



GGCC GROUP GOVERNANCE CLIMATE CHANGE

CITES. Sustainability Science and Technology
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HOW TO OPERATIONALIZE EQUITY IN THE MITIGATION COMPONENT OF THE PARIS AGREEMENT?

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Submission of the Group of Governance on Climate Change of the Universitat Politècnica de Catalunya to call all Parties, Observers, and other non-Party stakeholders to submit suggested topics in line with the scope of the work programme referred to in Paragraph 4 of FCCC/PA/CMA/2022/L.17, para. 12 to be discussed under the dialogues.

SUGGESTED TOPIC

How to operationalize equity in mitigation for the implementation of the Paris Agreement in order to urgently scale up mitigation ambition during this decade.

LINE OF ARGUMENTATION

1. EQUITY IN THE PARIS AGREEMENT AND ITS MITIGATION COMPONENT

Article 2.2 of the Paris Agreement states that: “This Agreement will be implemented to reflect **equity** and the principle of common but differentiated responsibilities and respective capacities, in the light of different national circumstances” (United Nations 2015). This indicates that the principles of equity and CBDR-RC are meant to guide the implementation of the Paris Agreement and its operational provisions and related rules. This applies across the whole Paris Agreement, but it is especially relevant to the operational provisions concerning mitigation and the Global Stocktake.

Article 4 of the Paris Agreement on mitigation, reinforces the equity idea in the context of the long-term goal for mitigation and sets a timetable for NDC ambition in the light of IPCC assessments of emissions cuts required to meet the long-term temperature goal. Furthermore, Article 4.1 states that “In order to achieve the long-term goal..., Parties aim to reach global peaking of GHG emissions as soon as possible, recognizing that peaking will take longer for developing country Parties. And, to undertake rapid reductions thereafter following the best available science, to achieve a balance between anthropogenic emissions by sources and removals by sinks of GHG emissions in the second half of this century, **on the basis of equity**, and in the context of sustainable development and efforts to eradicate poverty” (United Nations 2015). Thus, equity is intended not only to underpin the Paris Agreement in general terms, but more specifically to inform national mitigation contributions.

In August 2023 the UNFCCC Secretariat received a request from a group of Parties to include an agenda item for COP 28 on the “Operationalization of the principles of equity and common but differentiated responsibilities and respective capabilities, in accordance with Article 2, paragraph 2, of the Paris Agreement”. At COP 28 in Dubai, UAE, the incoming Presidency held consultations on the matter and the COP, CMA and SBs agendas were adopted with the agreement that the equity item requested for inclusion would be discussed under the First Global Stocktake (GST) item (4) of the CMA.5 agenda. However, the CMA.5 GST decision did not address the operationalization of the principles of equity and common but differentiated responsibilities and respective capabilities; and hence the topic still lacks guidance in the Paris Agreement regime UNFCCC (2023a).

2. ANALYSIS OF THE INFORMATION PRESENTED IN THE NDCs IN RELATION TO EQUITY

It’s worth noting that, according to the Paris Rulebook, in communicating their second and subsequent NDCs, Parties shall provide the information necessary for clarity, transparency and understanding (ICTU) of NDCs. (Decision 4/CMA.1). This information includes “How the Party considers that its Nationally Determined Contribution is fair and ambitious in the light of its national circumstances”. Specifically, Parties are requested to provide fairness considerations, including reflection on equity. (UNFCCC, 2018).

In this context, the Group of Governance on Climate Change (GGCC) of the Universitat Politècnica de Catalunya (UPC) has developed an analysis of the information contained in the updated NDCs submitted after the adoption of the Paris Rulebook. This analysis is focused specifically on the Fairness and Ambition section of the NDCs.

The NDCs analyzed represent new or updated NDCs reported by 176 Parties (41 Annex I Parties and 135 non-Annex I Parties) that entered in the NDC registry between January 2019 and December 2023. Note that 27 members of the European Union are only counted individually in this analysis. The main findings are presented below.

First, it is important to highlight that only 151 Parties included a section on Fairness and Ambition in their NDCs. It should also be noted that 100% of Annex I Parties have included this section in their NDCs, while a total of 81% of non-Annex I Parties (110 Parties in total) have included it.

In relation to fairness considerations, 91 Parties include references to the principle of equity in their NDCs. Among them, only 17% of Annex I Parties and 76% of non-Annex I Parties refer to this principle. Both explicit (direct citation of the principle) and implicit references, according to the definition given in the Declaration of Legal Principles relating to Climate Change (International Law Association, 2014), are considered.

The following analysis has been conducted by classifying Parties into three groups according to the UNCTADstat (2022) classification: Developed countries, Developing countries, and the third group that includes Least Developed Countries (LDCs) and Small Islands Developing States (SIDS). It is interesting to separate the LDCs and SIDS from the other developing countries taking into account that the Paris Agreement recognizes them as particularly vulnerable to the adverse effects of climate change and with significant capacity constraints. Moreover, Decision 18/CMA.1 of the Paris Rulebook, about the enhanced transparency framework, gives LDCs and SIDS a high level of flexibility in their reporting processes.

Figure 1 illustrates how these 91 Parties that include a reference to the principle of equity in their NDCs, are distributed according to two indicators:

- **Cumulative CO₂ emissions per capita in the period 1990-2019.** This indicator can be used to inform about the historical responsibility of the country (Gütschow J *et al.*, 2021).
- **GDP-PPP per capita.** This indicator reports on the country's capacity to address climate change mitigation and/or adaptation measures (World Bank, 2023).

The orange lines indicate the average value of the global GDP-PPP (USD, year 2020) (vertical line) and the global average of emissions per capita (horizontal line). Both values were calculated with the data available from the 196 countries which are Parties to the UNFCCC. The countries are classified as Developed, LDCs and SIDS, and Developing (excluding LDCs and SIDS) countries. The colors of the points indicate the group to which each country belongs. Additionally, the white points show countries of any group which have not referred to the principle of equity in the Fairness and Ambition section.

Thus, among the countries that include the section on Fairness and Ambition, only 22% developed countries include the concept of equity. This situation is very different from the rest of the countries considering that this concept is referred to by 72% of developing countries and 84% of LDC and/or SIDS.

In general, and as can be seen in Figure 1, the results of the analysis of the NDCs show that the Parties that provide some reference or consideration about equity in their NDCs are mostly those with less historical responsibility and less economic capacity to face the mitigation challenges and the effects derived from the current climate crisis. More specifically, LDCs and SIDS countries, with more flexible

requirements on transparency, are those that more frequently appeal to the principle of equity. This fact is understandable when considering their high levels of vulnerability and low capacity to deal with the climate crisis. On the other hand, it is proven that there are very few countries with a high historical responsibility and economic capacity that include references to any principles related to fairness in their arguments.

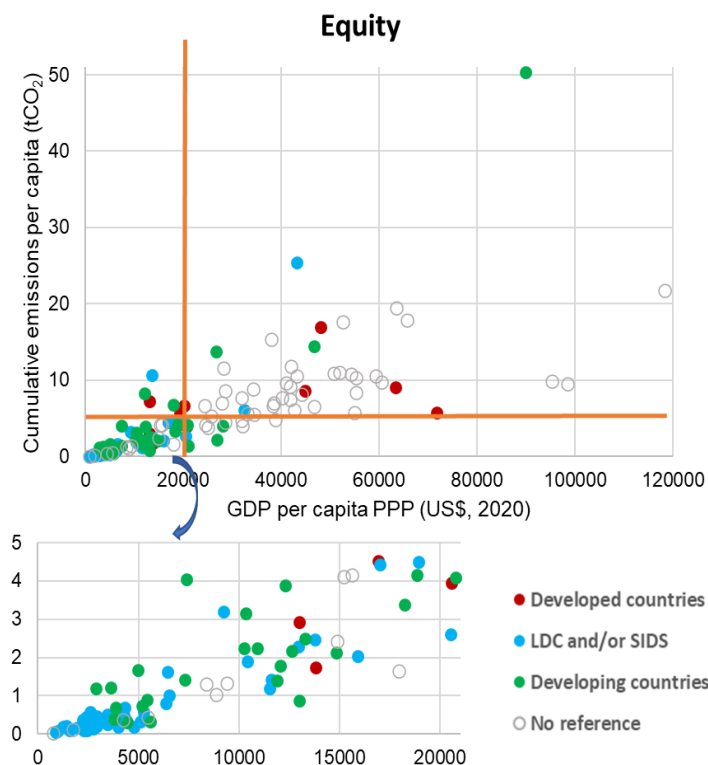


Figure 1. Mapping of countries that refer to the principle of equity in the Fairness and Ambition section of their NDC. The vertical orange line indicates the value of the global average GDP per capita, while the horizontal orange line represents the global average of emissions per capita. The colored points indicate the classification of countries in three groups: Developed (red), Developing (green) and LDCs & SIDS (blue). Additionally, the white points show countries which have not referred to the principle of equity in the named section. The lower graphs zoom in the lower left section of the upper graphs. Source: GGCC-UPC.

Considering that providing the information necessary for clarity, transparency and understanding (ICTU) of NDCs, which includes “fairness considerations, including reflection on equity” is mandatory for Parties from the second and subsequent NDCs, it will be crucial to debate on how to include equity considerations in the next round of NDCs.

3. THE GLOBAL CARBON BUDGET AS A REFERENCE FOR EQUITY

There is a direct, linear relationship between the average global temperature increase and the cumulative CO₂ emissions released into the atmosphere since the industrial revolution.

In accordance with the Sixth Assessment Report (AR6) of the IPCC, the Global Carbon Budget (GCB) refers to the maximum amount of cumulative net global anthropogenic CO₂ emissions that would limit global temperature rises to a given level. It is important to note that the cumulative historical emissions up until this point have mainly been from industrialized countries. Thus, the remaining GCB is the total quantity

of CO₂ emissions that could still be released while keeping warming below a specific temperature level (IPCC 2021).

According to the AR6, the remaining GCB from the beginning of 2020 that is compatible with the Paris Agreement goal of limiting the global temperature increase to 1.5 °C, with a 67% probability, amounts to 400 GtCO₂. As stated in the outcome of the first Global Stocktake carried out during last COP28, the carbon budget consistent with achieving the Paris Agreement temperature goal is now small and being rapidly depleted (UNFCCC, 2023a). And the last NDC synthesis report estimates that cumulative CO₂ emissions in 2020-2030 will be around (430±10) GtCO₂ (UNFCCC, 2023b). Furthermore, the GGCC has estimated the carbon budget to be utilized by the Parties that have integrated net-zero emission (NZE) targets within their LT-LEDS. The analysis reveals that this group of Parties (i.e. those reporting on LT-LEDS and those with NZE targets), currently encompasses 37% of the global population and is responsible for 62% of global emissions. If these NZE targets are met, the group is projected to consume a total of 431 GtCO₂. This study also reveals that the existing NZE targets set by developed nations entail a carbon budget consumption significantly exceeding their equitable share, while those formulated by less developed countries remain notably below their due allocation. This divergence could potentially limit the capacity of the latter group to foster their development, compounded by the challenges of addressing climate change impacts (Cruanyes, 2023)

The portion of the Remaining GCB that each country takes when implementing its NDCs and Long-Term Low Greenhouse Gas Development Strategies (LT-LEDS) serves as a basis for determining its national climate equity perspective.

4. EQUITY-BASED ANALYSIS OF THE CURRENT NDCs MITIGATION COMPROMISES

Similarly, we have carried out an analysis of the cumulative CO₂ emissions that the current updated NDCs entail in the 2020-2030 period. Our work compares the countries' population with their respective cumulative historical emissions. This analysis is applied to groups of countries according to their income level based on the World Bank classification (World Bank 2022) and it is made only using historical data. Historical GHG emissions data are obtained from the Climate Watch portal (2022) and population from the UNDESA World Population Prospects (2019). Countries are grouped according to their income level based on the World Bank classification (World Bank 2022).

Our analysis of the aggregated effect of the unconditional NDCs indicates that the intended cumulative CO₂ emissions foreseen by the current NDCs from 2020 to 2030 totals 390 GtCO₂. This allows us to affirm that by 2030, humanity will have already consumed 97.5% of the GCB compatible with limiting the increase in global temperature to 1.5°C (with a probability of 67%), which according to the AR6-WGI is 400 GtCO₂ (IPCC 2021).

The analysis of the percentage distribution of the 390 GtCO₂ implied by the unconditional NDCs for different groups of countries is presented in Figure 2 (Column 3). For each group, the percentage of historical emissions during the period 1990–2019 is also presented with respect to the total emissions in the same period (Figure 2, Column 2). The percentage of the population in 2020 that corresponds to each analyzed group of countries is shown in Column 1 (UNDESA 2019).

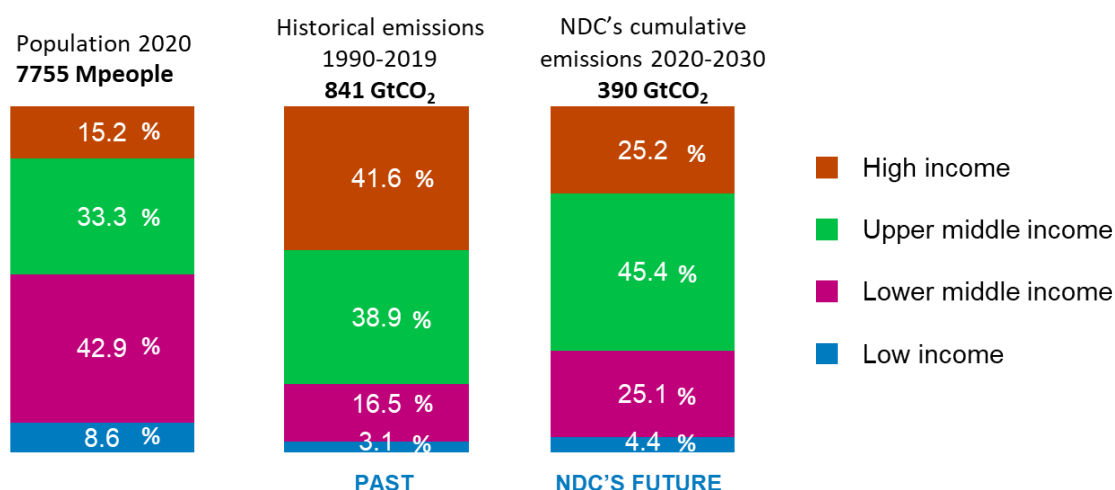


Figure 2. Column 1, shows the percentage distribution of the population in 2020; Column 2, indicates the historical cumulative emissions (1990–2019); and Column 3, the cumulative emissions according to the unconditional NDCs; for the groups of countries according to their income level (World Bank).

- The high-income countries contain 15.2% of the current world population but take 25.2% of the cumulative emissions until 2030, which is not compatible with the principle of equality. In addition, these countries have already been responsible for 41.6% of the cumulative historical emissions, so it cannot be said that the current NDCs address the responsibility dimension.
- The upper-middle-income countries, that include China, qualitatively follow a similar pattern to that of the high-income countries, although the percentage differs between the different columns are lower.
- For the lower-middle-income countries, which include India, and low-income countries, the situation is opposite to that described above. These country groups contain more than half of the world population in 2020 (42.9% and 8.6%, respectively) yet, they will only represent 29.5% (25.1% and 4.4%, respectively) of the cumulative emissions until 2030, being historically responsible for 19.6% (16.5% and 3.1% respectively) of emissions.
- In the 2020–2030 period, the share of the carbon space used by high-income countries decreases when compared to that used between 1990–2019. But compensation for the poorest countries following their development needs, historical responsibilities, and their population level, is not achieved.
- Therefore, our analysis finds that the current NDCs are not equitable because they do not take into account the dimensions of equality and historical responsibility. Besides, they do not address the issue of the right to development. The poorest countries, which are the ones that lack the most basic infrastructures for development, are still taking a share of the carbon space lower than that allocated according to their population share.

5. CONCLUSIONS

As already shown, the Paris Agreement incorporates the consideration of equity in its own essence and explicitly in Articles 2.2 and 4.1. Analyzing the reflections of equity made by countries in their NDCs, it is clear that developed countries, responsible for the highest share of historical emissions, are the group that includes equity in their NDCs the least. Conversely, the vast majority of developing countries, LDC and SIDS include that consideration. Therefore, a congruent implementation of the Paris Agreement should consider NDCs that adequately describe how each country considers equity when defining its mitigation commitments.

The remaining GCB can be understood as a planetary boundary. According to the AR6-WGI, the remaining GCB compatible with the Paris Agreement is 400 GtCO₂ from 2020 onwards. Regardless of the bottom-up nature of the Paris Agreement, if the long-term mitigation goal set up in the Agreement has to be achieved, countries have to deal with this planetary constraint. The percentage of the remaining GCB that the mitigation commitment included in an NDC or an LT-LEDS implies that it can be used to assess if this commitment is equitable or not.

The analysis of the current NDCs leads to the conclusion that the NDCs are not ambitious enough and do not incorporate the principle of equity. Firstly, they are insufficient because, by 2030, they would collectively consume 97.5% of the remaining GCB. Secondly, they are not based on equity because high-income countries have pledged to consume a higher portion of the GCB that would be allocated following their population share (equality) or their historical emission (responsibility).

Consequently, to operationalize ambition and equity in the Paris Agreement in this decade and to respond to the mandate of the MWP, this submission suggests that Parties should consider specific and common entry points and indicators to better reflect on the equity considerations of the NDCs.

6. THE RATIONALE OF THE SUGGESTED TOPIC

Based on the latest NDCs submitted by Parties since 2020 in the context of the first NDC update milestone, it is very likely that the 1.5°C temperature goal of the Paris Agreement will be exceeded during this decade. For some Parties and independent organizations, this is caused in part by the fact that some NDCs do not reflect the principle of equity due to the failure to operationalize it in the Paris Agreement regime. In addition, Parties have so far failed to form a consensus around individual assessments of the ambition and adequacy of NDCs.

Thus, as described above, the remaining GCB for limiting temperature increase to 1.5°C is rapidly being depleted, and hence, the portion that each country takes when implementing the Paris Agreement serves as a basis for determining its national equity perspective and therefore, its climate ambition.

On the other hand, our assessment of the updated NDCs shows that the implementation of current mitigation commitments will result in the consumption of the remaining GCB in a manner that does not reflect equity as it is stated in the Paris Agreement.

Therefore, considering the legally binding nature of the Paris Agreement and the fact that the MWP aims to develop a process to urgently scale up mitigation ambition and implementation of the Agreement, it is then suggested that the MWP addresses the importance of operationalizing equity in the mitigation component of NDCs in order to respond to the mandate of the MWP. When addressing the equity topic in the MWP, Parties should consider what entry points and indicators could be in place to operationalize equity within the Paris Agreement regime.

Continuing to ignore the needs of fairness and equity considerations in the implementation of the Paris Agreement does not make the multilateral climate process neutral, but it just perpetuates the unfairness on how global resources as the carbon budget have been used up to date.

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