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# Drivers of Nationally Determined Contributions

## *An Exploratory Look at Several Developing Countries*

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**Abstract:** The Paris Agreement, the principal international treaty governing climate change, requires each country to submit Nationally Determined Contributions (NDCs) which include quantitative targets for greenhouse gas reductions. This study aims to identify the motivating factors behind NDC creation generally and the mitigation targets specifically using a case study approach. Semi-structured interviews were conducted with key representatives from Argentina, the Gambia, and some other developing countries. Interview responses are interpreted in context with literature for each country. Results show that NDC creation processes vary, but generally involve holding meetings to educate and involve stakeholders. In most cases, stakeholders are found to be knowledgeable and able to suggest mitigation actions or to contribute data. Least developed countries recruited international help for technical support. International factors are shown to be the most important drivers of increasing the ambition of the mitigation targets. Specifically, this includes the desire to improve a country's national image and to obtain higher levels of international aid. Domestic political factors are also likely to be influential: politicians could use their leverage to change the NDCs to match their own agenda.

## 1. INTRODUCTION

Climate change, as one of the world's most inherently global problems, is also one of the most intractable. Nationally Determined Contributions (NDCs), a feature of the Paris Agreement (PA), are an important step in the solution. The PA is an international agreement under the United Nations Framework Convention for Climate Change (UNFCCC) framework that took effect in November 2016. The goal of the PA is to keep global warming under 2° C, and to strive for a 1.5° C limit. To this end, all countries party to the agreement were required to plan mitigation and (optionally) adaptation actions, the details of which were left to be determined by each individual country. These actions were formalized in documents expressing Intended Nationally Determined Contributions (INDCs), which include a quantitative goal for greenhouse gas (GHG) emissions reductions.

This study aims to investigate how the NDCs are formulated, particularly in several developing countries. It consists of general information about the

committee that created the NDCs, the stakeholder engagement process, and the reasoning behind the quantitative emissions reduction goal contained within each NDC. Because cutting greenhouse gas (GHG) emissions involves deliberate policymaking, large changes to national infrastructure and development strategies, and significant costs, it follows that the quantitative goals were made with specific reasons in mind. This paper examines each of these potential drivers of NDC formulation, and subsequently discusses the policy implications.

This is an important, yet little studied, area of the literature and political discourse, most of which focuses on implementation of the NDCs as currently written. Knowing the motivations behind the NDCs may put pressure on future NDC revisions to be more ambitious, and bring them closer to fulfilling the goals of the PA. Increasing NDC ambitions are critically important, because even under optimistic assumptions that all countries will fully reach their highest conditional targets, global warming was calculated to be 2.7° C, and with less optimistic assumptions, could be as high as 3.9° C ([Rogelj et al., 2016](#)). In either case the world would face disastrous climate change impacts ([IPCC, 2014](#)).

## 2. NATIONALLY DETERMINED CONTRIBUTIONS

### 2.1 A Brief History of the Paris Agreement

International negotiations under the UNFCCC struggled for years to come up with a solution for climate change that was politically acceptable for all countries. These negotiations, dubbed Conferences of the Parties (COPs), have been held yearly since 1995. The groundwork for the NDCs was laid in COP 19, in Warsaw. Countries were encouraged to begin planning them, with the goals of communicating with “clarity, transparency, and understanding” ([Wienges & Zachow, 2014](#)). COP 20, in Lima, published guidelines to writing INDCs. COP 21, in Paris, in December 2015 resulted in the Paris Agreement. It was officially ratified in November 2016; since this time, INDCs have also been known as NDCs. This paper will use the acronym INDC when referring to the drafting of the document, and NDC otherwise.

### 2.2 Transparency in NDCs

General features of most INDCs include an overview of sectors that they cover, national policies in place that will help achieve the emissions reduction goal, and information on adaptation plans.

Since COP 21 was held recently, there is a dearth of academic studies analysing NDCs. However, several researchers ([Hare, Höhne, & Blok, 2017](#); [Robiou du Pont et al., 2016](#); [Athanasiou et al., 2017](#)) have performed quantitative analyses, comparing the promised emissions reductions to various determinations of what the reductions should be. These are generally based upon the remaining carbon budget which would result in warming of two degrees, distributed by country according to population, historical emissions, and developmental trajectory.

Largely absent from the literature are determinations of why the NDCs were formulated the way they were. INDC preparation was done well in

advance of the PA, but at that time no transparency framework existed to ensure they were created fairly and equitably ([Dagnet, 2016](#)). As a result, very little information regarding the NDC drafting process is publicly available for most countries.

Transparency levels in NDCs vary. Some NDCs provide almost no information about the planning process, and few provide any details about the specific quantitative methodology used and steps followed to arrive at the mitigation target. Many commentators have highlighted a lack of transparency, and proposals for increased transparency and ambition do not seem to have been heeded ([Tamura, Kuramochi, & Asuka, 2013](#)).

### 2.3 Standards and Guidelines for INDCs

INDCs show these kinds of differences partly because only loose guidelines on what they should contain were published. These were set in the COP 20 conference in Lima. The primary rule proposed that a mandatory mitigation target be included in each INDC, and that the target should result in greater emissions reductions than current efforts would indicate. Only least developed countries and small island developing states were exempted from this rule.

Additionally, the following information should be provided in the INDC ([UNFCCC, 2014](#)):

*Quantifiable information on the reference point (e.g. base year, or reference level if the form of the INDC is a reduction below reference)*

*Time frames for implementation [e.g. the target year(s) or period]*

*Scope and coverage of plans (inclusion of sectors and gases)*

*Assumptions and methodology for estimating and accounting for GHGs*

*Self-assessment of how the INDC is fair and ambitious, given the countries' national circumstances.*

*Explanation of how the INDC contributes to the objective of the Convention to hold global warming below 2°C or 1.5°C above pre-industrial levels.*

*Information on the "planning processes" (e.g. how they arrived at the INDC or how they plan to implement it).*

These guidelines allowed countries a substantial amount of freedom of how to plan for and frame their INDC. Even so, some countries did not address all of the points. Submitted INDCs vary widely in length and information provided.

These minimal guidelines were supplemented by guides written by independent NGOs ([Merrill et al., 2015](#); [Dodwell et al., 2016](#); [Levin et al., 2015](#); [Day et al., 2015](#)). Most of these guides are considerably broad, and it is unclear to what extent, if at all, countries used the information therein.

### 2.4 INDC Preparation Process

INDC preparation is complex: Choosing appropriate mitigation targets requires good estimates of current and future greenhouse gas emissions, detailed knowledge of the national budget and government structures, and familiarity with existing policies relating to climate change. This information is also essential for assessment and for enabling implementation. ([Levin et al., 2014](#)) clarified some of this necessary ex-ante information.

Most countries also experienced problems in creating their INDC, which could reflect drivers at work and may have affected the level of ambition.

([Day et al., 2015](#)) found, from a survey distributed to developing countries, that more than half experienced financial difficulties or difficulties assessing economic impacts when drafting their INDCs.

Notably, many countries lacked comprehensive climate change legislation before the INDC planning process began. For such countries, the INDC planning process catalysed discussions on climate change policymaking. ([Day et al., 2015](#)) reported that 71% of developing countries surveyed strongly agreed that INDCs accelerated policymaking for climate change in their country. They also found that 86% of the countries invited stakeholder participation in preparation of the INDCs. In this regard, then, the process can be regarded as a success, regardless of the drivers that eventually decided the output of the INDC.

### 3. METHODS

This study collected data from a literature review and interviews.

#### 3.1 Literature Review

The literature review had several purposes. First, it established potential NDC drivers generally. Then, for each case study country, it estimated the ambitiousness of their NDCs, using data from ([Hare, Höhne, & Blok, 2017](#); [Robiou du Pont et al., 2016](#); [Athanasiou et al., 2017](#)). These provided quantitative measures of NDC ambition, using different criteria such as national capacity and historical emissions. Finally, the literature review informed the background and drivers for each country. Peer-reviewed literature in this area is sparse, and even journalistic sources and other less formal outlets are uncommon, so the literature needed to be supplemented by interviews.

#### 3.2 Interviews

Interviews are a well-established way to conduct qualitative research regarding motivations in climate change mitigation behaviours ([Semenza et al., 2008](#); [Semenza, Ploubidis, & George, 2011](#)). Interviews were conducted with people knowledgeable about the NDC formulation process in the case study countries. Potential interview contacts from developing countries were found through the UN website and through a literature review, as well as through contacts that the interviewees themselves provided (i.e., snowball sampling). Ultimately, three interviews were employed: one for Argentina, one for the Gambia, and one who spoke more generally of NDCs for Belize, Malawi, Mali, the Republic of the Marshall Islands, Micronesia, Saint Lucia, and Senegal. Interviews were selected for inclusion on the basis of interviewee knowledge, and of special circumstances which make the countries particularly informative to examine.

The interviews were semi-structured, that is, questions were asked to determine the drivers of the NDC creation, and follow-up questions were aimed to probe more deeply on promising threads of discussion. The names and job titles of the interviewees have been kept private to ensure anonymity.

## 4. RESULTS AND DISCUSSION

### 4.1 Literature Review: Potential NDC Drivers

This section reviews the literature to identify those drivers that have been decisive in choosing the form of NDCs, as well as determining the mitigation targets within them.

#### 4.1.1 Economic Factors

All countries' actions are constrained by the resources available to them. Even “low hanging fruits”—mitigation actions such as increasing energy efficiency that are relatively cheap and cost effective—require some initial investment ([Alcorta et al., 2013](#)). Governmental finances are comprised of two sources—the domestic national budget, typically financed through taxes, or international aid, typically flowing from relatively wealthy countries to developing countries.

The domestic national budget is hotly debated, since money is never enough to fund all worthy programs. Given the substantial initial investments often required to fund mitigation actions, these budget constraints may serve to weaken targets in INDCs or national climate change laws ([Brown & Taylor, 2014](#)).

Developing countries may be pulled in two different directions—one way by their national budget, which may prioritize economic development over environmental protection, and another by the desire to obtain international aid—if their NDC is seen as fair and ambitious, they may be more likely to receive the aid ([Neuhoff et al., 2009](#)).

International aid used ostensibly to fund GHG mitigation actions often has substantial co-benefits. For instance, improved soil management may increase the carbon storage capacity of the soil but may also enhance adaptability to droughts and improve soil fertility for crops ([Hamilton & Akbar, 2010](#)). Health benefits result from improving public transportation and from replacing biomass cookstoves with cleaner ones ([Shaw et al., 2014](#); [Grieshop, Marshall, & Kandlikar, 2011](#)). More generally, expanding the energy supply to include renewable sources may increase electrification rates in developing countries ([Ahuja & Tatsutani, 2009](#)).

#### 4.1.2 Difficulty of changing the energy mix or upgrading technology

Most countries are largely dependent on fossil fuels to power their economies. Thus, a substantial part of climate change mitigation must involve generation of renewable energies, which for most countries consist largely of solar and wind ([de Vries, van Vuuren, & Hoogwijk, 2007](#)). Switching to these sources, however, requires novel technologies and expensive infrastructure renovations. Moreover, energy efficient technologies and transmission/distribution infrastructure technologies are expensive, and particularly difficult for developing countries to obtain ([Ahuja & Tatsutani, 2009](#)).

#### 4.1.3 Civil society

Actors in civil society contribute significantly to the national discourse and exert an influence on decision-making processes that precede national policies ([Fisher & Green, 2004](#)). Civil society actors consist of those with

business interests and environmental NGOs (non-governmental organizations), among others. Business interests may be concerned with preserving a fossil-fuel based status quo that does not require them to invest in expensive low-carbon technologies. Alternatively, they may attempt to publicly encourage climate action and illustrate environmentally friendly changes they are making to their business to enhance their standing with the public ([Gullberg, 2008](#)). Environmental NGOs, on the other hand, are proponents of more ambitious mitigation targets ([Rietig, 2011](#)). Other actors in civil society, such as academic organizations, religious groups, community groups, and professional organizations, may have also tried to influence their country's NDC.

#### 4.1.4 Politicians' viewpoints

Politicians may be sympathetic to environmental concerns and advocate for ambitious mitigation targets, whereas others may be wedded to business and industry interests and would prioritize unsustainable economic growth over environmental actions ([Rosenbaum, 2014](#)). These politicians are more directly influential than public opinion.

#### 4.1.5 Pre-existing legislation

Several countries had national climate change policies in place before the NDC planning process began. Those countries whose political situations make passing more ambitious environmental legislation difficult may have chosen targets largely based on what was possible under extant, rather than future, legislation. Most NDCs list legislation that is expected to provide the means to reach their target ([UNFCCC, 2017](#)).

#### 4.1.6 Ethics

Climate change is a global problem, but the burden is not shared equally. Some countries are more vulnerable to the impacts than others, a fact explicitly mentioned in a number of NDCs. Moreover, relatively few countries are responsible for the bulk of historic GHG emissions ([World Resources Institute, 2017](#)). This fundamental unfairness was caused much rancorous debate during the international negotiations and was partly responsible for the structure of the PA ([Yeo & Evans, 2015](#)).

Despite its prominence in international negotiations discourse and its status as the most likely driver to result in targets that will reach the PA's goals, ethical concerns were not likely significant in NDC formulation in most cases. Instead, official government statements regarding climate change policies were crafted to make it seem like the policies offered the highest possible environmental protection, to appease concerned citizens and the international community. In reality, these statements may have significantly overstated the effects of the policies ([Brown & Taylor, 2014](#)).

Calculating ethical mitigation burdens is complex due to the numerous factors involved. Different quantitative estimates exist on how to fairly allocate the burdens, using the estimated carbon allowance remaining under the PA's goal to limit warming to 2°C or 1.5°C ([Robiou du Pont et al., 2016](#); [Raupach et al., 2014](#)). These studies' calculations emphasize, to varying degrees, current per capita emissions, historical emissions, vulnerability to climate change impacts, ability to pay for mitigation technologies, and comparisons to pledges put forth by others with similar national



circumstances. The approaches most commonly used emphasize equalizing per capita emissions allowances under the equity principles of equality, historical responsibility for climate change, and national capacity to mitigate emissions ([Averchenkova, Stern, & Zenghelis, 2014](#)).

#### **4.1.7 International negotiations and international image**

In COP conferences, countries have formed alliances to increase their bargaining power and to express common concerns. Examples include the Coalition of Low-Lying Atoll Nations, the Alliance of Small Island States, and the Africa Group. The “high ambition coalition”, a group formed in secret in advance of COP 21, was instrumental in creating and passing the PA ([Mathiesen & Harvey, 2015](#)). Ultimately, the pressure from these negotiations influenced the nature of the mitigation commitments in the INDCs. This sort of “facilitative dialogue” was anticipated by the PA to be a driver of increased ambition for the INDCs ([Rajamani, 2017](#)).

Additionally, countries care about their image in the international community. A country widely seen as having a particularly weak NDC given their national circumstances may be at a disadvantage when trying to influence international policy, in both environmental and non-environmental spheres. International image was reported to be a significant driver of climate change policy in Brazil, for example ([Kasa, 2013](#)).

#### **4.1.8 Vulnerability**

Climate change is expected to produce a wide range of negative impacts on humans and ecosystems ([IPCC, 2014](#)). A number of NDCs, particularly those put forth by developing countries, mention vulnerability to the impacts of climate change as an ethical driver for international action. As many as 57 NDCs explicitly mention loss or damage due to climate change impacts ([Hoffmeister & Huq, 2015](#)). The link between higher levels of mitigation and thus lower adverse climate change impacts—and adaptation costs—is well understood, meaning that more vulnerable countries may choose to mitigate more than their counterparts ([IPCC, 2014](#)).

## **4.2 Interview Case Study: Argentina**

### **4.2.1 Background**

Argentina emitted 431.64 MtCO<sub>2</sub>e in 2013, with a significant portion of these coming from land use changes and forestry ([World Resources Institute, 2017](#)). It is ranked 19<sup>th</sup> in the world. This represents 4.44 tCO<sub>2</sub> per capita, ranked 52<sup>nd</sup>. Argentina is notable for being one of the only countries thus far to submit a revised NDC. The revised NDC was unveiled at COP 22 in November 2016.

In addition to the literature cited, data for this analysis was obtained from an interview conducted with a high-ranked official in Argentina’s Ministry of Environment who has in-depth knowledge of the NDC formulation process. Unless otherwise noted, all information is from the NDC text or the interview.



#### 4.2.2 INDC Planning Process

There was no legislation on climate change mitigation preceding the INDC. The government of Argentina created a Governmental Committee on Climate Change under the new National Strategy on Climate Change to coordinate climate change actions and to direct INDC creation. They tried to be proactive and involving stakeholders in the process, through meetings, workshops and surveys. The interviewee rated stakeholder engagement as “acceptable.”

The revised NDC was first and foremost a product of a regime change: A new president, Mauricio Macri, was elected after the first INDC was submitted. He was more concerned about climate change than his predecessor and wanted to take concrete steps to show this. As noted by the interviewee, “[w]ith the change of government, one of the main priorities was climate change ... [There was] a need for differentiating between the previous government; they wanted to make a quick and strong revision of the NDC.”

The revised NDC was formulated with a similar process although the NDC committee was supported more strongly and directly by the central government. Various related governmental ministers were contacted, and stakeholders were once again brought together to discuss the new plans. However, the effort for this second process was more involved than the first—more of an effort was made to engage stakeholders. Specifically, the government used data given by industries, domestic renewable energy developers, and banks. More quantitatively rigorous analyses involving new GHG inventories and stakeholder data were conducted on the targets and the steps needed to achieve them.

#### 4.2.3 Mitigation targets and related text in NDC

Argentina’s original NDC pledged an unconditional GHG emissions reduction of 15% by 2030 compared to a business as usual (BAU) projection, and a conditional reduction of 30% with sufficient international aid. This methodology was changed for the revised NDC, and, using the same time frame and BAU projections, results in the more ambitious target reductions of 18% unconditionally and 37% conditionally.

Argentina’s original NDC claims the following.

*The national contribution is fair and ambitious, it is based on a process that took years, and that has implied the development of knowledge, institutional framework and specific measures. ... Moreover, Argentina’s current share of global emissions and its contribution to global food security have been considered. ... The criteria for selecting the actions include the potential for reducing/capturing GHG emissions and associated co-benefits, as well as the possibility of applying nationally developed technologies.*

The text indicates that Argentina’s first priority is development. Drivers for the mitigation target are listed explicitly—they seem to have been based on specifically planned mitigation actions that were deemed cost-effective using Argentina’s own technology and had co-benefits. A secondary driver appears to indicate that an ethical assessment of Argentina’s share of GHG emissions reductions was conducted, although there is no further explanation of this, and this claim is contradicted by the independent analyses provided in the next section.

The text of the revised NDC is similar to the original in relation to fairness and ambition. The revision contains more detailed information, particularly about the specific mitigation actions planned and projections of the finances required to fund them. It has not been quoted here as it is currently available only in Spanish.

#### **4.2.4 Independent NDC analyses**

([Hare, Höhne, & Blok, 2017](#)) rated the original NDC “inadequate”, stating that Argentina’s target did not meet their fair share. While the revised NDC is more ambitious, it still results in a grade of “inadequate.” Likewise, ([Athanasidou et al., 2017](#)) calculated that Argentina’s original NDC’s unconditional pledge would fail to meet its fair share of a two degree pathway by 8.0 tCO<sub>2</sub>e/capita and its conditional pledge by 5.9 tCO<sub>2</sub>e/capita. ([Robiou du Pont et al., 2016](#)) also noted that Argentina’s original NDC fails to meet all five of their equity criteria, making it relatively weak.

#### **4.2.5 Drivers as suggested by an interview**

The original INDC targets were formulated with a conservative mind-set. The government wanted the goals to be achievable given the current and future developmental progress of the country. Foreign experts agreed with the targets, as did other countries when they were consulted. The interviewee suggested the targets were “a signal of goodwill”, meaning that although climate change was not a priority of the government, the INDC suggests that they were taking it seriously.

Due to time constraints, the targets did not undergo a deep analysis, that is, the government did not conduct extensive projections on what would be possible with certain mitigation actions and funding to achieve them. Rather, a cursory analysis was conducted to estimate the figure in an approximate range of what the government wanted—this is, perhaps, why the targets are round numbers.

Interestingly, the mitigation actions planned for renewable energy were based more around energy diversification. Argentina relies heavily on imported fossil fuels for most of its energy, and demand for electricity has been increasing. Meeting these additional needs and mitigating the variability in costs for imports were key concerns for expanding renewable energy production. The goals for protecting forests also had an ulterior motive—protecting natural beauty was a bigger concern than ensuring they continued acting as carbon sinks.

For the revised NDC, international image was the dominant driver. The new administration under Marci was concerned that the previous NDC was viewed as inadequate and wanted to change the NDC to improve Argentina’s reputation in the eyes of the international community. This image was envisioned to display a modern, progressive Argentina eager to do its part in facing international problems. International image is important for trade and especially for attracting foreign investment. However, the targets were still constrained by analyses of what was financially feasible.

#### **4.2.6 Policy Implications and Recommendations**

Argentina’s revision of their NDC shows a desire to engage with the international community as a response to domestic pressures. They have meticulously planned out an extensive list of mitigation actions which they

have shared publically on a number of occasions. They have been praised for their efforts and are now undergoing further analyses and actions to reach their targets. Nonetheless, they will need to step it up in order to reach them—current laws and actions will fail to reach the targets given Argentina’s rapid growth and increasing energy consumption ([Hare, Höhne, & Blok, 2017](#)). Additionally, since even the more ambitious targets do not meet international standards of equity, explicitly considering ethical calculations of their fair share and being more transparent about the calculations used in their targets would go a long way towards ensuring future revisions of their NDC are well-received.

### **4.3 Interview Case Study: The Gambia**

#### **4.3.1 Background**

The Gambia is a small country in Africa with about two million inhabitants. The Gambia serves as a good example of small developing countries and is meaningful to examine because of its open NDC formulation process.

The Gambia emitted 7.47 MtCO<sub>2</sub>e in 2013, ranked 140th, and 0.26 tCO<sub>2</sub> per capita, ranked 170<sup>th</sup> ([World Resources Institute, 2017](#)). In addition to the literature cited, data for this analysis was obtained from a personal interview conducted with a representative from a company with whom The Gambia consulted about technical matters. Unless otherwise noted, all information was obtained from the NDC text or the interview.

#### **4.3.2 INDC Planning Process**

As a country with limited financial and technical resources, The Gambia requested help after the UNFCCC called for INDCs. They received aid from the governments of Germany and the UK and hired a private company to provide technical support.

Several types of workshops were held to prepare for drafting the INDC. The technical inception workshops involved experts on technical analyses sharing input with stakeholders from the government as well as representatives from NGOs and the private sector. Then, local sensitization workshops were held in each of the eight districts of the country. These were a deliberate effort to share information regarding climate change and the NDC process with stakeholders from each area. Attendees were asked to brainstorm good mitigation actions in their area. In total, 971 people participated in these local workshops ([Sowe, 2015](#)). The interviewee noted that “it was amazing how many people were involved if you compare that to the overall size of the population.” Finally, a technical training workshop was provided to ensure experts had the information needed to make calculations correctly.

#### **4.3.3 Mitigation targets and related text in NDC**

The Gambia’s NDC is longer than most, and it is evident that significant effort went into planning and drafting it. As a least developed country it was not required to include a mitigation target, but chose to include one, nonetheless. The unconditional target promises an absolute GHG reduction of 1.42 MtCO<sub>2</sub>e, which corresponds to a 44.4% reduction compared to a BAU projection by 2025. Detailed and exact reduction targets are presented

for each relevant sector, except for land use, land use change, and forestry (LULUCF), which was not considered.

Fairness and ambition are expressed through the following NDC text.

*The Gambia has always shown a progressive standpoint and commendable leadership in the climate change negotiations, as the implications of the current level of mitigation ambition is particularly low and likely to pose tremendous challenges for countries like Gambia. Agriculture, Energy, Water Resources, which are vital sectors for the Gambian economy will severely suffer if global and deep cut do not occur in a near future. For this reason, The Gambia took the leadership and joined the call in 2011 for a universal mobilization of efforts to tackle climate change allowing that global actions protect the future of the most vulnerable countries. By presenting this INDC, the Gambia would like to provide a moral voice for all responsible and capable countries to undertake actions that are proportionate for their responsibilities and capabilities not only for themselves, but for the whole global community. ... this INDC has quantified and quantifiable commitment which go beyond the fair share of The Gambia.*

The Gambia presents itself as a least developed country that is doing its best to contribute to the global effort to reduce climate change, despite not having a responsibility to do so. Given the relatively high transparency shown in their NDC, it is a compelling argument. The country is one of relatively few to hint at drivers in their NDC—they suggest that ethical concerns and serving as an inspiration to the global community are among them.

#### 4.3.4 Independent NDC analyses

([Hare, Höhne, & Blok, 2017](#)) gave The Gambia their highest grade — “sufficient,” noting that the country is one of the few developing countries whose target actually results in GHG emissions decreasing in the short term. It is on the border, however — the 2030 target in their NDC is only slightly more ambitious than the 2025 target and would result in a “medium” grade.

The Gambia’s pledge is one of the few that does more than its fair share. Under a 2° C pathway model, the conditional pledge exceeds its fair share by 2.8 tCO<sub>2</sub>e/capita and the unconditional pledge by 3.1 tCO<sub>2</sub>e/capita ([Athanasίου et al., 2017](#)). ([Robiou du Pont et al., 2016](#)) noted that The Gambia’s NDC fulfils four out of five equity approaches.

#### 4.3.5 Drivers as suggested by an interview

The Gambia’s INDC process was largely driven by analyses of cost-effective mitigation actions. This process was limited by data availability — the GHG emissions data for the country were just beginning to be catalogued at the time and lacked sectoral details.

International drivers were significant. The Gambia wanted to show the world that they were involved in the process — they attempted to “make a mark” on the international climate negotiations stage. Vulnerability was also considered: The Gambia is already feeling some climate change impacts, and stakeholders in the process were generally highly aware of the importance of mitigation and adaptation to reduce these impacts. Therefore, even if potential impacts were not specifically accounted for in the calculations, concern about them may have driven targets to be more ambitious.

As expected, international finance was also a significant concern. The Gambia received substantial financial and technical support to formulate their INDC and intended to show that that investment did not go to waste. Furthermore, more ambitious targets were thought to bring in more international funding, which would help The Gambia achieve substantial co-benefits in addition to GHG reductions.

Domestic political concerns were also a factor. For example, the environmental minister desired more ambitious targets than other government officials. Ultimately, however, the chosen targets ended up with a wide consensus. The interviewee noted that some politicians could reap strategic political benefits — perhaps some thought a more or less ambitious target would help them get re-elected, for example. However, the political situation in The Gambia was undergoing rapid changes at the time, so the extent to which this happened is unclear.

#### **4.3.6 Policy Implications and Recommendations**

The inclusive stakeholder involvement process and the exhaustive sector-by-sector planning in The Gambia’s INDC formulation process is a sign that it is likely to achieve its targets. Mitigation actions were proposed by stakeholders at the regional meetings, and they are presumably eager to actively support their implementation. Should these actions be successful, locals may push for more actions, and ask for further support.

The recent political circumstances in The Gambia have been volatile. The president at the time of INDC formulation, Yahya Jammeh, refused to give up power after elections were held in December 2016. It was only after military pressure from neighbouring countries that he left the country and the new president Adama Barrow took office ([Leithead, 2017](#)). It is not clear what role Jammeh played in INDC formulation, and Barrow has made no public statements regarding the PA. It can be assumed, however, that institutional knowledge acquired by governmental agencies under both presidents would continue the work of implementing the NDC.

The Gambia’s efforts at inclusiveness and transparency in their NDC are encouraging. They could strive for even greater transparency in sharing information about their targets, by showing more of the inputs that were behind the calculations. Furthermore, their targets for future NDC submissions could be slightly more ambitious, to be in line with the 1.5° C pathway.

### **4.4 Interview Case Study: Other Developing Countries**

#### **4.4.1 Background**

One interviewee was a technical expert of a company hired to help with the INDCs of the following countries: Belize, Malawi, Mali, The Republic of the Marshall Islands, Micronesia, Saint Lucia, and Senegal. Belize is in Central America; Malawi, Mali, and Senegal are in Africa; and Marshall Islands, Micronesia, and Saint Lucia are island countries located in the Pacific Ocean. Each country has unique circumstances which led to different drivers, but here they will be discussed together in light of their commonalities: namely, their developing status and their request for international technical assistance.

The interviewee’s role was to counsel these countries in planning their INDCs. As such, he was able to look closely at existing domestic climate

change policies and institutional capacity to find inconsistencies and possible places for improvement. He also examined planned mitigation actions and suggested future actions. Unless otherwise noted, all information was obtained from the NDC text or the interview.

#### **4.4.2 INDC Planning Process**

The process varied across the countries, but they all experienced several hardships. First was the short time frame—they were given less than a year from the time the INDCs were commissioned and the deadline for submission. Second, many of these countries lacked existing climate change policies, institutional knowledge, and/or relevant climate change/financial data. Thus, to come up with a rigorous NDC was a daunting task.

Typically, the process was initiated by each country's ministry of environment. Each country held a number of workshops for the purpose of recruiting local experts, engaging stakeholders, and identifying possible mitigation areas. In a few cases, these workshops also served to improve the collection of GHG emission and financial data. The data collected in the workshops were crucial to producing the INDC.

#### **4.4.3 Drivers as suggested by an interview**

These countries were largely successful in gathering stakeholder input and forming INDC drafting teams with technical proficiency. Overall, they had similar motivating factors affecting their target.

One important driver was a desire to leverage international aid—more ambitious targets were perceived as more likely to receive aid. Magnifying this driver, highly sought-after co-benefits often come along with international funding for mitigation actions. Several countries attempted to provide an ambitious example, hoping other countries would follow suit.

Ethical obligations were considered important, but these obligations were quite low for developing countries. As the interviewee noted, “the [ethical] obligation for climate change was very weak, but the [stakes] were very high, because they are already affected very seriously by drought, changing rain, hurricanes, whatever—you name it.” The sense of obligation, then, comes more from climate change vulnerability—African and island countries are some of the hardest hit. This was of particular concern in Micronesia and other island nations, where rising sea levels threaten to inflict heavy damage in the short term and inundation in the long term. In some cases, cities had poor air quality. While city smog is not directly related to climate change, it is more visible and has more immediate impacts on human health, and thus may inspire climate action regardless. These were some concerns brought up by stakeholders in the government-held meetings.

Stakeholders, through the workshops held to plan the INDCs, exerted influence in various ways. More environmentally concerned stakeholders advocated for more ambitious mitigation targets. But some were concerned more with development: for example, a stakeholder in Malawi was planning to build a new coal-fired power plant with Chinese funding, but would not be able to profit from it if the NDC target effectively forbade the energy production. This also illustrates how, in an increasingly global world, the potential actions of one country may be deeply connected to others. Agriculture, in particular, produces winners and losers among stakeholders—less carbon-intensive agricultural exports may win out under a more ambitious NDC target, at the expense of other potential exports.

Motivation was higher when teams considered the cheapest, most readily feasible mitigation actions—these were a source of inspiration. In many cases, it was also inspiring to plan phasing out foreign oil in favour of domestically produced energy, which would be cleaner and even cheaper in the long run.

Notably, for least developed countries there seemed to be no downside to proposing an ambitious target. Since they currently do not have sufficient infrastructure or fuel to provide electricity to all of their citizens, renewable energy projects, which directly increase available energy, are purely beneficial, especially when funded with foreign money. This is a substantial co-benefit.

#### **4.4.4 Policy Implications and Recommendations**

In general, these countries had relatively inclusive INDC creation processes and their targets are comparatively ambitious. In the short term, then, their focus should be on implementation — it is not always easy to carry out mitigation actions, particularly when a majority of them are dependent on international aid. A focus on the “lowest hanging fruits” — the cheapest, easiest to implement actions — may provide visible signs of progress and inspire further actions to be undertaken.

### **4.5 Summary and International Policy Implications**

Not all of the drivers are relevant on the international stage, but some do have wider implications. Perhaps most importantly, transparency was a concern for all of the countries studied in this paper. The Gambia was the most transparent of the case study countries, but still falls well short of ideal. While some NDCs shared information about how they were drafted, none provided information about the specific quantitative methodology used to come up with the targets and projections. This is due in part to the relatively short time period in which INDCs were expected to be written; this should not be a problem for future revisions. As a way of promoting ambition in the next NDC review period, it is recommended that NDC requirements require updates to follow a stricter format and provide more information, particularly regarding the process by which the NDC committees decided on the targets.

Domestic and international factors turned out to be the dominant drivers of NDC formulation. Specifically, the administration in power at the time of NDC formulation can be a strong predictor of ambition. Many countries also recognized that their NDC was an opportunity to improve their international image and to recruit additional foreign investment to help with both climate change mitigation and co-benefits. These results suggest that predictable, generous international aid is necessary to help developing countries reach their targets and aim higher.

Unfortunately, ambitions of each NDC are just that: ambitions. Based on projections of current policies, many countries are expected to fail to reach their NDC pledges ([Hare, Höhne, & Blok, 2017](#)). It may be the case, then, that countries formulated their pledges, even their unconditional pledges, with the understanding that a failure to reach their targets was an acceptable possibility. Alternatively, such countries may be unaware of the disparity between the projections of current policies and NDC pledges. If it is hoped to limit warming to 2° C or less, both scenarios are unacceptable. This should be discussed in future negotiations.



If NDC transparency is increased, it could change the types of pressure exerted on different countries depending on the importance of the drivers. Since the PA's enforcement mechanism largely derives from peer pressure, increased knowledge of NDC formulation could prove influential. Ideally, it could even result in more ambitious NDCs in future review cycles.

#### 4.6 Limitations

The primary limitation of this study was a lack of data availability. Previous literature on this subject is sparse, and this study was unable to collect enough independent data to support more detailed analyses and conclusions. In particular, relying on a single data point for each country is a weakness; having several data sources from the same countries would ensure that more viewpoints would be represented. Moreover, later studies could include more countries which would allow the conclusions to be generalized: currently, unique situations in each case study country make generalization difficult. Well-connected individuals or organizations that could leverage their contacts to conduct interviews or distribute surveys would be well-positioned to collect high-quality data that could lead to robust conclusions.

Second, it is possible that interviewees and literature sources were not completely honest. Should the actual drivers prove to be something that a country would not like to advertise, such as economic concerns or an unwillingness to act from the administration in power, these may well be omitted from any official reports on the process and may also have been sidestepped by interviewees.

Finally, language may also have been a barrier. Supporting documents were only searched for in English, which risks missing out on official government documents that were not translated, as well as viewpoints from civil society groups and other independent sources written in other languages. Future work by researchers competent in multiple languages could eliminate this limitation. However, due to the international nature of the PA there was, at the very least, basic information available in English for each country. Additionally, all interviewees spoke English well.

Due to these concerns, the results of this study must be considered exploratory. Further studies on motivation are needed on current and future NDC submissions. Transparency could be a key factor in increasing climate change mitigation ambition, so this avenue of research has practical as well as academic importance.

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