

Chapter 3 - Appendix A: Methodology of national and global studies

Appendix A gives an overview of the national and global studies that are used for the calculation of the emission projections resulting from the current policies scenario and NDC scenario.

Table A.1: Overview of global NDC studies included in the assessment (in alphabetical order).

Reference	Sector and gas coverage	Cut-Off date for analysis and countries included	Scenario coverage	Unconditional NDC case	Conditional NDC case
Climate Action Tracker (CAT, 2017)	All	August 2017	Current policy trajectory, NDC	X	X
Climate and Energy College/University of Melbourne dataset (Meinshausen, 2016)	All	November 2016	NDC	X	X
Climate Interactive (Climate Interactive, 2017)	All	20 October 2015	NDC	X	—
Danish Energy Agency (DEA, 2015)	All	8 December 2015	NDC	X	—
International Energy Agency – World Energy Outlook (IEA, 2016)	All ^a	November 2016	Current policy trajectory, NDC	X	—
Joint Research Centre (JRC) (Vandyck <i>et al.</i>, 2016; Kitous <i>et al.</i>, 2017)	All	August 2017	Current policy trajectory, NDC	X	X
London School of Economics and Political Science (LSE) (Boyd <i>et al.</i>, 2015)	All	Mid-October 2015	NDC	X	X
Pacific Northwest National Laboratory (PNNL) (Fawcett <i>et al.</i>, 2015)	All	Mid-October 2015	NDC	X	—
PBL Netherlands Environmental Assessment Agency (PBL, 2017; den Elzen <i>et al.</i>, 2016; Kuramochi <i>et al.</i>, 2016)	All	August 2017	Current policy trajectory, NDC	X	X
UNFCCC Synthesis Report on the Aggregate Effect of NDCs (UNFCCC, 2016)	All	4 April 2016	NDC	X	X

^a Only available at the global level. Here the IEA current policies scenario is used.

Source: Updated from Rogelj *et al.* (2016) and UNEP (2016).

Table A.2: Overview of current policies and NDC studies included in the G20 member assessment by type of source (in alphabetical order)

Reference	Geographic coverage	Sector and gas coverage	Scenario coverage
Global NDC analyses			
Climate Action Tracker (CAT, 2017; Kuramochi <i>et al.</i>, 2016)	All G20 economies included	All	Current policy trajectory, NDC
Climate and Energy College/University of Melbourne dataset (Meinshausen, 2016)	All G20 economies included	All	NDC
Climate Interactive (Climate Interactive, 2017)	About nine countries, i.e.: Australia, Canada, EU, India, Japan, Mexico, Russia, Republic of Korea, the USA ^a	All	NDC
International Energy Agency – World Energy Outlook (IEA, 2015)	China, India	CO ₂ from energy use ^b	Current policy trajectory, NDC
Joint Research Centre (JRC) (Vandyck <i>et al.</i>, 2016; Kitous <i>et al.</i>, 2017)	All G20 economies included	All	Current policy trajectory, NDC
London School of Economics and Political Science (LSE) (Boyd <i>et al.</i>, 2015)	All G20 economies, except Australia	All	NDC
Pacific Northwest National Laboratory (PNNL) (Fawcett <i>et al.</i>, 2015)	China, India, Russia ^c	All	NDC
PBL Netherlands Environmental Assessment Agency (den Elzen <i>et al.</i>, 2016)	All G20 economies included	All	Current policy trajectory, NDC
Official country-specific data sources			
Australian Government (2015)	Australia	All	Current policy trajectory
Biennial Report/Biennial Update Report (UNFCCC National Reports, 2015)^a	Brazil, Japan, Norway, Republic of Korea, Russia and Switzerland	Varies	Current policy trajectory
Department of Environmental Affairs (2014)	South-Africa	All	Current policy trajectory, NDC
EEA (2014)	EU	All	Current policy trajectory
Government of Canada (2014)	Canada	All	Current policy trajectory
NDCs (UNFCCC, 2015a)	Argentina, Brazil, Japan, Mexico, Republic of Korea, South Africa, Turkey and the USA	Varies	NDC

Reference	Geographic coverage	Sector and gas coverage	Scenario coverage
National Climate Change Strategy (2013)	Mexico	All	Current policy trajectory
National Communications (UNFCCC, 2015b)	Indonesia, the USA	Varies	NDC
Independent country-specific data sources			
Reputex (2016)	Australia	All	Current policy trajectory
Centre for Policy Research (Dubash <i>et al.</i>, 2015)	India	CO ₂	Current policy trajectory
Climate Advisers (Belenky, 2015; Climate Advisers, 2017)	United States ^a	All	Current policy trajectory, NDC
Climate Interactive (2017)	United States	All (excl. LULUCF)	Current policy trajectory
Energy Research Institute Low carbon scenarios (based on Jiang <i>et al.</i>, 2013)	China	CO ₂ ^d	Current policy trajectory, NDC
Indian Institute of Management, Ahmedabad (Garg <i>et al.</i>, 2014)	India	All	Current policy trajectory
Institut du Développement Durables et des Relations Internationales (Garg <i>et al.</i>, 2014)	Japan	All	NDC
King Abdullah University of Science and Technology (2014)	Saudi Arabia	CO ₂ ^d	Current policy trajectory
National Center for Climate Strategy and International Cooperation (Sha <i>et al.</i>, 2015)	China	CO ₂ ^d	NDC
Rhodium Group (2017)	United States	All	Current policy trajectory
Resources For the Future (Hafstead, 2017)	United States	All	Current policy trajectory
World Resources Institute (Kuramochi, 2014)	Japan	All	NDC
World Resources Institute (Hausker <i>et al.</i>, 2015)	United States	All	Current policy trajectory, NDC

^a Compared to last year we have deleted the NDC estimate of China for the studies Climate Interactive and Climate Advisers because of data inconsistency, but this does not affect the NDC estimate of China, as the number of studies included is still 10 (instead of 12).

^b Augmented with the US Environmental Protection Agency (2012), JRC/PBL (2012) and den Elzen *et al.* (2015) to produce economy-wide figures.

^c Not all countries' projections of the studies are included for this analysis

^d Augmented with Tavoni *et al.* (2015) and Government of China (2012) to produce economy-wide figures.

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