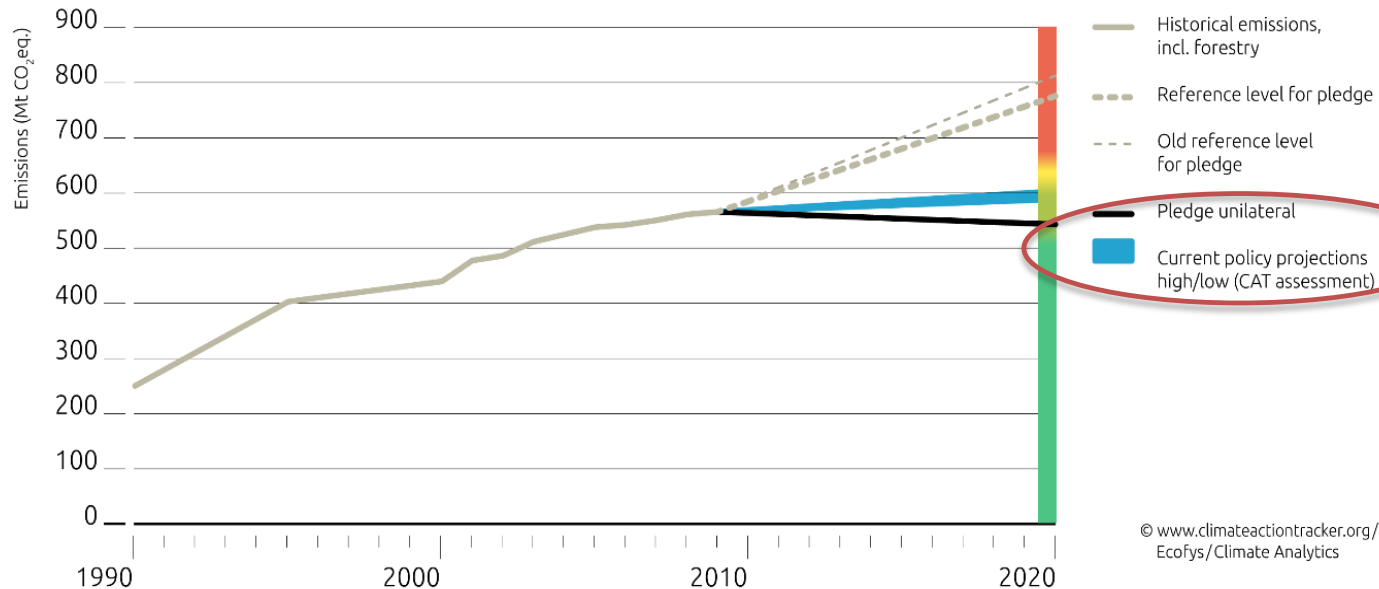
Simple Excel modules which can be combined and easily adapted to national circumstances or data availability

Example: electricity generation or capacity target for RE:

- Step1: Calculate share of total electricity generation
- Step2: Determine share of other energy carriers under target scenario, e.g. based on an external scenario or own assumptions
- Step3: Apply emission factors for energy carriers

## Exemplary country results – South Korea

- Result: 613 – 627 MtCO<sub>2</sub>e/a in 2020 (excl. land use, land use change and forestry)
- Input data from UNFCCC (historic data), national communication (projections)
- Add. policies included: Policies under the Green Growth Strategy (e.g. Target Management System, Renewable Portfolio Standard, million green homes)



# Challenges to the analysis and solutions

Challenge	Approaches
<p>Lack of data</p> <ul style="list-style-type: none"> <li>Lack of data especially for developing countries</li> <li>Depth of information available by country varies greatly</li> </ul>	<ul style="list-style-type: none"> <li><b>Scaling down</b> data/information to countries/sectors</li> <li><b>Extra/-interpolation</b> to/between years</li> <li>Take <b>own assumptions</b> on future development of indicators</li> </ul>
<p>Conflicting data</p> <ul style="list-style-type: none"> <li>Historic data and future projections do not match</li> <li>Various contradicting projections</li> </ul>	<ul style="list-style-type: none"> <li><b>Harmonisation</b> to reported emissions</li> <li><b>Hierarchy of data sources</b> (national data first)</li> <li>Thorough research on quality of sources</li> </ul>
<p>Recent policy development not included</p>	<ul style="list-style-type: none"> <li>Qualitative <b>assessment of relevancy</b></li> <li>If relevant, <b>own quantitative assesement</b></li> <li>Various <b>standardised tools</b> for specific policy instruments</li> </ul>
<p>Interactions between policies/sectors</p> <ul style="list-style-type: none"> <li>Policies targeting same area</li> <li>Demand and supply sector dependencies</li> </ul>	<ul style="list-style-type: none"> <li>Quantify <b>strongest policy</b> in area, others reflect likelihood of implementation</li> <li>Demand side first, adapt energy supply sector</li> </ul>

# Conclusions

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- Applying the method to more than 20 countries has proven it is useful.
- The method has certain strengths and weaknesses:

Strengths	Weaknesses
High flexibility regarding data and time availability	No complex feedback loops considered
Adaptable to different countries and policies	Lack/uncertainty of data not necessarily visible
Simple and transparent calculations	Requires thorough case by case documentation

- Further possible application in different context possible:
  - Quantification and evaluation of Intended Nationally Determined Contributions (INDCs)
  - Determine trends of emissions or other indicators of sub-national stakeholders or companies/other organisations