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Shifting discourses of climate change in India

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Abstract Developing countries like India are under international pressure to sign a legally binding emissions treaty to avert catastrophic climatic change. Developing countries, however, have argued that any international agreement must be based on historic and per capita carbon emissions, with developed countries responsible for reducing their emissions first and funding mitigation and adaptation in other countries. Recently, however, several scholars have argued that Indian government climate change discourses are shifting, primarily by recognizing the "co-benefits" of an alignment between its development and climate change objectives, and by displaying increasing "flexibility" on mitigation targets. This study investigates the factors driving shifting Indian discourses of climate change by conducting and analyzing 25 interviews of Indian climate policy elites, including scientists, energy policy experts, leading government officials, journalists, business leaders, and advocates, in addition to analysis of articles published in *Economic and Political Weekly* (a prominent Indian policy journal), and reports published by the government and other agencies. Our analysis suggests that India's concerns about increasing energy access and security, along with newer concerns about vulnerability to climate change and the international leadership aspirations of the Indian government, along with emergence of new actors and institutions, has led to plurality of discourses, with potential implications for India's climate change policies.

1 Introduction

India is one of the world's most vulnerable countries to climate change (Cruz et al. 2007; INCCA 2010). About half of its population is dependent on agriculture or other climate sensitive sectors (Bureau of Labour Statistics 2010), and about 76 % of the population lives on less than $2 a day (World Bank 2008). The 2010 United Nations Human Development Report (HDR 2010) found that poverty levels in eight Indian states, home to about 421 million poor, are as acute as those in the 26 poorest African countries.

India, however, is now the world's third largest greenhouse gas (GHG) emitter, having tripled its carbon dioxide emissions from fuel combustion alone between 1990 and 2011 and its emissions are predicted to increase by almost 2.5 times between 2008 and 2035 (IEA 2013). Citing the rising national emissions of developing countries like India, developed countries like the United States have refused to sign a legally binding treaty to reduce greenhouse gas emissions (National Academies 2010). Developing countries, however, have refused to

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commit to binding emissions reductions based on arguments of equity, low per-capita emissions and the historical responsibility of developed countries to reduce their emissions first. For example, the per capita emission of India, with 17 % of world's population, is 1 ton of CO_2 emissions in 2013, whereas in the United States, with less than 5 % of the world's population, per capita emissions are 17 t CO_2 (IEA 2013). These three different frames for carbon emissions—national, per capita, and historical—lead to different conclusions about responsibility for climate change that have contributed to the impasse in negotiations under the United Nations Framework Convention on Climate Change (UNFCCC) (Dubash and Rajamani 2010).

In recent years, however, several scholars have noted that India has begun to shift its position at international and domestic forums (e.g., Dubash 2011a; Michaelowa and Axel 2012; Vihma 2011; Kapur et al. 2009). In 2007, the Prime Minister (PM) instituted a Council on Climate Change and mandated eight national missions to address energy security among other vulnerabilities as part of Nation Action Plan on Climate Change (NAPCC 2008). Just days prior to the important Conference of Parties (COP) 15 meeting in Copenhagen in 2009, India voluntarily offered to reduce the emissions intensity of its GDP by 20–25 % by 2020 compared to 2005 levels. At the 2010 COP 16 meeting in Cancun, the then Indian minister for Environment and Forests, Jairam Ramesh, in a significant shift, stated "all countries must take binding commitments in appropriate legal form" (PTI 2010, para.3).

At the same time, however, there are dissenting voices within the Indian government and among civil society organizations over the nature and direction of such shifts. Most visible of these divisions was a leaked letter from Jairam Ramesh to the Prime Minister, arguing for, among other things, a domestic mitigation law and the need to soften India's rhetoric of no emission reduction targets. During Copenhagen, Indian negotiators, such as the Special Envoy of Prime Minister on Climate Change, Shyam Saran, and other senior Indian delegates expressed disagreements with Environment Minister Ramesh's efforts to shift India's negotiating position, including his announcement of possible voluntary commitments without securing other Indian objectives such as legally binding emission cuts for developed countries and developed countries support for Indian mitigation and adaptation efforts. Others argued that, in the name of flexibility, India along with US and other BASIC countries was weakening the multi-government UNFCCC consensus process for "Kyoto style" top-down binding emission reductions, instead favoring bottom-up pledges, such as the voluntary commitments announced by the U.S., China, and India prior to COP 15, that are insufficient to limit the increase in global temperature to 2 °C (Bidwai 2012; Jayaraman 2009; Raghunandan 2011).

At the international negotiations, India still argues that historic and per-capita emissions, not national emissions, should be the organizing frame for future UNFCCC conventions, which is increasingly looked upon as a barrier to a globally binding deal, given India's rising national emissions. At the 2011 COP 17 conference in Durban, India was portrayed by some international observers as a "deal breaker," for refusing to sign a new, legally binding framework that would include both developed and developing countries (e.g. Vidal and Harvey 2011). Further, in her statement to the Indian Parliament, the new Environment Minister Jayanthi Natarajan stated: "There is no question of signing a legally binding agreement at this point of our development. We need to make sure that our development does not suffer" (The Economic Times 2011). Some scholars suggest that with the new environment minister at the helm, the more open international negotiating position articulated in Cancun may only have been "Ramesh deep" (Michaelowa and Axel 2012).

Several scholars argue that although the Indian government's negotiating position is shifting, it is not yet commensurate with the risks that climate change poses to India (Bidwai 2012; Raghunandan 2011).

1.1 A brief history of climate change discourses in India

Climate change emerged as an issue for Indian policy-makers in the late 1980s, a decade which included the formation of the IPCC in 1988, at a time when the Indian government was beginning to transition to a market oriented economy to accelerate growth and reduce poverty. Several scholars argue that the initial Indian government positions on climate change were largely efforts to protect its domestic development and sovereignty in an increasingly unipolar world (e.g. Biermann 2001; Jakobsen 1998; Rajan 1997; Kandlikar and Sagar 1999). In an ironic turn, the Indian government adopted principles articulated by Anil Agarwal and Sunita Narain—two long-standing critics of Indian government environmental policies (e.g. Agarwal and Narain 1985)—in their globally influential report, *Global Warming in an Unequal World*. This report was written as a response to a directive by the then Indian Environment Minister to state governments to reduce agricultural and cattle-based emissions, based on a World Resources Institute report that had blamed India as one of the world's largest emitters, primarily because of methane emissions from agriculture and cattle stock (Editorial 1991; Singh 1991). Agarwal and Narain reframed the climate change issue as "environmental colonialism" making a distinction between "luxury" and "survival" emissions, and arguing that climate change has been primarily caused by the "historic" emissions of greenhouse gases by developed countries, not contemporary annual emissions. A framework to solve the problem, they argued, therefore needed to begin by allocating equal access to the atmosphere for all individuals in the world, the per-capita allocation principle.

The Indian government drew heavily upon this report and in fact successfully inserted the terms "historical emissions" and "common but differentiated responsibilities" (CBDR) into the preamble of the UN Framework Convention on Climate Change (Jakobsen 1998; Jasanoff 1993; Rajan 1997). Moreover, there was a fear that global environmental concerns would now be used to limit and control developing countries' economic growth, through global financial institutions such as the World Bank and International Monetary Fund (IMF), controlled by the rich North (e.g. Editorial 1991; Gupta 1997). Others argued that climate change would divert the "attention of policy-makers, scientists and NGOs, often the first rate ones, from more pressing issues" (Parikh 1994, p. 2942) especially, as the Director General of the Indian Meteorological Department suggested at the time, "in the absence of hard evidence" (Rajan 1997, p.102).

Yet at the same time, India took a number of domestic measures and played an important role in international meetings on global environmental problems, including the formation of the UN Framework Convention on Climate Change (UNFCCC) (Dasgupta 2011; Rajan 1997; Sengupta 2011). Similarly, India played a major role at COP 1 in Berlin in 1995, submitting a proposal for a 20 % emission reduction by industrialized countries in the year 2000 compared to 1990 levels, a watered-down version of which ultimately became the 1997 Kyoto Protocol—to this date the only binding emissions reductions treaty. India was initially skeptical of market-based mechanisms such as the Clean Development Mechanism (Editorial 1997, 2000), but due to increased lobbying by Indian business for access to international markets (Jakobsen 1998), it quickly established the national CDM project approval authority in December 2003 and is currently the second largest CDM host country in the world (Gupta 2003; for critique of CDM, see Gundimeda and Guo 2003).

On the domestic front, although not addressing climate change directly, the Indian government passed domestic legislation for energy conservation and increased use of renewable energy, for example by setting up the Indian Renewable Energy Development Authority (IREDA), legislation of 2003 Electricity Act, and finally the "coal cess"—a form of carbon

tax at the rate of Rs 50 (approx. 1$) per ton on domestic and imported coal—to fund renewable energy sources (MOEF 2010).

The Indian government, however, continues to argue that differentiation between developed and developing countries should remain a key principle of any new international agreement, and the right for "development" carbon space (e.g. NAPCC 2008). More development, not less, Prime Minister Manmohan Singh argued, and increasing living standards, are the way to deal with climate change (as cited in Rajamani 2009). Similarly, the Indian government has consistently maintained that expecting India to do more to reduce emissions will limit its ability to address more pressing domestic development needs (Rajamani 2009, p. 343; Sant and Gambhir 2011).

There has long been scholarly interest in Indian climate change discourses (Jasanoff 1993; Rajan 1997; Jakobsen 1998; Kandlikar and Sagar 1999; Rajamani 2009). All these scholars have argued that climate change discourse has largely been limited to a small set of elite actors such as domestic NGO's, particularly CSE and TERI, and foreign policy experts (Dubash 2011a; Jasanoff 1993). With the emergence of new domestic actors and institutions, however, Indian climate change discourses appear to be increasingly nuanced and diversified, with climate change providing a space to engage with the government on broader governance issues. This study extends this prior research by exploring the drivers of shifting discourses of climate change in India.

2 Method

We identified prominent leaders and organizations that work in the field of climate change science, policy, communication and allied areas through an extensive literature review. We compiled a final list of about 40 key individuals and circulated it among prominent climate change scientists and academics working on climate change in India to add any additional names. Finally, we contacted potential respondents requesting a face-to-face interview during our fieldwork in India from December, 2010 to January, 2011.

2.1 Participants

The final sample consisted of 25 experts working in the field of climate change or related fields: five academics, five environmental group leaders, four scientists, three energy policy experts, three business leaders, two bureaucrats involved in national and international policy, two journalists, and one national-level politician who has been engaged with the climate issue for many years.

The semi-structured interviews began by exploring the climate-related work of the interviewees, their perceptions of the state of public and policymakers' awareness of climate change, and the range of climate change discourses in India, their origins and implications for the future. The average interview was approximately one hour. All the interviews were digitally recorded, transcribed and validated for accuracy by two researchers. Finally, the corrected transcripts were loaded in Atlas ti for analysis. We followed the grounded theory constant-comparative method (Creswell 2007), by building themes from successive rounds of coding the interview data. For example, we found that all interviews agreed that India's climate change positions were shifting, which became our central theme of analysis. Next, we identified themes which appeared to be the drivers of the shifting discourses.

Because of the limited sample size, and the short time frame when the interviews were conducted, we analyzed published literature, including government reports, NGO reports and

newspaper articles to add to the themes that were identified in the interview analysis. Specifically, we analyzed articles published in *Economic and Political Weekly* (EPW), a prominent and influential Indian policy journal to trace the historical antecedents for the emerging narratives on climate change in India. We searched the archives of EPW for the terms "climate change" "global warming" on the journal website from1990 to November 2013. We found 123 articles, out of which we deleted 24 articles because they mentioned the terms only in passing, resulting in a final sample of 99 articles. All the 99 articles were coded based on the themes that emerged from the interviews.

3 Findings

3.1 Increasing energy access and energy security

The analysis found that the prior prominent argument that India is too poor to redirect its resources away from poverty reduction and economic development has started to shift to a discourse of co-benefits—policies that "promote our development objectives while also yielding co-benefits for addressing climate change effectively" (NAPCC, Section 2). The central government's framing of "co-benefits" not only seeks to align domestic priorities of securing energy to sustain economic growth, and increase energy access, but is also widely seen as a means to provide India leverage in international negotiations (Bureaucrat; Former Negotiator; Energy Analyst 1, 2; Energy policy Expert 1; also see Dubash et al. 2013; Kapur et al. 2009). Identifying an increasing alignment between India's domestic priorities and international geopolitics for a strong climate regime, a former climate change negotiator said, "you have to take into account the fact that we cannot tell 400 million Indians, 'Sorry, there is climate change taking place so we can't give you electricity.' That is not possible, certainly not in a democratic country like India. But if you are able to do that mainly with cleaner sources of energy, renewable sources of energy you are making actually a very huge contribution both to India as well as to the world." A shift in the emission trajectory, without compromising on the goal of increasing energy access, for example through increased investments in renewables, and promoting energy efficiency, have emerged as common themes.

Increasing energy access was an important objective for Indian governments even before the issue of climate change entered domestic policy circles (Scientist 1, 2; Energy Analyst; Energy Policy Expert) as about 40 % of the Indian population still does not have access to electricity, while India's surging economic growth and industrial sectors are also dramatically increasing energy demands (Former Bureaucrat; Sant and Gambhir 2011). Climate change, however, has constrained the choices of energy mix, given that energy demand and supply, particularly coal, are increasingly factored in climate diplomacy (Scientist 1; Desai 2011). According to a bureaucrat, "So for us climate change and energy security, these are absolutely interlinked together. You can't talk about one without talking about the other".

Many interviewees suggested, and several studies indicate the potential of a co-benefits paradigm, by aligning development priorities with climate change policies, primarily in the areas of renewable energy, industrial and domestic energy efficiency, investments in public transport, and urban development (Energy Analyst 1, 2; Energy Policy Expert; Das 2011; Rai and Victor 2009; Mukhopadhyay and Revi 2009). For example, Rai and Victor (2009) argue that providing efficient cook stoves to the majority of Indians who still use biomass as their primary source of energy will not only help reduce Indian emissions levels, but also reduce the blown cloud that accelerates the net-global warming effect in the region, as well as improving public health in low-income households. Similarly, a national program to improve the

efficiency of India's coal-based power plants—the primary source of energy in India—from the current "30 to 40 % over the next two decades can provide about 400 Mt CO_2 reductions/yr by 2030, while also reducing coal requirement by 250MT/yr" (Rai and Victor 2009, p. 85).

3.1.1 From crisis to opportunity

Calls for increased renewable energy resources, particularly solar, although made earlier by several domestic actors (e.g. Agarwal and Narain 1985, 1991; Editorial 1997), are increasingly becoming a central argument in the quest for more equitable access to energy. As early as 1997, an editorial in EPW argued that the climate change crisis provides an opportunity for developing countries such as India and China to construct "a firm alternative plan" of action by investing in alternative sources of energy instead of "adopting a reactive posture and responding critically to the initiatives taken by the north" (p. 3103). Similarly, another editorial argued that "given the tremendous need for these (renewable technologies) in the future, India could well become a leader in what will be one of the cutting edge technologies of the future" (Editorial 2000, p. 1041).

Some Indian businesses are also promoting the green growth narrative as a means to participate more in international carbon trading schemes such as the CDM, and to potentially lead the world market in low carbon technologies (Energy Analyst 1, 2; Energy Policy Expert; Advocacy 1,2,3; Scientist 1, also see Das 2011; Pulver 2011). Given that Indian businesses played an important role in the decision of the Indian government to adopt the CDM mechanism, they may also play an important role in shaping the climate change mitigation as an economic opportunity discourse. An Energy Policy Expert warned, however, that there could also be some increased opposition from some industries as the policy prescriptions get more specific, especially from the automobile and the real-estate industries who may perceive that reducing subsidies (e.g., diesel) will increase costs for the consumer and drive down demand for their products (also Scientist 1).

3.2 International aspirations

As mentioned, several scholars have argued that climate change policy in India has been closely tied to its post cold war foreign policy agenda, resulting in India's initial do-nothing, protectionist position on climate change (Dubash 2011a; Rajan 1997; Sengupta 2011). But as foreign policy priorities shifted, particularly within the larger narrative of India as an emerging economic power with international leadership aspirations such as permanent membership on the UN Security Council, the initial Indian position of "do nothing" outlived its usefulness (Raghunandan 2011), and it became imperative for India to shift towards an international "bargaining" position (Kapur et al. 2009). According to Minister Jairam Ramesh, India's stand of no emission reductions was not only "disfavored by the developed countries, small island states and vulnerable countries" but may also hinder "India's aspirations for permanent membership on the Security Council" (Sethi 2009, para. 7).

India is increasingly facing criticism, and isolation, from its traditional developing and underdeveloped partner countries, such as the group of Least Developed Countries (LDC's) who, according to one interviewed scientist, see "the India growth story, the China grown story" and India's refusal to agree to binding emission reductions, as an impediment to a strong legally binding international agreement on climate change. For example, Granada was widely reported as rebutting India's defense of the right to develop without emissions reductions by arguing, "While they develop, we die; and why should we accept this?" (Black 2011). As one scientist said: "In 1990 India could say, 'We are a poor country, we don't know what is going

on, you guys have done the problem, you solve it and if you want us to do something give us money.' India can no longer stand in line and ask for money. India can no longer say, 'We are not contributing to the problem.'"

3.2.1 Increasing alignment with US

Some scholars, however, argue that India's climate policies during the Jairam regime appears to be "heavily influenced by the now blossoming Indo-US strategic partnership and the compulsion felt by the Indian political leadership to draw closer to the USA on all issues, and more importantly, to avoid disagreements, let alone articulating strongly conflicting positions" (Raghunandan 2011, p. 178). This flexibility in international negotiations, such as voluntarily announcing a reduction in emissions intensity, without at the same time securing commitments for deep emission cuts from the developed countries, including the US, has been criticized as bartering "India's energy and developmental future for an illusory superpower status" (Jayaraman 2009, p.10; Raghunandan 2011). India's emerging climate policy is seen as "concessions to the US" (Jayaraman 2009, p. 10), particularly in the field of nuclear power (Bidwai 2012). The increasing alignment between India and the US became particularly visible during COP15 in Copenhagen, when the leaders of BASIC and the US, at the last minute, produced the Copenhagen Accord, subverting the multi-government consensus process enshrined in UNFCCC. Since COP15-Copenhagen convention, there is increasing shift towards a "bottoms-up" pledge and review process instead of top down, legally binding, targets and timetables, which some fear would lead to restricting the basis features of the UNFCCC accord on equity, and differentiated responsibility (Dasgupta 2011; Khor 2010; Raghunandan 2011; Sengupta 2011).

With the new Minister Natarajan, however, there has been a shift back to emphasize sharp distinctions between developing and developed countries, including criticizing developed countries during the COP 19 Warsaw summit for seeking business opportunities for their domestic companies in the name of acting on climate change (Sethi 2013). This shift back by the Minister to underline the differentiated responsibilities has found support with CSE and other domestic climate actors that seek equity to be the cornerstone of any international treaty (Sharma 2011).

3.3 Domestic vulnerability and domestic equity

With climate science increasingly certain that anthropogenic climate change is happening, and climate change impacts increasingly visible in India, other actors and institutions, specially grassroots organizations such as People's Science Movement, and India Climate Justice movement, are developing the discourse on national vulnerability as a means to urge the Indian government to act on climate change. The Indian government recently created the Indian Network for Climate Change Assessment, along with other climate research institutes to investigate the impacts of climate change. For grassroots organization such as India Climate Justice, the vulnerability frame also supports their critique and skepticism of the larger developmental narrative that they believe perpetuates the rich-poor, and rural–urban divide within India (Adve 2007, 2013; Adve and Engineer 2010). For example, after the Uttarkhand Disaster, climate change vulnerability was argued to accompany vulnerability induced by other "developmental" projects, such as construction of large hydro-electric dams, large scale deforestation, increased and unplanned urbanization, and other governance issues such as the sand mafia by the rising infrastructure industry (Scientist 1; Adve 2013). The oft-cited conflict of development vs. environment includes the degradation of natural resources by

development projects, but in the case of India, environmental degradation is also closely linked to the livelihood access and cultural rights of indigenous groups. For example, the Indian Supreme Court recently ordered that a project of Bauxite mining, supported by the Central and Odisha State government, consult indigenous groups as it infringes on their cultural rights (Anand 2013). Protests against nuclear energy, recently in Kondankulam in south India, is another example for this growing debate about winners and losers in the Indian development narrative (Bidwai 2012).

Increasing recognition of India's vulnerability to climate change, particularly among poor and rural Indians, amidst the rising emissions of rich Indians, has led some to reassess India's development strategy, where the benefits of record economic growth have not trickled down to marginalized populations (Chakravarty and Ramana 2011). Some are beginning to apply the concepts of equity, differentiation and capabilities at scales other than developed vs. developing countries, including comparisons of India with its neighbors, and internally within India itself (e.g. Bidwai 2012; Dutt 2009; Kanitkar et al. 2009; Raghunandan 2011). Domesticating the equity frame entails identifying the winners and losers in the growth story, who gets the access to energy, and which Indians are displaced to enable increased energy production. The increasing focus on domestic vulnerability to climate change has also increased attention to local environmental issues such as water and air pollution, priorities often considered more important and urgent than climate change (Srinivasan 2011).

3.4 Emerging scientific consensus for developing countries to shift emission pathways

The 2007 IPCC AR4 assessment "galvanized the scientific community" in India and along with the Bali Action Plan, "…spoke about developed countries having to undertake deep cuts, but also for large developing countries to undertake deviations below the baseline to slow down rates of growth," particularly because "countries like India, China, and others have a major responsibility going forward" (Scientist, Energy Policy Expert). The AR4 confirmed that apart from ambitious reductions by developed countries, developing countries too need to "deviate below their projected baseline emissions within the next few decades" Barker et al. 2007; also see Adve 2007; Raghunandan 2011). Further, Kanitkar et al. (2009) showed that to limit global warming to 2 °C—to limit the dangerous consequences of climate change as agreed by Indian government—even emerging economies such as India need to cut about 30 % of emissions from business-as-usual by 2020 and begin absolute reductions in emissions after 2030. Similarly, Dubash (2007, p.33) reviewing India's position on the Bali Action Plan argued that, "the science and current projections dictate that developing countries too need to urgently shift to less carbon-intensive growth trajectories." Raghunandan (2011) argued that India's "position could even have been interpreted as tantamount to climate denial in that down-playing the dangers of climate change was also used to reduce pressure to do something about it" (p. 173).

3.5 Increasing visibility of climate change in Indian politics and media

Three key events, the IPCC AR4 report in 2007, Bali Action Plan in 2007, and COP 15 in Copenhagen in 2009 attended by heads of states, including PM Manmohan Singh, have generated increased attention to climate change domestically. In particular, former Environment Minister Jairam Ramesh helped to highlight the issue, both in the Indian Parliament and in increased Indian media coverage of climate change (eg. Atteridge et al. 2012), as well as an increasing emphasis by the national government, and a greater number of research reports from civil society organizations (Das 2011). According to a scientist interviewed, "I think the

last 2 years has seen a fairly dramatic change. Till 2 years ago climate change was not even anywhere in people's consciousness, did not figure in the media, did not figure in conversations, it was just nowhere."

At the government level, more debates in the Indian parliament on India's climate policies, constitution of the PM National Council on Climate Change, and establishment of the Expert Group on Low Carbon Strategies for Inclusive Growth by the Planning Commission have increasingly domesticated the issue of climate change.

Scholars observed increased media coverage of climate change in India (e.g., Billett 2010; Boykoff and Nacu-Schmidt 2013). For example, Boykoff and Nacu-Schmidt (2013) found that Indian media coverage grew from 2006 and peaked during COP 15 at Copenhagen. This increased coverage, however, has often been focused on the international negotiations with less attention to climate science and Indians' vulnerability (e.g., Billett 2010).

This growing national attention has also provided political and media space for more recent actors and institutions to highlight their positions, for example the before mentioned criticism of India's current development strategy that has disproportionally benefitted the elite at the expense of the poor, the "hiding behind the poor" critique, the argument that India should adopt the principle of per-capita emissions internally, and the need for India, along with other developing countries to "commit to necessary and binding reduction targets along with sharp cuts by Annex 1 countries" (India Climate Justice 2009, p. 4). Recently, the flash floods in Uttarakhand also provided an opportunity for critics to highlight India's vulnerability to extreme weather events (Adve 2013).

4 Conclusion

The primary shift in climate change discourses in India has been from a frame that externalized the climate change problem and solutions towards a "co-benefits" approach, where policies aim to align climate change with domestic priorities of poverty alleviation and economic growth. Consistent with prior studies, we find that traditional national priorities of poverty alleviation and economic growth are key drivers of India's emerging climate policy narrative (Jakobsen 1998; Jasanoff 1993; Kandlikar and Sagar 1999). However, new concerns such as international aspirations, increasing scientific consensus regarding the need for even developing countries to transition to a low carbon energy system, and Indians' vulnerability, particularly poor Indians, are increasingly being used by NGO's and grassroots organizations to pressure the government to adopt more proactive climate change policies.

There is broad-based support for the government's co-benefits paradigm across a range of NGO's, and business organizations (Dubash 2011a; Editorial 2008; Kapur et al. 2009; Sanwal 2008). However, different actors and institutions can be differentiated in their criticism about the evolution, form and progress of the co-benefits paradigm.

Actors that are in close proximity to the government, and often form part of government instituted committees such as the PM's Council on Climate Change, and Expert Group on Low Carbon Strategies for Inclusive Growth, question the lack of a detailed framework of action in the NAPCC, lack of ambition in setting higher domestic climate change and development goals, particularly with regard to factors that are directly under Indian government purview, such as decreasing emission from black carbon, which could also provide tremendous health benefits (Dubash 2011a; Pandey 2006; Reddy and Balachandra 2002). For example, despite India's recent commitment to reduce its carbon intensity by 20–25 %, it is set to achieve this target without any changes to business-as-usual due to increasing efficiency in Indian industries responding to global market demands (Dutt 2009). According to Dubash (2011b, p. 200), NAPCC

goals demonstrate that the rhetorical co-benefits paradigm of Indian climate change policy reflects "an accidental quality" rather than a "proactive framing" approach. A recent study found that many of the national missions are being implemented at a slow pace (Byravan and Rajan 2012).

At the same time, for grassroots organizations, climate change becomes a new discursive weapon to try to reinforce and amplify their critique of Indian government's developmental policies. They argue that NAPCC is but another instance of closed-door policymaking process, and it merely tinkers with the economic growth narrative that has largely resulted in increasing the vulnerability of poor Indians. In fact, 25 of the 26 members of the Prime Minister's Council on Climate Change are all based in New Delhi, with only one, industrialist Ratan Tata, based outside of New Delhi (in Mumbai) (Bidwai 2012, p. 9). They tend to argue that without a radical shift in the policy making process in India for more equitable development, and a quantitative shift from the primacy of growth as a national priority, NAPCC is less likely to help the most vulnerable parts of India, given that the poor without access to energy provide the low per-capita emission figure the Indian government often uses in international forums to reject any emission reductions.

There is, however, increasingly consensus, both from NGOs (Dubash 2011a, b; Raghunandan 2011) and grassroots organizations (India Climate Justice 2009), that India should take a leadership role by leveraging the co-benefits paradigm, including, a plan for future absolute emission reductions and forcefully seeking an ambitious globally binding emission reduction deal, within the frame of CBDR. Jairam Ramesh appears to have supported this stance by stating the "All countries should take binding commitments in an appropriate legal form." The window of opportunity for India to take that leadership role, however, appears to have closed following the appointment of new Environmental Minister Jayanthi Natarjan, who has firmly re-established older narratives of deep emission cuts from developed countries first, need for developmental emissions, voluntary emission reduction targets, and assistance in mitigation, technology transfer and adaptation. This wait-and-watch approach, however, is increasingly contested by new actors to be neither in commensurate with the vulnerability of Indians, nor its ambitions for international leadership.

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