

# ASSESSMENT OF SUBNATIONAL AND NON-STATE CLIMATE ACTION



INDIA

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# India

## COUNTRY CONTEXT

India's population has grown rapidly, reaching 1.35 billion people in 2017 (UN DESA, 2019). Therefore, greenhouse gas (GHG) emissions will increase accordingly, unless action is taken in the next few years. It all depends on India's development transition (Dubash et al., 2018), which currently has two faces: coal consumption is increasing rapidly, but at the same time India is becoming a global leader in renewable energy (Carbon Brief, 2019; Climate Action Tracker, 2019a).

Currently, India has 221 GW of coal power, 36 GW is being built, and 58 GW is in the pipeline (Carbon Brief, 2019), but costs for solar power are falling, making this technology interesting for India. The National Solar Mission aims to grow solar power to 100 GW by 2022, and 75 GW from other renewable sources are also planned (Indian Ministry of New and Renewable Energy, 2015). The Secretary of New and Renewable Energy announced that India is planning to install 500 GW of renewable capacity by 2030 (Beetz, 2018; Varadhan, 2019).

In the transport sector, the complete ban on new fossil fuel-driven cars after 2030 has been scaled down to a target of 30% of sales for electric vehicles (Carbon Brief, 2019). In addition, India has implemented fuel efficiency standards for cars, which will be tightened by 2022, and a 20% blending biofuel target, which had not been met in 2018 (ibid).

In its nationally determined contribution (NDC), India commits to reducing its emissions intensity of GDP by 33% to 35% below 2005 levels by 2030, and also sets targets for non-fossil fuel energy and forest carbon stock. The latest assessments by NewClimate Institute, PBL and IIASA indicate that India is likely to meet its unconditional NDC emissions intensity target with its current policies (Kuramochi et al., 2018; den Elzen et al., 2019).

## INTERACTIONS BETWEEN NATIONAL GOVERNMENT AND SUBNATIONAL AND NON-STATE CLIMATE ACTORS

Although India has a strong centralised federal system with a dominant role for national government regarding climate policy, states are essential for implementation. Since 1990, states increasingly conduct independent policy making by setting their own objectives and implementing policy instruments (Jørgensen, Mishra and Sarangi, 2015). Since the publication of the National Action Plan on Climate Change in 2008, states are required to submit and implement State Action Plans on Climate Change. Implementation of these plans is not evident, as many states feel lack of ownership, links to development are unclear, and alignment with the budget process is small (Gogoi, 2017). The GHG Program India is an initiative that supports setting up GHG emission inventories, if necessary, for the national government and local governments (Ghosh and Prasad, 2017).

In India, 25 companies have committed to Science Based Targets, while 52 have responded to the CDP questionnaire giving insight into their climate action (CDP, 2019b). The Mahindra Group was one of the first companies to articulate a climate commitment, pledging to reduce (scope 1, 2 and 3) emissions per tonne of steel by 35% in 2030 relative to 2016 (Mahindra, 2018).

## COMPARING SUBNATIONAL AND NON-STATE TRAJECTORY WITH NATIONAL TRAJECTORY

The assessment includes three cities, representing just under 3.4 million people, and one region, representing a population of more than 60 million, that have made quantifiable commitments to reduce GHG emissions.<sup>1</sup> It also includes over 340 companies, controlling over \$576 billion USD in revenue<sup>2</sup> that have made quantifiable climate commitments – including 17 of the world’s largest companies<sup>3</sup> – most frequently in the financial services, specialised professional services, and electrical and electronic equipment sectors.

Together, these cities, regions, and companies represent 350 MtCO<sub>2</sub>e/year in 2015, accounting for overlap between actors. If fully implemented and if such efforts do not decrease efforts elsewhere, individual city, region, and company commitments would reduce emissions in 2030 by 220 to 250 MtCO<sub>2</sub>e/year, 5.5% below the projected emissions under current national policies (Figure 1, top panel). Companies’ commitments make up the largest share of these potential emissions mitigations, reducing by more than 200 MtCO<sub>2</sub>e/year in 2030 (Figure 1, bottom-left panel). In the current national policies scenario, total GHG emission levels increase to a level between 4,050 and 4,450 MtCO<sub>2</sub>e/year by 2030 (Kuramochi et al., 2018). The emissions in a “current national policies plus individual actors’ commitments” scenario are about 3,800 to 4,200 MtCO<sub>2</sub>e/year, which are 1,100 to 1,900 MtCO<sub>2</sub>e/year lower than India’s NDC target emission levels. These results suggest that India could further raise its NDC ambition level by fully taking the commitments of regions, cities and companies into account.

International cooperative initiatives (ICIs) – networks of cities, regions, companies, investors, civil society, and, in some cases, countries, pursuing common climate action – could have a significantly larger impact. If they realise their goals, they could reduce emissions in 2030 by 510 and 590 MtCO<sub>2</sub>e/year or 13% below the projected emissions under current national policies (Figure 1, bottom-right panel). These reductions mostly come from initiatives on cities and regions, non-CO<sub>2</sub> GHGs and appliances energy efficiency. This would lead to total GHG emissions levels in the ‘current national policies plus initiatives goals’ scenario of 3,500 to 3,900 MtCO<sub>2</sub>e/year, about 1,400 to 2,200 MtCO<sub>2</sub>e/year lower than the emissions levels of India’s NDC target.

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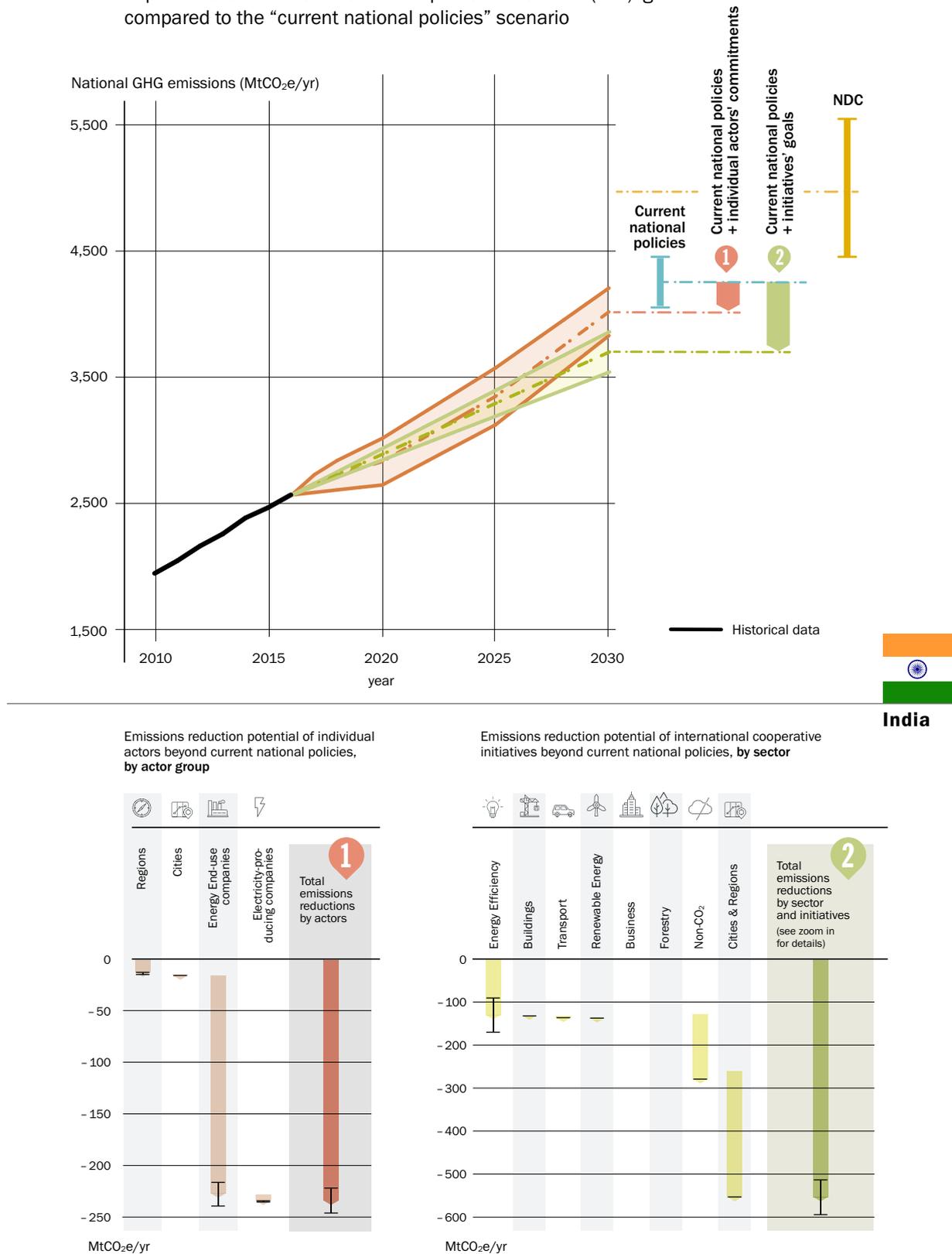
1 Quantifiable commitments to reduce GHG emissions typically include a specific emissions reduction goal, target year, baseline year, and baseline year emissions. See Technical Annex I for more details.

2 Companies’ combined revenue reflects companies making quantifiable commitments to reduce GHG emissions, whose headquarters are in India, and whose revenue data is publicly available. See Technical Annex I for more details.

3 The world’s largest companies are defined in terms of their inclusion in the 2019 Forbes 2000 and Global Fortune 500 lists.

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**Figure 1.** Potential greenhouse gas (GHG) emissions reductions in India resulting from the full implementation of individual subnational and non-state actor commitments and the full implementation of international cooperative initiatives (ICIs)’ goals compared to the “current national policies” scenario



The “current national policies” scenario (Kuramochi et al., 2018) includes land use, land-use change and forestry. Top panel: historical GHG emissions up to 2016 (with authors’ own estimates for years between the last inventory data year and 2016) and scenario emissions pathways up to 2030, alongside the NDC target emissions range (indicative target level for 2030). Emissions reduction target trajectories from individual actors’ commitments and initiatives’ goals are assumed to be achieved linearly from the latest historical data year and are presented here for illustrative purposes. Bottom-left panel: the breakdown of potential GHG emissions reductions from individual subnational and non-state actor commitments in 2030 by actor group. Bottom-right panel: the breakdown of potential GHG emissions reductions from ICIs in 2030 by sector. The results for “Current national policies plus initiatives’ goals” scenario do not include the potential emissions reductions from Science Based Targets, RE100 and Collaborative Climate Action Across the Air Transport World (CAATW); they are only quantified at a global level.

## ABOUT THIS FACT SHEET

The **Global Climate Action from Cities, Regions, and Businesses** country fact sheet series takes a close look at the potential impact of subnational and non-state climate change mitigation action for ten high-emitting economies.

In each fact sheet, we: (1) provide general information on the country's greenhouse (GHG) emissions and its energy and climate policies (the country context); (2) describe the interactions between the national government and subnational and non-state actors on climate action; (3) identify and map the type of GHG emissions reduction commitments made individually by cities, regions and companies within that country, as well as the actors making them; and (4) quantify the potential GHG emissions reduction impact that city, region and company commitments, as well as those of international cooperative initiatives (ICIs), could have on that country's emissions trajectory. The analytical steps follow those described in an earlier 2018 report (Data-Driven Yale, NewClimate Institute and PBL, 2018) and adopts the methodological recommendations made in Hsu et al. (2019). Detailed descriptions of this can be found in the main report and its Technical Annexes I and II, all of which can be downloaded from the NewClimate Institute website (<https://newclimate.org/publications>). A full list of references can also be found in the main report (Section 5).

Regarding the emissions data presented in this section, total national GHG emissions include land use, land use change and forestry (LULUCF) unless otherwise stated. The historical GHG emissions data are plotted up to 2016; for a number of UNFCCC non-Annex I countries, the values between the last inventory year and 2016 were estimated based on current policies scenario projections by NewClimate Institute, PBL and IIASA (Kuramochi et al., 2018). All GHG emissions figures presented are aggregated with 100-year global warming potential (GWP) values of the IPCC Fourth Assessment Report. For the NDC target emission levels, we used LULUCF sector emission levels projected under the current policies scenario when a country's NDC: (i) excludes LULUCF emissions, (ii) is not clear about the LULUCF accounting or (iii) considers LULUCF credits. For these countries, the NDC target emission levels may not match the official values reported by the national governments.

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## SUGGESTED CITATION

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