ASSESSMENT OF SUBNATIONAL AND NON-STATE CLIMATE ACTION

SOUTH AFRICA

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NEW CLIMATE INSTITUTE
DATA DRIVEN ENVIROLAB
PBL Netherlands Environmental Assessment Agency
d·i·e Deutsches Institut für Entwicklungspolitik
German Development Institute
BLAVATNIK SCHOOL OF GOVERNMENT
UNIVERSITY OF OXFORD

South Africa

COUNTRY CONTEXT

South Africa's progress in reducing emissions will be closely tied to its economic and energy infrastructure. Mining and heavy industry form a significant part of the country's economy, and in 2016, 91% of its electricity was generated from coal (IEA, 2018). South Africa released the long-awaited draft of the Department of Energy's Integrated Resource Plan (IRP 2018) in August 2018, setting out a new direction in energy sector planning. The plan includes a shift away from coal, increased adoption of renewables and gas, and an end to the expansion of nuclear power (Department of Energy, 2018). The revised plan aims to decommission 35 GW of 42 GW currently operating coal generation capacity by 2050 and increase renewables-based power generation capacity from wind and solar by an additional 8.1 GW for wind and 5.7 GW for solar by 2030. Uncertainty remains on the plan's final adoption by the South African Government considering that the previous two proposed IRP updates in 2013 and 2016 were never adopted. The South African Parliament finally approved a carbon tax in February 2019 after two years of consultations, although its immediate impact is likely to be limited, given tax exemptions for up to 95% of emissions during the first phase until 2022 (KPMG, 2019).

South Africa's nationally determined contribution (NDC) commits to achieving a "peak, plateau and decline" (PPD) of greenhouse gas (GHG) emissions at a level between 398 and 614 $MtCO_2e$/year between 2025 and 2030. The latest assessments by NewClimate Institute, PBL and IIASA indicate that South Africa would fall short of its NDC target with its current policies (Kuramochi et al., 2018; den Elzen et al., 2019). South Africa experienced several rolling blackouts during the first quarter of 2019 caused by the mismanagement of the state-owned utility Eskom (Onishi, 2019), adding to the complications on transitioning the country's power sector to a low-carbon one.

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

Interactions between the national government and subnational and non-state actors in South Africa have historically been vertically integrated; the national government incorporates subnational and non-state actors in its design of national policies (Hale et al., 2018). This vertical integration may be further institutionalised once the South African Government passes a Climate Change Bill mandating the integration of provinces, municipalities, and economic sectors into the national climate policy.

South Africa released the draft Climate Change Bill in June 2018. It was open for public consultation until the beginning of August 2018, but has not been officially adopted as of July 2019 (Department of Environmental Affairs, 2018). The Climate Change Bill mandates the establishment of Provincial Committees on Climate Change for each province to coordinate climate change response actions, to recommend relevant climate change matters to the national Ministerial Committee on Climate Change, and to provide regular progress reports. All provinces and municipalities must also undertake climate change needs and response assessments and develop climate change response implementation plans covering all priority sectors and defining mechanisms for implementation. South Africa's 2015 NDC had also emphasised the need to integrate sub-national planning into national climate action (Government of South Africa, 2016), but little progress has been made since (Hale et al., 2018).

South Africa's Green Fund, established in 2011, constitutes a mechanism for subnational actors' integration into national climate action. The Green Fund provides an array of financial instruments for a variety of non-state actors such as project developers, municipalities, provinces, NGOs, and academic institutions to invest in low carbon and innovative development projects. The funding streams align with priorities identified in various national development and sustainability plans (Bhandari, 2014).

Subnational and non-state action has gained momentum over the past decade. Projects that reduce emissions while strengthening communities' resilience to climate change impacts have risen since 2011 and are often implemented through collaborations between local government and non-profit organizations, other government agencies, research institutes and the private sector (Local government programme 4 climate change., 2016). A 2015 analysis found that approximately half of all municipalities address climate change or sustainable energy in their development plans, and that municipalities including funding for climate change or sustainable energy projects in their budgets has nearly doubled between 2012 and 2015 (Ibid).

In recent years, city governments have become more active on climate action; the cities of Johannesburg, Tshwane, Cape Town and Durban, are all members of the C40 Cities Climate Leadership Group. All four cities aim to adopt and publish long-term climate action plans and their respective actions by 2020, as part of C40's Climate Action Planning (CAP) initiative for South African cities (C40 Cities, 2018). The city governments aim to align these processes with all relevant national and provincial policies and legislation. The city of Cape Town has already pledged to become carbon neutral by 2050, for example by aiming for carbon neutrality of new buildings from 2030 onward and exploring option to purchase electricity from independent electricity producers (Davis, 2019; IOL, 2019). The C40 Cities South Africa Buildings Programme aspires to make zero carbon buildings standard practice across South African cities.

Climate action in the business sector has mainly been streamlined by the South African National Business Initiative (NBI). The voluntary coalition of more than more than 80 South African and multinational companies works towards sustainable growth and development in South Africa. The NBI engages with the South African Government on key thematic focus areas such as the National Development Plan (NDP) implementation.

COMPARING SUBNATIONAL AND NON-STATE TRAJECTORY WITH NATIONAL TRAJECTORY

The assessment includes seven cities, representing just under 20 million people, that have made quantifiable commitments to reduce GHG emissions.[1] It also includes over 170 companies, controlling over 131 billion USD in revenue[2] – and including six of the world's largest companies[3] – that have made quantifiable climate commitments, most frequently in the metallic mineral mining, financial services, and web and marketing service sectors.

Together, these cities, provinces and companies represent 110 $MtCO_2e$/year in 2015, accounting for overlap between actors. If fully implemented and if such efforts do not decrease efforts elsewhere, they would reduce emissions by 20 to 30 $MtCO_2e$/year, or by 3% to 4%, below the emission levels projected under current national policies (Figure 1, top panel), with cities being the largest contributors (Figure 1, bottom-left panel).

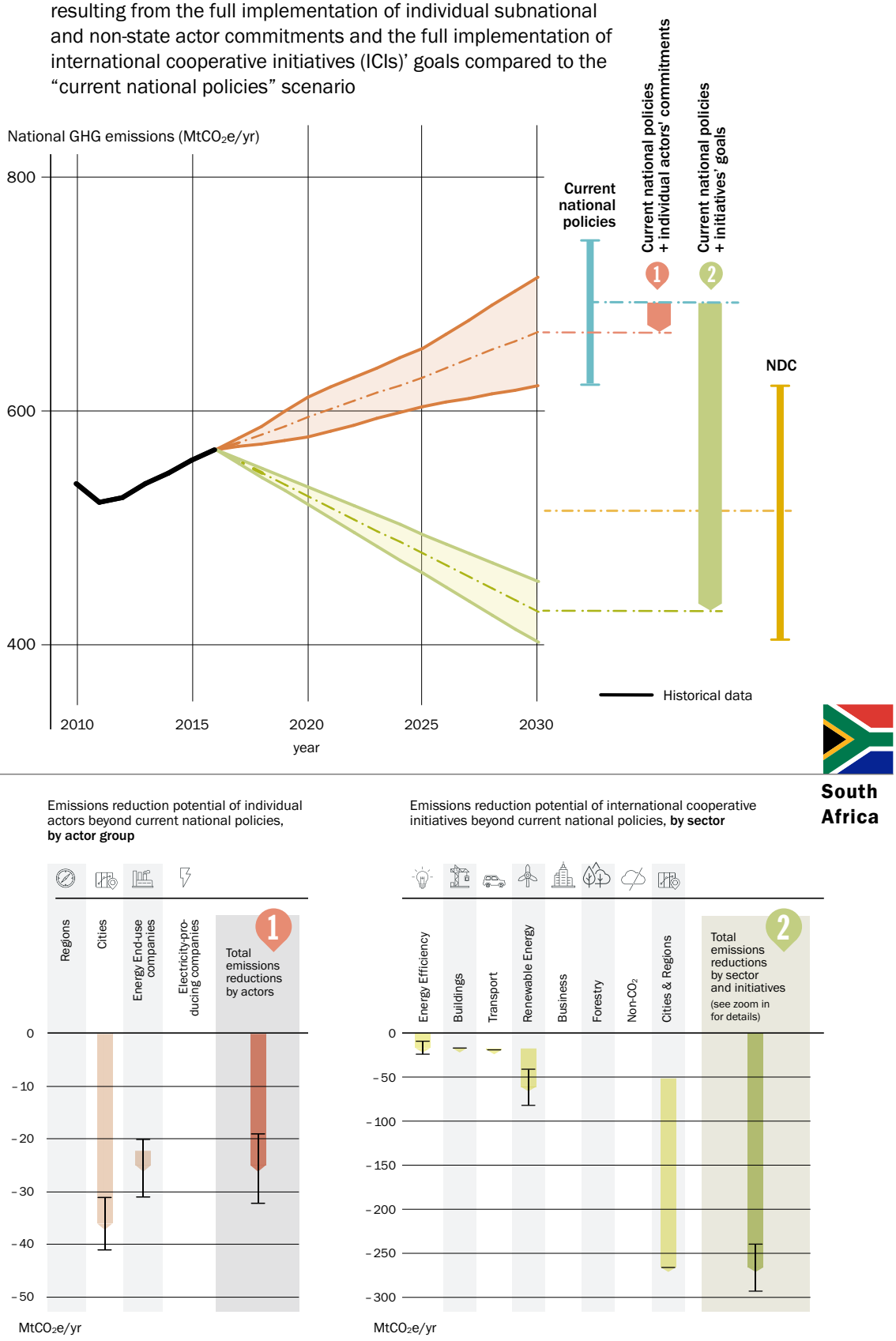
International cooperative initiatives (ICIs) – networks of cities, regions, companies, investors, civil society, and, in some cases, countries, pursuing common climate action – could have a significantly larger impact. If they realise their goals, they could lower emissions in 2030 by an additional 240 to 290 $MtCO_2e$/year or 37% to 39% below the current national policies scenario projections in 2030 (Figure 1, top panel). This would decrease emissions to a level between 400 and 450 $MtCO_2e$/year, the lower end of the range of South Africa's NDC target. Initiatives focused on cities and regions, such as the C40 Cities for Climate Leadership Group, Global Covenant of Mayors for Climate & Energy, and Under2 Coalition, account for the largest share of this estimated mitigation potential (Figure 1, bottom-right panel).

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 South Africa, 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.

Figure 1. Potential greenhouse gas (GHG) emissions reductions in South Africa 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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