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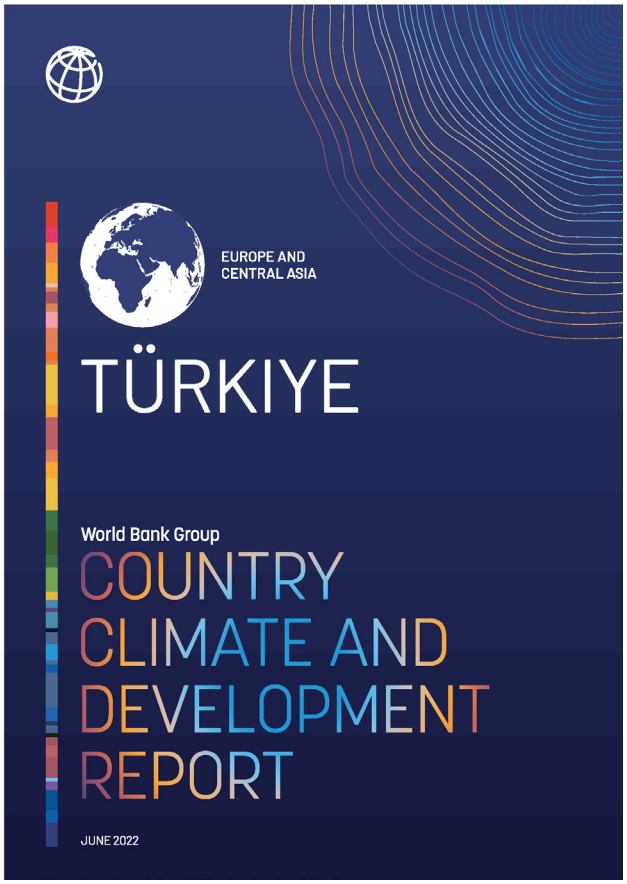
Will the Resilient Net Zero Development Pathway in the World Bank's Turkiye CCDR Reach Its Goal?

Introduction

IThe Country Climate and Development Report (CCDR), disclosed on June 13, 2022, adopts a people-centered and holistic economic approach to analyze how Türkiye's development priorities are compatible with a resilient net zero development pathway (RNZP). The CCDR highlights the ways in which Türkiye's current legislative and institutional frameworks can be enhanced to support this transition. In addition, the CCDR emphasizes that adopting an RNZP will not only help Türkiye meet its climate goals, but will also lead to economic gains as a result of less financing allocated towards mitigating the effects of climate-related events. The findings and recommendations in the CCDR will be supported and enhanced by the Bank's upcoming Country Private Sector Diagnostic (CPSD) and Financial Sector Assessment Program. This CCDR is expected to influence all future Bank activities in Türkiye. However, it primarily focuses on generating short-term results, signaling a need for additional analysis on the pathways and financing mechanisms for Türkiye to meet its long-term climate goals.

Overview of CCDR

Türkiye is highly vulnerable to climate change[1] and has faced an increase in both the severity and occurrence of climate-induced natural disasters. Simultaneously, it faces impediments to growth due to macroeconomic shocks and geopolitical events, which hinder its ability to take concrete measures to combat the effects of climate change.[2] Incorporating considerations of mitigation and adaptation have the potential to reverse this trajectory in the short-term, both of which will also help to support the economy and economic growth.



The Turkish Government's commitment to climate action is enunciated in its comprehensive international and domestic policies. Türkiye is a signatory to the Paris Agreement and has committed to net-zero greenhouse gas emissions by 2053.[3] Türkiye's National Climate Change Strategy (2010-23) and related documents[4] are intended to help Türkiye fulfill its climate targets, but the success is dependent on the government's ability to mainstream these policies. While Türkiye has revised its intended nationally determined contribution

1 As a result of its geographic, climatic, and socioeconomic conditions, Türkiye faces a higher vulnerability to climate change than other countries of a similar development status. For example, its vulnerability is ranked nine out of ten (ten being most vulnerable), whereas other OECD countries have an average rating of two. Figure 1.2: Climate risk and vulnerability in Türkiye and other OECD countries compares Türkiye's vulnerability in key sectors to that of other countries. World Bank Group. 2022. Türkiye Country Climate and Development Report. CCDR Series. Washington, DC: World Bank. http://hdl.handle.net/10986/37521, p.23.

2 World Bank Group, Turkiye CCDR, p. 21.

3 World Bank Group, Turkiye CCDR, p. 25.

4 Turkiye's other relevant environment and climate documents are: National Climate Change Action Plan (NCCAP) (2011-23), NCCAP Monitoring System, National Climate Change Adaptation Strategy and Action Plan (2011-23), and the 11th National Development Plan (2019-2023).

(INDC) to a nationally determined contribution (NDC), the commitments need to be more consistent with the RNZP (and the 2053 net zero goal) and incorporated into its national policies. If these elements are successfully implemented, Türkiye will have the legislative and institutional capacity to pursue a RNZP.

The CCDR presents a pathway for Türkiye to mainstream adaptation both proactively, through social and economic policy, and reactively, in adapting and managing climate-related disasters.[5] The CCDR implies that a strong economic system is needed for greater adaptation across the most vulnerable sectors, including: electricity production, transmission, and distribution; water collection, treatment, and supply; and transport, among others.[6]

A significant barrier to widespread incorporation of adaptation across Türkiye is that it is incumbent upon the government to define and assign responsibilities and create stronger institutional capacity. In addition, adaptation necessitates a fundamental shift compared to continuing to do business as usual, due to the need to incorporate resilience in land use and urban planning and factor it into design and building codes.. These will have a positive trickle-down effect on the incorporation of resilience in other sectors. The CCDR also quantifies how resilient infrastructure benefits the economy. For instance, 2.2 percent of Türkiye's GDP is lost to unreliable power and water supply and transport disruptions. Therefore, increasing the resilience of the electricity production and water supply sectors would be economically beneficial as long as the annualized expense is under 2.2 percent of GDP.[7]

The other portion of the development model proposed is centered around net-zero GHG emissions.[8] Türkiye has committed to net-zero emissions by 2053, and meeting this target requires adopting a net-zero pathway (NZP). The CCDR presents one viable NZP that emphasizes decarbonization and concentrates on six sectors: power; residential buildings (heating and cooling); transportation; agriculture, forestry, and land-use (AFOLU); industry; and waste management.[9]

Electrification and an increase in the use of renewable energy in the power sector, residential buildings, and transportation have the potential to generate significant emissions reductions.[10] The power sector is currently responsible for producing the largest share of emissions, due to its dependence on coal for electricity.[11] A successful transition away from coal requires removing coal subsidies and promoting renewable energy sources such as wind and solar.[12] Electrification of buildings and transport is equally as important for meeting the 2053 goal.[13] Additional emissions reductions are expected to come from AFOLU as a result of sustainable forest management as well as afforestation and reforestation.[14] These areas include a commitment to restore three million hectares of degraded forests and reforest half a million hectares.[15]

While the substantive information in the two sections on adaptation and mitigation differs, the two are fairly complementary and interconnected. The success of the RNZP as a whole is contingent on both adaptation and decarbonization. An example illustrating their duality is food systems. Türkiye is rated 47 out of 113 countries by the Global Food Security Index on food security and improving the supply chain and using country-specific climate-smart agriculture techniques can help to reduce food insecurity.[16]

The cost of implementing the RNZP is estimated at $165 billion or 1.2 percent of Türkiye's GDP over the course of 2022 to 2040.[17] While this is substantial, Türkiye will gain $146 billion during this same period mainly due to savings associated with decarbonization.[18]

Currently, Türkiye has subsidies fossil fuels, incentivizing the use of fossil fuels, which as a result, are less expensive than renewable alternatives. These subsidies pose a large challenge to mitigation action within Türkiye. One of the main macroeconomic tools that the CCDR advises for Türkiye is the implementation of carbon pricing through either

5 World Bank Group, Turkiye CCDR, p. 29.
6 The CCDR identifies that private sector vulnerability is high in the following sectors: sewerage; chemicals and chemical production; tourism; and construction. World Bank Group, Turkiye CCDR, p. 29.
7 The World Bank carried out an assessment to understand the threat of water security and found that a 10 percent reduction in water is likely to cost around $50 billion or 6 percent of its GDP. World Bank Group, Turkiye CCDR, p. 32.
8 In 2020, Türkiye was responsible for emitting 523.9 MtCO2e.
9 The CCDR notes that there are other opportunities for Türkiye to meet its decarbonization goals and highlights the need for additional analysis on the long-term pathways. World Bank Group, Turkiye CCDR, pp.38-48.
10 World Bank Group, Turkiye CCDR, p.39.
11 The power sector in Türkiye produced 149 MtCO2e in 2018.
12 World Bank Group, Turkiye CCDR, pp.40-41.
13 World Bank Group, Turkiye CCDR, p.44.
14 World Bank group, Turkiye CCDR, p.49.
15 World Bank Group, Turkiye CCDR, p. 49
16 World Bank Group, Turkiye CCDR, p. 36
17 World Bank Group, Turkiye CCDR, p. 51.
18 World Bank Group, Turkiye CCDR, p.52. It's worth noting that these are estimates that could change based on multiple factors; however, the point is that the proposed climate actions will produce benefits on a par with the costs.

a carbon tax or emissions trading system. When implemented properly, these can reduce greenhouse gas emissions and allow for revenues to be recycled into the economy. This revenue could be allocated specifically towards social protection programs which would promote a just transition for Türkiye's workers, or distributed on an equal per capita basis, which would provide a net benefit to the poor, since they have a smaller carbon footprint. Another approach that the CCDR offers is charging higher taxes on high emitting vehicles–proportional to the externalities of emissions. The issue will be transitioning from an economy dependent on fossil fuel subsidies to one with carbon pricing, which the CCDR does not address. As a result, the execution of the policies necessary for the RNZP will be largely dependent on the political processes within Türkiye. Türkiye must also have stable enough macroeconomic conditions for the climate actions to be successful. With shifting demand from carbon-intensive goods to more environmentally friendly products, Türkiye has the opportunity to strengthen its capacity for the development of green products and technologies.

The CCDR concludes with a set of policy recommendations for 2022 through 2030 that are aligned with an RNZP and Türkiye's development objectives. The recommendations are presented based on their urgency and include: (i) establishing the policy framework to support a just transition away from coal in the power sector; (ii) develop and implement macroeconomic policies that support climate, development, and economic objectives; (iii) mainstream energy efficiency across the economy; (iv) utilize negative emissions from forests[19] and landscapes; (v) promote resilient and sustainable growth; and (vi) advocate for a just and inclusive transition.[20]

Role of the World Bank

The World Bank has a unique role to play in helping Türkiye implement the policy recommendations included in the CCDR. Given Türkiye's middle-income status, the Bank will likely take a less hands-on approach, yet the Bank still has opportunities to facilitate faster and broader climate action. For example, the CCDR explicitly references two ongoing Bank engagements in Türkiye that support the energy transition and low-carbon long-term development. In addition, the Bank has the capacity to support Türkiye's development and implementation of a carbon tax through the Partnership for Market Implementation (PMI), which has already supported planning for this.[21]

Another opportunity for the Bank to provide support is in the field of disaster risk reduction (DRR) and helping Türkiye to develop a stronger, more robust DRR program. The CCDR referenced the need for Türkiye to improve its early warning systems and tools in DRR to become more resilient to climate change. The Bank has a comparative advantage in this area, including DRR targets in its Action Plan on Climate Change Adaptation and Resilience. This Plan demonstrates that the Bank can play an active role in this process.

Finally, the Bank can do more to support Türkiye's transition away from coal through its "Just Transition for All" Initiative and its "Supporting Energy Transition in Coal Regions" Initiative. These two initiatives have been specifically designed to help countries move away from coal and decommission coal power plants, while recognizing the importance of developing social safety nets to protect those most vulnerable. A majority of Türkiye's coal plants are less than 20 years old and their premature retirement or decommissioning is expected to cost around $4 billion. This sum does not include the cost of supporting a just transition, and through these initiatives, the Bank can help Türkiye develop the necessary framework and work to support the transition financing.[22]

Areas for Improvement

The CCDR provides valuable insights; however, it falls short in several areas needed for integrating Turkiye's climate and development agendas:

1. The fixation on technology and technological solutions. The CCDR repeatedly presents

19 The Bank's 2017 Turkey Forest Policy Note notes that the country's Climate Change Action Plan, adopted in 2011, "set out ambitious targets for afforestation and rehabilitation of degraded forests. Targets in the main have been met including afforestation, erosion control and rehabilitation. The forestry sector's contribution to Turkey achieving its INDC is significant. Mitigation activities are projected to reduce CO2 emissions by over 68.7 million equivalent tons representing 12 percent of the [INDC] 21 percent reduction commitment."
World Bank. 2017. Forest Policy Note- Turkey. World Bank, Washington, DC- page 12.

20 World Bank Group, Turkiye CCDR, pp.71-72.

21 See Republic of Türkiye, Ministry of Environment, Urbanization and Climate Change: Opportunities and challenges for a Just Transition created by carbon pricing policies – Türkiye Case (presentation, July 2022).

22 The World Bank helped Greece establish a framework to support its transition away from coal plants, which outlines the roles of various stakeholders in the process and serves as an example of a similar path the World Bank could take in Türkiye. In addition, the World Bank can use experiences and lessons learned from its Platform in Support of Coal Regions in Transition in Western Balkans and Ukraine and apply it to Türkiye.

technological solutions as a means to reduce emissions without addressing the root cause of climate change and environmental degradation. There are various examples throughout the CCDR, but one of note is included in the section on decarbonizing the power sector. In the proposed RNZP, one potential power source will come from "gas generation with carbon capture," which ignores the adverse effects associated with gas and prolongs its use, as well as the unproven nature of carbon capture as an economically viable solution.[23] Other technological solutions proposed are also costly and primarily effective in the short term. Similarly, in the agricultural sector, the Bank focuses on technological solutions, including increased R&D for new agricultural technologies and the potential for carbon sequestration. Yet agroecological and regenerative agricultural practices are already well-known and available; they need to be adapted and supported.

2. Carbon-intensive exports not addressed. The CCDR explains that, although the changes in demand for carbon-intensive products will decrease as a result of the EU CBAM, the overall impact will not be significant for Türkiye. Türkiye can just export to other countries, especially since there will be less competition for Turkish exports due to the higher resulting input costs for countries in the EU CBAM. This course of action does not actually address the issue of the environmental impacts of carbon-intensive products being produced by Turkiye. Instead, the CCDR focuses on the macroeconomic success of Türkiye as an exporter of these products. Although the report acknowledges that, in the scenario that the US and other large markets join the EU CBAM, the impacts could be more significant and Turkiye would need to shift away from these carbon-intensive products and towards green products. The initial scenario and advice demonstrates that there is not a priority to limit the production of carbon-intensive products.

3. Near term focus. The CCDR is primarily focused on the near to medium term, as in the solutions until 2030. This is a fairly significant limitation as Türkiye's NDC does not require actual reduction in GHG emissions before that date.[24] This makes it questionable whether Türkiye will build the ability, or political will, to meet meaningful long-term climate goals. The low carbon energy, industry, and infrastructure that will enable achieving its 2053 net zero goal needs to be reflected in the CCDR.

4. Limited promotion of the circular economy. The CCDR primarily presents the circular economy as a solution for reducing emissions in the waste management sector, but it should also be promoted in other sectors, such as transportation and mining, due to its promotion of electric vehicles.

5. Agricultural emissions unaddressed. When examining the potential for an emissions trading system (ETS) in Türkiye, the World Bank mentions that the ETS should exclude emissions from the agricultural sector, as to not potentially raise food prices. However, seeing that the agricultural sector makes up a significant portion of current emissions, and the agricultural sector plays a large role in Türkiye's economy, emissions in this sector must be combatted through a climate-smart approach, which the Bank has extensive experience in promoting.

6. NBS opportunities missed. The CCDR should have provided more nature-based solutions that can be adopted or prioritized in the AFOLU sector. While there are recommendations for a more integrated waste and nutrient management system for agriculture, the CCDR lacks substantial recommendations as to how Türkiye should be implementing nature-based solutions in agriculture and other land use sectors to address emissions at their root.

7. Where is the World Bank? Finally, the CCDR fails to provide a roadmap for the future of the World Bank engagement in the country. There is no mention of the Systematic Country Diagnostic, Country Partnership Framework or other relevant documents, like the 2017 Forest Policy Note. Considering the CCDR is expected to influence all future Bank activities in the country, the absence of the Bank's plans for engagement, or references to other Bank country planning documents, is a serious flaw.

Conclusion

This CCDR is a valuable resource insofar as it evaluates Türkiye's emissions profile and barriers to climate action and provides recommendations to help Türkiye align with an RNZP. Another benefit of this CCDR is that it demonstrates the compatibility between economic growth and climate action. The

23 World Bank Group, Turkiye CCDR, pg.15.

24 Türkiye's greenhouse gas emissions stood at 523.9 million tonnes of CO2e in 2020, a rise of 3.1% from a year earlier. However, the government projected GHG emissions to reach 1.175 billion tonnes by 2030 under business-as-usual conditions. Given the projection of rapid growth (124%!) by 2030 under BAU, Türkiye's NDC commitment still equals an increase of more than 30% in GHG emissions over the decade, "meaning that we will not deviate from the historical emission path," according to Bengisu Ozenc, director at Türkiye's Sustainable Economics and Finance Association.

Bank's commitment to adhere to this diagnostic in its future lending and operations is commendable; however, there is a gap around how Türkiye can sustain, enhance, and develop new strategies to meet its long-term climate goals. This raises significant concerns about the overall usefulness of the CCDR.

Other concerns associated with the CCDR include the failure to address behaviors that have contributed to climate change, such as Türkiye's use of coal and support for Türkiye's practice of exporting carbon-intensive goods. While these exports may not necessarily increase Türkiye's GHG emissions, they will have a global impact and contribute to climate change. Overall the CCDR falls short in many ways and fails to grasp the severity of climate change, as demonstrated by its failure to call for a complete stop to coal and gas, the failure to systematically address emissions from agriculture, and its short-term focus. If this CCDR is expected to influence the Bank's future activities, these shortcomings will need to be addressed for Türkiye's long-term success.

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