Tolling bells for Nationally Appropriate Mitigation Actions in Emerging Economies: Policy Cycle Stages in Comparative Perspective

Prabhat Upadhyaya[1,2], Mathias Fridahl[2], Björn-Ola Linnér[2] and Mikael Román[3]

1   Introduction

The 2015 Paris Agreement on climate change marks an important shift for climate governance toward a renewed interest in state-centric comparisons. First, the agreement affirms that all countries are expected to take on some form of mitigation actions. Second, through the Intended Nationally Determined Contributions (INDCs)[4], the agreement puts the states back as the vital player in orchestrating a climate regime. Third, it marks the beginning of a new cycle of implementing mitigation measures.

Since international climate politics is increasingly driven by a multilateral bottom-up perspective, Purdon (2015) argues that we need greater clarity on national and subnational climate politics: neoliberal institutionalism, International Relations scholars and climate policy practitioners "tend to expect global climate accords and international institutions to produce uniform and standardized effects at the domestic level" while in fact "state and subnational interests on climate change are much more varied" (Purdon, 2015, p. 4). In anticipation of a shift in the focus of academic research from climate policy negotiations and formation to decision-making and implementation, it is time to open up the "black box" of national policy priorities and intentions (Victor 2011: 8), to bring under focus the variations in states' climate policy responses to internationally conceptualized instruments (Purdon, 2015; Steinberg & Vandeveer, 2012).

The overarching objective of this paper is to shed light on how countries engage domestically with the internationally formulated climate policy frameworks. The national circumstances approach, crowned by the INDCs process, began with the Nationally Appropriate Mitigation Actions (NAMAs) in 2007 at the 13th Conference of Parties to the UN Framework Convention on Climate Change

[2] Centre for Climate Science and Policy Research (CSPR), Department of Thematic Studies – Environmental Change, Linköping University, Linköping, Sweden.

[3] Swedish Agency for Growth Policy Analysis, Swedish Embassy, Brazil

[4] We refer to the submission made by countries to the UNFCCC in preparation for the Paris Agreement as INDCs. These may turn out to be different from the Nationally Determined Contributions (NDCs) that will be confirmed by countries in conjunction with their submission of instruments of ratification.

(UNFCCC). As a policy instrument aimed to incentivize mitigation action in developing countries, by registering and recognising nationally defined contributions to the convention, NAMAs can provide important insights for addressing the challenges facing the development of the INDCs.

NAMA portended a facilitative, bottom-up turn of international climate multilateralism (Bodansky & Diringer, 2014; Coetzee & Winkler, 2014). By shifting the locus of action at national levels, NAMAs are turning out to be the precursor for INDCs. Therefore, even though there are differences between the two instruments, an analysis of NAMA engagements can serve a useful purpose for the NDC implementation. NAMA offers a test bed for the challenges when international climate policy instrument encounters varied national policy realties.

The paper throws light on the similarities and challenges faced in realising the internationally formulated policy framework of NAMA in different country settings and draws tentative lessons for future policy frameworks. To do so policy cycle model is used to operationalize the analysis of NAMA engagement. Although it is a simplification of an integrative policy process, the categories of agenda setting, policy formulation, decision-making, implementation, evaluation and innovation help us to point at differences and similarities between countries' engagement with NAMAs (Jann & Wegrich, 2007). We point at context specific elements that help us to understand the NAMA engagement in the different policy contexts. Conversely, policy cycle analysis also helps us to approach the varied contexts in which NAMAs play out.

The paper aims to highlight the nuances and complexities that countries face when engaging with international policy frameworks in their domestic constituencies. We do so by studying the reception of and engagement with NAMAs in the three major emerging economies: India, Brazil and South Africa (henceforth referred to as IBSA). All three countries have been key actors in the negotiations on developing country's obligation post Kyoto. They agreed in the so called IBSA trilateral dialogue forum 2003 to develop common strategies and position through multilateral diplomacy (IBSA, 2003), later specified to include UNFCCC negotiations (IBSA, 2008). Also, with increase in their gross national income in recent years, their emissions have also increased, which in turn has resulted in increased international expectations for them to take on mitigation actions domestically.

By studying the NAMA engagement, we address the following research questions:

1. How do the IBSA's engagement with NAMAs play out with respect to policy cycle categories?
2. Do the IBSA's engagement with NAMAs differ or converge with respect to the six analytical policy cycle categories?

The paper is structured as follows. Section two outlines the background to NAMAs and contextualises the three case countries and briefly introduces their national initiatives to tackle climate change. Section three elaborates on the theoretical and analytical framework by elaborating on policy processes and

Comparative Environmental Politics; and the methodology employed for data collection and analysis. Section four presents the results on the NAMA engagement in the case countries on individual basis. Section five discusses the findings from policy cycle perspective in comparative but stage-wise manner. Section Six concludes the paper by summarizing the countries' engagement with NAMAs and tentatively enumerates the lessons for NDC implementation.

2 Background

Domestic climate policies and plans are being innovated at national level at different rates and times in different world regions (Dubash, Hagemann, Höhne, & Upadhyaya, 2013; Jordan & Huitema, 2014b, p. 388). Recent years have witnessed growing attention to environmental policy making in the global South (Bailey & Compston, 2012; But see Held, Roger, & Nag, 2013). By focusing on NAMA engagement in three emerging economies from a policy process perspective, this paper contributes to these efforts.

The peer-reviewed literature explicitly addressing NAMAs is primarily qualitative and driven by case studies (Winkler, 2014)[5]. Some sector case studies focusing on the tourist (Burns & Vishan, 2010), waste (Guzzone, 2013), and energy demand sectors (Bassi, Deenapanray, & Davidsen, 2013) cut across countries. These studies are complemented by studies focusing on institutional aspects of the international framework such as complexity in accessing NAMA support (Shrivastava & Upadhyaya, 2014); effectuating matching of NAMA proposals with support (Fridahl, Upadhyaya, & Linnér, 2014; Winkler & Dubash, 2015); and studying the evolution of NAMAs as a concept (Coetzee & Winkler, 2014). Studies have also taken comparative approaches to study NAMAs across countries and types of actors engaged (Garibaldi et al., 2013; Tyler, Boyd, Coetzee, Torres Gunfaus, & Winkler, 2013; Shrivastava & Upadhyaya, 2014; Fridahl, Hagemann, Röser, & Amars, 2015). This paper complements these efforts by comparing NAMA engagement in three emerging economies: India, Brazil and South Africa.

2.1 Contextualising IBSA

Our three case countries have varied as well as overlapping socio-political and techno-economic preconditions, yet they have cooperated amongst others, through the IBSA trilateral – a formal forum among these three democracies on issues of common concern, including climate change. The IBSA trilateral was formed in 2003 to help counter the marginalization of developing countries in multilateral fora. While these countries agreed, in the IBSA trilateral dialogue forum, to develop common strategies and position in multilateral negotiations little is known of how they have engaged with the concept of NAMAs within their domestic constituencies, which all of the three countries were active in establishing. Thus IBSA present a selection of case countries that engaged with

---

[5] For more details see Volume 6, Supplement 1, 2014 of Climate and Development. Special Issue: Designing and implementing mitigation actions: emerging lessons from five developing countries.

each other to fine-tune positions and strategies to negotiate at the international fora but domestically have to engage with the NAMA concept in very varied socio-political circumstances.

2.1.1 Climate Policy in IBSA countries

From a climate policy perspective, the energy profile and energy access in Brazil is drastically different from South Africa and India; similarly, India has a very high population that accounts for very low electricity power consumption per capita – a pattern followed in its GHG emissions also. In contrast, South Africa has relatively low emissions from agriculture sector but its per capita emissions are much higher. Nonetheless, all three acknowledged the importance to tackle climate change by developing national legislation – Law 12187/2009, which establishes the National Policy on Climate Change for Brazil – or national policy on climate change – the National Action Plan on Climate Change (NAPCC), 2008 for India and National Climate Change Response White Paper (NCCRWP), 2011 for South Africa. Although these national initiatives are cognizant of country's pre-existing priorities –promoting "development objectives while also yielding co-benefits for addressing climate change" in India (GoI, 2008, p. 2); "making social-economic development compatible with the protection of the climate system" (Government of Brazil, 2009); and "integrate mitigation and adaptation elements within developmental framework" in South Africa (Republic of South Africa, 2011, p. 13); – they do not shy away from identifying avenues for mitigation. For India this translates into eight national missions, with at least four of the missions providing co-benefits of mitigation. South Africa presents its initiatives as eight flagships, all of which with exception of one relate to mitigation. Similarly, Brazil presents seven goals of which the main focus resides on different forms of land-use, mainly forest issues and agriculture. In addition, all three countries are also witnessing movement on climate policy at sub-national level (Romeiro & Parente, 2011; Tyler, 2013; Dubash & Jogesh, 2014).

2.2 NAMAs in the INDCs

In 2010, it was agreed that NAMAs should be undertaken "aimed at achieving a deviation in emissions relative to 'business as usual' emissions in 2020" (UNFCCC, 2011b). This provided a timeframe for NAMAs, without preventing them from playing a role beyond 2020. As evidenced in the proposals to the NAMA registry as well as NAMA references in some of the draft NDCs, developing countries seek to engage with NAMAs in both pre- and post-2020 context. By end of 2015, 94% of developing countries had submitted their INDCs (Cameron & Harms, 2015). Many of these are conditional on international support. One-third of developing countries refer to NAMAs in their INDCs, with references correlating with income – over 43% of low-income developing countries communicate a role for NAMAs in their INDCs compared to 22% of high-income developing countries (Figure 1). At the same time, over 100 so-called NAMAs by developing countries have been officially submitted to the UNFCCC's NAMA-Registry, seeking variety of international support (UNFCCC, 2016).

Figure 1 | References to NAMAs in developing countries' submissions of intended NDCs by income category.
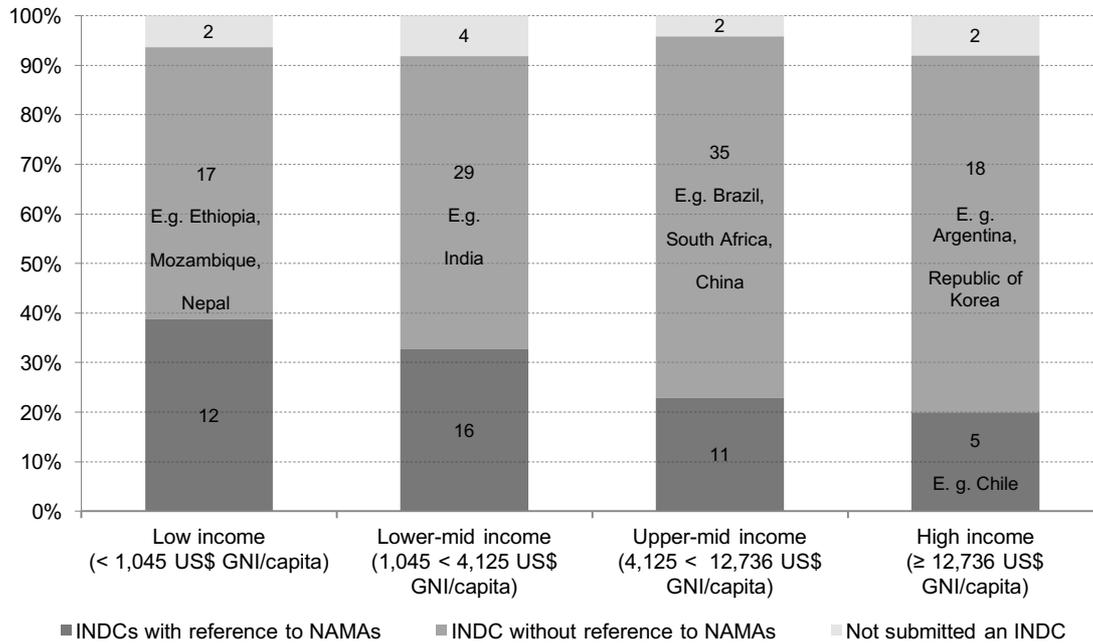
3 Theoretical and Analytical Framework: Policy Processes and Comparative Environmental Politics

3.1 A staged approach to policy processes: Applying the "policy cycle" analysis/model

Policy processes can be understood from a multitude of perspectives. We approach policy processes and policy making through the policy cycle model. This model depicts policy making as a process with six overlapping stages. First, the *agenda-setting* stage where the governments and political actors initially frame the problems; second, *policy formulation* stage where policy options are formulated within government; third *decision-making* where government decides to undertake a particular course of action; fourth *policy implementation* stage which refers to actual governmental efforts to put policies into action; fifth, *evaluation* of impacts of implementing policy, both direct and indirect, and; sixth, *policy innovation,* wherein the lessons learnt from evaluating the effects of implementing a policy are used to revise existing policy by setting the agenda for reformulating or terminating policies (Hogwood & Peters, 1982; Howlett, Ramesh, & Perl, 2009; Liu, Matsuno, Zhang, Liu, & Young, 2013; Jordan & Huitema, 2014a; Wellstead & Stedman, 2015).

Figure 2 | The policy cycle model
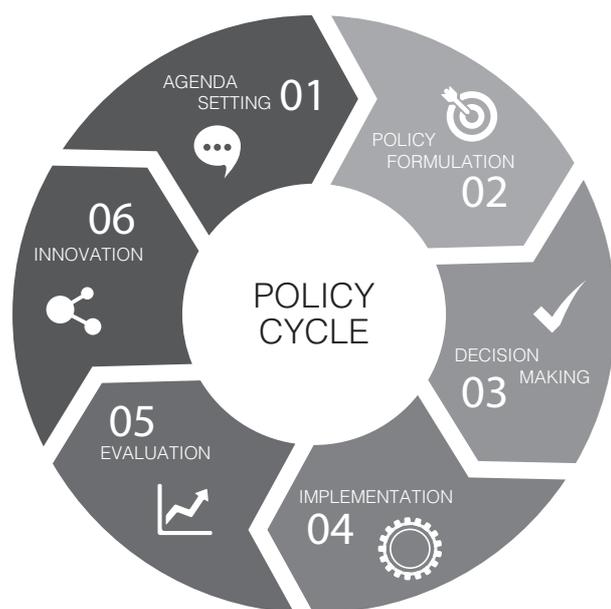
It is widely acknowledged that the policy cycle model is a simplified framework to understand policy processes (Jann & Wegrich, 2007). The critique mainly focuses on understanding policy processes as developing in discrete and sequential stages. A second line of critique argues that the policy cycle model does not offer any explanation of what drives processes from one stage to another. However, the critique under-emphasises the important and successful usages of the model: it has been frequently applied both as "a yardstick for the evaluation of the (comparative) success or failure of a policy" (Jann & Wegrich, 2007, p. 58) and for contextualising case studies of single steps in the process. Based on this critique, rather than seeing the policy cycle model as a accurate representation and causal model of policy processes, we use it as a heuristic devise for analytical categorization of empirical material.

3.2   Comparative approaches to studying policy process

Comparative policy process studies to understand climate policy developments are gaining momentum (Vogel & Henstra, 2015; Wellstead & Stedman, 2015). Along with comparative analysis on policy learning and policy transfer (Schmitt 2013) they can prove helpful in the analysis of post-Paris ambitions and implementation efforts. In this paper we compare policy cycle related to NAMAs across IBSA. By taking this approach we compare a common issue (NAMA engagement) at various stages of policy cycle across different contexts (Gupta, 2012). The contextual background is essential in identifying the nature of policy changes. These changes may be marked by incremental gains, emergence of new policy instruments as a means to make progress or radical changes in the overarching terms of a given policy paradigm (Hall 1993). While the first two changes represent instances of normal policy making, it is the third change that is associated with emergence of periodic discontinuity and thus major change in policy process.

3.3 Data collection and coding

For our analysis, we rely on semi-structured interviews of key actors in IBSA. Secondary literature, namely policy documents from key ministries involved in the respective NAMA processes, the countries' submissions to the UNFCCC on NAMAs and the research literature produced in these countries provide the contextual background within which this study is undertaken.

Document analysis formed the basis for developing a semi-structured interview guide that was deployed between May 2014 and March 2016 in the case countries for collecting the data. A total of 41 interviews (19 South African, 15 Indian and 7 Brazilian) were conducted during this time period. Depending on availability of personal resources, South African interviews were conducted in 2014, Indian interviews in 2015 and Brazilian interviews in 2015-16. We found it preferable that all interviews were carried out by the same person. Time constraints only allowed for in situ studies in two countries. While the number of Brazilian interviews is also significantly fewer than the other two countries interviewees, we found the Brazilian data to be sufficiently solid for applying comparative approach.

Non-state actors have become increasingly involved in both transnational and domestic climate policy-making over the last decade (Bäckstrand et al 2016, fc). Therefore, the interviewees were selected to represent a wide range of actors at different levels of policy-making and policy-related activities representing different constituencies. The interviewees were encouraged to reflect not only on NAMAs and climate policy processes in specific, but climate policy in general and the role of the international as well as domestic climate policy integration into other issue areas, particularly development. The interviews were transcribed verbatim, summarized and coded using the software NVivo as per the stages of policy cycles, based on the framework provided in Table 1. The material thus generated was then analysed to identify differences and similarities in NAMA engagements.

Table 1 | Policy cycle and applicability to NAMAs in IBSA, based on Wellstead and Stedman (2015, p. 57).

Policy cycle stages	Examples of policy roles and tasks
Agenda setting	Identifying policy issues Identifying policy options Environmental scans Consulting with the public
Policy-formulation	Appraising policy options Collecting policy-related data, information and research Negotiating with stakeholders Preparing position papers
Decision making	Comparing policy options Decision matrices High-level briefing Negotiating with central agencies Department planning
Implementation	Implementing or delivering policies or programs Negotiating with program managers Consulting with stakeholders Legal analysis
Evaluation	Policy evaluation skills Risk-based tools and techniques Evidence-based policy
Policy innovation	Adaptive learning Terminating or updating existing policy

4   Results: Views on NAMA engagement in IBSA

By using the heuristic devise provided by the policy cycle model, this paper compares the policy process surrounding NAMA engagement in IBSA.

Entry point for our analysis is post 15th Conference of the Parties (COP-15) in late 2009. The COP had taken note of the Copenhagen Accord and following a UNFCCC decision at in COP-15, countries were submitting information regarding their mitigation efforts under the so-called Copenhagen Pledges to the Copenhagen Accord. The Cancún Agreements, subsequently adopted in December 2010, served to bring elements of the Copenhagen Accord into the formal negotiating process and made it acceptable to all Parties.

4.1   India

While India's submission to the Copenhagen Accord specify that "India will endeavour to reduce the emission intensity of its GDP by 20-25% by 2020 in comparison to the 2005 level" (UNFCCC, 2011a), it did not use the NAMA phrase per se. Although many of the Indian informants do not view the Indian Copenhagen Pledge as a NAMA (IN-10, 13, 15), there are contending voices too.

As informant 07 recalls, at the time of submitting the pledge, "for many of us including I thought they are NAMAs" (IN-07).

4.1.1 Agenda setting, policy formulation and decision making

According to most informants, NAMAs did indeed emerge on the Indian political agendas, but with a strong connection to the scale and nature of the international support. "The government was open to ideas of NAMAs but not actually trying out any NAMAs or encouraging NAMA research in India. [...] India was following a very strict definition of NAMAs, [...] only those mitigation projects which are supported by new and additional international finance, technology transfer and capacity building support are NAMAs" (IN–04). This is confirmed by informant 12: "India's position on NAMAs has been [...] mixed or complicated. I don't think they were really ever in favour of doing NAMAs, it had to do linked with the MRV." This understanding constricted NAMA usage to the agenda setting stage.

While formally the usage of NAMA terminology mostly got confined to agenda setting stage, it is understood that all mitigation actions with no negative side-effects for development could be seen as NAMAs (IN–04). This opens the door to approach India's national missions under the NAPCC as NAMAs. A key decision maker emphasizes that: "...it would be improper to treat NAMAs different from the national missions. National missions are also nationally appropriate mitigation actions..." (IN–03). On the same lines it is argued that "if the NAMA [...] supports the renewable mission, [...] the [Perform, Achieve and Trade] PAT scheme, so on that's fine" (IN-10). Supporting existing policy options is identified as a possible way forward for NAMAs but that decision is solely seen as Government's prerogative.

But what led to relegation of NAMAs to the fringes? Informant 4 provides some clues: "there is a politics associated with NAMAs, which is by and large focusing on MRV. [...]" As will become evident in the evaluation stage, the politics of MRV influenced decision making on NAMAs in India. MRV is closely linked to support aspect: "if two [finance and technology] are tangible upfront before you then you can agree to other conditions like MRV [...]. But in NAMA both were missing. Finance was missing and technology was missing. [...] What else is there if these two things are not there? Why should anybody come with program?" (IN-15). Others contend that "...the overall structure for NAMAs has never become too clear. That's number one, number two, the availability of the scales of financing that a country like India needs – [...] were never made available" (IN-07). These concerns at decision-making stage concretized the template within which NAMA got stuck.

4.1.2 Implementation, evaluation and policy innovation

In line with the views held on NAMAs, their implementation is either not occurring or is constantly implemented in myriad ways. First, if there are no specific NAMA, it is not surprising that stakeholders are "not seeing anything on the ground so far" (IN-11). Second, if all development driven mitigation actions are regarded as NAMAs, it is constantly implemented in a multitude of actions – primarily as national missions under the NAPCC – without them being referred

to as NAMAs. The reason why NAMAs as a label was not taken up formally is also institutional in nature. "...Its partly because they came up with this idea of missions and then there was not sort of some equivalence made between NAMAs and missions. [...] you've people from the MEA, [...] doing the negotiations or even MoEF. Whereas NAMAs are really the line ministries functions, energy, transport etc. [...] So the people who might be generators of NAMAs are not the people who are in negotiations. And there is no mechanism to link those. [...] the other guys don't particularly want to come to the table" (IN-13). Inability to get the implementing departments directly involved hampers NAMA engagement.

Accordingly, evaluation has not been an issue since the perspective in India, expressed by the informants, is either, if ever there was an Indian NAMA, it is no longer a NAMA and do not have to meet international MRV requirements, or that if NAMAs are seen as development driven mitigation action, then they are undertaken solely by domestic support and consequently do not require international MRV. Indian Government is neither keen to call the unilaterally initiated mitigation actions as NAMAs for recognition purposes nor do they see any justification in opening the unilateral actions to international MRV. The political position was that "as long as there is no international support, we will not call, what we are doing as NAMAs. So we would not report or we would not subject ourselves to scrutiny" (IN-04). MRV, as well as International Consultation and Analysis (ICA) requirements, are clearly seen as barriers to engagement. Respondents are sceptic of such initiatives as a means to "second-guess their policies [...] and impose certain policies" (IN-10). This line of argument could be addressed if support for implementing NAMAs is provided. But in such cases, the scale of support provided and "issues of sovereignty come up" (IN-04). Opening oneself for MRV or ICA "without significant international support" (IN-10) does not seem worthwhile.

If NAMAs ever fulfilled the purpose of specifying targets, this purpose has now been overtaken by INDCs. In that sense, NAMAs did pave way to innovate new policy at conceptual level by enhancing engagement with "definitional problems or political questions" (IN-04) and at implementation level by providing "opportunity to push things at a programmatic level" (IN-07). As expressed by informant 1 in connection to the Indian Copenhagen Pledge: "at that time [2009] it [...] was a NAMA probably. Now it would be probably the INDC. Its all about word changing things, game basically going on." (IN–01). Similarly: "to me it seems like the flavour of the month kind of syndrome where, to me an INDC is just a NAMA under another name" (IN–12). As we shall see, it seems like the door to maintain and apply the terminology "NAMAs" also for post-2020 actions is open. It all depends on them becoming a "bridge to INDCs" (IN-13) and ensuring support. Without assured support at the scale needed, India does not see value in committing to any international framing.

4.2   Brazil

In Brazil, things took a considerably different turn. Both the Brazilian Copenhagen Pledge and its constituent NAMAs, were already from the outset intimately linked to the country's new Climate Change Law, developed in parallel with the global negotiations, which specified sectoral actions that, combined,

amount to reductions in the range of 36.1–38.9 per cent below BAU for 2020. Same numbers are used in the Brazilian Copenhagen Pledge as well as the subsequent NAMAs (Government of Brazil, 2010; UNFCCC, 2011a). To informant five the situation is clear: "the Copenhagen Pledges are NAMAs" (BR–05). Informant six nuances the position by stressing that the reduction figures itself is "not a NAMA, it's actually a target" (BR-06).

4.2.1   Agenda setting, policy formulation and decision making

Brazil was one of the first developing countries that submitted information on NAMAs to the UNFCCC. On 29 December 2015 – a few days after end of COP15 – the Brazilian National Climate Change Law was established. Submitting information on the Brazilian NAMAs exactly one month later, 29 January 2010, constitutes a remarkably expedite policy process, making NAMAs centrepiece of national government's climate policy.

This development started already in 2007, when the Brazilian government established an Interministerial Committee on Climate Change (CIM) that, in collaboration with societal stakeholders, was given the task to develop a new climate change legislation, that would harmonize climate policy across sectors, issue areas and ministries (Government of Brazil, 2007). This meant that, when the call for submitting NAMAs to the UNFCCC emerged in mid December 2009, Brazil had already well established discussions regarding national climate change policy, based on the account of a "coalition of forces that was created in second semester [around July 2009] and the assertiveness of the [then] minister of environment" (BR-04). Thus, with the agenda already set and policy options identified and formulated, the terminology of the emerging national climate change legislation could easily be adjusted to fit the international framing. The decision to submit information on the Brazilian NAMAs to the UNFCCC was therefore relatively simple and expedite. As, informant four notes: "the Brazilian NAMA was the climate change law" (BR–04). Conversely, the international process on NAMAs influenced the design of the new Brazilian law. The law in effect explicitly refers to the possibility of using NAMAs to implement climate targets in various sectors (Government of Brazil, 2009).

In effect, the discussions on NAMAs thereby met little resistance in the agenda setting, policy formulation and decision making stages. Instead, further engagement with NAMAs was well aligned with already on-going and highly integrated processes, across ministries and stakeholder dialogues, which ended up supporting the concept. But unlike India, why Brazil decided to label its actions as NAMAs without waiting for clarity on international support? There seems to be a two pronged explanation to this. Firstly, as part of its international diplomacy, it wanted to emphasize its sovereignty, by emphasizing that "it can do whatever it wants because it does not depend on anyone" (BR-03). The second part of the puzzle is that it doesn't "see NAMAs as action to get support. NAMA is our commitment" (BR-06). This reflects its eagerness to project itself as a strong economy which could take on greater responsibility without waiting for others to act.

4.2.2 Implementation, evaluation and policy innovation

The situation, though, is decidedly different with respect to implementation, where assessments range from "success" to "failure". "The only NAMA that Brazil has been really implementing, significantly, is the reduction of deforestation in the Amazon. The other NAMAs, all are going in the opposite direction" (BR–04). The more intriguing question, though, is why there is a difference amongst sectors and even the interpretation of the success rate in the implementation of the Brazilian NAMAs. The steep reduction in emissions in Amazon region is ascribed to two interventions: "law enforcement [...] by the federal police against deforestation, [using good monitoring system] and the [...] more effective, was the denial of credits by public banks [...] to properties with illegal deforestation" (BR-01), the lack of progress in other NAMAs is largely attributed to "distance between what's on paper and what is really being implemented" (BR–01). This therefore calls for greater attention to understanding implementation challenges.

Some informants' express concerns regarding existing methods for evaluating progress. Some argue that the Brazilian methodologies for measuring emission reductions have been paltry. "If we do the Brazilian inventory [...] following [...] the IPCC rules, then the AFOLU sector [agriculture, forestry and other land use] in Brazil, it actually sequestered and fixed the carbon, it doesn't have any emissions." (BR–05). This perspective stems from a deep distrust for central planning as it breeds corruption by providing central officials lot of power. Although levels of corruption are definitely not lower at local level (Timmons & Garfias, 2015), this perspective sits uneasily with the "very weak government [...] and a major fragmentation of the political system" (BR-04) at the current moment. In terms of emissions portfolio, although "comparatively, Brazil is doing ok" (BR-01) others contend that this has been achieved "without advancing in low-carbon development" (BR-04). Thus "transparency and international verification, [is] very welcome" (BR–05). This complicates the picture because NAMAs in Brazil are unilateral in nature and therefore the accuracy of the numbers may be hard to validate.

Yet, at same time most agree that "NAMAs are not anymore at debate in Brazil because we have moved forward [...] when we move to the INDCs, the NAMAs per se makes no sense anymore" (BR–06), and that "NAMAs is something of the past" (BR-03). The informants agree that the new policy, in shape of the INDC, has been innovated based on the experience with NAMAs. At the same time, the law from 2009 remains the main vehicle for implementing the INDC (including, in turn, the possibility of using NAMAs as instrument to implement the law). Unlike the submission on NAMAs, the INDC specifies, for example, a target of minus 37 per cent in 2025 relative to the base year 2005 (Government of Brazil, 2015). This is "an absolute target in relation to a base year. And it's an economy-wide commitment. So its different from NAMAs ..." (BR–07). Most informants agree that the INDCs, designed for the post-2020 period, will replace the function served by NAMAs in the pre-2020 period but that the former will be innovated based on the Brazilian experience with NAMAs. Yet, some urge for caution. Informant seven argues, for example, that there is a need to discuss how the pre-2020 NAMAs should link to post-2020 actions. Again, part of the answer resides

in the national climate legislation since the law specifies that NAMAs will be used to implement sector targets and a low-carbon economy, the INDC maintain an option for future engagement with NAMAs. In sum, Brazil had no concerns using international framing of NAMAs.

4.3 South Africa

South African interviewees in general do not see their country's Copenhagen pledges as NAMAs. South Africa indicated that it "will take nationally appropriate mitigation action to enable a 34% deviation below the 'Business As Usual' emissions growth trajectory by 2020 and a 42% deviation below the 'Business As Usual' emissions growth trajectory by 2025" (Republic of South Africa, 2010). The pledge was incumbent upon the support by developed countries but its "overall pledge, did not have components in it" (SA-10). Although it is acknowledged that "it definitely sets the scene for action … so perhaps its not necessary to regard them as NAMAs because its very difficult to quantify it a bit" (SA-16). The usage of the phrase NAMA is also attributed to confusion on part of the country regarding NAMA.

4.3.1 Agenda setting, policy formulation and decision making

While making submission on NAMA registry, South Africa referred to it as "a core element of any negotiating text" (UNFCCC, 2009, p. 97). It is however, worth noting that neither the NCCRWP, nor the report on mitigation potential in South Africa make reference to NAMA (DEA, 2014a; Republic of South Africa, 2011). The site for action in the NCCRWP is identified as flagships. "It is primarily from flagships that … NAMAs" (SA-10) can come out but "they are not named as NAMAs because there isn't signal from the international level" (SA-17). However, in its Biennial update report, South Africa presents Vertically-Integrated NAMA (V-NAMA) as part of its Energy Efficiency and Energy Demand Management Flagship Programme and indicates that "the final V-NAMA proposal … [would] be submitted to the UNFCCC/NAMA Facility for funding and support" (DEA, 2014b, p. 154). While this indicates that the DEA is trying to align flagship and NAMA initiatives, these efforts are seen as "being driven with great energy by a marginal department" (SA-17), thus indicating that struggle to influence agenda is driven from fringes.

Nonetheless, concrete initiatives were taken to package various domestic actions as NAMAs. Notable among these are the Sustainable Settlement Facility (SSF) – submitted to the NAMA Facility by SouthSouthNorth; the South African Renewables Initiative (SARi) – an inter-ministerial initiative launched during COP-17; currently ongoing V-NAMA that involves various departments of the national government; but also transport NAMA as well as Gautrain NAMA.[6] While the fate meted out to each of these is different, these efforts do indicate that NAMA as a policy instrument managed to reach the policy formulation stage. Non-state actors were also involved in these NAMAs and "took direction from what South Africa was saying at international forums (UNFCCC). … [but also] it

---

[6] Our analysis is based on detailed analysis of SSF and SARI.

was in the white paper so it must be nationally appropriate" (SA-04). So both international submissions as well as flagships within the NCCRWP became reference point for NAMA development.

It is however at the decision making stage that the efforts to package these actions as NAMAs started facing resistance. For SSF, "the DEA was very happy to sign and endorse the letter" but the efforts to "show enough support from the" (SA-04) relevant line department were not successful. On the other hand, SARI managed to garner international support but it "doesn't exist on ground actually" because "...the political and stakeholder management process [...] was in shambles" (SA-06); akin to "a political mess" (SA-14). Unlike SSF where the problems were faced at both national and international level, in SARI "it was more the issue around at domestic level, who has the mandate to lead on renewable energy policy" (SA-15). Respondents also contend that SARI "didn't really get formulated into even a policy document" (SA-17). Lack of clarity on who should be calling the shots seems to have resulted in the NAMA process faltering time and again.

4.3.2   Implementation, evaluation and policy innovation

Translating exemplary policies into action seem to be South Africa's bane. On a general level it affects the implementation of NAMAs as well but more specific reasons are also visible. The NCCRWP established a coordination committee in the form of Inter Ministerial Committee on Climate Change (IMCCC) to "oversee all aspects of the implementation of ... White Paper" (Republic of South Africa, 2011, p. 37). There is confusion on the role of IMCCC, which seems to hamper implementation. Some respondents think that its role was limited "to facilitate our preparation and [...] hosting the COP ... ministerial committee seized to exist after COP-17" (SA-18). Others are "not sure where it is right now" (SA-15). It is possible that this lack of clarity on the role of IMCCC influenced coordination and implementation of NCCRWP and subsequently NAMAs.

With respect to evaluation, MRV in itself "is not a concern" (SA-06), but the fact that "someone will be looking at you, [...] that's an impediment" (SA-02). The country prefers to use its in house system of Monitoring and Evaluation (M&E) as it goes beyond the "context of mitigation only and GHG ... [by bringing] in the context of adaptation" (SA-10).

The country has a strong culture of policy innovation though. The country "is fantastic in designing policy" (SA-06); and it is "far better at developing policy then implementing it" (SA-08). The Long Term Mitigation Scenario exercise and the South African proposal on Sustainable Development – Policies and Measures are evidence of innovative and capable epistemic climate community in the country (Upadhyaya, 2016). Policy innovation is also seen in how the elements of SARI have been incorporated in designing a successful Renewable Energy Programme (REI4P) and efforts of National Treasury to roll out economy-wide carbon tax in 2016.

5 Discussion: Comparing the Indian, Brazilian and South African NAMA policy processes

While none of the IBSA countries submitted any NAMA to the NAMA Registry or referred to NAMAs in their INDCs, a closer look presents a much more complicated picture of NAMA engagement. In this section we comparatively analyse the NAMA policy process within broader climate policy process in the case countries using the policy cycle model. In doing so we intend to highlight the similarities and differences that influenced NAMA engagement.

5.1 Agenda setting

The chances of NAMAs making it to the agenda are directly proportional to the importance given to the threat posed by climate change to the country under study. While informants across the board acknowledged that climate change is a concern, Brazil gave it high policy priority, particularly between 2009-2010. This could be attributed to the fact, that around the same time its Environment Minister, Marina Silva resigned, shifted to Green Party and became its Presidential candidate. Her presidential campaign, presence of pragmatic environment Minister in Carlos Minc and conducive international environment around COP15 provided "reformist forces" in Brazil considerable sway (Viola & Franchini, 2014, p. 683). This paved way for a strong Copenhagen pledge from Brazil leading to synergies between mitigation actions in Brazil and NAMAs getting tapped. In addition, since 2007, Brazil had clearly defined role and responsibilities for institutions such as CIM and Executive Group on Climate Change (GEx) (MCTI, 2014, pp. 8–9). This ensured that a wider consultation process was in place that also paved way for having different government departments on board. Similar to Brazil, the consultation process led by DEA in South Africa is lauded for its multi-stakeholder, consultative and iterative nature (Giordano, Hall, Gilder, & Parramon, 2011) but it has not necessarily translated into implementation. In contrast, due to high population, it is felt that undertaking a very wide consultative process can be counterproductive in India.

Before the current "crisis of governance" (BR-01, 04) struck it, Brazil was unilaterally taking successful efforts to reduce its GHG emissions, particularly from deforestation in Amazon. In contrast, there is no Green Party in India or South Africa. Neither is it "part of the electoral calculus for any politician" (IN-13), nor is it "a campaign issue" (SA-01). Part of the problem is that climate change is an abstract, long term issue compared to more urgent and pressing challenges, particularly in case of India and South Africa. In comparison Brazil has a high rate of energy access driven by hydro power which reduces pressure on it to take comparable transformation efforts. But with the current Brazilian "crisis of governance." climate issues may again take a back seat. How IBSA engage with NAMAs then becomes a function of their immediate priorities. Electoral demands managed to bring climate change at centre stage for Brazil in 2009-10 but it does not seem to be given as much attention in IBSA now. If environment is a priority for the country in general, then it will take policy frameworks such as NAMAs as a means to tackle climate change, if there are

other pressing priorities then other factors need to weigh in to make international framings worthwhile option.

5.2   Policy formulation

Depending upon the perceived utility of NAMA in pursuing national priorities, NAMA engagement at policy formulation stage varies in IBSA. Studies in India consistently approached NAMA as a mechanism that could be tapped in future – provided its concerns were addressed (ABPS Infra, 2011; Jindal, Khanna, and Sriram, 2013). While some studies rued the lack of clarity on which of India's eight national missions 'can finally emerge as formal NAMAs', they flagged the missions that could probably be turned into NAMAs (ABPS Infra, 2011: 56–57). Although mitigation actions in India have not been formally recognized as NAMAs, an Expert Committee on NAMAs seems to be in place (MoEFCC, 2015: 13). At the moment, the only NAMA initiative currently underway in India is the NAMA feasibility study on waste and forestry sectors, being supported by the GIZ. These sectors have been chosen by the MoEFCC as India had contrasting experience with these sectors under the CDM – small number of projects in forestry viz-a-viz large number in waste sector (IN-03). In contrast all the mitigation actions in Brazil have been "informed to the Convention" as NAMAs (MCTI, 2014: 14). This is in continuation of the developments at the agenda setting stage. In total, eight actions have been described as NAMAs. The "momentum in 2009-2010, in favour of approving the climate change law" (BR04) that resulted in formulation of the policy is also identified as the factor responsible for this development.

Unlike the somewhat binary approach to NAMAs taken in India and Brazil, South Africa presents a much more complex picture. Respondents find debate about terminology distracting (SA-03, 10, 17) and complained that negotiators tend to act as "basket of kittens [... getting] excited about the next new shiny object in the sky" (SA-17) thus making it difficult for non-state actors to develop a concept. Nonetheless, both state and non-state actors undertook initiatives to showcase some of South Africa's mitigation actions as NAMAs, SARi, SSF and V-NAMAs being the prominent ones. In some sense it is both a reflection of highly consultative nature of climate policy formulation process in South Africa as well as limited capability of the driving agency to define and own the policy process. Nonetheless, NAMA terminology was not used in the NCCRWP as implications of its usage were not clear at the time (SA-04, 08). But it seems that efforts to align NAMA initiatives with the national flagships programme are still underway (DEA, 2014b, Chapter 7 Additional Information). Thus lack of clarity on NAMAs, results in very different modes of NAMA policy formulation in IBSA countries.

5.3   Decision-Making

Whether to use the NAMA terminology to describe mitigation action or not seems to be a strategic choice, particularly influenced by country's approach towards international support and commensurate MRV requirements. On one end of the scale is Brazil for whom NAMA engagement is natural because it doesn't "see NAMAs as action to get support. NAMA is our commitment" (BR-06). Thus it sees no distinction between its mitigation actions and NAMAs (MCTI,

2014), as making distinctions between supported and unsupported actions is considered "a nightmare" as it is time-consuming "to actually demonstrate that this support is actually for implementing something that is plus something that you are actually proposing" (BR06). This approach is also reflected in Brazil's iNDC whose implementation "is not contingent upon international support" (Government of Brazil, 2015, p. 3).

For South Africa NAMA exemplifies the confusion that has also muddled its implementation efforts. The conditionality clause in its Copenhagen pledges is seen as "an inhibition to national action [...because] if we do stuff before we have to, then we undermine our own case for getting [...] the international support [... and] having those commitment is as much a barrier as it is an enabler because it is conditional commitment" (SA-08). This combined with lack of clarity on IMCCC's role as the institutional body providing oversight for implementation has resulted in an uneven engagement with NAMAs across various actors in South Africa, currently operating without any overall guidance. At the other end of the scale, lack of clarity on "international support for NAMAs has clearly influenced India's attitude" (IN-10). While "both the magnitude and the level at which (support) will come" are important factors for India, it is felt that clarity on "where from, what kind of domestic actions [...] will be eligible for international support" (IN-03) is needed before taking on NAMAs. India seeks support to ensure successful implementation of its INDC under Articles of the Convention (India, 2015). Therefore, it is evident that lack of clarity on support evokes three very different type of responses from the case countries.

5.4 Implementation

Gap between policy and actual implementation is a common refrain running across IBSA, though it is much more prominent in South Africa. Lack of clarity on the role of IMCCC, makes coordination of its initiatives difficult (Worthington, 2014, p. 18). In addition the Minister of Finance was also not part of the IMCCC (Giordano et al., 2011: 18–19). At this point in time, we cannot infer the extent to which this factor impacted the implementation. In contrast, almost all the major ministries were on board in Brazil's CIM and GEx. Attempts were also made to label specific initiatives in South Africa as NAMAs – something that is not witnessed in the other two case countries – these attempts have not necessarily resulted in actual implementation on ground, primarily because of lack of oversight and coordination.

While India does not have any specific NAMAs in place, the performance of its national missions is subject to the importance that the relevant line ministries give to the national missions. Existing level of staff seem insufficient for implementing range of functions under various missions (Dubash & Joseph, 2015). For NAMA implementation in India, lack of clarity on available support comes across as an immediate factor. Barring aside a feasibility study, mitigation actions in India are not referred to as NAMAs. The Indian Govt. however has engaged with the concept of INDCs more openly and invited different stakeholders for their views, albeit in an ad-hoc manner.

In contrast, Brazil sees all of its actions as NAMAs (MCTI, 2014) primarily because it does not make them conditional to international support. While avoiding deforestation efforts have been highly successful, other NAMAs have not been that successful. While Amazon NAMA has reduced emissions, it is not "promoting low-carbon development" (BR-04) per se. This is an important observation as it implies that successful implementation of NAMA need not result in cleaner energy mix if other contextual developments are in opposing direction. Nonetheless Brazil has also moved beyond NAMAs to INDCs, thus the future of NAMA as a concept is doubtful.

It can be argued that while NAMA has been considered as a policy option in different degrees in IBSA, at the moment, all three countries have moved beyond NAMAs to INDC. Although Brazil presented its mitigation actions as NAMAs, none of the initiatives have specifically been successfully promoted purely as NAMA. This shows that efforts of countries "to shoehorn their stuff into an international term that is just an empty shell" (SA-13) had limited success. This observation is in line with Tyler et al. (2013) who concluded that NAMA as a concept seems to be "positively impacting mitigation action in the smaller developing countries … but not in India, South Africa or Brazil."

5.5   Evaluation

Evaluation features prominently as a relevant factor for the policy process on NAMAs in all IBSA countries, both in terms of expectations on international provisions for MRVing NAMAs and in terms of evaluating the countries' experience with NAMAs.

Even if implementation of NAMAs has not happened in India and South Africa – given the current understanding of NAMAs in these countries – expectations on international MRV requirements has been an inhibiting factor for embracing NAMAs, particularly in India. This led to a distancing of their domestic mitigation actions from the concept of NAMAs. And it was presented as a case for the need to update policy.

The story is different for Brazil. In Brazil, the view that the Copenhagen Pledge is a NAMA never faded, as was the case in India. Therefore, central actors in Brazil can maintain the position that NAMAs have both been decided on and are under implementation. Here, evaluation of implementation has been a strong foundation both for detecting problems with how emissions are measured and for arguing for the need to update policy around both reporting practices and targets.

5.6   Policy innovation

In all three IBSA countries, the experience with NAMAs informed the process of designing new policy in shape of INDCs. The policy process around NAMAs is highlighted, particularly in Brazil and India, as an important learning process for how domestic climate policy relates to international climate policy. The South African INDC also quite clearly builds on what the Government, in their INDC,

explicitly refer to as their Cancún Pledge, at the time of submission in 2009 referred to as their NAMA.

In both Brazil and South Africa, several of the informants and the official documents speak the same language: that the INDCs have moved on from NAMAs by updating the national target from a deviation from business as usual (which was the encouraged framing of NAMAs agreed by the UNFCCC COP in Cancún 2010) to absolute emission reduction targets. As an example, the South African INDC explicitly relates to South Africa's previous Cancún Pledge by specifying a timeframe for evaluating the implementation of the NAMA (2016-2020) and by expressing the target of the Cancún Pledge for the period 2021-2025 in absolute terms rather than as a deviation from BAU. In fact, the Cancún Pledge and the INDC are in several respects identical, for example in outlining that "This level of effort will enable South Africa's greenhouse gas emissions to peak between 2020 and 2025, plateau for approximately a decade and decline in absolute terms thereafter" (Ref to Cancún Pledge, p. 2 and INDC, p. 6). In case of India though NAMAs have not been instrumental for policy innovation. On a conceptual level though, work done by TERI[7] created important space for deliberating upon the purpose and utility of NAMA, while suggesting a way forward to facilitate decision making (Shrivastava et al., 2013). This has not yet been linked to implementation.

In general, the INDCs are seen as updates of pledges put forward in the countries' submissions under the Copenhagen Accord in 2009 and Cancún Agreements in 2009. All three countries are engaging differently with the concept of INDCs, largely following in the backwaters of how they have engaged also with NAMAs. Table 2 below summarizes the informants views on NAMA engagement in IBSA countries at different stages of policy cycle.

---

[7] For more details refer to: http://www.teriin.org/projects/nfa/cc2bwp1.php

Table 2 | Summary of the informants' views of engagement with NAMAs in IBSA at different stages in the policy cycle

	Agenda setting	Policy formulation	Decision making	Implementation	Evaluation	Policy innovation
Brazil	Driven by alignment with existing processes	Driven by alignment with existing processes	Driven by alignment with existing processes	Partly failing due to centralized governance structures	Incorrect methodologies prevent proper actions	NAMAs have evolved into INDCs;
India	Driven by availability and scale of international support and subsequent MRV	Driven by: availability and scale of international support and subsequent MRV; Could be aligned with existing processes under the NAPCC	Driven by: availability and scale of international support and subsequent MRV; Could be aligned with existing processes under the NAPCC	Mitigation occurs over and beyond NAMAs	International MRV requirements seen as demanding and onerous	Studies aimed at developing conceptual clarity on NAMAs
South Africa	Driven by alignment with existing priorities	Driven by South Africa's position under UNFCCC and flagships defined under NCCRWP	Influenced by absence of relevant line departments	Faltering due to lack of clarity on the role of IMCCC; missing implementation gap	Domestic M&E terminology preferred over international MRV	Strong policy innovation; high conceptual capacity

6   Conclusions

While IBSA countries have not submitted any formal NAMA proposal to the NAMA registry, this does not imply absence of domestic NAMA engagement. As is evident from our analysis, NAMA engagement has played out very differently in the three countries and is closely associated with the domestic priorities.

On one end of the scale is Brazil which seamlessly merged its domestic actions into the UNFCCC formulation of NAMAs. Framing its mitigation actions as its commitments under NAMA, Brazil delinked its domestic initiatives from international support. At the same time, the implementation of its various NAMAs is not uniform. And even the success of its Amazon NAMA, is not enough to drive it towards a low-carbon development path. How NAMA played out in Brazil is in stark contrast with India's experience. India presents a vast array of mitigation actions which have recently been jacked up, sending the signal that it is willing to take on a bigger role on climate mitigation. Yet it has steadfastly maintained aversion for using internationally formulated constructs to define its

domestic actions. Much of its reluctance comes from its desire to emphasize its sovereignty in domestic affairs and deep suspicion of current climate governance architecture to deliver on its promises to provide support to developing countries. In addition, the scale of support being made available is not seen as worthwhile to indulge. South Africa falls somewhere in between these two binaries. In its efforts to project itself as a responsible member of global community is keen to take on international framing. At the same time, vested interests and its inability to translate laudable policies into realities hamper its engagement with NAMAs. Lack of oversight and turf battles over who should drive its climate and energy policies has muddied the waters for NAMAs, and has impeded the implementation of, well designed NAMAs. This variance in NAMA engagement will provide an important backdrop for implementing INDCs.

Irrespective of their NAMA experiences, all three countries are now gearing up for translating their INDCs into NDCs. This is where studying their NAMA engagement from a policy cycle perspective provides important findings for internationally formulated concepts that are to be engaged in different domestic settings. All the three cases show different modes of engagement with NAMAs.

Firstly, their experiences varied at the agenda setting stage itself. As the India example shows, NAMAs were not considered much useful and could not go much beyond the agenda-setting stage. Agendas can only be influenced if these concepts are able to address existing priorities. In Brazil environment was seen as an important issue in electoral process and mitigation action was projected as NAMAs to tap this constituency. But in South African and India contexts development and social goals trump environmental concerns and here NAMAs have not been that successful.

Second, maintaining a certain degree of vagueness was often portrayed as NAMA's strength. But as is visible in policy formulation stage, implementers find it hard to engage with such a high degree of abstraction. In instances where all mitigation actions are not considered equivalent to NAMAs, analytically more concrete framing can prove helpful.

Third, decision-making stage is influenced by what can NAMAs deliver. For Brazil, making distinction between supported and unsupported actions was seen as a waste of time and therefore it decided to label its mitigation actions as NAMAs without waiting for clarity on support. In contrast, both India and South Africa are dependent on fossil fuels for meeting their energy requirements. In order for them to break their institutional lock-in, clarity on international support is necessary. While nations have already formally submitted their INDCs, if the global community is serious about scaling up these commitments, then it needs to provide greater clarity on support. Without it countries cannot wean off their fossil fuel dependence.

Fourth, while implementation is very much dependent on the domestic institutional capacity, if international framings are not seen as providing any value-addition to existing interventions, then they will not be utilised. In addition, successful implementation of NAMAs by themselves, need not result in low-carbon development – as is evident by the Amazon NAMA in Brazil. Policy

analysts need to be aware of broader context to understand effectiveness of policy interventions. Packaging actions as NAMAs or not is secondary to actually making implementable policies that promote low-carbon development as a whole.

Fifth, global climate governance architecture continues to suffer from trust deficit due to its perceived insensitivity towards addressing needs of emerging economies. Countries prefer to use their own frameworks to evaluate their actions. Having lack of clarity on support makes countries even more wary of international MRV requirements.

Finally, it may be possible to have high policy innovation capacity without having effective implementation. In addition, lots of instances of policy innovation are continuation of existing paradigms. While INDCs reflect emergence of a new policy instruments on policy horizon, they do not reflect radical change in policy paradigm.

Current experiments with policy instruments reflect normal policy making marked by second order changes (Hall, 1993). The developments at domestic level are only a reflection of the incremental gains approach currently playing out at UNFCCC level where one policy instrument is replaced by a new policy instrument that follows in the foot step of the previous. Policy process studies need not be distracted by mutations of concepts and terminologies. Still, the gains of the IBSA countries having grappled with NAMAs may prove valuable in the INDC process. Their respective NAMA encounters have helped to clarify the element of national appropriateness on a conceptual level, in particularly at the agenda setting, but also partly in policy formulation. While this may have been helpful in building capacity, going beyond these stages need global climate governance to get its act together.

7   References

ABPS Infra. (2011). *Measurement and Performance Tracking: Scoping and Survey Results*. Mumbai: ABPS Infrastructure Advisory Private Limited.

Bailey, I., & Compston, H. (Eds.). (2012). *Feeling the Heat: The politics of Climate Policy in Rapidly Industrializing Countries*. Palgrave Macmillan.

Bassi, M. A., Deenapanray, (Sanju) Prakash, & Davidsen, P. (2013). Energy Policy Planning for Climate-Resilient Low-Carbon Development. In H. Qudrat-Ullah (Ed.), *Energy Policy Modeling in the 21st Century* (pp. 125–156). New York, NY: Springer New York.

Bodansky, D., & Diringer, E. (2014). *Alternative Models for the 2015 Climate Change Agreement* (13). Lysaker, Norway: Fridtjof Nansen Institute. Retrieved from http://www.fni.no/climatepolicyperspectives/FNICPP-13.html

Burns, P. M., & Vishan, I. (2010). The Changing Landscape of Climate Change: NAMAs, SIDS and Tourism. *Tourism and Hospitality Planning &*

Development, *7*(3), 317–328.
http://doi.org/10.1080/1479053X.2010.502391

Cameron, L., & Harms, N. (Eds.). (2015). NAMAs and INDCs: Interactions and
opportunities. ECN. Retrieved from
http://www.mitigationmomentum.org/downloads/NAMAs-and-INDCs-
Interactions-and-opportunities.pdf

Coetzee, K., & Winkler, H. (2014). The international policy context for mitigation
actions. *Climate and Development*, *6*(S1), 4–11.
http://doi.org/10.1080/17565529.2013.867245

DEA. (2014a). *Mitigation report: South Africa's Greenhouse Gas Mitigation
Potential Analysis*. Pretoria: Department of Environmental Affairs.

DEA. (2014b). *South Africa's 1st Biennial Update Report* (p. 160). Pretoria:
Department of Environmental Affairs.

Dubash, N. K., Hagemann, M., Höhne, N., & Upadhyaya, P. (2013). Developments
in national climate change mitigation legislation and strategy. *Climate
Policy*, *13*(6), 649–664. http://doi.org/10.1080/14693062.2013.845409

Dubash, N. K., & Jogesh, A. (2014). *From Margins to Mainstream? State Climate
Change planning in India as a "Door Opener" to a Sustainable Future*
(Research Report). New Delhi: Centre for Policy Research (CPR).

Dubash, N. K., & Joseph, N. B. (2015, May). *The Institutionalisation of Climate
Policy in India: Designing a Development-Focused, Co-Benefits Based
Approach*. Working Paper, New Delhi.

Fridahl, M., Hagemann, M., Röser, F., & Amars, L. (2015). A Comparison of Design
and Support Priorities of Nationally Appropriate Mitigation Actions. *The
Journal of Environment & Development*, *24*(2), 237–264.
http://doi.org/10.1177/1070496515579124

Fridahl, M., Upadhyaya, P., & Linnér, B.-O. (2014). Supporting Nationally
Appropriate Mitigation Actions through the Green Climate Fund:
Governance Capacities and Challenges. *Carbon and Climate Law Review*, *4*,
257–269.

Garibaldi, J. A., Winkler, H., La Rovere, E. L., Cadena, A., Palma, R., Sanhueza, J. E.,
… Torres Gunfaus, M. (2013). Comparative analysis of five case studies:
commonalities and differences in approaches to mitigation actions in five
developing countries. *Climate and Development*, *6*(sup1), 59–70.
http://doi.org/10.1080/17565529.2013.812031

Giordano, T., Hall, L., Gilder, A., & Parramon, M. (2011). *Governance of Climate
Change in South Africa*. Department of Environmental Affairs. Retrieved
from http://www.gov.za/issues/national-development-plan-2030

GoI. (2008). National Action Plan on Climate Change. Ministry of Environment
and Forest, Government of India. Retrieved from
http://pmindia.nic.in/climate_change.htm

GoI. (2015). *India's INDC: Working towards Climate Justice*. Government of India.
Retrieved from

http://www4.unfccc.int/submissions/INDC/Published%20Documents/India/1/INDIA%20INDC%20TO%20UNFCCC.pdf

Government of Brazil. DECRETO Nº 6.263, DE 21 DE NOVEMBRO DE 2007. Institui o Comitê Interministerial sobre Mudança do Clima - CIM, orienta a elaboração do Plano Nacional sobre Mudança do Clima, e dá outras providências. Brasilia: Presidência da República, Casa Civil, Subchefia para Assuntos Jurídicos, Pub. L. No. 6.263 (2007). Retrieved from http://www.planalto.gov.br/ccivil_03/_Ato2007-2010/2007/Decreto/D6263.htm

Government of Brazil. LEI Nº 12.187, DE 29 DE DEZEMBRO DE 2009 - Institui a Política Nacional sobre Mudança do Clima - PNMC e dá outras providências., Pub. L. No. 12.187, DE 29 (2009). Retrieved from http://www2.camara.leg.br/legin/fed/lei/2009/lei-12187-29-dezembro-2009-599441-publicacaooriginal-121756-pl.html

Government of Brazil. (2010). Brazil's Copenhagen pledges including NAMAs. Retrieved from https://unfccc.int/files/meetings/cop_15/copenhagen_accord/application/pdf/brazilcphaccord_app2.pdf

Government of Brazil. (2015). *Brazil iNDC*. Federative Republic of Brazil. Retrieved from http://www4.unfccc.int/submissions/INDC/Published%20Documents/Brazil/1/BRAZIL%20iNDC%20english%20FINAL.pdf

Gupta, K. (2012). Comparative Public Policy: Using the Comparative Method to Advance Our Understanding of the Policy Process. *Policy Studies Journal*, *40*, 11–26. http://doi.org/10.1111/j.1541-0072.2012.00443.x

Guzzone, B. (2013). Development of a Waste Sector NAMA: Lessons Learned. In *Impacts, Policy and Regulation.* Washington, DC.

Hall, P. A. (1993). Policy Paradigms, Social Learning, and the State: The Case of Economic Policymaking in Britain. *Comparative Politics*, *25*(3), 275–296. http://doi.org/10.2307/422246

Held, D., Roger, C., & Nag, E.-M. (2013). *Climate Governance in the Developing World*. Wiley.

Hogwood, B. W., & Peters, B. G. (1982). The dynamics of policy change: Policy succession. *Policy Sciences*, *14*(3), 225–245. http://doi.org/10.1007/BF00136398

Howlett, M., Ramesh, M., & Perl, A. (2009). *Studying Public Policy - Policy Cycles and Policy Subsystems.* (3rd ed.). Canada: Oxford University Press.

IBSA. (2003). *Brasillia Declaration*. Brasilia: IBSA Dialogue Forum.

IBSA. (2008). *Memorandum of understanding on cooperation in the field of environment.* New Delhi: IBSA DIalogue Forum.

Jann, W., & Wegrich, K. (2007). Theories of the Policy Cycle. In F. Fischer, G. J. Miller, & M. S. Sidney (Eds.), *Handbook of Public Policy Analysis: Theory, Politics, and Methods.* (pp. 43–62). CRC Press.

Jindal, G., Khanna, P., & Sriram, B. (2013). *NAMAs in India's RE Sector*. EVI. Retrieved from http://emergent-ventures.com/FReportsFile/NAMAs%20in%20Indias%20RE%20Sector.pdf

Jordan, A., & Huitema, D. (2014a). Innovations in climate policy: the politics of invention, diffusion, and evaluation. *Environmental Politics*, *23*(5), 715–734. http://doi.org/10.1080/09644016.2014.923614

Jordan, A., & Huitema, D. (2014b). Policy innovation in a changing climate: Sources, patterns and effects. *Global Environmental Change*, *29*, 387–394. http://doi.org/10.1016/j.gloenvcha.2014.09.005

Liu, L., Matsuno, S., Zhang, B., Liu, B., & Young, O. (2013). Local Governance on Climate Mitigation: A Comparative Study of China and Japan. *Environment and Planning C: Government and Policy*, *31*(3), 475–489. http://doi.org/10.1068/c11246

MCTI. (2014). *First Biennial Update Report of Brazil* (p. 54). Ministry of Science, Technology and Innovation.

MoEFCC. (2015). *India: First Biennial Update Report* (p. 184). New Delhi: Ministry of Environment, Forest and Climate Change, Government of India.

Purdon, M. (2015). Advancing Comparative Climate Change Politics: Theory and Method. *Global Environmental Politics*, *15*(3), 1–26. http://doi.org/10.1162/GLEP_e_00309

Republic of South Africa. (2010, January 29). South Africa: Copenhagen Pledges.

Republic of South Africa. (2011). National Climate Change Response White Paper. Department of Environmental Affairs. Retrieved from http://www.sanbi.org/sites/default/files/documents/documents/national-climate-change-response-white-paper.pdf

Romeiro, V., & Parente, V. (2011). Climate change regulation in Brazil and the role of subnational governments. In *Climate change in Brazil: economic, social and regulatory aspects*. Brasilia.

Shrivastava, M. K., & Upadhyaya, P. (2014). Whither multilateralism? Implications of bilateral NAMA finance for development and sovereignty concerns of developing countries. In *Internalising mitigation activities into the development priorities and approaches of developing countries* (pp. 78–89). Cape Town: Energy Research Centre, University of Cape Town.

Steinberg, P. F., & Vandeveer, S. D. (2012). *Comparative Environmental Politics*. The MIT Press.

Timmons, J. F., & Garfias, F. (2015). Revealed Corruption, Taxation, and Fiscal Accountability: Evidence from Brazil. *World Development*, *70*, 13–27. http://doi.org/10.1016/j.worlddev.2014.12.011

Tyler, E. (2013). South Africa: A case study on national and sub-national climate policy experiences. In *Building the Hinge: Reinforcing National and Global Climate Governance Mechanisms*. Alwar: CPR.

Tyler, E., Boyd, A., Coetzee, K., Torres Gunfaus, M., & Winkler, H. (2013). Developing country perspectives on "mitigation actions", "NAMAs", and "LCDS." *Climate Policy*, 1–7. http://doi.org/10.1080/14693062.2013.823334

UNFCCC. (2009). *Ideas and proposals on the elements contained in paragraph 1 of the Bali Action Plan. Submission from Parties: PArt II.* (Submissions from Parties: Part II. No. FCCC/AWGLCA/2009/MISC.4 (Part II)). UNFCCC.

UNFCCC. (2011a). *Compilation of information on nationally appropriate mitigation actions to be implemented by Parties not included in Annex I to the Convention* (No. FCCC/AWGLCA/2011/INF.1). UNFCCC. Retrieved from http://unfccc.int/resource/docs/2011/awglca14/eng/inf01.pdf

UNFCCC. (2011b). *COP16: Report (Addendum 1), Cancun 2010.* (No. FCCC/CP/2010/7/Add.1). UNFCCC. Retrieved from http://unfccc.int/resource/docs/2010/cop16/eng/07a01.pdf

UNFCCC. (2016, May 4). Public NAMA - Home. Retrieved May 4, 2016, from http://www4.unfccc.int/sites/nama/SitePages/Home.aspx

Upadhyaya, P. (2016). Aligning Climate Policy with National Interest: Disengagements with Nationally Appropriate Mitigation Actions in South Africa. *Journal of Environmental Policy & Planning*, 1–19. http://doi.org/10.1080/1523908X.2016.1138402

Viola, E., & Franchini, M. (2014). Brazilian climate politics 2005–2012: ambivalence and paradox. *Wiley Interdisciplinary Reviews: Climate Change*, *5*(5), 677–688. http://doi.org/10.1002/wcc.289

Vogel, B., & Henstra, D. (2015). Studying local climate adaptation: A heuristic research framework for comparative policy analysis. *Global Environmental Change*, *31*, 110–120. http://doi.org/10.1016/j.gloenvcha.2015.01.001

Wellstead, A., & Stedman, R. (2015). Mainstreaming and Beyond: Policy Capacity and Climate Change Decision-Making. *Michigan Journal of Sustainability*, *3*. http://doi.org/http://dx.doi.org/10.3998/mjs.12333712.0003.003

Winkler, H. (2014). Emerging lessons on designing and implementing mitigation actions in five developing countries. *Climate and Development*, *6*(sup1), 1–3. http://doi.org/10.1080/17565529.2014.892315

Winkler, H., & Dubash, N. K. (2015). Who determines transformational change in development and climate finance? *Climate Policy*, 1–9. http://doi.org/10.1080/14693062.2015.1033674

Worthington, R. (2014). *Report on a Review of Implementation of South Africa's National Climate Change Response White Paper (NCCRWP)*. Electricity Governance Initiative - South Africa, Project 90 by 2030 and EnAct International.