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Self-Differentiation of Countries' Responsibilities

Addressing Climate Change through Intended Nationally Determined Contributions

Kennedy Liti Mbeva
Pieter Pauw

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Bonn, February 2016 Kennedy Liti Mbeva and Pieter Pauw

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Abbreviations

AILAC	Asociación Independiente de Latinoamérica y el Caribe
BASIC	Brazil, South Africa, India and China
CBDR	Common But Differentiated Responsibilities
CBDR-RC	Common But Differentiated Responsibilities and Respective Capabilities
COP	Conference of the Parties
CSO	Civil Society Organisation
EU	European Union
GDP	Gross Domestic Product
GHG	Greenhouse Gas
INDC	Intended Nationally Determined Contribution
LDC	Least-Developed Country
OECD	Organisation for Economic Cooperation and Development
SIDS	Small Island Developing States
UN	United Nations
UNCED	United Nations Conference on Environment and Development
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change

Executive summary

As a result of the United Nations (UN) climate negotiations in Warsaw in 2013, all countries were invited to submit a climate action plan – or "Intended Nationally Determined Contribution" (INDC) – as part of the preparations for the 2015 UN climate summit in Paris (COP21). The innovation of this instrument lies in the fact that it is universal (each country formulates one) and that they are formulated "bottom-up" (countries set their own priorities and ambitions). In theory, this stimulates countries' self-differentiation of responsibilities and capabilities to address climate change.

This paper analyses 159 INDCs on whether they advanced self-differentiation in the context of the notion of common but differentiated responsibilities and respective capabilities (CBDR-RC). The analysis focuses on aspects beyond mitigation targets, including INDC sections on fairness / equity as well as INDC content on adaptation and climate finance.

Findings are provided for three country groupings:

- 15 "Annex I" parties, representing 42 countries (the EU, as one Party, represents 28 countries);
- 79 least-developed countries (LDCs) and small island developing states (SIDS), given the Paris Agreement's subtle differentiation towards these country groups;
- 65 "Middle countries" that fit neither category: a heterogeneous mixture of predominantly middle-income countries.

This paper offers two main conclusions:

First, bottom-up setting of priorities and ambitions in INDCs advanced the issue of CBDR-RC beyond mitigation to include, at least, adaptation and finance. Although Annex I countries hardly mention adaptation in their INDCs, Middle countries, and LDCs and SIDS prioritise adaptation. The latter group, in particular, included adaptation plans and strategies. Climate finance was also hardly mentioned by Annex I countries. For Middle countries, however, and for LDCs and SIDS in particular, climate finance is often a condition for undertaking mitigation and adaptation.

Second, self-differentiation through INDCs advanced the evolution of differentiation beyond the bifurcation of Annex I and non-Annex I countries. For example, the three country groupings introduced above have cascading priorities and ambitions in adaptation and finance. Such differentiation already appears in the Paris Agreement through "subtle differentiation": flexible differentiation that is applicable to specific subsets of countries (e.g. the LDCs and SIDS) on certain issues (e.g. adaptation and finance) and procedures (e.g. timelines and reporting).

The bottom-up formulation of INDCs brought many interesting insights about the climate politics and policies of years to come. However, as much as the instrument is universal, the limited guidance on the formulation of INDCs allowed for non-universal INDC content. For example, it is problematic that only the potential recipients included climate finance in their INDCs. Also, the adaptation challenge (e.g in terms of cost estimates and the global goal on adaptation that was decided upon in the Paris Agreement) remains unclear because developed countries did not include adaptation in their INDCs.

1 Introduction

One of the biggest challenges in the UN climate change negotiations is the differentiation of common responsibilities to address climate change. Countries' contributions to global greenhouse gas (GHG) emissions and the climate change impacts they face are poles apart. These differences, as well as countries' different capabilities and development levels, have been internationally acknowledged by including the notion of "common but differentiated responsibilities and respective capabilities" (CBDR-RC) in the preamble of the United Nations Framework Convention on Climate Change (UNFCCC) of 1992 (United Nations [UN], 1992b):

> [T]*he global nature of climate change calls for the widest possible cooperation by all countries and their participation in an effective and appropriate international response, in accordance with their common but differentiated responsibilities and respective capabilities and their social and economic conditions.*

CBDR-RC has typically been – and often even implicitly – related to mitigation (Ciplet, Roberts, & Khan, 2012; Klinsky & Winkler, 2014). Indeed, the most evident operationalisation of the logic of CBDR-RC is the 1997 Kyoto Protocol, in which only developed countries are obliged to reduce or limit their GHG emissions.[1] However, this approach was not successful. The United States never ratified the Kyoto Protocol; Canada withdrew from it; and Japan and Russia have no binding targets in its second commitment period (2013–2020). Furthermore, emerging economies such as China and India have seen their share of global GHG emissions rise rapidly (Olivier, Janssens-Maenhout, Muntean, & Peters, 2015), effectively undermining the legitimacy of the Annex I / non-Annex I country groupings under the UNFCCC (see, e.g., Parikh & Baruah, 2012; Pauw, Bauer, Richerzhagen, Brandi, & Schmole, 2014).[2] The failure of the international climate negotiations in Copenhagen in 2009 unravelled the political futility of continuing with this dichotomy, with the chasm growing between Annex I countries and mainly emerging developing countries (Carter, Clegg, & Wåhlin, 2011).

The often implicit and typical limitation of CBDR-RC to mitigation (in particular, emission reductions) has also monopolised and narrowed the narrative of climate policy as being an environmental problem, when it is, in fact, also a development problem (Hermwille, Obergassel, Ott, & Beuermann, 2015; Atapattu, 2008; Mbeva, Ochieng, Atela, Khaemba, & Tonui, 2015).

The United States delegation has consistently lobbied for a universal international agreement on climate change (Bortscheller, 2010). This position was well-articulated by Robert Reinstein, who, after being a chief US negotiator for the UNFCCC, published a paper in 2004 in which he stated that, "*the next stage of negotiations needs to approach the issue of*

1 Here, developed countries are the "Annex I" country parties: a list of 43 parties that included all of the member states of the Organisation for Economic Cooperation and Development (OECD) (as of 1992) plus a host of additional states undergoing the process of transition to a market economy in the wake of the Soviet Union's collapse.

2 Most of the global increases in emissions since the late 1990s have occurred in developing countries. The countries that were not part of the OECD in 1990 emitted 61 per cent of the global emissions in 2014, compared to 32 per cent in 1990 (Olivier et al., 2015).

future commitments by all countries from the bottom up, in light of large differences in national circumstances, especially for developing countries" (Reinstein, 2004, p. 309). Reinstein furthermore notes that such commitments should not only include emission targets but also elements such as adaptation, as well as commitments by industrialised countries to enhance research, public education and development (Reinstein, 2004). Financing climate policy is also linked to CBDR-RC through Article 4.3 of the UNFCCC, which requires developed countries to provide financial support to developing countries to assist the latter in addressing climate change issues.

Reinstein was probably only one of the many trailblazers, but large parts of his "way forward" have now become reality through the INDCs. The Durban Platform of 2011 provided the slate upon which to build a bottom-up and universal (i.e. based on contributions by all countries) global climate regime (United Nations Framework Convention on Climate Change [UNFCCC], 2011). The Durban Platform for Enhanced Action was envisioned to "*develop a protocol, another legal instrument or an agreed outcome with legal force under the Convention applicable to all Parties (...), which shall be adopted at the twenty-first session of the COP, in 2015, for it to come into effect and be implemented from 2020*".[3] We will refer to this agreement, which was adopted in Paris on 12 December 2015, as the "Paris Agreement" in this paper. "Applicable to all" has a political rather than a legal significance. It does not imply that it is applicable in an asymmetrical manner to all. It is a signal that the UNFCCC regime is moving towards more symmetrical obligations, at least in so far as the nature and form of the obligations (even if not their stringency) are concerned (Rajamani, 2012).

As an instrument, the Intended Nationally Determined Contributions also embody this "applicability to all", pursuant to a decision of the Warsaw Conference of the Parties (COP19) in 2013.[4] In essence, INDCs have since proven to be the main building blocks for increased ambition under the 2015 Paris Agreement: 159 INDCs were submitted before the adoption of the Paris Agreement (see Figure 1), thereby providing much more information than before on countries' priorities and ambitions in climate policy.

Although the instrument of INDCs is universal, the formulation of the contributions is a bottom-up process in which countries can contextualise and self-differentiate their contributions based on their national circumstances and priorities. However, national priorities and ambitions may not necessarily mean that INDCs are fair and ambitious from an international perspective (as will be explained in Section 3.3).

Official criteria (let alone metrics) for fairness and ambition have not been agreed upon by the UNFCCC. However, one approach to address this issue is for countries to clearly detail the concepts and approaches used in determining the fairness of their contributions, such as responsibility, capability, cost-effectiveness, methodologies, data and any assumptions underlying the data and methodologies (Herold & Siemons, 2014). Other approaches include the development of an indicator basket (Climate Action Network [CAN], 2013), sectoral-based differentiation, and applying the same principles and obligations but with

3 Decision 1/CP. 17.

4 Decision 1/CP. 19 (see UNFCCC, 2013).

differentiated stringency of commitments (van Asselt, Sælen, & Pauw, 2015). These varied proposals illustrate the lack of agreed metrics for defining fairness.

It is in this context that this paper assesses how self-differentiation through the bottom-up setting of climate priorities and ambitions reflects the notion of CBDR-RC, under the following objectives:

1. analysing whether INDCs advance differentiation beyond the established bifurcation of Annex I and non-Annex I countries; and
2. analysing whether self-differentiation includes other aspects apart from mitigation.

This paper proceeds as follows: Section 2 presents a brief overview of the concept of CBDR-RC and its evolution in international climate policy; Section 3 analyses COP guidance for the formulation of INDCs and reviews the emerging literature on the notion of CBDR-RC in the formulation of INDCs; Section 4 provides the results of our analysis on ways in which CBDR-RC is advanced in INDCs; and Section 5 concludes by summarising the key findings as well as offering some recommendations for policy and future research.

2 The notion of common but differentiated responsibilities

2.1 Evolution of CBDR in the international context

The notion of common but differentiated responsibilities predates the international climate regime and its concept of CBDR-RC.[5] CBDR originally emerged from the application of equity in international environmental law (Sands & Peel, 2012). It can be understood as one way of integrating the environment and development at the international level, as well as outlining the proportional commitments countries make relative to others, as well as the "justness" of these commitments (Pauw et al., 2014). The notion of CBDR is undergirded by the two meta-principles of equity and fairness, which are often used interchangeably. In line with the UNFCCC's guidance for the formulation of INDCs and usage by most parties, this paper refers to "fairness" (see Figure 3).[6]

Elements of the idea behind CBDR can be traced back to the call for a "new international economic order" in the 1970s, the UN Conference on the Human Environment in 1972 in

5 This paper builds on an earlier DIE discussion paper by Pauw et al. (2014), which provides a state-of-the-art review of CBDR. Hence, this concept is not explored in great detail in this paper.

6 Fairness and equity have similar philosophical connotations and are often used interchangeably in political discourse, notably at the international level and specifically where divergent interests between "North" and "South" are at stake. This is not to say that equity and fairness would be considered synonymous in international climate negotiations. The Oxford English Dictionary defines "equity" as "*the quality of being fair and impartial*", and "fairness", that is, the noun corresponding with the adjective "fair", as "*treating people equally without favouritism or discrimination*". For a concise philosophical excursion on equity in the context of CBDR, see Rajamani (2006, 150ff.).

Stockholm and the Enabling Clause of the General Agreement on Tariffs and Trade in 1979 (Pauw et al., 2014; Rajamani, 2006).

The 1989 Montreal Protocol, under the Vienna Convention for the Protection of the Ozone Layer, is often regarded as an exemplary illustration of the implementation of CBDR in an international context. Although the Vienna Convention does not refer to CBDR, it is explicit about the different responsibilities that different countries need to take in accordance with their capabilities to regulate the emission of ozone-depleting substances. Furthermore, the Montreal Protocol includes a number of mechanisms aimed at differentiating responsibilities (United Nations Environment Programme [UNEP], 2003). For example, countries had different base years for their phase-out commitments; delayed compliance was granted to developing countries if their per capita consumption of certain controlled substances was below a certain threshold (as a proxy for economic development); and through the Multilateral Fund, developed countries helped developing countries to implement the Protocol (see Pauw et al., 2014, Section 4.4, with further references).

It was only in 1992, during the United Nations Conference on Environment and Development (UNCED) that CBDR evolved as an international principle, when it was adopted as Principle 7 of the Rio Declaration (UN, 1992a; see also Pauw et al., 2014).

2.2 CBDR in international climate policy

The principle of CBDR is one of the cornerstones of the global climate regime (Abeysinghe & Arias, 2012). The UNFCCC was the first international regime to explicitly incorporate the principle of CBDR.[7] However, the UNFCCC added a component on "respective capabilities" in order to put responsibilities and capabilities on equal footing. Politically, this reflects developed countries' strong opposition to any reference to their historical emissions, which would invoke a strong emphasis on the "polluter pays principle" (see Deleuil, 2012; Pauw et al., 2014). Historical emissions of countries refer to the share of a country's emissions to global emissions over a certain period of time and have often been used as a proxy for apportioning responsibility as regards climate action.

However, the exact amount of historical emissions is difficult to assess and arguably impossible to agree on internationally. It depends, for example, on the base year for the start of such emissions (typically, either the start of the industrial revolution or 1990)[8]; whether emissions from basic needs should be exempted; whether the causal contribution lies with consumers or producers; what kinds of GHG emissions are taken into account (including their atmospheric lifetimes); and whether land-use change is included (not just in terms of emissions, but also in terms of sink capacity) (Dellink, Dekker, den Elzen, Aiking, Peters, Gupta, Bergsma, & Berkhout, 2008). Adding "respective capabilities" also underscores that all countries share the responsibility to adhere to universal principles, such as the precautionary principle, even if they are poor and lack commensurate capacities.

7 Article 3.1 of the UNFCCC.

8 Some countries refer to 1750 as the base year (start of the industrial revolution), whereas others refer to 1990, when there was formal recognition of GHGs as being the main causes of global warming through the first IPCC report.

In short, CBDR-RC reflects a lasting political consensus in which: 1) the broadest possible level of cooperation by all countries is needed to combat climate change and its impacts, 2) all countries have a responsibility to act accordingly and 3) actions are to be undertaken in line with countries' capabilities. However, the word "differentiated" also implies the adoption and implementation of differing commitments for different states while taking into account their diverse circumstances and capacities, their historical GHG emissions and their specific development needs (cf. Honkonen, 2009).

CBDR is mentioned in Article 3.1 of the UNFCCC as follows: *"The Parties should protect the climate system for the benefit of present and future generations of humankind, on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities*" (UN, 1992b).

Although CBDR-RC is included under the "Principles" section of the UNFCCC, it does not imply that it has legal force; rather, these principles are merely guidelines aimed at contextualising the convention for the user (Bodansky, 1993; Honkonen, 2009).

The 1997 Kyoto Protocol also embraced CBDR-RC in Article 10. In the Kyoto Protocol, developed countries have an obligation to take action, whereas developing countries only have voluntary commitments (UNFCCC, 1997). However, criticism has been levelled against the Kyoto Protocol as regards this bifurcation by terming it as "*CBDR in its most rigid application*" (Weisslitz, 2002, p. 473).

The Kyoto Protocol has ultimately proven to be inadequate in addressing climate change. In today's world, mitigation efforts by the 37 developed countries that have commitments under the Kyoto Protocol alone are insufficient to avoid dangerous climate change, even if the commitments were far more ambitious than they currently are. The diversification of state groups, the changing emission pathways of developing countries, and the rise of emerging economies such as China (now the world's largest emitter, accounting for 30 per cent of global CO_2 emissions) and India (6.5 per cent) warrant a critical reconsideration of the conceptualisation and operationalisation of CBDR (Olivier et al., 2015).

In working towards a new climate agreement, Pauw et al. (2014) argue that the climate regime has to move beyond the dichotomic differentiation between Annex I and non-Annex I countries, and towards a more flexible operationalisation of CBDR, for example by allowing for countries to graduate from one group to another, or to be excluded from certain groups.

Another development within the increasingly complex UNFCCC regime is that issues other than mitigation are gaining importance, too. First, adaptation has been moving to the fore in negotiations at an accelerating pace (Berrang-Ford, Ford, Lesnikowski, Poutiainen, Barrera, Heymann, 2014; Kahn, 2014). At COP7 in Marrakesh (2001), several climate funds were established; at COP11 in 2005, the Nairobi work programme on impacts, vulnerability and adaptation to climate change was established; at COP13 in Bali (2007), the recognition of adaptation was placed on equal footing with mitigation; and COP16 in Cancun (2010) saw the adoption of the Cancun Adaptation Framework. The latter is a milestone in the sense that it further developed planning and implementation of adaptation; elaborated on the provision of finance; created institutional mechanisms, such as the

Adaptation Committee; incorporated principles such as "country-driven", "gender-sensitive" and "participatory"; and aimed for more stakeholder engagement (Kahn, 2014).

Second, climate finance is another increasingly important issue. Article 4.4 of the 1992 UNFCCC already states that developed countries shall assist particularly vulnerable developing countries in meeting the costs of adaptation. Since COP7 in Marrakesh in 2001, there has been a proliferation of climate funds to support developing countries with adaptation and mitigation (O'Sullivan, Szõcs, Streck, Meijer, & Bracer, 2011). At COP15 in Copenhagen in 2009, "climate finance" came more to the front after developed countries pledged to mobilise US$ 100 billion annually by 2020 to support developing countries with adaptation and mitigation. Although there is widespread recognition that climate finance indeed needs to be scaled up, there is no clear view on how developed countries can efficiently and effectively mobilise further climate finance (including from private sources) to meet the needs of developing countries (Kato, Ellis, Pauw, & Caruso, 2014; Pauw, Klein, Biermann, & Vellinga, 2015). Progress on issues of climate finance thus became one of the most important conditions for the 2015 climate summit in Paris to be successful.

The Paris Agreement indeed brought adaptation and finance to the front. Article 2 of the Paris Agreement spells out its three overarching aims:

- a long-term **mitigation** target: to hold global average temperature rise well below 2°C above pre-industrial levels and to pursue efforts to limit warming to 1.5°C above pre-industrial levels;
- increase the ability to **adapt**; and foster climate resilience and low GHG emissions development in a manner that does not threaten food production;
- make **finance** flows consistent with a pathway towards low levels of GHG emissions and climate-resilient development.

In short, CBDR-RC can no longer be seen as related to mitigation only. In this discussion paper, we take up concepts beyond mitigation, such as adaptation and climate finance, and analyse how INDCs advance self-differentiation here.

2.3 CBDR-RC in the Paris Agreement and beyond

The Paris Agreement does not refer to Annex I, Annex II and non-Annex I Party countries, but instead it differentiates between developed countries and developing countries. The positive note is that this implies a more flexible, dichotomic differentiation, allowing for countries to become "developed" over time and to take on more responsibility accordingly. However, the negative side is that responsibilities become less clear because, for many countries, it is unclear whether they are considered developed or not in terms of climate policy. For example, Qatar has some of the world's highest per capita incomes and per capita emissions (World Bank, 2015), but it claims to be a developing country in its INDC. Chile, South Korea and Mexico are members of the Organisation for Economic Co-operation and Development (OECD) – does that make them developed countries?

The term CBDR-RC is mentioned four times in the Paris Agreement: in the preamble (notably as a *principle*); in Article 2.2 (on the aims of the Agreement) and twice in Article

4 on mitigation – once in the context of INDCs and once in the context of long-term, low GHG-emission development strategies. On issues such as adaptation and finance, CBDR-RC is not mentioned explicitly. However, we do find "subtle differentiation" here (see below; also Table 1).

Subtle differentiation

In contrast to the rigid differentiation along the dichotomy of the Annex I countries versus non-Annex I countries, we define "subtle differentiation" as being flexible and applicable to specific subsets of countries (e.g. the LDCs and SIDS), certain issues (e.g. adaptation and finance) and procedures (e.g. timelines and the conducting of the global stock-taking to assess implementation of the Paris Agreement). Such subtle differentiation can be found in the UNFCCC Convention Text and the Kyoto Protocol, but it is not well specified. The core of subtle differentiation can be found in Article 4 of the convention. Paragraph 8 states that countries shall give full consideration of actions (including funding, insurance and technology transfer) to meet needs and concerns of "developing countries" (UN, 1992b). It lists nine (mostly physical) conditions for consideration, such as small island countries, countries with areas liable to drought and desertification, and countries with fragile ecosystems. However, it does not target specific (groups of) countries. Paragraph 9 does mention the LDCs in the context of funding and technology transfer. The Kyoto Protocol refers to Articles 4.8 and 4.9 twice, but LDCs and SIDS are not mentioned directly (see UNFCCC, 1997). Subtle differentiation is more abundant in the Paris Agreement and more concrete: it makes six references to LDCs and five to SIDS (see Table 1 for an overview of subtle differentiation in the articles most relevant for this discussion paper).

Table 1: Differentiation in five sections of the Paris Agreement

	CBDR-RC	Developed vs. developing	Subtle differentiation	
			LDCs and SIDS	Other (explained)
Preamble	✓	✓ (2x)	✓	
Aims of the agreement (Art. 2)	✓			
Mitigation (Art. 4)	✓ (2x)	✓ (4x)	✓	
Adaptation (Art. 7)		✓ (3x)		✓ (2x) (developing countries, especially particularly vulnerable ones)
Finance (Art. 9)		✓ (5x)	✓ (2x)	✓ ("other" non-developed countries)

Note: CBDR-RC is mentioned four times, and explicit differentiation between developed and developing countries is made 14 times. On top of that, subtle differentiation towards LDCs and SIDS or other particular groups of countries is mentioned seven times.

Source: Authors

Article 7 (on adaptation) recognises the importance of support (thus including finance) for adaptation efforts, as well as the importance of taking into account the needs of developing countries, "*especially those that are particularly vulnerable to the adverse effects of climate change*" (Art. 7.6). Article 7.10 also notes that the submission of periodical adaptation communications should not create "*any additional burden for developing countries*".

Subtle differentiation can also be found in Article 9 (on finance). For example, developed countries insist that other countries contribute to climate finance as well, which resulted in Article 9.2: "*Other Parties are encouraged to provide or continue to provide such support voluntarily*." Similarly, Article 9.3 states that "*developed country Parties should continue to take the lead in mobilizing climate finance*", meaning others will follow. Article 9.4 emphasises countries that are particularly vulnerable to the adverse effects of climate change and that have significant capacity constraints, and explicitly mentions LDCs and SIDS. In this context, it also mentions the need for public and grant-based resources for adaptation (as a contrast to Article 9.3, which mentions that finance will come from a wide variety of sources).

In a similar vein, subtle differentiation can also be found in Article 11 on capacity-building. Article 11.1 emphasises countries "*with the least capacity, such as the least developed countries*" and "*those that are particularly vulnerable, such as the Small Island Developing States*". Article 13, on the enhanced transparency framework, mentions flexibility in the implementation of its provisions to "*those developing country Parties that need it in the light of their capacities*". Such, "subtle differentiation" can also be found in many other articles of the Paris Agreement (see Appendix I). Although these subtle differentiations focus on single issues only (adaptation, finance, capacity-building, etc.), they clearly marks steps beyond the dichotomy between developed and developing countries. Yet, subtle differentiation is not always consistent. For instance, as example of countries that are "particularly vulnerable", Article 9.4 mentions LDCs and SIDS, but Article 11.1 only mentions the SIDS.

Just like the "developed countries", the SIDS do not form a clearly delineated group of countries. The SIDS were first recognised as a distinct group of countries at the 1992 "Earth Summit" (UNCED) in Rio de Janeiro. According to the UNFCCC, the SIDS form a coalition of some 40 low-lying islands that are particularly vulnerable to sea-level rise: "*SIDS countries are united by the threat that climate change poses to their survival and frequently adopt a common stance in negotiations. They were the first to propose a draft text during the Kyoto Protocol negotiations calling for cuts in carbon dioxide emissions of 20% from 1990 levels by 2005*" (UNFCCC, 2016). In our country grouping, we refer to the list of SIDS from the United Nations Educational, Scientific and Cultural Organization (UNESCO, 2016), which includes 39 countries and 8 associate member countries.

The LDCs are also not defined by the UNFCCC itself, but by the wider UN system. The identification of LDCs is based on three criteria: per capita gross national income; human assets; and economic vulnerability to external shocks (The United Nations Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and the Small Island Developing States, 2016). This also means countries can graduate or relegate. For example, Samoa graduated from the LDCs (UNFCCC, 2016), but is still considered one of the SIDS.

Because of the frequent subtle differentiation towards LDCs and SIDS as well as the need to move beyond the dichotomy between developed and developing countries (see Section 2.3), this paper identifies the LDCs and SIDS as separate country groupings, next to Annex I countries. All the remaining countries are labelled "Middle countries" by default (the introduction of Chapter 4 explains this in more detail).

3 CBDR-RC in the INDCs

3.1 Guidance from the UNFCCC on the formulation of INDCs

The absence of official guidance by the UNFCCC on how to develop INDCs has been a major hurdle to many countries (Höhne, Ellermann, & Li, 2014; Scholz, 2014; Herold & Siemons, 2014; Karlsen, 2014; Pauw & Mbeva, 2015).

It was agreed at COP19 in Warsaw in 2013 that the submission of INDCs would be universal. All parties to the UNFCCC would submit one, as early as the end of the first quarter of 2015. As further guidance for the formulation of INDCs was expected one year later at COP20 in Lima, no Party submitted its INDC in 2014. COP20 indeed focussed on the elaboration of the information and process required for the submission of INDCs, and UN Secretary-General Ban Ki-moon called upon countries to reach a common understanding on the scope of INDCs (International Institute for Sustainable Development [IISD], 2015). However, the "Lima Call for Action" that resulted from COP20 did not develop detailed guidelines, allowing parties space to manoeuvre while developing their INDCs (see Table 2).

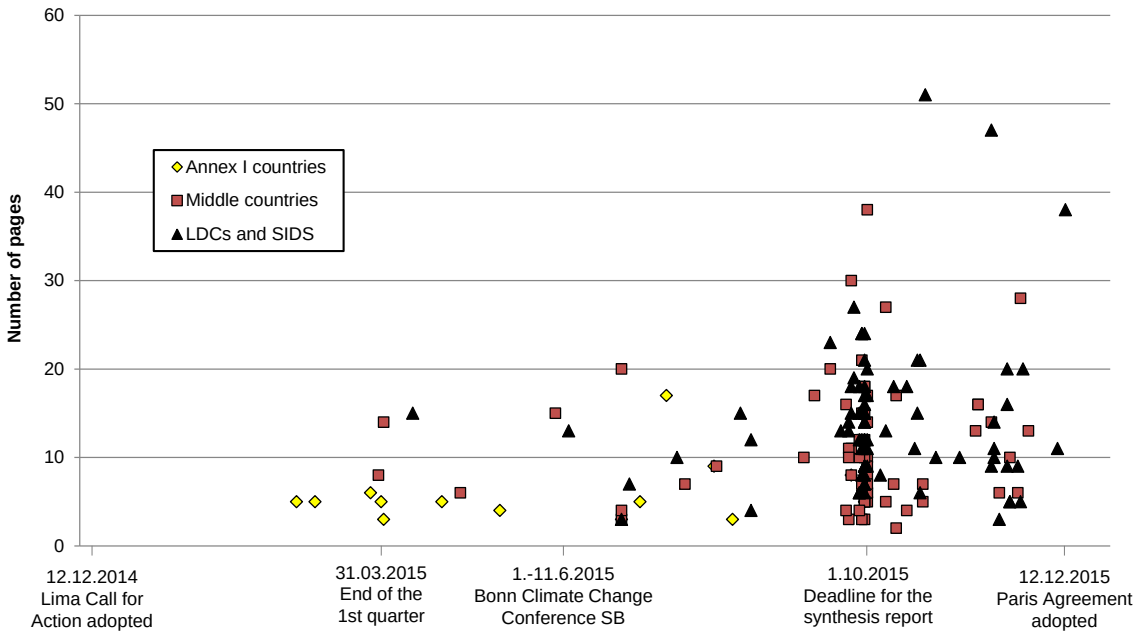
This unclear guidance on the formulation of INDCs was caused by a lack of consensus among negotiators on the scope and nature of INDCs. Whereas countries such as Canada and the United States stressed that INDCs relate to mitigation (with New Zealand even stating that all parties should quantify expected emission outcomes), countries such as Brazil and Tuvalu (for the LDCs) noted that the scope of INDCs should not be limited to mitigation. Thailand, for example, stated that mitigation and adaptation should be treated equally, and Bolivia and others stressed the importance of including means of implementation (capacity-building, climate finance and technology transfer) (IISD, 2015).

Countries could also not find consensus on how to differentiate between developed and developing countries. Although Switzerland called for including references to fairness in the INDCs, it opposed a division between Annex I and non-Annex I countries; Tuvalu proposed different reporting for countries with economy-wide reduction targets (the developed countries) and developing countries (IISD, 2015). China stated that the guidelines of INDCs should allow for developed countries to enhance the clarity of their ambitions and "*reflect the diversity of, barriers to and needs for*" developing countries' INDCs (IISD, 2015, p. 28).

Furthermore, countries disagreed on assessment and review of INDCs and their ambitions. Theoretically, assessment and review can help to: 1) ensure that national contributions are in line with internationally agreed objectives and principles; 2) establish and enhance

transparency, trust and accountability between countries; and 3) increase ambition through feedback, an exchange of ideas and approaches, and by encouraging additional reciprocal actions (van Asselt et al., 2015). Whereas South Africa called for an *ex ante* assessment of INDCs by the UNFCCC Secretariat, Jordan, China and India opposed any *ex ante* review assessment. However, Brazil stressed that consideration of INDCs is not a legally binding process but a means to enhance the understanding of each other's intentions (IISD, 2015). It is clear that there was no agreement among the negotiators on the structure and content of INDCs, and their subsequent assessment and review.

Figure 1: Length and number of INDCs increased over time, with many INDCs submitted just before the UN's 1 October 2015 deadline[9]



Source: Authors

Countries could also not agree on a clear deadline for the submission of INDCs. For example, the United States, supported by the Marshall Islands but opposed by the LDCs, proposed to invite parties to communicate their INDCs well in advance of COP21, and those willing to do so by the first quarter of 2015 (IISD, 2015). The decisions of COP20 reflect this proposal (see Table 1). The 1st of October 2015 became an informal deadline (see §16 and the peak in submissions in Figure 1).

The unclear guidelines also allowed for significant differences in the lengths of the INDCs (see Figure 1). Annex I countries formulated the shortest INDCs (93 per cent were less than 10 pages), whereas LDCs and SIDS had the longest INDCs (only 31 per cent were

9 At COP21 in Lima, it was decided that the UNFCCC Secretariat would prepare a synthesis report on the aggregate effect of INDCs communicated by Parties up to 1 October 2015 (UNFCCC, 2014, §16). This created a dense cluster towards October 1.

less than 10 pages; and 17 per cent were longer than 20 pages).[10] As will be explained in the results section, the INDCs of Middle countries, LDCs and SIDS were much longer because they included more information on, for example, adaptation and finance.

The lack of scope and context of the INDCs, as well guidelines on how to reflect equity and CBDR-RC in the INDCs, has opened the door to different interpretations by different countries (United Nations Development Programme [UNDP] & UNFCCC, 2014a, 2014b; Climate Change Authority, 2015; Darajati, 2015; Hermwille et al., 2015). This may lead to low levels of ambition, whereby Parties may provide inadequate information and clarity (including on how they consider their INDCs to be fair and ambitious). At the same time, the lack of scope and context of the INDCs also provides countries the opportunity for country-driven self-differentiation of ambitions and priorities. Conversely, INDCs based on clear, transparent and quantifiable information detailing progressive climate action by Parties could be expected to raise ambitions on climate action, but it might allow for less self-differentiation of priorities and ambitions.

Table 2: INDC guidance in the 2014 Lima Call for Action

§10 Agrees	INDC contributions should provide a progression beyond the current undertakings of Parties
§11 Agrees	LDCs and SIDS may communicate about low GHG emissions development reflecting their special circumstances
§12 Invites	all Parties to consider communicating on undertakings in adaptation planning or consider including an adaptation component
§13 Reiterates	its invitation to all Parties to communicate their INDCs well in advance of COP21 (by the first quarter of 2015 by those Parties ready to do so) in a manner that facilitates clarity, transparency and understanding
§14 Agrees	that the information in INDCs "*may include, as appropriate, inter alia*": • *"quantifiable information on the reference point (including, as appropriate, a base year), time frames and/or periods for implementation, scope and coverage, planning processes, assumptions and methodological approaches including those for estimating and accounting for anthropogenic greenhouse gas emissions and, as appropriate, removals"*; • how the Party considers its INDC to be fair and ambitious, in light of its national circumstances; • how the INDC contributes towards achieving the objective of Article 2 of the Convention.
§15 Reiterates	its call to developed countries, the operating entities of the Financial Mechanism and any other organisations in a position to do so to provide support for the preparation and communication of the INDCs of Parties that may need such support
§16 Requests	the Secretariat to prepare a synthesis report (Nov. 1) on the aggregate effect of INDCs communicated by Parties by 1 October 2015

Source: Authors' compilation based on UNFCCC (2015)

10 The three country groups and their definitions will be explained in Chapter 4.

In short, the Lima provisions on the formulation of INDCs (see Table 2) suggest that there is a clear focus on mitigation (§10 and §14) and on self-differentiation (§14). However, it also pre-sets some subtle "top-down" differentiation between countries. For example, based on their special circumstances, LDCs and SIDS are allowed to communicate on low GHG emissions development (§11); parties are given different timelines for the submission of their INDCs (§13 and §16); and the guidance creates a subtle differentiation between three groups of countries when it comes to the preparation and communication of INDCs: those who support others, those who are supported and the remaining countries (§15). This is a subtle differentiation – albeit slightly different from the subtle differentiations as described in Section 2.3. Finally, the Lima Call for Action allows for a differentiation of priority setting, in the sense that it invites countries to also communicate their adaptation contributions (§12).

3.2 Literature review on fairness of INDCs

So far, analyses of INDCs that address the fairness of the contributions are scarce. The four most comprehensive analyses that have been undertaken to date include the official UNFCCC synthesis report (UNFCCC, 2015), the UNEP Emissions Gap Report 2015 (UNEP, 2015), the equity review of INDCs conducted by civil society organisations (CSOs) (Civil Society Review [CSR], 2015) and the Climate Action Tracker (CAT, 2015).

First, the CAT team analysed 159 INDCs that had been submitted by 8 December 2015. According to CAT, the global temperature rise by 2100 would be 3.6°C compared to pre-industrial levels, if current policies are maintained. However, if the mitigation ambition of the submitted INDCs are fully implemented, and if climate policies of similar ambition are implemented after 2030, the median global warming would be reduced to around 2.7°C by 2100 (and a full range of 2.2–3.4°C) (CAT, 2015). This is still much higher than the goal of the Paris Agreement – to hold global average warming well below 2°C and to pursue efforts to limit it to 1.5°C warming (UNFCCC, 2015, Art. 2). The CAT tool also calculates the adequacy of individual INDCs based on historical emissions, projected emissions and policy projections. According to them, Bhutan's contribution is the most ambitious (sufficient: fully consistent with below 2°C limit). China's ambition is "medium" (not consistent with limiting warming below 2°C, as it would require many other countries to make a comparably greater effort and much deeper reductions). The EU's ambition is also considered "medium" (less ambitious than China), as are India (less ambitious than the EU) and the United States (less ambitious than the EU and India). Russia and South Africa are considered "inadequate" (contribute to warming likely to exceed 3–4°C).

Second, as mandated by COP20 in Lima (see Table 2), the UNFCCC synthesis report analysed 119 INDCs of 147 countries that were submitted before the 1 October 2015 deadline with the aim of establishing their aggregate impact on global GHG emission reductions in particular (UNFCCC, 2015).[11] This report also includes a very general analysis of how countries explained the fairness and ambitions of their INDCs. It mentions that all INDCs include a narrative on why they are fair and ambitious, for example through Parties' references to: a shared global effort; equity; the principle of CBDR-RC; and

11 There are more countries than INDCs because the EU submitted one INDC for its 28 member states.

application of the same rules to all Parties (UNFCCC, 2015, p. 6). The specific criteria scoped out in this analysis by the UNFCCC for evaluating fairness include: responsibility; capability; mitigation potential and cost of mitigation; degree of progression; and link to objectives and global goals (see Section 2.2) (UNFCCC, 2015, p. 6). This report mostly focussed on mitigation.

Third, the UNEP Emissions Gap Report of 2015 analysed the reflection of equity and fairness of 146 countries – representing more than 90 per cent of the global GHG emissions. The analysis focuses on mitigation and on closing the gap between current emission pathways and the aim of keeping global warming under 2°C compared to pre-industrial times (UNEP, 2015).[12] Eighty of the INDCs analysed did not offer the metrics on which the fairness and equity of the INDCs were addressed, but they instead provided general statements and referred to principles such as those in the UNFCCC. Thirty-one INDCs used models within their countries in evaluating their effectiveness, whereas only eight INDCs used models / methodologies developed by external experts (UNEP, 2015). This can be understood to foster the aspect of self-differentiation, especially with regards to the fairness of the contributions.

Finally, CSOs' equity review report analysed how countries' mitigation contributions in INDCs were fulfilling their fair share in tackling climate change (CSR, 2015). The premise of this analysis was that equity is "*something each country can assert for itself*" (p. 1). This analysis also noted that the notion of fair share is often linked to the principles of the UNFCCC but has varying interpretations. The core components of the framework used in this analysis, which were given equal weight, were based on a "basket of indicators" drawn from principles of the UNFCCC (CAN, 2013):

- historical responsibility for emissions (50 per cent);
- capacity to take climate action (50 per cent) using national income over what is needed to provide basic living standards (and excluding countries with per capita incomes of less than US$ 7,500 per year).

The report focuses on mitigation, with its key findings being that the aggregate effect of the fair share of countries is not sufficient to keep global warming below 1.5°C, and that developed countries fall "*well short of their fair shares*" (p. 3). According to the review, the historical responsibility makes the fair shares of many developed countries so large that they cannot be fulfilled by domestic action only. They conclude that means of implementation (the provision of capacity-building, technology transfer and climate finance) are therefore part of the equation, too.

In sum, to the extent that equity and fairness of INDCs are addressed in literature, it focuses largely on mitigation. Self-differentiation of ambitions and priorities on aspects such as adaptation and finance are not addressed comprehensively. This paper aims to address these issues and analyses below how countries describe their contributions as being fair and equitable.

12 The objective of the UNFCCC is to avoid dangerous anthropogenic interference with the climate system (Article 2; see UN, 1992b). At COP16 in Cancun, this objective has been translated to a goal to keep the average global temperature increase below 2°C above pre-industrial levels.

3.3 Translating national priorities into international fairness

Given the limited guidelines, it was expected from the start that INDCs would reflect countries' diverse circumstances and capacities, their historical and current greenhouse gas emissions, and their specific development needs, and would therefore set out different priorities and ambitions.

Indeed, even before submitting, countries had different conceptions of the INDCs (see also Section 3.2). For instance, African countries indicated that their INDCs would be anchored to national development strategies (UNDP & UNFCCC, 2014b); and LDCs were expected to include adaptation components, as well as means of implementation (financial support, technology transfer and capacity-building) (Holdaway & Dodwell, 2015). Developed countries, however, had not described how they intend to offer support for means of implementation for the former, and opposed references to adaptation in INDCs (Kartha, 2014). Such differences between developed and developing countries underscore the assertion that a nation's fair share of the global effort may not necessarily reflect its domestic potential (Kartha, 2014).

Since a broadly accepted or monitorable definition of "fairness" does not exist, each country can define what it considers to be fair on its own. However, what might be considered a priority or as being ambitious from a national perspective may not be viewed as being fair from an international perspective (i.e. in comparison with other contributions towards collective goals). When using certain assumptions, a level of fairness of mitigation contributions can still be calculated, as demonstrated, for instance by the Equity Reference Framework, the Climate Action Tracker and the CAIT Equity Explorer (Equity Reference Calculator, 2016; CAT, 2016; CAIT, 2016). Yet, such assumptions determine the outcome and will therefore hardly be acceptable multilaterally, as they are always contested by some countries. Furthermore, contrary to mitigation (GHG emissions) and finance (US dollars), adaptation lacks a common unit that could be easily tracked.

This paper analyses how countries perceive the fairness of their contributions, as indicated in the "fairness and/or equity" sections of their respective INDCs. The INDCs provide an invaluable opportunity to study fairness and ambition from a bottom-up perspective: it is the first time that all countries were asked to provide such information. As indicated in Section 3.1, this paper explores the concept of fairness beyond mitigation (i.e. including finance and adaptation). Finally, as elaborated in Section 3.2, this paper analyses whether INDCs have fostered self-differentiation beyond the Annex I and non-Annex I "firewall". Results from this analysis are presented in the next chapter.

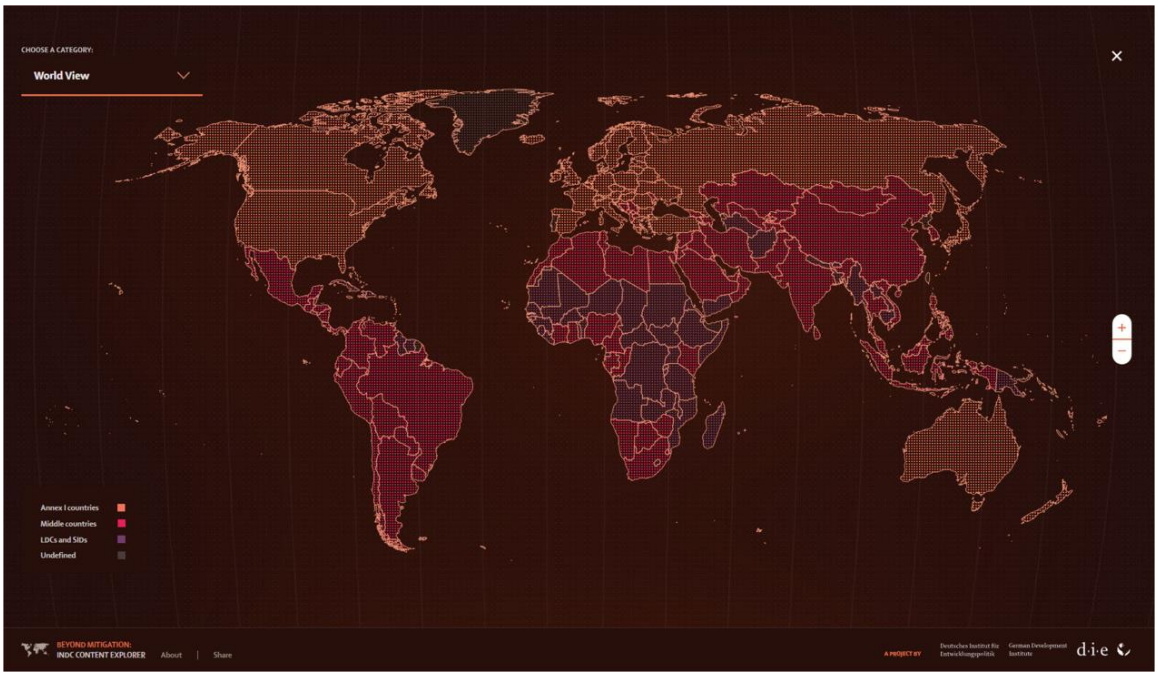
4 INDCs as an instrument for self-differentiation

This section presents the results of our analysis of all 159 INDCs that were submitted to the UNFCCC before the adoption of the Paris Agreement on 12 December 2015.[13]

The key objective of this study is to assess whether an INDC is an instrument for self-differentiation of countries in the international climate regime under the UNFCCC in the context of the notion of CBDR-RC. Where others have examined fairness in the context of mitigation (see Section 3.2), this report goes beyond mitigation targets and includes an analysis of INDCs' fairness / equity sections, adaptation and finance.

The main categories analysed in this study are: 1) countries' sections on fairness / equity, 2) adaptation and 3) climate finance (adaptation and mitigation). We do not claim *ex ante* that all these categories are necessarily part of a CBDR-RC framework. We just signal that limiting it to mitigation is inadequate and does not reflect current negotiation outcomes (see Chapters 2 and 3), and that the bottom-up formulation of priorities and ambitions might create insights into issues that are relevant for a more holistic approach towards CBDR-RC. This analysis does not focus on the fairness of mitigation actions of individual countries, since this topic has already been comprehensively addressed by others (see Section 3.2).

Figure 2: The three country groups: Annex I countries, Middle countries, and LDCs and SIDS



Note: The map is a screenshot from the INDC Content Explorer.
Source: Pauw, Barthe, Friedrich, Hadir, & Mbeva, (2016) and http://klimalog.die-gdi.de/#INDCContentExplorer

13 The Paris Agreement includes an article on INDCs and therefore automatically changes the conditions under which INDCs are written. INDCs submitted after the Paris Agreement are therefore not included.

As stated above, countries are categorised into three groups (see Figure 2 and Appendix II):

- 15 "Annex I" parties. This includes 42 countries, given that the EU represents 28 countries. We chose Annex I countries instead of the "developed countries" (as used in the Paris Agreement) because the latter is not defined officially;
- 79 "LDCs and SIDS", based on the subtle differentiation in the Paris Agreement (see Section 2.3);
- 65 "Middle countries", which fit neither category: a heterogeneous mixture of predominantly middle-income countries.

4.1 Indicators of fairness and/or equity

In compliance with the Lima Call for Action (see Table 2), 94 per cent of the INDCs include a specific section on fairness and/or equity in their INDCs, which is the basis of this analysis.[14] Notable exceptions include the United States, China, Iraq, Pakistan and Canada. The fairness / equity sections of Annex I countries always carry the word "fairness" in the title, whereas the other groups – Middle countries as well as the LDCs and SIDS, in particular – often use "equity" instead. This is in line with research by Kallbekken, Sælen, and Underdal (2014) showing that Annex I countries prefer to use fairness over equity. By analysing countries' submissions to the UNFCCC, they found that equity is associated with other terms that are particularly important for developing countries, such as "CBDR", "Annex 1", "historical responsibility" and "equitable access to sustainable development" (Kallbekken et al., 2014). This paper refers to "fairness", as it is the more common term when considering all INDCs (see Figure 3).

In the fairness / equity section, countries contextualised why they considered their contributions to be "fair and ambitious" (see Table 2). Although these contextualisations were too diverse in content and scope to create a general statement on what constitutes a "fair and ambitious" contribution, a number of examples of such criteria are illustrated under the following headings in this section: 1) emissions, 2) population growth, 3) financial capacity and 4) adaptation and vulnerability. This is by no means comprehensive, but it does provide new insights into how countries contextualise the fairness of their INDCs.

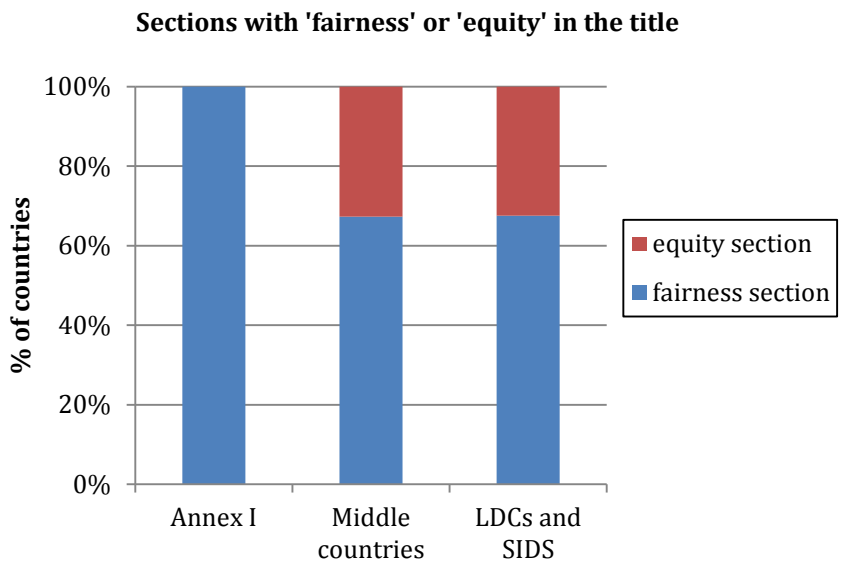
Emissions

With the exception of 23 countries, all countries contextualised their emissions in their INDC sections on fairness / equity. The majority did so in terms of total emissions, with fewer countries also mentioning per capita emissions (Middle countries in particular) or emissions per unit of gross domestic product (GDP). In all three groups, and for these three categories (total-, per capita- and per GDP emissions), most countries contextualised their emissions by providing their current emissions (rather than historical or future emissions). Almost 70 per cent of the LDCs and SIDS mentioned their low levels of current total

14 Although some of the INDCs among the remaining 6 per cent also write about fairness in their INDCs, they do not have a particular section (which can also be a dedicated space in a table) on it. For methodological reasons, these INDCs were not included in the analysis, because it cannot always be demarcated which text elements concern fairness and which do not.

emissions – some even stated their country is a net carbon sink, as it absorbs more GHGs than it emits – after which they contextualised their fairness and ambition using other indicators.

Figure 3: Title of the fairness / equity section in INDCs



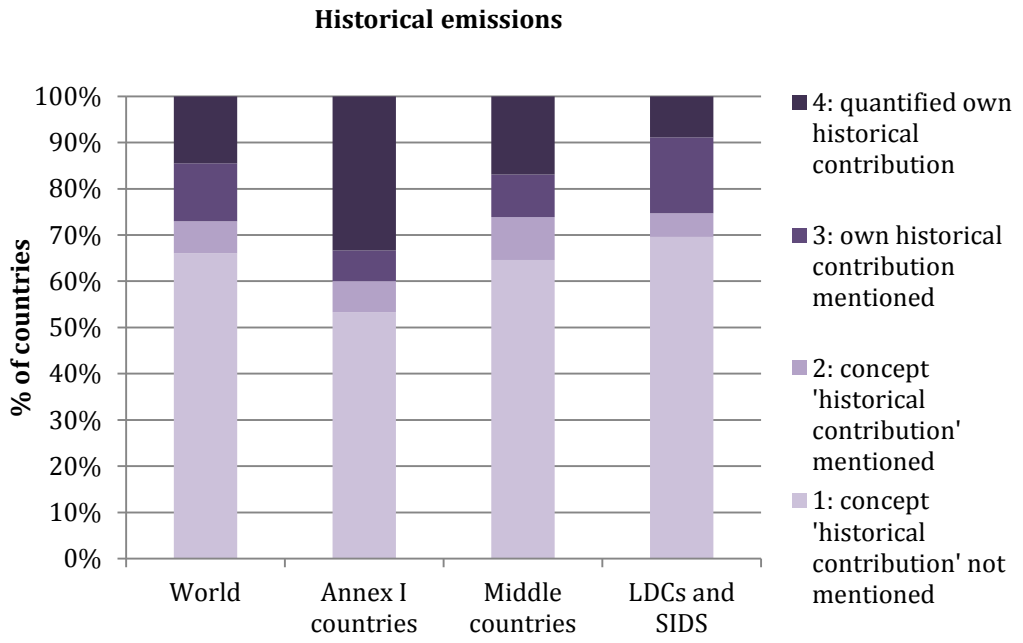
Note: Annex I countries always refer to "fairness", the other groups also often refer to the term "equity".
Source: Authors

Historical responsibility is a contentious issue in climate change negotiations. Although the emissions gap between countries is rapidly closing, Annex I countries still have much higher historical emissions than non-Annex I countries (Parik & Baruah, 2012; Pauw et al., 2014). In 2013, the "BASIC plus" countries[15] issued a joint political statement, recalling that responsibility needs to be differentiated according to historical contributions to address "*the urgent problem which we now face*" (BASIC Ministerial Meeting, 2013). Historical emissions are the core indicator of responsibility in both the CSO equity review of INDCs and the Climate Action Tracker review on INDCs (CSR, 2015; CAT, 2015; see also Section 3.2). Surprisingly, however, our analysis shows that the concept of historical responsibility is not that important in the elaboration of INDCs.

More than half the countries in all three country groups do not mention the concept of historical responsibility, as depicted in Figure 4. One-third of the Annex I parties contextualised and quantified their historical responsibility in terms of emissions. Apart from Canada, these were countries with low levels of historical emissions, compared to the other Annex I countries: Monaco, New Zealand, Switzerland and Turkey.

15 This joint statement was issued by Argentina, Brazil, China, Fiji, India, Paraguay, Peru, South Africa and Venezuela.

Figure 4: Differentiation based on historical responsibility of GHG emissions



Note: Many countries did not mention historical responsibility, especially Middle countries and LDCs and SIDS.

Source: Authors

Only 17 per cent of the Middle countries contextualised and quantified their historical emissions. Some Middle countries with rapidly increasing emissions do not mention or quantify historical emissions (e.g. Brazil, China, Indonesia, Malaysia, Saudi Arabia, South Korea); other Middle countries with slowly increasing emissions do mention or quantify their historical emissions (e.g. Bolivia, Bosnia-Herzegovina, Mongolia). This seems only logical, but it is in fact an important finding for the UNFCCC negotiations. It might indicate a shift in countries' positions towards the contentious issue of historical emissions. The Group of 77 and China group, which represents many Middle countries as well as LDCs and SIDS, have always strongly supported the operationalisation of the principle of CBDR-RC, primarily based on historical GHG emissions, whereas Annex I countries, and the United States in particular, have stated that historical responsibility changes over time (thus referring to current and future emissions of countries) (see Pauw et al., 2014). The fact that some of the largest emitters among the Middle countries, such as China, India and Indonesia, do mention historical responsibility in their INDCs suggests that the concept of historical responsibility might become less important in the UN climate negotiations in the coming years than it has been for the past 25 years.

Finally, only a minority of the LDCs and SIDS mention or quantify their historical responsibility. If they do, they often state that their historical emissions are negligible, or that their net emissions are negative (through carbon sinks).

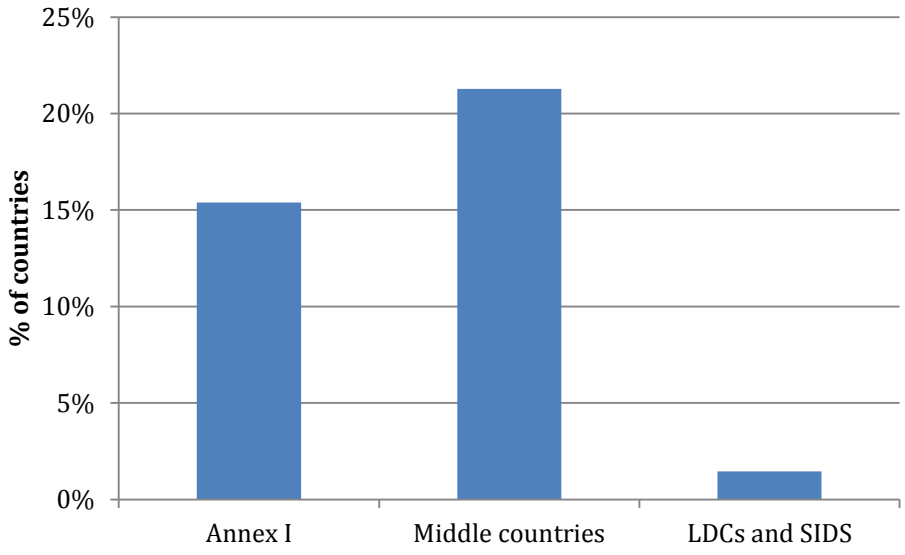
These findings on historical responsibility are important. They underscore the evolving debate and understanding of historical emissions and related responsibilities. Although the emissions of many Annex I countries have already peaked, the rapidly increasing GHG

emission levels of some of the Middle countries is likely to make them reconsider their position on the concept of historical responsibility.

Population growth

In total, 13 countries (8 per cent) mention population growth to contextualise the fairness of their INDCs, most of which were Middle countries (see Figure 5). LDCs and SIDS had the lowest number. This is surprising because an analysis of World Bank data on population and population growth shows that the populations of the LDCs and SIDS are growing much faster than those of Middle countries (World Bank, 2015).

Figure 5: Population growth mentioned in fairness / equity section



Note: More Middle countries make reference to population growth in their INDCs; these also happen to hold the largest percentage of the global population.

Source: Authors

However, of the three groups of countries, Middle countries on average have the largest populations. For instance, six of the ten most populous countries in the world are in the group of Middle countries (China, India, Indonesia, Brazil, Pakistan and Nigeria) and together comprise almost half of the world's population. Middle countries most often provided information on per capita emissions in the fairness / equity section.[16] In the emerging economies among the Middle countries, the growing middle classes and their increasing needs might be a much larger challenge than the population growth itself (c.f. New Climate Economy, 2014).

The focus of Middle countries – especially those with large populations and fast growing economies – on emissions per capita underscores the challenge of balancing climate action (mainly reducing emissions) with improving the populations' well-being through economic

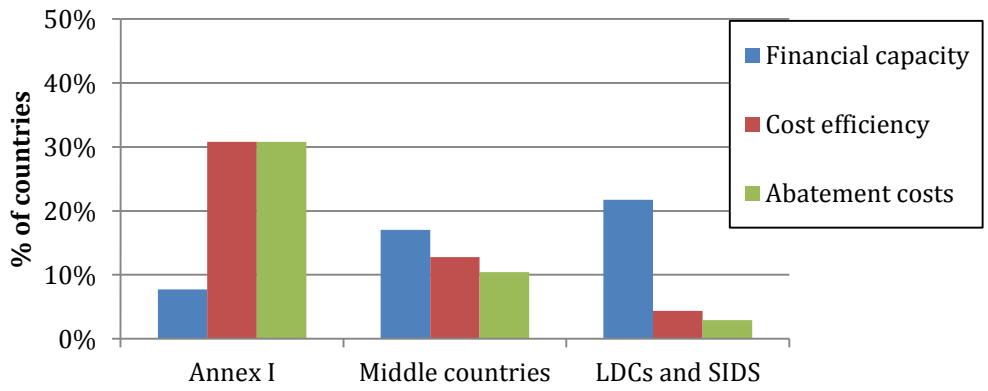
16 Of the Middle countries, 47 per cent provided information on current per capita emissions in the fairness / equity section. In comparison, 30 per cent of the Annex I countries did, and 28 per cent of the LDCs and SIDS.

development. India, for instance, highlights this challenge of improving its Human Development Index while pursuing a "cleaner" development path in its INDC.

Financial capacity

Annex I countries contextualise the fairness and ambition of their INDCs by mentioning the high abatement costs of mitigation measures, and by writing that cost-efficient mitigation can be a challenge. Annex I countries are highly industrialised and, hence, their high-carbon infrastructure is locked in. Moreover, many Annex I countries have already successfully reduced their GHG emission levels, which could mean that the cheapest mitigation measures have already been taken.

Figure 6: Financial capacity



Note: Annex I countries focus more on cost-efficiency and abatement, whereas Middle countries and LDCs and SIDS focus more on financial capacity.

Source: Authors

A small share of Middle countries mention cost-efficiency, abatement costs and financial capacity, at almost equal frequency. LDCs and SIDS clearly focus on their financial capacity constraints when it comes to undertaking mitigation and adaptation (see Figure 6). This clearly reflects the "capabilities" aspect of CBDR-RC. Many LDCs and SIDS emphasise that they had made contributions despite their limited financial capacities and other competing challenges, such as poverty. This also sets the context for support from Annex I countries for means of implementation of the climate contributions from LDCs and SIDS.

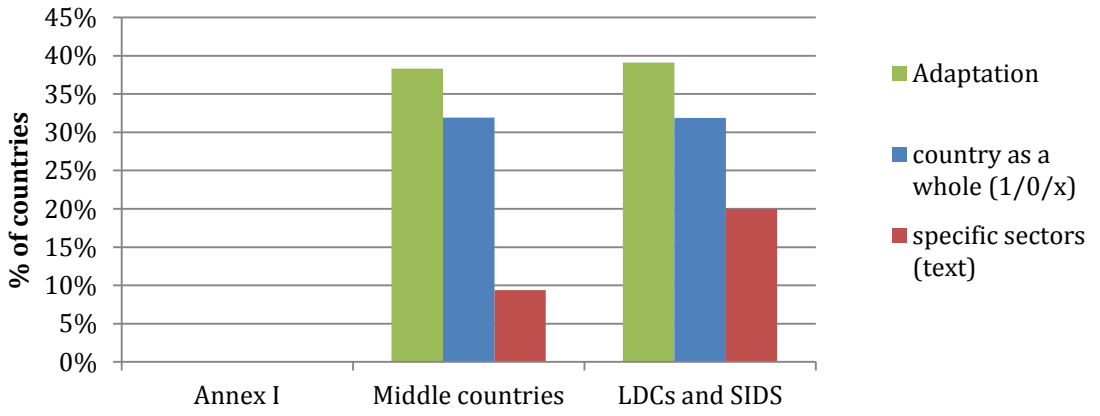
Adaptation and vulnerability

Annex I countries did not include the words "adaptation" and "vulnerability" in the fairness / equity sections of their INDCs, which is a stark contrast to the Middle countries and the LDCs and SIDS (see Figure 7). The latter two mention adaptation and vulnerability with the same frequency.

The point of differentiation, however, is that the LDCs and SIDS provided more details on sectors that are vulnerable. Also, LDCs and SIDS describe their specific natural circumstances (e.g. low-lying islands, mountainous areas, desert) more often (36 per cent) than

Middle countries (19 per cent) and Annex I countries (14 per cent) to contextualise their countries' vulnerabilities.

Figure 7: Adaptation and vulnerability in the context of fairness / equity



Note: Annex I countries do not make reference to adaptation and vulnerability in their "fairness" / "equity" sections.

Source: Authors

Outside of the section on fairness / equity, the LDCs and SIDS also provided more information on adaptation actions and strategies (see Section 4.2), cost estimates of adaptation (see Section 4.3), and they included particular sectors more frequently than Middle countries. The particular vulnerability of LDCs and SIDS is also reflected in the Paris Agreement through subtle differentiation (see Section 2.3).

4.2 Adaptation

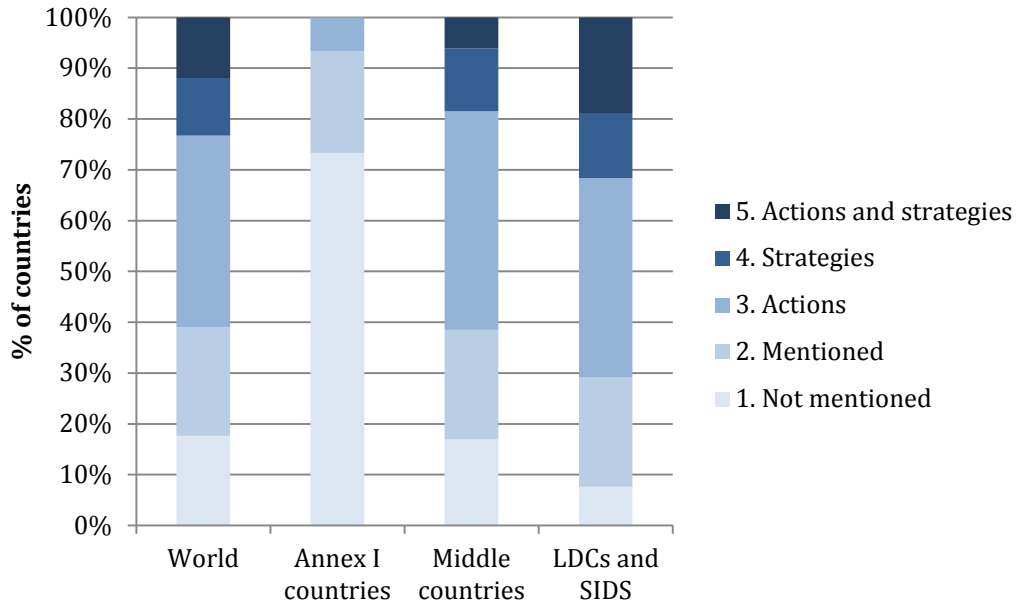
The push by developing countries for more emphasis on adaptation to climate change is well reflected in the INDCs (see Figure 8). Seventy-three per cent of Annex I countries did not mention adaptation in their INDCs. This marks a strong contrast to Middle countries, LDCs and SIDS. Both groups not only included adaptation in their INDCs, a majority also included action plans (for short-term action on adaptation) and strategies (long-term adaptation aims).

LDCs and SIDS, in particular, prioritised adaptation in their INDCs. Fifty-eight per cent of the LDCs and SIDS included adaptation actions in their INDCs, and 39 per cent included strategies (sometimes in combination). This can be explained by the high level of vulnerability of LDCs and SIDS to climate change. It might also reflect, in the case of LDCs, that countries had adaptation plans readily available (through their National Adaptation Programmes of Action). This could easily have been included in the INDCs in the short term, whereas mitigation contributions still would have needed to be developed.

Our findings are in line with the differentiation on adaptation in the Paris Agreement. Article 7.3 of the Paris Agreement, for instance, recognises adaptation efforts of developing countries, thus reflecting the importance of adaptation to these countries. Articles 7.2

and 7.6 add subtle differentiation and refer to "particularly vulnerable" developing countries (see also Section 2.3).

Figure 8: Adaptation



Note: Whereas Annex I countries hardly mention adaptation, a majority of the Middle countries and LDCs and SIDS mention adaptation and provide actions and/or strategies.

Source: Authors

Loss and damage

Mention of loss and damage – or "*negative effects of climate variability and climate change that people have not been able to cope with or adapt to*" (Warner & van der Geest, 2013) – was not analysed in this paper, as it is only emerging as an issue in international climate change negotiations, notably under the Warsaw International Mechanism. However, Pauw et al. (2016) show a similar self-differentiation of priorities as adaptation: Annex I countries do not mention loss and damage at all, whereas LDCs and SIDS often do.

4.3 Climate finance

This section analyses whether financial support to undertake climate action (also referred to as climate finance) is mentioned in the INDCs, and to what extent countries make its provision a condition for the implementation of their contributions, both for mitigation (Section 4.3.1) and for adaptation (Section 4.3.2). The analysis focussed on the use of wording and using "international finance", "climate finance" and "international support" interchangeably to mean financial support for climate actions.

Developing countries made repeated requests for information on financial provisions to be included in the INDCs (IISD, 2015). For example, Mali, on behalf of the Africa Group, requested that developed countries provide a roadmap on the mobilisation of US$ 100 billion per annum by 2020. Brazil, on behalf of the AILAC group, also proposed that

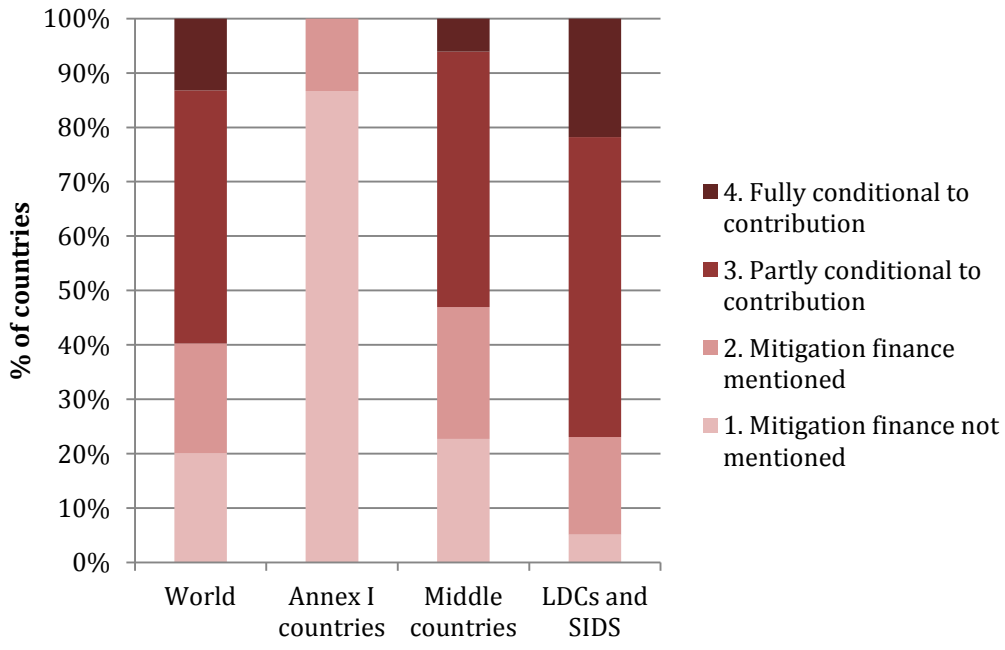
developed countries include targets for financial support in their INDCs.[17] These proposals were strongly opposed by the EU, Switzerland and the United States (IISD, 2015). This sets the context for analysis on whether there was self-differentiation in the INDCs regarding financial support and the cost of contributions (including conditionality of contributions based on availability of support for means of implementation).

The differentiation in climate finance is undertaken in the context of CBDR-RC, in particular the notions of "responsibility" (i.e. provision of financial support) and "capabilities" (i.e. financial capacity to undertake contributions).

4.3.1 Mitigation finance

Given the discussions on whether or not to include the provision of climate finance in INDCs, it does not come as a surprise that Annex I countries hardly refer to mitigation finance in their INDCs (see Figure 9). Those Annex I countries that did include mitigation finance simply mentioned it and did not set any specific targets for financial support. This shows that Annex I countries do not consider the provision of mitigation finance as being an INDC contribution, even though they have repeatedly pledged to mobilise US$ 100 billion of climate finance per year by 2020.

Figure 9: Mitigation finance



Note: More than half of Middle countries and LDCs and SIDS make their mitigation contributions conditional to the provision of climate finance.

Source: Authors

However, for Middle countries, and for LDCs and SIDS in particular, mitigation finance is a crucial aspect of INDCs. Although the capacities of many emerging economies to

17 The "Independent Alliance of Latin America and the Caribbean" consists of Chile, Colombia, Costa Rica, Guatemala, Panama, Paraguay and Peru.

undertake mitigation contributions have increased in tandem with their economic status, more than half of the Middle countries made their mitigation contributions partly conditional to the provision of climate finance from others.

At the same time, the more advanced Middle countries of Brazil and China indicated that they are planning for South-South cooperation in their INDCs, with China stating that it will establish the Fund for South-South Cooperation on Climate Change to provide assistance and support to LDCs, SIDS, African and other developing countries. This is in line with Articles 9.2 and 9.3 of the Paris Agreement, which encourage countries that are not part of the "developed countries" to provide financial support, too (see Section 2.3). Finally, 95 per cent of LDCs and SIDS mention mitigation finance in their INDCs. More than half of them make their mitigation contributions partly conditional to the provision of climate finance. Twenty-two per cent even make their mitigation contributions fully conditional. An analysis of the INDCs of 43 African countries indicated that they all requested the provision of mitigation climate finance (Mbeva et al., 2015).

The contention and lack of agreement among countries on how to reflect financial support in the INDCs resulted in a major imbalance between providers and recipients of climate finance. Not a single country describes its provision of mitigation finance, yet a majority of the countries (60 per cent of all INDCs) included mitigation contributions that are (partly) conditional to receiving mitigation finance. This underscores the significance attached to financial support; (partial) conditionality thus emerged as one of the self-differentiating factors manifested in the INDCs.

4.3.2 Cost of climate contributions

The costs of undertaking mitigation and adaptation can pose significant challenges, especially to countries that have limited capacities to undertake these contributions. In their fairness sections, one-third of the Annex I countries state that their ambitions should be seen in the context of high abatement costs and the limited cost-efficiency of mitigation. At the same time, 21 per cent of LDCs and SIDS mention financial capacity as being a determinant in what they consider their fair and ambitious contribution (see Section 4.1).

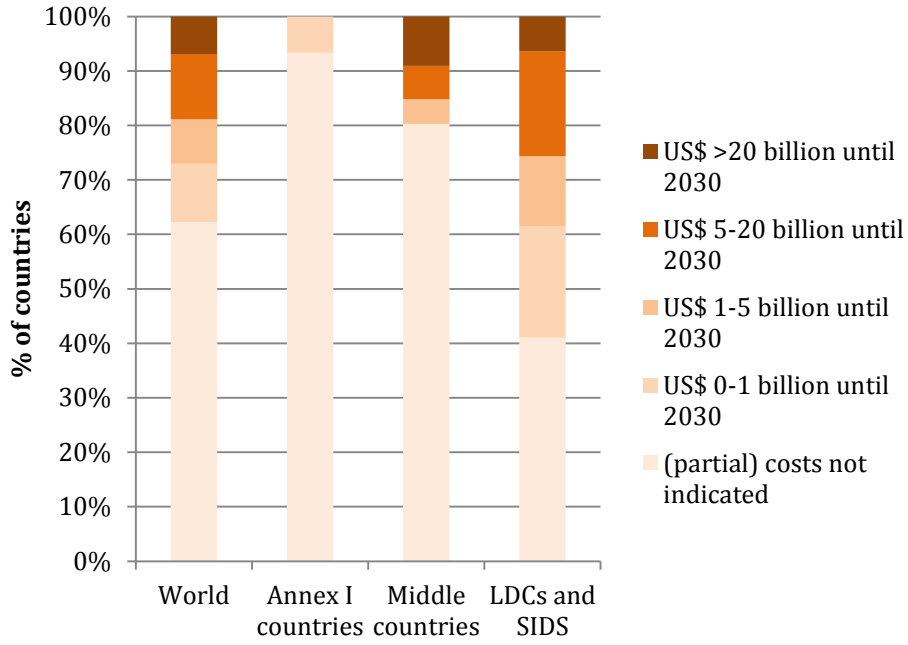
Sixty countries included the (partial) costs of mitigation in their INDCs, adding up to US$ 2.9 trillion up to 2030. Of the Annex I countries, only New Zealand mentions and quantifies mitigation costs – and these are clearly partial costs only (on research). Most (70 per cent) Middle countries did not mention mitigation costs either, and only a few clearly quantify these costs. Most of the 60 countries that mention and/or quantify mitigation costs are LDCs and SIDS (see Figure 10).

Given that 1) only 60 countries included cost estimates of their mitigation contributions, 2) many of these estimates are partial (e.g. not reflecting all sectors) and 3) 89.5 per cent of all mitigation costs in INDCs come from India, South Africa and Ethiopia alone, the indicated mitigation cost estimate should not be used as an aggregate. The cost estimates are most useful in a country context.

A similar pattern was observed in indicating the cost of adaptation in INDCs. Fifty-four countries indicated (partial) adaptation costs, adding up to US$ 770 billion for the period

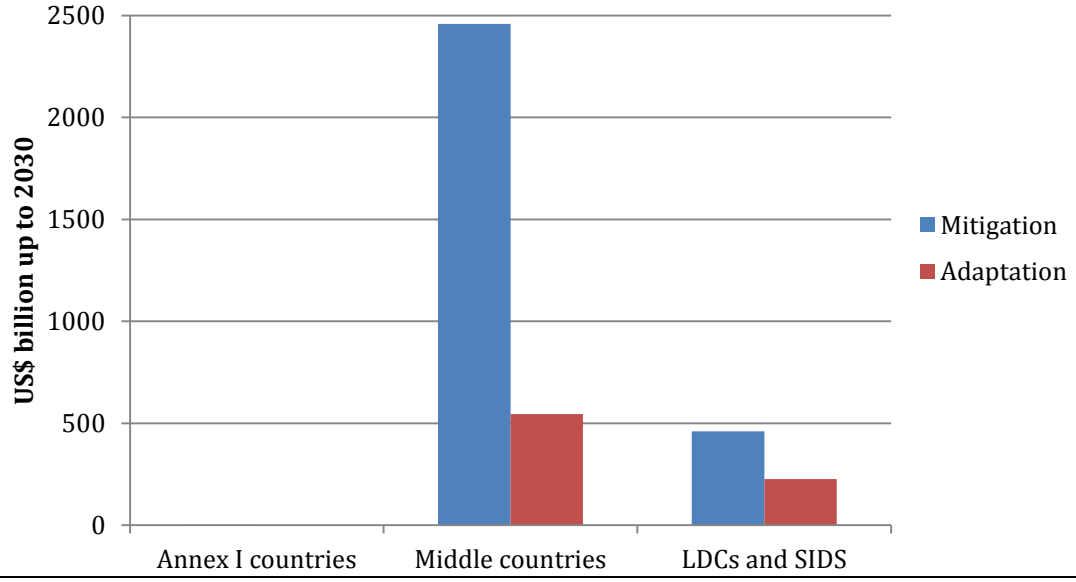
up to 2030. Although the variations among countries are lower than for mitigation costs, the number should also be treated with care. Differentiation is significant, especially between Middle countries and LDCs and SIDS (see Figure 11).

Figure 10: (Partial) costs of mitigation in order to make the contribution



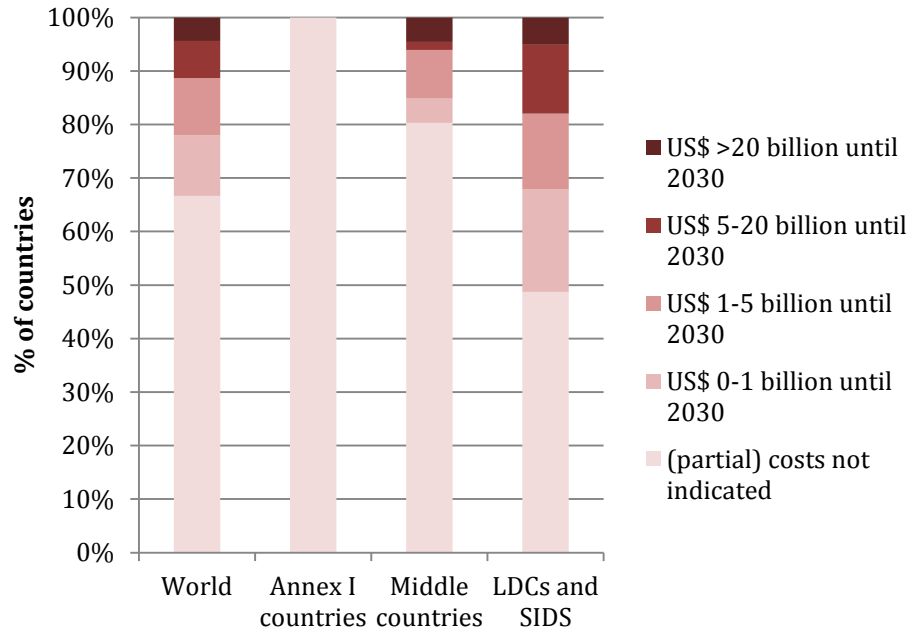
Note: More than half of LDCs and SIDS included the (partial) costs of their mitigation contribution in their INDCs.
Source: Authors

Figure 11: Aggregated (partial) cost indications in INDCs



Note: Costs of mitigation are higher than those for adaptation for Middle countries and SIDS. Annex I countries hardly indicated (partial) cost estimates for their mitigation and adaptation actions.
Source: Authors

Figure 12: (Partial) costs of adaptation in order to make the contribution



Note: A larger percentage of LDCs and SIDS have quantified their adaptation costs, whereas no Annex I country has quantified adaptation costs.

Source: Authors

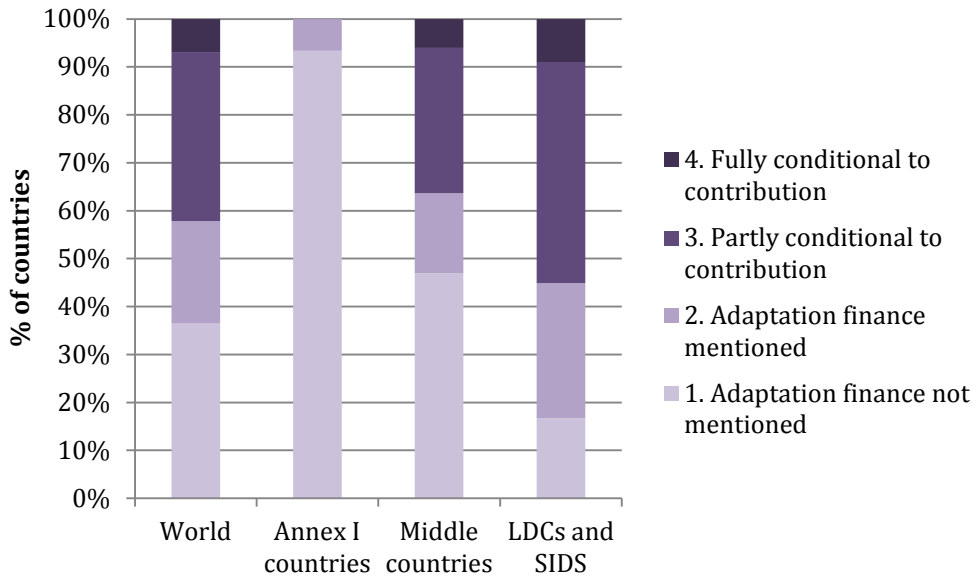
Clear differentiation whereby a higher percentage of LDCs and SIDS include (partial) cost estimates of their contributions can be understood to target financial support for implementation. This is consistent with results in Sections 4.3.1 and 4.3.2, in which a larger percentage of LDCs and SIDS make their contributions (partly) conditional to financial support. By adding information on (conditional) climate finance and costs of mitigation and adaptation action, countries make it clear that they are willing to contribute, but they retain the option of receiving financial support to implement these contributions.

4.3.3 Adaptation finance

The analysis on adaptation finance in INDCs shows a similar pattern to mitigation finance (see Figure 13).

Only 7 per cent of Annex I countries make reference to adaptation finance in their INDCs. This shows that Annex I countries do not consider the provision of adaptation finance as being an INDC contribution, even though they have repeatedly pledged to mobilise US$ 100 billion of climate finance per year by 2020. Almost half (46 per cent) of Middle countries do not mention adaptation finance in their INDCs (this is significantly more than for mitigation finance), and a larger proportion (30 per cent) of those that include it make their adaptation contributions partly conditional to access to adaptation finance.

Figure 13: Adaptation finance



Note: Conditional adaptation finance is mentioned by a significantly larger percentage of LDCs and SIDS than Middle countries.

Source: Authors

In contrast, more than 80 per cent of LDCs and SIDS mention adaptation finance in their INDCs. More than half of LDCs and SIDS make their adaptation contributions partly or fully conditional to financial support. This mirrors the differences in capability between Middle countries and LDCs and SIDS. It might also be seen in relation to historical responsibility: far more LDCs and SIDS note that they are suffering from a problem they did not cause in the first place (see also Section 4.1).

In comparison to mitigation, a smaller percentage of Middle countries and LDCs and SIDS make their adaptation contributions (partly) conditional to financial support. This differentiation may reflect the lack of a clear understanding of actual costs of adaptation, whereby adaptation costs are usually understated (UNEP, 2014). It may also reflect the disagreement between countries on the inclusion of adaptation and finance in INDCs (see Section 3.1). By including (partial) costs of adaptation and by making adaptation contributions (partly) conditional to finance, developing countries could make developed countries even more sceptical about including adaptation in INDCs.

5 Discussion and conclusion

In preparation for the 2015 UN climate summit in Paris, all parties to the UNFCCC were invited to submit a climate action plan – or Intended Nationally Determined Contribution. The innovation of this instrument lies in the fact that it is universal (each country formulates one) and that it is formulated bottom-up (countries set their own priorities and ambitions). In theory, this stimulates countries' self-differentiation of responsibilities to address climate change.

This paper analysed whether Parties' self-differentiation of priorities and ambitions through INDCs also advances the notion of CBDR-RC. Although the general idea behind this notion is accepted by all countries, its operationalisation has proven problematic. This paper has analysed the 159 INDCs that were submitted to the UNFCCC until the Paris Agreement was adopted on 12 December 2015. The analysis has specifically focussed on aspects beyond mitigation targets, including INDC sections on fairness / equity as well as INDC content on adaptation and climate finance.

In doing so, countries were divided into three groups: the Annex I countries, the Middle countries, and the LDCs and SIDS (see page 17). This responds both to recommendations by the literature to go beyond the bifurcation of Annex I and non-Annex I countries (Pauw et al., 2014; Deleuil, 2012; Depledge & Yamin, 2009; Honkonen, 2009) as well as the recent UNFCCC Paris Agreement (UNFCCC, 2015). Although this agreement formally differentiates between developed and developing countries, it also contains remarkable "subtle differentiation" towards LDCs and SIDS in particular. For the purposes of our analysis, we define "subtle differentiation" as flexible differentiation that is applicable to specific subsets of countries (e.g. the LDCs and SIDS) on certain issues (e.g. adaptation and finance) and procedures (e.g. timelines and reporting).

Our results show that: 1) the bottom-up setting of priorities and ambitions in INDCs advanced the issue of CBDR-RC beyond mitigation to include, at least, adaptation and finance; 2) self-differentiation through INDCs advanced differentiation beyond the "firewall" between Annex I and non-Annex I countries, without actually dissolving these Annexes. These results are explained below.

a. "Fair and ambitious" sections in INDCs

It is surprising that historical emissions – a contentious issue at the root of CBDR-RC in the UN climate negotiations – have limited relevance in INDCs. Interestingly, the Annex I country group has the largest share of countries that quantify their historical emissions. This can be accredited to the smaller emitters in the group. The LDCs and SIDS mention historical responsibility the least.

However, the fairness / equity section of most countries in this group includes many other elements of fairness. We thus argue that these other aspects were of greater priority to these countries in terms of fairness. Such aspects include financial capacity and vulnerability. On the former, Annex I countries focus on cost-effectiveness and abatement costs, whereas LDCs and SIDS focus on a lack of financial means. On the latter, both Middle countries as well as LDCs and SIDS emphasised their vulnerability and adaptation, with the latter providing more details. Although more research should be done, we can already conclude from countries' sections of why their INDCs are fair and ambitious that national priorities do not necessarily reflect fairness at the international level (i.e. comparison of individual country contributions in the context of collection action).

b. Adaptation

Adaptation to climate change is approached differently by the three country groups (see Figure 8). Only three Annex I countries mentioned adaptation, and only one included adaptation actions. In contrast, all but six LDCs and SIDS mentioned adaptation; and a

majority elaborated on adaptation actions and/or strategies. The majority also quantifies (partial) costs of adaptation. This should all be seen in the context of LDCs and SIDS that make adaptation conditional to climate finance.

Although more than 80 per cent of the Middle countries mention adaptation in their INDCs, these descriptions are less elaborate than those of LDCs and SIDS. For example, only 20 per cent include (partial) cost estimates. In total, 53 countries include (partial) cost estimates, adding up to US$ 771 billion up to 2030.

To conclude, the bottom-up setting of priorities and ambitions to address climate change has put adaptation at the front for less-developed countries in particular. At the same time, the fact that Annex I countries hardly refer to adaptation does not mean that it is not an issue for them. Many face high adaptation costs too, but they do not communicate this at the climate negotiations.

c. Climate finance

There is clear differentiation between the three country groups as regards both mitigation finance and adaptation finance. A majority of the Middle countries mention climate finance, and even more LDCs and SIDS do so. Furthermore, a significantly larger number of countries in the latter group made their INDC contributions partly or fully conditional to climate finance: 46 per cent (partly) and 9 per cent (fully) for adaptation; and 55 per cent (partly) and 22 per cent (fully) for mitigation. Because so many countries make climate finance conditional, climate finance automatically becomes a crucial aspect of countries' common but differentiated responsibilities and respective capabilities.

Such conditionality makes the implementation of INDC contributions much more uncertain – including the CAT outcome that full implementation of INDCs could limit global warming to 2.7°C (CAT, 2015). This conditionality is even more striking when considering that Annex I countries have hardly referred to climate finance in their INDCs. In other words: climate finance providers do not consider climate finance as an INDC contribution. So whilst the INDC instrument is universal, INDC content is not. This can partly be explained by the lack of UNFCCC guidance on INDC content and scope.

Further research

Areas for further research include further analysis of how fairness is presented in INDCs: the universal and bottom-up description in INDCs provides a unique opportunity and a stark departure from the top-down application of fairness criteria. This research also showed how unclear guidance leads to very different INDCs. Further research should explore options for better guidance on the content and scope of future INDCs.

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Appendix

Appendix I: (Subtle) differentiation in the Paris Agreement

The table below presents differentiation between countries in the Paris Agreement based on CBDR, equity, special circumstances and/or national circumstances.

Article	Text	Differentiated towards particular countries
Article 2.2	This Agreement will be implemented to reflect equity and the **principle of common but differentiated responsibilities and respective capabilities**, in the light of **different national circumstances**	All countries
Article 4.3	Each Party's successive nationally determined contribution will represent a progression beyond the Party's then current nationally determined contribution and reflect its highest possible ambition, reflecting its **common but differentiated responsibilities and respective capabilities**, in the light of **different national circumstances**	All countries
Article 4.4	Developed country Parties should continue taking the lead by undertaking economy-wide absolute emission reduction targets. Developing country Parties should continue enhancing their mitigation efforts, and are encouraged to move over time towards economy-wide emission reduction or limitation targets in the light of **different national circumstances.**	Developed vs developing
Article 4.6	The least developed countries and small island developing States may prepare and communicate strategies, plans and actions for low greenhouse gas emissions development reflecting their **special circumstances**	LDCs and SIDS
Article 4.19	All Parties should strive to formulate and communicate long-term low greenhouse gas emission development strategies, mindful of Article 2 taking into account their **common but differentiated responsibilities and respective capabilities**, in the light of **different national circumstances**	All countries
Article 7.6	Parties recognize the importance of **support for** and international cooperation on adaptation efforts and the importance of taking into account the needs of **developing country Parties,** especially those that are particularly vulnerable to the adverse effects of climate change.	Developing vs developed
Article 7.10	Each Party should, as appropriate, submit and update periodically an adaptation communication, which may include its priorities, implementation and support needs, plans and actions, **without creating any additional burden** for developing country Parties	Developing vs developed
Article 9.2	Other Parties are encouraged to provide or continue to provide such support voluntarily	Developed vs developing
Article 9.3	As part of a global effort, developed country Parties should continue to take the lead in mobilizing climate finance from a wide variety of sources, instruments and channels, noting the significant role of public funds, through a variety of actions, including supporting country-driven strategies, and taking into account the **needs and priorities of developing country Parties**. Such mobilization of climate finance should represent a progression beyond previous efforts.	Developed vs developing

Article	Text	Differentiated towards particular countries
Article 9.4	The provision of scaled-up financial resources should aim to achieve a balance between adaptation and mitigation, taking into account **country-driven strategies**, and the priorities and needs of developing country Parties, especially those that are particularly vulnerable to the adverse effects of climate change and have significant **capacity constraints**, such as the least developed countries and small island developing States, considering the need for public and grant-based resources for adaptation	LDCs and SIDS
Article 9.9	The institutions serving this Agreement, including the operating entities of the Financial Mechanism of the Convention, shall aim to ensure efficient access to financial resources through simplified approval procedures and enhanced readiness support for developing country Parties, in particular for the least developed countries and small island developing States, in the **context of their national climate strategies and plans**	LDCs and SIDS
Article 11.1	Capacity-building under this Agreement should enhance the **capacity and ability** of developing country Parties, in particular countries with the least capacity, such as the least developed countries, and those that are particularly vulnerable to the adverse effects of climate change, such as small island developing States, to take effective climate change action, including, inter alia, to implement adaptation and mitigation actions, and should facilitate technology development, dissemination and deployment, access to climate finance, relevant aspects of education, training and public awareness, and the transparent, timely and accurate communi-cation of information.	LDCs, SIDS, developing countries
Article 13.1	In order to build mutual trust and confidence and to promote effective implementation, an enhanced transparency framework for action and support, with built-in flexibility which takes into account **Parties' different capacities** and builds upon collective experience is hereby established	All countries
Article 13.14	**Support** shall be provided to **developing countries** for the imple-mentation of this Article.	Developed vs developing
Article 15.1	The mechanism referred to in paragraph 1 of this Article shall consist of a committee that shall be expert-based and facilitative in nature and function in a manner that is transparent, non-adversarial and non-punitive. The committee shall pay particular attention to the **respective national capabilities and circumstances** of Parties	All countries

Appendix II: List of countries / INDCs analysed

Annex I countries	Middle countries	LDCs and SIDS
Australia	Albania	Afghanistan
Belarus	Algeria	Angola
Canada	Andorra	Antigua and Barbuda
European Union	Argentina	Bahamas
Iceland	Armenia	Bahrain
Japan	Azerbaijan	Bangladesh
Liechtenstein	Bolivia	Barbados
Monaco	Bosnia-Herzegovina	Belize
New Zealand	Botswana	Benin
Norway	Brazil	Bhutan
Russia	Brunei	Burkina Faso
Switzerland	Cameroon	Burundi
Turkey	Chile	Cabo Verde
United States	China	Cambodia
Ukraine	Colombia	Central African Republic
	Congo, Rep.	Chad
	Costa Rica	Comoros
	Cote d'Ivoire	Cook Islands
	Ecuador	Cuba
	Egypt	Dem. Rep. of the Congo
	Gabon	Djibouti
	Georgia	Dominica
	Ghana	Dominican Republic
	Guatemala	Equatorial Guinea
	Honduras	Eritrea
	India	Ethiopia

Annex I countries	Middle countries	LDCs and SIDS
	Indonesia	Fiji
	Iran	Gambia, The
	Iraq	Grenada
	Israel	Guinea
	Jordan	Guinea-Bissau
	Kazakhstan	Guyana
	Kenya	Haiti
	Kuwait	Jamaica
	Kyrgyzstan	Kiribati
	Lebanon	Lao PDR
	Macedonia (The former Yugoslav Republic of Macedonia)	Lesotho
	Malaysia	Liberia
	Mexico	Madagascar
	Moldova, Rep	Malawi
	Mongolia	Maldives
	Montenegro	Mali
	Morocco	Marshall Islands
	Namibia	Mauritania
	Nigeria	Mauritius
	Oman	Micronesia (Federated States of)
	Pakistan	Mozambique
	Paraguay	Myanmar
	Peru	Nauru
	Philippines	Niger
	Qatar	Niue
	San Marino	Palau

Annex I countries	Middle countries	LDCs and SIDS
	Saudi Arabia	Papua New Guinea
	Serbia	Rwanda
	South Africa	Saint Lucia
	South Korea, Rep	Saint Kitts and Nevis
	Sri Lanka	Saint Vincent and the Grenadines
	Swaziland	Samoa
	Tajikistan	São Tomé and Príncipe
	Thailand	Senegal
	Tunisia	Seychelles
	United Arab Emirates	Sierra Leone
	Uruguay	Singapore
	Vietnam	Solomon Islands
	Zimbabwe	Somalia
		South Sudan
		Sudan
		Suriname
		Tanzania
		Togo
		Tonga
		Trinidad and Tobago
		Turkmenistan
		Tuvalu
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