CLIMATE ACTION TRACKER

India

History: 2017 | 2016 | 2015 | 2014 | 2013 | 2012 | 2011

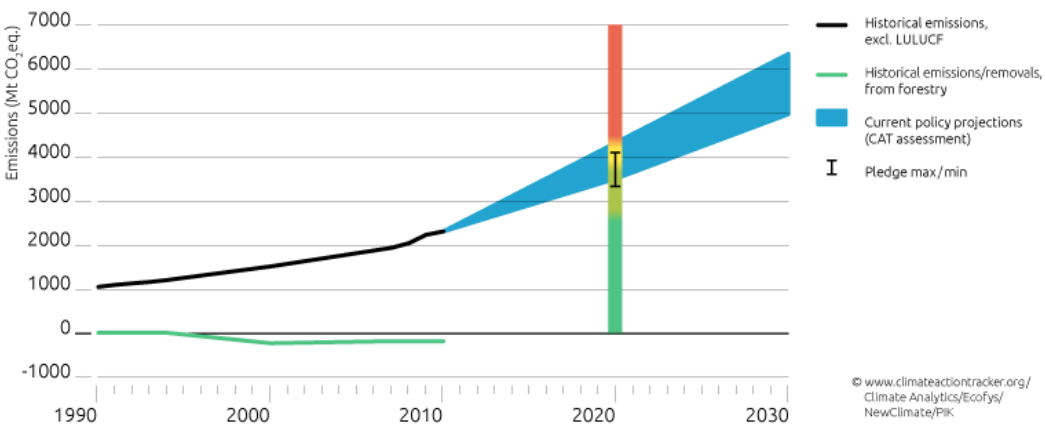
Page last updated: 6th December 2014

Rating



Assessment

India pledged to reduce the emission intensity of its GDP by 20 to 25% by 2020 compared to 2005 levels. We estimate that this target is in line with current policies, although the range of estimates is large. Economic growth projections are uncertain and are a major driver of uncertainty in estimated future emissions.



Pledge

India has pledged to reduce the emission intensity of its GDP by 20 to 25% in 2020 compared to 2005 levels. This target does not cover emissions from the agricultural sector. The target was proposed during the Copenhagen negotiations and submitted to the Copenhagen Accord on 30 January 2010. The quantification of this pledge covers a range of between 3.3 and 4.1 $GtCO_2e$ in 2020 (excluding LULUCF) due to the wide range of GDP projections.

Convention	
Copenhagen pledge Intensity: (excluding emissions from the agriculture sector)	-20% / -25%
Reference for pledge	2005
Conditions	none
National goals	
Long term goal(s)	none

In 2007 at the G8 + 5 Summit in Heiligendamm, Germany, then Indian Prime Minister Singh pledged that India's per capita emissions would never exceed those of the developed world. Given India's low per capita emissions, meeting this pledge does not require any emission reductions compared to the current policy projections up to 2030, and this pledge is not shown in the figure. However, this pledge is taken into account in the global pathway to 2100.

Current policy projections

Currently implemented policies are projected to lead to an emissions level (excluding emissions from LULUCF) of between 3.5 and 4.3 $GtCO_2e$ in 2020 and between 5.0 and 6.4 $GtCO_2e$ in 2030, according to our analysis. Current policy projections are in line with the pledge range, but the absolute level of both is dependent on economic growth.

India's total emissions have been growing steadily since 1990. The overall growth slowed down around the year 2000 as land use changed from being a small source of emissions in the first inventory year - 14 $MtCO_2e$ in 1994 - to a large sink, with removals of 223 $MtCO_2e$ in 2000. Since then, this impact has been reduced to some extent; in the last available inventory year (2007), land use represented removals of 175 $MtCO_2e$. Based on projections from the Planning Commission Government of India (2014), this carbon sink is expected to increase to 206 $MtCO_2e$ in 2020 and 228 $MtCO_2e$ in 2030.

India launched its National Action Plan on Climate Change (NACC) in 2008, which outlines eight national missions in the area of sustainable development (Government of India, 2008). India's 12th Five Year Plan for the period 2012–2017 (Government of India, 2013) proposed a re-organisation of the NACC. The Five Year Plans provide the basic direction for government activities, addressing all sectors and policy areas. Our analysis includes the 11th and 12th Five Year Plan.

On the federal level, India has implemented two major renewable energy-related policies. The 'Strategic Plan for New and Renewable Energy' provides a broader framework. The 'National Solar Mission' contains capacity targets for renewables. By 2017: 27.3 GW wind, 4 GW solar, 5 GW biomass and 5 GW other renewables, and by 2022: 38.5 GW wind, 20 GW solar, 7.3 GW biomass and 6.6 GW other renewables. (Planning Commission Government of India, 2011). In November 2014, the government announced plans to increase the solar ambition to 100 GW installed capacity by 2022 but official legislation does not reflect this target yet and it would only have a small effect on emissions under current policy projections.

Achieving the targets depends on financial and structural supporting mechanisms. The state level feed-in schemes and renewable portfolio standards are expected to partly provide this. Given that electricity demand is expected to grow further in the future, and the prevailing dominance of other energy sources, such as coal, the total impact of these policies and targets is expected to be low compared to the potential of renewable energy in India.

Under the 'National Mission on Enhanced Energy Efficiency,' India implemented the 'Perform, Achieve and Trade (PAT)' Mechanism. The scheme covers the country's largest industrial and power generation facilities, that, in total, cover more than 50% of fossil fuel use in India. The target is to achieve a 4% to 5% reduction of energy consumption of the participating facilities in 2015 (compared to 2010 levels). Sixty percent of this is to stem from the power sector and 40% from the industry sector. The effect after 2015 heavily depends on the rules governing the continuation of the scheme, which have yet to be decided.

Biofuel legislation sets a target of 20% blending of ethanol and biodiesel in 2017.

The 12th Five Year Plan proposes a new 'National Wind Energy Mission' similar to the 'National Solar Mission.' However, this wind energy mission has not yet been implemented and is therefore not included in this analysis.

Date of pledge: January 2010

Assumptions

Pledge

Historical emissions for the years 1994 and 2000 were taken from the latest UNFCCC inventory (UNFCCC, 2014), emissions for 2007 were taken from India's Second National Communication (Government of India, 2012) with interpolation in between these years. The historic dataset was extended to 1990 and 2010 using growth rates for CO_2 from fuel combustion from IEA (2013), growth rates for other CO2 emissions from JRC/PBL (2012) and CDIAC (2014) and growth rates for non-CO_2 emissions from USEPA (2012).

The pledge is quantified based on actual GDP development until 2013 (IMF, 2014) and a range of projections for GDP growth from IMF (2014) and Planning Commission Government of India (2011). In the period 2005-2013 GDP has grown by 7% per year on average. For the pledge calculations we assumed an average annual growth of between 6% and 9% for the period 2014 – 2020.

Current policy projections

The current policy projections are based on the World Energy Outlook 2014 Current Policy Scenario (IEA, 2014) and projections by the Planning Commission Government of India (2014) for CO_2 from fuel combustion until 2030 (IEA 2012). Both scenarios were combined with the US EPA non-CO_2 emissions projections until 2030 (US EPA 2012) and extrapolation of other CO_2 emissions based on JRC/PBL (2012), CDIAC (2014) and WBCSD/IEA (2013).

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