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To: Secretariat of the United Nations
Framework Convention on Climate Change (UNFCCC)

Submission on the First Global Stocktake

Mandate: Article 14 of the Paris Agreement and Decision 19/CMA.1
Thematic Area: Mitigation

Dear Sir / Madam

As a Non-party stakeholder without observer status of the UNFCCC, we would like to submit and share the first results of ongoing project namely “Developing a Method for Evaluation of the Amount of Greenhouse Emission Reduction of Countries According to the Paris Agreement” which is funded by Scientific and Technological Research Council of Türkiye (TÜBİTAK) Grant No. 121K009.

The aim of this project is to assess Nationally Determined Contributions (NDCs) and Long-Term Low Emissions Development Strategies (LT-LEDS) of countries in the Paris Agreement.

One of the main objectives of the project is to conceptualize and indexation of the main principles of the UNFCCC namely common but differentiated responsibilities and respective capabilities. The thematic area of the project is mitigation actions of countries.

This submission introduces the CBDR and RC indices approach to evaluate NDCs of countries. In the near future, the development of a toolkit to assess all NDCs will be completed for the sake of achieving ultimate objective of the UNFCCC and the Paris Agreement.

Kind regards,

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Addressing the Comparative Assessment of Nationally Determined Contributions

According to Lima Call for Actions and related decisions of the UNFCCC, parties of the UNFCCC have communicated their Nationally Determined Contributions (NDCs) in the light of their national circumstances. These first submissions were more frequent in 2015 which was before the adoption of the Paris Agreement. NDCs have been providing greater opportunities for the involvement of all countries whether they are developed or developing. In this perspective, the Paris Agreement has a historical success in avoiding Annex based emissions mitigation targets. The approach of the Paris Agreement also supports the motto – no one left behind - of the Agenda 2030 and the Sustainable Development Goals (Ari, 2017). On the other hand, assessment of the NDCs in terms of their ambition level is a problematic area. Although, UNFCCC the global stocktaking (GST) process is expected to analyze countries' NDCs in the light of scientific recommendations from the IPCC reports, it is ambiguous how countries' efforts or contributions will be adjusted to achieve 1.5°C or 2 °C targets of the Paris Agreement. To encourage the widest participation, these efforts must also exhibit justice and equality. However, implementation of justice and equality in the face of climate change is debatable and depends on the views of the parties. Countries' views on these values are reflected in their voluntary NDCs.

The main anticipation from NDCs is to contribute to achieving the ultimate objective of the UNFCCC and the Paris Agreement. Both dynamic and self-differentiation are exemplified within NDCs. Two guiding principles of the UNFCCC namely common but differentiated responsibilities and respective capabilities represent the mitigation responsibilities and capabilities of countries, respectively. Hence as a concretizing tool CBDR and RC principles have started to play a role in the multilateral climate discussions.

The scope of the project (Developing a Method for Evaluation of the Amount of Greenhouse Emission Reduction of Countries According to the Paris Agreement - funded by Scientific and Technological Research Council of Türkiye) covers NDCs and long term low emissions development strategies of top-60 emitters. These countries account for more than 90 per cent of global emissions. The creation and revision of some updates indices for CBDR and RC (Ari and Sari, 2017) provides an opportunity for comparative assessment of NDCs. Due to the compilation of various types of NDCs, it is a challenging work to evaluate the targets' alignment with the Paris Agreement goal. There are several inputs for this comparative assessment process, such as:

- Created CBDR and RC indices for those top-60 countries.

- Quantified NDC targets which can be absolute emissions mitigation, deviation from the business as usual, peak year, intensity or performance based, and policies and strategies.
- Global carbon budget for 2°C and 1.5°C target of the Paris Agreement. These budgets are based on the assessment of UNEP's Emissions Gap Report (UNEP, 2022).
- The amount of required and limited emissions for each top-60 in 2030 according to CBDR Index score based on carbon budgets.

Created CBDR and RC indices are shown in Figure 1 and Figure 2. Originally, Ari and Sari (2017) conceptualized CBDR and RC indices. Now, in this project, CBDR index is created with six perspectives defined in the IPCC Mitigation of Climate Change Report (Kolstad et al., 2014). As for RC index, it includes four dimensions namely economic, social, technological and governance.

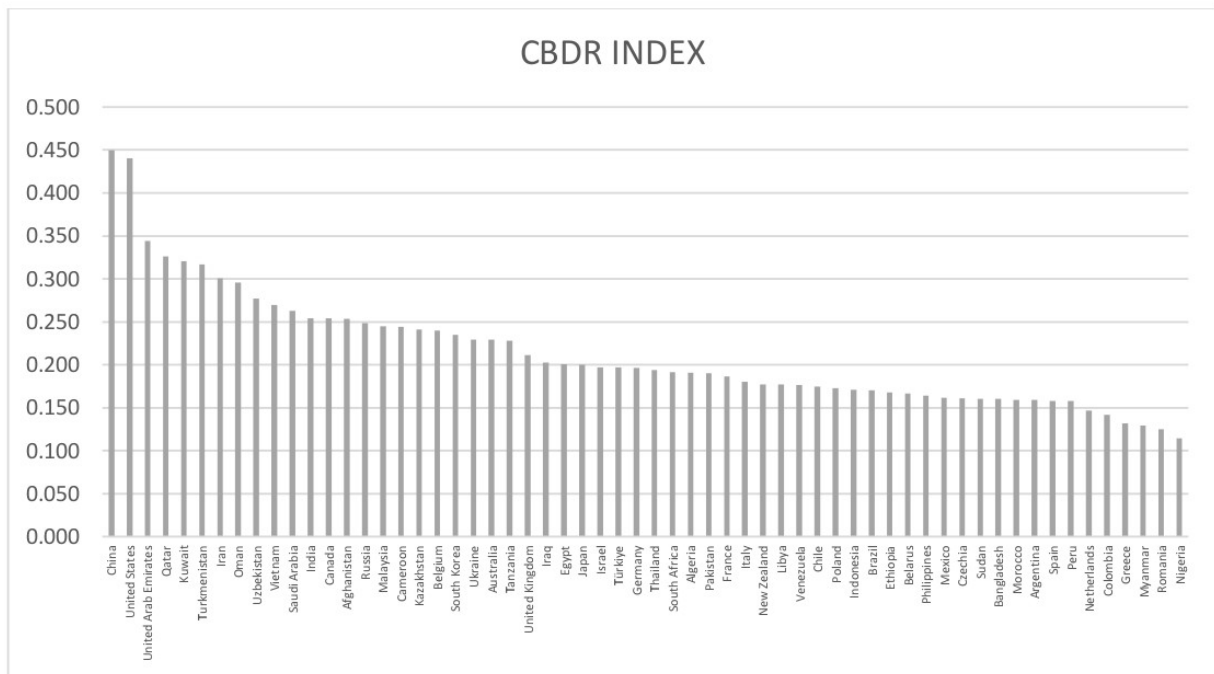


Figure 1. CBDR Index Scores of Top-60 Emitters

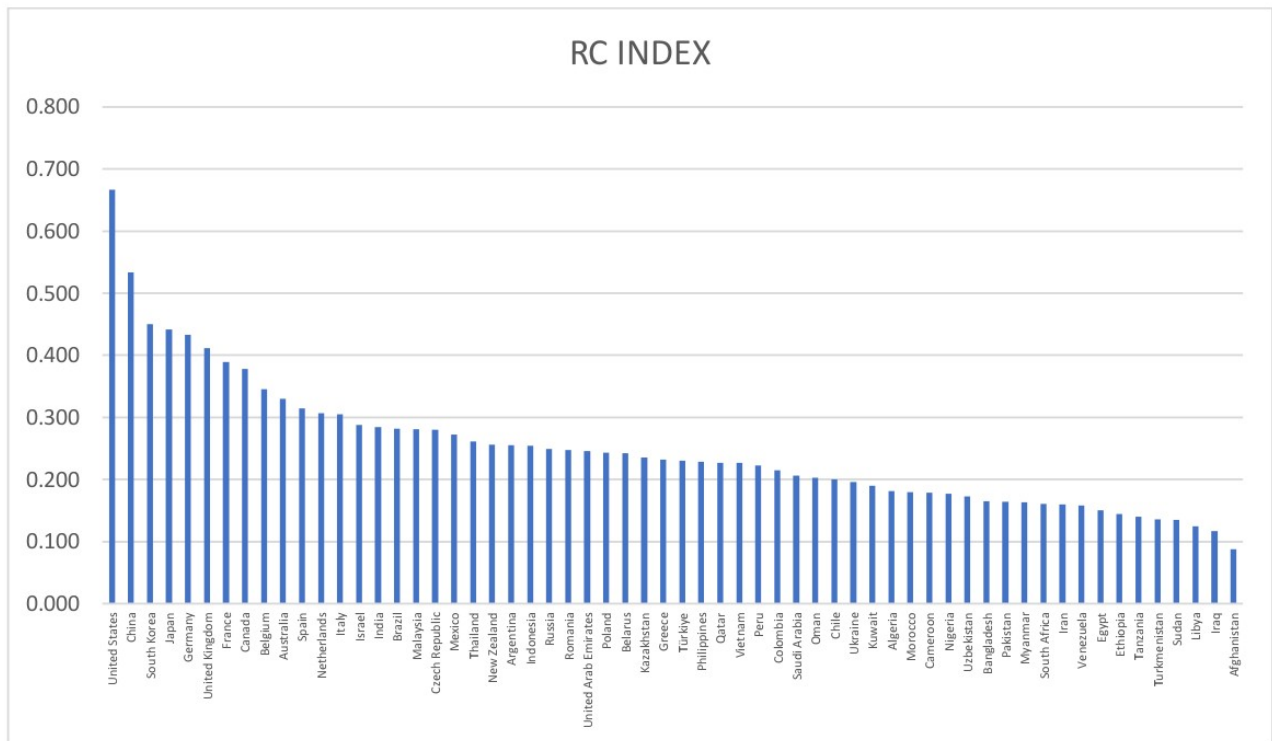


Figure 2. RC Index Scores of Top-60 Emitters

NDC emission targets of countries are compared with the UNEP Emissions Gap Report and UNFCCC Synthesis Report (UNEP, 2022; UNFCCC, 2022a, 2022b). [The preliminary results](#) (Orion-Climate, 2023) of the mitigation gap between NDC targets and 1.5°C / 2°C targets show that:

- 49 per cent of countries contribute to achieving 2°C target of the Paris Agreement in 2030 (Figure 3)
- 27 per cent of countries contribute to achieving 1.5 C target of the Paris Agreement in 2030 (Figure 4)

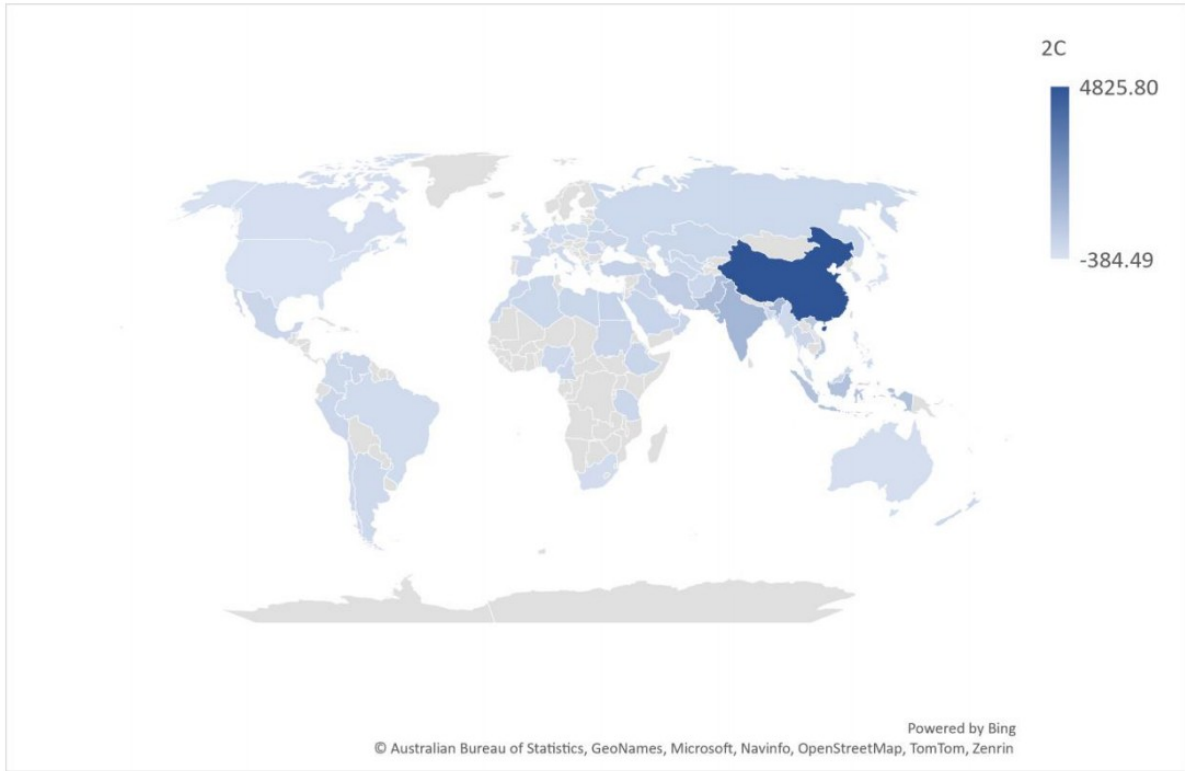


Figure 3. Required Emissions Mitigation to achieve 2°C target by 2030, million tons

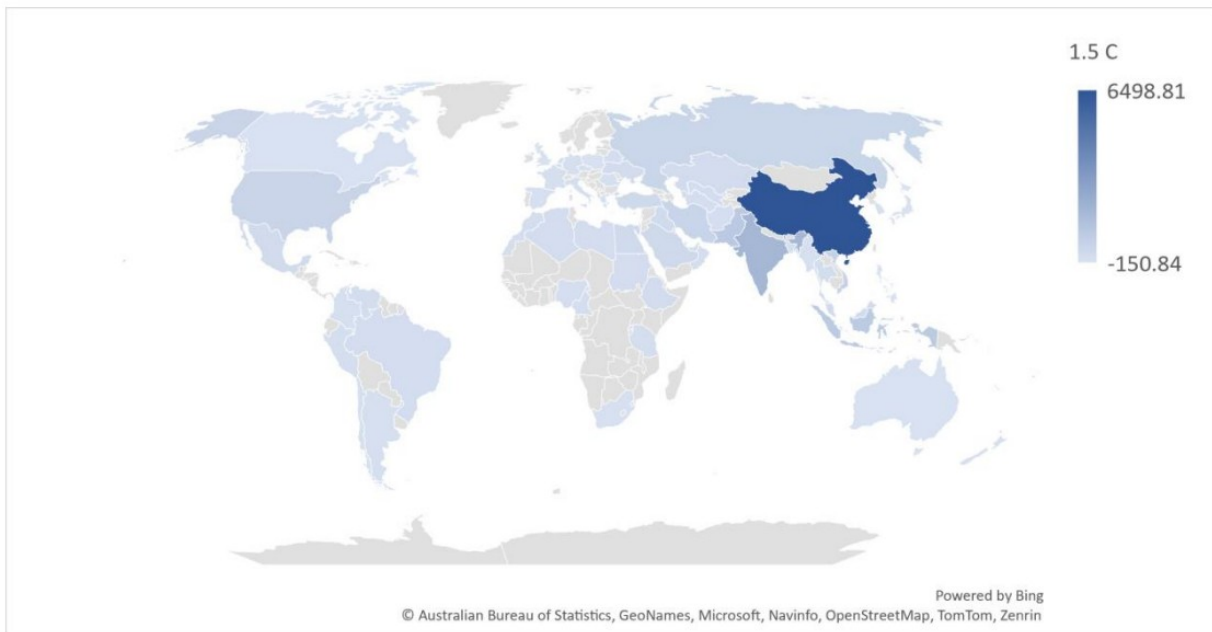


Figure 4. Required Emissions Mitigation to achieve 1.5°C target by 2030, million tons

NDC targets of countries are partially aligned with the remaining global carbon. While, the existence of the CBDR-RC principles would provide a dynamic and self-differentiation, they should also ensure climate justice, equity and taking ambitious mitigation targets. Using CBDR and RC indices as an adjustment tool for determination country-based remaining carbon budget addresses the main question:

- Which countries should increase their commitments and by how much?

Therefore, discussions around fairness, equity and climate justice for effective differentiation criteria of the NDCs for timely climate change actions (Klinsky et al., 2017; Kverndokk, 2018; Liu et al., 2017; Okereke and Coventry, 2016; Will and Manger-Nestler, 2021) will be addressed by rational, fair, science based, ambitious and progressive NDCs to converge towards the goal of the Paris Agreement. Creating a tool for CBDR and RC principles is not aimed to support dichotomic discussions between developed and developing countries, they can provide windows for multidimensional and argumentative issues of responsibilities and capabilities and their reflections on emission mitigation.

NDCs of countries should serve the purpose of achieving the global temperature target. According to CBDR and RC indices, countries should express more ambitious targets in accordance with their capabilities and responsibilities.

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