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Climate Policy in India: What Shapes International, National and State Policy?

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Abstract At the international level, India is emerging as a key actor in climate negotiations, while at the national and sub-national levels, the climate policy landscape is becoming more active and more ambitious. It is essential to unravel this complex landscape if we are to understand why policy looks the way it does, and the extent to which India might contribute to a future international framework for tackling climate change as well as how international parties might cooperate with and support India's domestic efforts. Drawing on both primary and secondary data, this paper analyzes the material and ideational drivers that are most strongly influencing policy choices at different levels, from international negotiations down to individual states. We argue that at each level of decision making in India, climate policy is embedded in wider policy concerns. In the international realm, it is being woven into broader foreign policy strategy, while domestically, it is being shaped to serve national and sub-national development interests. While our analysis highlights some common drivers at all levels, it also finds that their influences over policy are not uniform across the different arenas, and in some cases, they work in different ways at different levels of policy. We also indicate what this may mean for the likely acceptability within India of various climate policies being pushed at the international level.

Keywords India · Climate change · Climate policy

INTRODUCTION

As the international climate negotiations increasingly show signs of adopting a 'bottom-up' regime, it is becoming increasingly important to understand what factors drive or condition climate actions in different countries. This is

essential in order to understand what prospects there are for different countries contributing to the international negotiations and/or taking domestic action to respond to the climate challenge.

India is an important and interesting case to study. The country is an increasingly influential actor in global climate negotiations, as a growing economic power, part of the G77 and China group, and more recently in its cooperation with Brazil, China and South Africa as the BASIC group. India has among the world's lowest *per capita* greenhouse gas (GHG) emissions, yet is the fifth largest source of GHG globally when accounted in total tonnes (Pew Centre 2008). This presents a challenging dichotomy for those tasked with devising an international climate agreement that simultaneously includes the bulk of global emissions and fairly apportions responsibility for taking action. Being among the most vulnerable countries to climate impacts, India has a very real stake in negotiations reaching a meaningful outcome and a growing awareness of its own potential role in helping achieve such an outcome. Yet at home, the Indian government knows it must weigh these goals against other domestic priorities, particularly the push to achieve high levels of social and economic development including reducing poverty.

Recent years have seen a shift in India's approach to negotiations within the United Nations Framework Convention on Climate Change (UNFCCC), as well as more advanced climate policy action in the national and sub-national arenas. This trend toward a 'multi-level governance' situation, with a more independent sub-national dimension, makes it important to study the forces that are driving and shaping policy at each level.

This paper explores various influences over India's engagement with international negotiations and over the development of domestic policy measures. The focus is not

on the substance of the actions themselves, but on bringing to light *what motivates and conditions* their approach. Our paper goes beyond previous literature in two important respects. The first is our application of an analytical approach that considers the influence of both material and ideational factors. Previous literature on Indian climate diplomacy, for instance, typically assumes material factors are most important—from broad security risks (Chellaney 2009; Mehra 2009), to national economic interests (Subramanian et al. 2009), to energy security (Noronha 2009; Fujiwara 2010) and ecological vulnerability (Buys et al. 2009; Rong 2010). A notable exception to this is Dubash (2009) who highlights a mix of selected material and ideational influences, and also the way in which different actors in the policy arena are responding to different influences. The second is that previous analysis has tended to focus on one of the policy levels in isolation, whereas here we bring the international, national and sub-national arenas together in order to see the commonality, contrasts and linkages between them. The resulting insights can better help assess the social and political feasibility of different kinds of policies and policy instruments, which are too often analyzed in terms of their economic efficiency only.

ANALYTICAL APPROACH

To understand what action to tackle climate change is politically possible and socially acceptable in India, it is necessary to look at the political economy in which decision makers are nested. Our analysis is premised on the argument that both *material* and *ideological* factors are capable of exerting influence over the behavior of decision makers. Our analytical approach draws on elements of competing perspectives in international political economy, adopting a synthetic framework that recognizes the roles that individual actors, institutions and particular ideas can play in motivating decision makers. Further, we make use of Robert Putnam's concept of 'Two Level Games' (Putnam 1988), which argues that national policy makers are subject to interests and influences at both international and domestic levels, and this influence runs in both directions, from higher levels to lower levels (e.g. international factors can shape domestic decisions) and vice versa (e.g. an international policy stance can be influenced by domestic drivers).

This is a synthesis paper presenting findings from a number of separate studies conducted between October 2008 and March 2011. The precise methodology for each study varied; however, the analysis here adopts a common analytical perspective. It has extracted from the various primary and secondary data sources a range of influences—both

material and ideational—over policy direction and content. A critical stakeholder approach was adopted to select interviewees, and semi-structured interviews were focused around questions about the influence that different actors (political, economic, bureaucratic and non-government), institutions and ideas may be exerting. From this, key influences were identified based on the frequency with which they were raised by different stakeholders and a subjective judgement of how well positioned different interviewees are in relation to the issues they discussed. In addition, previous literature was also drawn upon and, in the case of national and sub-national policy, from text analysis of policy documents and official government submissions.

INDIA IN INTERNATIONAL CLIMATE DIPLOMACY

India's practice of climate diplomacy has recently shifted. Current negotiating positions reflect a balancing exercise between its traditional 'constraint driven' approach and the new globalist 'aspiration driven' stance pursued by several political actors.

The Shaping of India's Traditional Approach to Climate Negotiations

The central tenet of India's approach for most of the past two decades has been equitable burden sharing, guided by the principles of historical responsibility for GHG emissions and common but differentiated responsibilities and respective capabilities.¹ In practical terms, this meant that India refused to take on emission reduction obligations, but rather pushed for developed nations to take financial responsibility for addressing the climate problem.

The substance of this traditional approach seems to have been most strongly influenced by (1) a sense of material limitation, (2) a lack of trust in the international process, (3) concerns over equity, (4) the likely technical and political difficulties in effectively regulating a large number of small and poor 'polluters' and (5) a strong sense of national sovereignty.

Poverty is widespread in the country, and around half a thousand million Indians live without basic access to electricity (GoI 2006; ADB 2009). A sense of limited financial and technological capacity is coupled with a belief that social and economic development priorities—including energy security and energy access—would be compromised by taking on any part of the burden of

¹ For details see: Government of India's official submission to UNFCCC (UNFCCC 2008; MoEF 2009b).

managing global environmental issues. Many fear that tackling climate change would redirect limited resources away from basic poverty reduction and economic development imperatives (Saran undated; Shrivastava and Goel 2010).

A lack of trust in other parties in the climate negotiations process has been raised in previous literature (Dubash 2009; Jha 2009). From interview data, the trust deficit appears to manifest in three ways: a lack of belief that industrialized countries are genuine in their efforts to negotiate a climate agreement; a lack of trust that any agreement reached will be honored (citing the failure of most Kyoto Protocol signatories to meet their targets for the first commitment period); and a suspicion that industrialized countries are using the climate regime to maintain economic advantage over emerging economies like India and China.

Concerns that the international process would not deliver a fair outcome for India were visible as far back as 1991 (Agarwal and Narain 1991) and lead to 'equity' emerging as a key driving norm in climate diplomacy. From interview data, it is clear that the particular framing of equity as 'equal per capita access to the atmosphere' has been so effectively institutionalized within Indian policy circles that it is now how most domestic actors understand the issue of climate change and how (and on whom) the burden for addressing climate change should be distributed.

Unlike most developed countries, India's industrial and agricultural sectors consist of a very large number of small entities, who are for the most part poor, and in the case of small and medium industrial enterprises, the activities are widely heterogeneous. This structural feature makes regulation of GHG emissions from these sectors challenging (Stuligross 1999).

A strong sense of national sovereignty is a legacy of India's struggle for independence. A desire to prevent outside intervention has hardened India's resistance to being dictated to by industrialized countries or having its domestic priorities compromised, and any suggestion the government might have 'caved in' to demands imposed by Western countries or institutions inspires vociferous criticism in the parliament.

Taken together, it is clear how these factors would motivate India's traditional defensive approach. Climate diplomacy was largely conducted in isolation from other areas of foreign policy, and directed by senior bureaucrats, mainly from the environment ministry. Curiously, India's defensive positioning in climate negotiations does not appear to have been driven or even significantly influenced by industry actors, with most interviewees observing little engagement and no perceived threat on industry's behalf.

A New Normative Perspective

Commencing around 2007 and intensifying toward the end of 2009, the locus of influence over Indian climate diplomacy shifted from the bureaucracy to the political sphere. With this came a change in the factors that enjoy influence over India's stance.

The announcement by Prime Minister Singh in 2007 that India's per capita emissions would never exceed those of industrialized countries—a pledge later reiterated in India's National Action Plan on Climate Change (GoI 2008)—introduced for the first time a notional capping of India's emissions. A new tact was also reflected in the appointment of a senior diplomat, Shyam Saran, then special envoy for the controversial nuclear deal with the United States, as India's chief climate negotiator in 2008, followed by Jairam Ramesh as Minister for Environment and Forests in 2009. By the time of the 16th meeting of the Council of Parties (COP16) under the UNFCCC in late 2010, there was clear evidence of new substance in India's stance, for example, the reframing of equity as 'equitable access to sustainable development'.² There were also signs of new behavior, including reports that India played a constructive leading role in seeking compromise between parties on issues such as the international monitoring of climate actions (Terradaily 2010; Menon 2010).

To understand this shift and foresee its possible trajectory, it is necessary to recognize that climate diplomacy is now strongly influenced by a set of material and ideational drivers that form part of India's broader foreign policy palette. Ambitions for raising India's global status as well as concerns about regional security and national economic interests incentivise the country's political leaders to seek broader geopolitical alignment in particular with the United States and China.³

India has thus introduced more flexibility in climate negotiations as a way of building these important international relationships. Significant diplomatic resources have been spent engaging the Chinese. The two countries signed a Memorandum of Agreement for cooperation on climate

² See Jairam Ramesh's speech at the MEF in 2010 (MoEF 2010e), his deliberations at the Government of India side event in Cancun (MoEF 2010d) and statements released after various BASIC ministerial meetings (MoEF: 2010b, c, 2011).

³ With regards to India's ambition to join the "high table" internationally, both the US and China will for instance have a major influence over India's attempt to gain permanent membership of the UN Security Council. Both have relationships to India's neighbors, particularly Pakistan and Afghanistan that cause some concern to India from a regional security perspective, while China and India are still also engaged in border conflict. Economically, the two are key trading partners of India. Moreover, US support was crucial for the realization of India's nuclear ambitions (with the conclusion of a US-India Civil Nuclear Agreement in 2008).

change in 2009 (MoEF 2009a) and show signs of attempted cooperation through the BASIC group—indeed, it was dialog between India and China that initially brought BASIC together (Hallding et al. 2011). While there are still major differences between India's stance and that of the US, at COP16 in Cancun Minister Ramesh's re-framing of equity and efforts to broker a solution on the issue of international monitoring of domestic mitigation efforts suggest attempts to bring the country's stances into greater alignment. The strategy appears to have worked, with US officials remarking in the aftermath that Ramesh and India had played a very positive, constructive role (Indian Express 2010).

A fear of isolation also seems to have pushed the shift in India's stance. When China announced in 2009 its target to cut the emissions intensity of its economy, India broke from its stance of not pledging action internationally and followed immediately with its own intensity target (UNFCCC 2010). There are suggestions India felt vulnerable to the 'soft pressure' applied by the international community in 2009 (Saran 2010). A concern about being sidelined by negotiations (Mathur and Varughese 2009), along with signs of fragmentation inside the G77 plus China group during 2009, catalyzed India's alignment with BASIC in the lead-up to Copenhagen (Hallding et al. 2011).

Balancing Domestic and Foreign Policy Objectives

While India's leaders are looking at a new game, the arguments underpinning India's traditional approach are still highly influential domestically, across the bureaucracy, civil society and within the parliament. This is apparent in strong opposition to statements by Ramesh before and during COP15 in Copenhagen and again following COP16 in Cancun (IBNlive 2010; The Hindu 2010; Dasgupta 2011). The notion that India's right to social and economic development is not to be compromised or belittled remains domestically embedded, and India's leaders must, therefore, balance these norms with their own broader international ambitions. Ramesh's re-framing of equity to the vaguer concept of 'equitable access to sustainable development' arguably represents an attempt at precisely this balancing act.

DRIVERS OF NATIONAL CLIMATE POLICY

International Influences on Evolution of Environmental Policy

The evolution of environment-related policy in India is strongly influenced by international environmental agreements as well as experiences of more industrialized

countries with successful policy interventions. Many of the principles and design aspects of national policies can thus be traced to international origins.

At the legislative level, several Acts of relevance to climate change make explicit reference to the role played by international processes. The introductions to the *Environment Protection Act 1986* and the *Air (Prevention and Control of Pollution) Act 1981* both refer explicitly to India's participation in the United Nations Conference on the Human Environment (UNCHE) in 1972. The *National Environment Tribunal Act 1995* categorically states that it was enacted in response to the call made at the Rio Summit in 1992 that States should 'develop national laws regarding liability and compensation for the victims of pollutions and other environmental damages'. In each case, India's participation in these conferences or summits is also made explicit (Shrivastava 2007).

Internationally embedded principles are also visible in various national and sector-specific policies that relate to environmental issues and climate change. The *National Environment Policy 2006* (NEP), for example, states in its Preamble that India 'recognizes the interdependencies among, and transboundary character of, several environmental problems', and the present policy is 'a statement of India's commitment to making positive contribution to international efforts'. The framing of environmental protection as an integral part of the development process and of intragenerational and intergenerational equity mirrors principles in the Stockholm Declaration and the UNFCCC. The NEP specifically recommends that new legislation should be enacted in line with multilateral environmental regimes, and various norms embedded in international agreements such as the Kyoto Protocol are visible in the NEP. These include notions of environmental standards, social responsibility and the offsetting of environmental impact through mechanisms promoting economic efficiency.

The Indian case also supports the argument (by for example Lemola 2002; Ochel 2004; Holzl 2006) that comparison with international institutions is an important component of the policy-making process, that countries actively learn from others' experience with policy interventions. The design of the *National Mission on Enhanced Energy Efficiency* is visibly influenced by the experience of the US with its Star Program and of Japan with its Top Runner program. The introduction of feed-in-tariff policy and tradable renewable energy certificates also exemplifies this thesis of 'learning from abroad'.

Key Domestic Drivers of National Climate Policy

While international influences over India's domestic policy tend to be in the realm of ideas, domestic influences are typically related to material needs and ambitions, largely

shaped by concerns about meeting the twin objectives of poverty reduction and economic growth.

The ideas of former Prime Minister Indira Gandhi, with her interest in the linkages and tensions between the goals of development and environment protection, are widely held as influential over early environmental policy in India (Ramakrishna 1985; Reich and Bowonder 1992; Rangarajan 2007). These were followed by new ideas that helped push the policy process, particularly an awareness of depleting natural resources and the health impacts of environmental degradation, which emerged with a growing voice among civil society and environmentalists (Rangarajan 2007).

Although the NAPCC was initiated primarily in response to developments at the international level, the eight missions focus on India's domestic development needs. The NAPCC itself states India's policy response to climate change will primarily address 'the urgent and critical concerns of the country' with 'co-benefits for addressing climate change' through 'a directional shift in the development pathway', thereby assigning priority to the maintenance of high economic growth.

These priorities are also embedded in the interim report of the committee set up by the Government of India to help develop a low carbon strategy for inclusive growth, as an input to India's Twelfth Five Year Plan (GoI 2011). The report recognizes that policies for climate change mitigation differentially affect the objectives of development such as poverty alleviation, improvement in quality of life, distributional justice, job creation, competitiveness, industrial growth and improving the quality of local environments. It recommends that policy choices be based on the extent of additional burden imposed on, and the benefits that accrue to, different consumers and sectors of the economy.

Policies linked to mitigation are generally motivated by material concerns over depleting resources, ambitions for maintaining high macro-economic growth, expanding energy access and increasing energy security. In this context, certain ideas have also become quite influential in the contemporary policy discourse, in particular ideas about sustainability, efficiency, technological advancement, free standing in a globalized economy and comparability with global standards.

Among the material drivers, energy is seen as one of the most important prerequisites underpinning Indian economic growth, and India's large population and expanding economy put increasing pressure on energy demand in the stationary energy and transport sectors. India's status as a net energy importer with the looming prospect of ever-increasing demand exceeding supply presents a potential threat to the goal of achieving high rates of inclusive growth. Balachandra et al. (2010) suggest that India's

energy policies first evolved in the context of global concerns about scarcity of fossil fuels, then as a means to achieving cost effectiveness and finally as critical to mitigating climate change.

The policy frameworks relating more closely to climate change adaptation are, by and large, also driven by material concerns such as poverty, livelihood protection, vulnerability and security. As with mitigation policy, notions of resource efficiency and conservation are again common. Table 1 presents a range of key ideas and influences that shape the focus and content of the various National Missions.

DRIVERS OF STATE CLIMATE POLICIES

Although the emerging sub-national actions are federally directed, the content of the State Action Plans on Climate Change (SAPCCs) is being shaped by the priorities of each state government particularly with respect to future development agendas and considerations of access to both natural and financial resources.

Sub-national actions are critical in addressing climate change due to their proximity to the consequences of climate change (Oliveira 2009). Arguably, in a 'bottom-up' regime, then, strategies should emanate from sub-national considerations of vulnerability and opportunity. However, action by Indian states to address climate change, to a large extent, has its roots in directions given by the federal government. Prior to the NAPCC, there was little action on the sub-national level that directly emerged out of climate change concerns, although many existing policies and programs have indirect bearing for climate change adaptation and mitigation. Following the Prime Minister's urging in August 2009 that all states develop a state action plan consistent with the strategies of the NAPCC, a common framework for preparation of the SAPCC was developed by the central government. Its 'territorial approach' guides the decentralisation of the NAPCC objectives into the sub-national context (MoEF 2010a). The framework emphasizes an idea of harmonization between national and state level actions, yet also recognizes the importance of regional and even local objectives and concerns, through a participatory and inclusive policy-making process.

There is a considerable variation between states in the level of recognition of climate change as a priority as well as in the level of effort that has gone into policy development. Gujarat has set up the first state climate change department in India, and Kerala has announced a green fund equivalent to around USD 220 million to be used over the next five years for various climate objectives. Yet some

Table 1 Ideas and interests that have shaped the policy focus of India's National Missions

Mission	Ideas and interests that have shaped policy focus
Jawaharlal Nehru National Solar Mission (JNNSM)	Improving <i>resource efficiency</i> and <i>energy security</i> , through utilization of abundantly available solar energy in India.
National Mission on Enhanced Energy Efficiency (NMEEE)	<i>Empowerment of rural poor</i> through decentralised energy supply technologies. <i>Energy security</i> , i.e. concerns about depleting non-renewable energy resources and competition in an increasingly globalized economy. Enhancing <i>cost effectiveness</i> and <i>corporate acceptability</i> through market mechanisms. <i>Improved technological and managerial innovation</i> , through technological upgrade and application of global efficiency standards.
National Mission on Sustainable Habitat (NMSH)	<i>Optimization of energy demand</i> , through better urban planning and public transport. Improving the <i>resilience of infrastructure to climate threats</i> and disaster management.
National Water Mission	<i>Conservation and waste minimization</i> , through integrated water resource management.
Green India Mission (GIM)	<i>Protection of livelihoods</i> and of <i>ecological balance and biodiversity</i> , through forest protection and management. <i>Carbon sink</i> potential. <i>Effective utilization of land</i> as key resource.
National Mission on Sustainable Agriculture (NMSA)	Concerns of <i>food security, livelihoods and economic stability in rural India</i> , recognizing that a large portion of the Indian population depends directly on the climate-vulnerable agriculture sector.
National Mission for Sustaining the Himalayan Ecosystem (NMSHE)	<i>Protecting the agricultural sector and other water needs</i> , by addressing predicted threats to the flow of perennial rivers.
National Mission on Strategic Knowledge on Climate Change	<i>Enhancing national scientific and technological capabilities</i> , by establishing networks of research institutions at national level, and promoting collaborations at global level.

These ideas and interests are derived by subjective interpretation of the available texts (final or draft) of these Missions, in light of statements made by senior government officials in various public forums where some of the authors were also present

other states are still to recognize climate change as a policy concern.

Responsibility for defining and implementing state climate policy varies, from the Department of Science and Technology in some states to the State Pollution Control Boards or the Department of Environment in others. These different institutional arrangements might be expected to influence the focus of policy in different states.

Although the SAPCCs were catalyzed and directed by the federal level, there are clear signs they are being shaped by each state's sense of vulnerabilities and opportunities, including resource availability or constraints, as well as their long-term development agendas. Development priorities are strongly reflected in SAPCCs, even at the expense of climate objectives in some cases. In Orissa, for example, the SAPCC highlights an aggressive investment strategy to increase energy security by adding 58 000 MW of coal-fired power in next 7–8 years (Government of Orissa 2010).

Depending on their developmental circumstances, sub-national governments have either placed emphasis on mitigation actions or prioritised adaptation, in some cases giving equal weight to both. The forest-dependent state of Assam has focused on sustainable livelihoods, and Manipur too has prioritised adaptation challenges, such as those concerned with water security (Manipur Hub 2011). By contrast, Gujarat—one of India's most developed and industrialized states—has focused on mitigation actions. Motivated by a sense of economic opportunity, as well as its geographical location and favorable investment environment, Gujarat has announced policies to attract wind and solar energy investment.⁴ Similarly, in the southern state of Karnataka, most of the actions outlined in the SAPCC are in response to the pressing development needs rather than climate change concerns (EMPRI 2010) and link most closely to mitigation. The hazard-prone state of Orissa, on the other hand, has given equal importance to both adaptation and mitigation, with 136 actions related to adaptation, 123 to mitigation and 28 actions common to both (Government of Orissa 2010). Some states have gone beyond the scope of the eight National Missions of the NAPCC and included other state-specific priorities in their SAPCCs. For instance, issues related to human health and desertification are evident in Rajasthan's action plan (Government of Rajasthan 2010).

⁴ Gujarat introduced a comprehensive Solar Power Policy in 2009; The city of Gandhinagar is being developed into a "Solar city", setting up the first ever 'smart grid' as a demonstration project; An amendment in the state Wind Energy Policy was announced in 2009, aiming to tap the estimated 10 000 MW potential; The state is understood to have signed 66 MOUs at the Vibrant Gujarat Summit in 2011.

Availability and access to financial resources are not only a crucial driver for delivery of actions identified in the SAPCC; it is also a potential motivation for state action. Financial support for climate actions that are integrated with a state's existing policies and programs are expected to be channelled from the existing budgetary outlays; however, there is a suggestion that the relevant nodal ministries at the federal level will allocate some funds to support implementation of new actions (MoEF 2010f). Some states have arguably seen this as an opportunity to solicit more federal funds to support development priorities, and unsurprisingly, some Indian states have come up with ambitious budgets for implementing their climate action plans. Orissa, for example, estimates a budget of around USD 3.7 thousand million equivalent for the 2010–2015 period. States have also requested the MoEF to ask for additional fund allocation from the Planning Commission. Gujarat's aggressive renewable energy policy might also be seen from this perspective.

Sensing economic opportunity, Gujarat has—in addition to pursuing additional financial support available under federal policies such as the National Solar Mission—set up a Clean Development Mechanism (CDM) cell for availing carbon credits from projects under all State Government Departments, so successfully that it accounts for around 42% of all CERs generated in India (Shah 2011).

INTERPLAY OF POLICY DRIVERS AT DIFFERENT LEVELS

At each level of decision making in India, climate policy is embedded in wider policy concerns. In the international realm, it is being woven into broader foreign policy strategy, while domestically, it is being shaped to serve national and sub-national development interests. While our analysis highlights some common drivers at all levels, it also finds that their influences over policy are not uniform across the different arenas, and in some cases, they work in different ways at different levels of policy.

At the international level, arguably the two strongest drivers are norms of *equity* and *global status*, which for the most part pull India in opposite directions. Equity motivates resistance to efforts by industrialized countries to bring the larger emerging economies into an agreement with emission commitments, while a drive for status motivates greater willingness to compromise in order to build international reputation.

Both national and state policies have progressed under the influence of particular economic development objectives. Energy security and energy access issues particularly have been cited as key drivers for national policy measures targeting renewable energy and energy efficiency. The

same concerns are also visible in state policies, although individual states' responses to these concerns vary according to how each perceives its own constraints and opportunities: while Gujarat has ambitious plans for expanding renewable energy, Orissa prioritises a major expansion of energy supply based on fossil fuels. At the international level, energy security and access concerns also influence India's approach, but in the opposite direction. Rather than encouraging actions to reduce GHG emissions, they motivate a reluctance to take on any emission reduction commitments for fear that these might seriously constrain India's options for expanding energy supply—and hence undermine development.

Another interesting disparity in the way a particular influence works at different policy levels can be seen in the way a perceived environment-development trade-off is in some areas being re-framed. This notion of a trade-off is visible from Indira Gandhi's views on a poverty-environment tension (Ramakrishna 1985) to Jairam Ramesh's recent suggestion of maximizing the 'yes but' approach in national policy-making (Ramesh 2010). However, there are also signs of a weakening of the influence of this idea in shaping climate diplomacy. Perhaps more interestingly, the emergence of state climate plans is beginning to reveal a re-framing of this tension, such that climate policies are being designed to deliver state-based development agendas that may have co-benefits for climate objectives.

National policy was by and large the catalyst for action by the states, and the states themselves have so far exerted little influence over either national policy or India's approach to international negotiations. This suggests a prevailing 'top-down' approach to climate policy in India. However, now that sub-national action is underway the top-down priorities, and agendas are evidently being filtered through a process of 'bottom-up' public reasoning and conditioned by grounded material concerns. The fact that emerging state policies show a clear pattern of being built around a state's individual material interests and development priorities will have implications for the extent to which national priorities and policies can be successfully implemented.

The other 'bottom-up' element relates to the influence of Indian civil society. The framing of domestic policy in some cases reflects international influence; however, it is also true that legitimacy for particular environmental policy interventions has a history in India of being created through civil society discourse. On climate policy, civil society has been both a source of new ideas and a conditioner of the ideas of others. Billett (2010), for instance, examines the role of Indian mass media (and of environmental NGOs through mass media) in maintaining and sustaining some of the key ideas underlying Indian climate policy.

CONCLUSIONS: RELEVANCE FOR GLOBAL COOPERATION

Policy influence, therefore, can be seen to run in both directions, from the bottom-up and from the top-down. Political leaders, like civil society organisations, construct their discourses under the influence of norms and interests at the domestic level and, increasingly, ideas and aspirations at the international level. This multi-directional relationship between the international and domestic arenas, as argued by Putnam (1988), is illuminated in the Indian case by seeing both the effect that economic development objectives and a strong sense of national sovereignty have over climate diplomacy on the one hand, and the influence that international institutions have had over national policy and institutions on the other. Likewise, the noticeable shift in Indian climate diplomacy from around 2007 onwards (though picking up pace from 2009) correlates with the emergence of India's first comprehensive domestic policies on climate change, specifically the NAPCC in 2008.

Our analysis makes clear that actions at any one level of the policy landscape have an influence at other levels. Recognizing these interlinkages can, according to Putnam (1988), have 'powerful consequences' for choices at both domestic and international levels. In other words, understanding the most influential factors shaping India's climate policy can open up space for other parties to initiate more productive efforts at cooperation with India. The conclusion that India is using climate diplomacy as a forum for enhancing international image, coupled with an awareness that many of India's domestic policy drivers are not incompatible with global climate change objectives, opens up opportunities within the international negotiations. Other parties have an opportunity to work with India toward constructive action where this can help accomplish India's wider policy objectives.

For international policy mechanisms to be accepted within India, they must be framed and designed in a way that is cognisant of the most important domestic policy influences, for instance, by appropriate signalling on resonant ideational concepts such as equity and sovereignty and with clear recognition for India's sense of limited capacity and prioritisation of poverty reduction, livelihood creation and energy security. This might, for instance, help explain why the concept of 'credited NAMAs' has gained some traction within Indian policy circles (Pahuja and Linner 2010), whereas the notion of 'sectoral crediting mechanisms'—which are perceived foremost as an economic threat—has been met with opposition.

Similarly, appropriate signalling from the national government toward states—focused on state needs—is more likely to foster cooperation and greater implementation of the national agenda.

Overall, the analysis of India's policy culture with respect to climate change at different levels of governance illuminates a complex interplay between levels and between drivers at each level. It is our hope that this analysis provides a more nuanced understanding of why India's approach looks the way it does, since the basis of effective policy cooperation at any level needs to be mutual understanding of the many needs and norms that influence decision makers.

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REFERENCES

- ADB (Asian Development Bank). 2009. *Improving Energy Security and Reducing Carbon Intensity in Asia and the Pacific*. Manila: Asian Development Bank.
- Agarwal, A., and S. Narain. 1991. *Global Warming in an Unequal World: A case of environmental colonialism*, 34. New Delhi, India: Centre for Science and Environment.
- Balachandra, P., D. Ravindranath, and N.H. Ravindranath. 2010. Energy efficiency in India: Assessing the policy regimes and their impacts. *Energy Policy* 38: 6428–6438.
- Billett, S. 2010. Dividing climate change: Global warming in the Indian mass media. *Climate Change* 99: 1–16.
- Buys, P., U. Deichmann, C. Meisner, T.T. Thao, and D. Wheeler. 2009. Country stakes in climate change negotiations: Two dimensions of vulnerability. *Climate Policy* 9: 288–305.
- Chellaney, B. 2009. Climate Risks to Indian National Security. In *Indian Climate Policy: Choices and Challenges*, ed. D. Michel, and A. Pandya, 61. Washington: Henry L. Stimson Centre.
- Dasgupta, C. 2011. Sweet surrender: Jairam Ramesh has turned India's climate change policy on its head. *The Hindu*, 17 Jan 2011. Retrieved 23 June 2011 from http://www.telegraphindia.com/1110117/jsp/opinion/story_13451487.jsp.
- Dubash, Navroz K. 2009. *Toward a progressive Indian and global climate politics*. Centre for Policy Research Climate Initiative, Working Paper 2009/1, New Delhi, India, 18 pp.
- EMPRI (Environment Management and Policy Research Institute). 2010. SAPCC Karnataka—rapid assesment of sectoral actions initiated. Department of Ecology & Environment, Government of Karnataka, India. Retrieved 28 June 2011 from: <http://empri.kar.nic.in/Karnataka%20SAPCC%20-%20Rapid%20Assessment%20-%20EMPRI,%202010-12-30.pdf>.
- Fujiwara, N. 2010. The political economy of India's climate change agenda. Centre for European Policy Studies, Working Document No. 325/March 2010, Brussels, Belgium, 28 pp.
- GoI (Government of India). 2006. *Integrated Energy Policy of India 2006*. New Delhi, India: The Planning Commission of India.
- GoI (Government of India). 2008. Prime Minister's speech on release of climate change action plan, 30th June 2008. New Delhi. Retrieved 21 Nov 2011 from <http://pmindia.nic.in/speech/content4print.asp?id=690>.
- GoI (Government of India). 2011. *Interim Report of the Expert Group on Low Carbon Strategies for Inclusive Growth*, 114. New Delhi, India: The Planning Commission of India.
- Government of Orissa. 2010. Orissa climate change action plan: 2010–2015—Draft. Department of Forest and Environment, Government of Orissa, 127 pp. Retrieved 21 Nov 2011 from http://www.orissa.gov.in/forest&environment/ActionPlan/CAP_Report_Draft.pdf.
- Government of Rajasthan. 2010. *State Environment Policy: Including Rajasthan Environment Mission and Climate Change Agenda for Rajasthan, 2010–2014*. Jaipur: Department of Environment.
- Hallding, K., M. Olsson, A. Atteridge, A. Vihma, M. Carson and M. Roman. 2011. *Together alone: BASIC countries and the climate change conundrum*. Nordic Council of Ministers Publication Series.
- Holzl, W. 2006. Convergence of financial systems: Towards an evolutionary perspective. *Journal of Institutional Economics* 2: 67–90.
- IBNLive. 2010. BJP, Left slam Jairam Ramesh's stand at Cancun. Retrieved 23 June 2011 from: <http://ibnlive.in.com/news/bjp-left-slam-jairam-rameshs-stand-at-cancun/137075-37.html>.
- Indian Express. 2010. India played 'constructive' role at Cancun: US. Retrieved 23 June 2011 from <http://www.indianexpress.com/news/india-played-constructive-role-at-cancun-us/725040/>.
- Jha, P.S. 2009. Indian Public Perceptions of the International Climate Change Negotiations. In *Indian Climate Policy: Choices and Challenges*, ed. D. Michel, and A. Pandya, 61. Washington: Henry L. Stimson Centre.
- Lemola, T. 2002. Convergence of national science and technology policies: The case of Finland. *Research Policy* 31: 1481–1490.
- Manipur Hub. 2011. State action plan on climate change (SAPCC) 2011-2012 Drafted. Retrieved 28 June 2011 from <http://manipurhub.com/news-manipur/state-action-plan-on-climate-change-sapcc-2011-2012-drafted/>.
- Mathur, U., and G.C. Varughese. 2009. From "Obstructionist" to Leading Player: Transforming India's International Image. In *Indian Climate Policy: Choices and Challenges*, ed. D. Michel, and A. Pandya, 61. Washington: Henry L. Stimson Centre.
- Mehra, M. 2009. India's Role in Confronting Climate Change: From Vulnerability to Opportunity. In *Indian Climate Policy: Choices and Challenges*, ed. D. Michel, and A. Pandya, 61. Washington: Henry L. Stimson Centre.
- Menon, M. 2010. India's role in Cancun appreciated. Retrieved 23 June 2011 from <http://www.hindu.com/2010/12/12/stories/2010121257801500.htm>.
- MoEF (Ministry of Environment and Forest). 2009a. Agreement on cooperation on addressing climate change between the government of the Republic of India and the government of the People's Republic of China. Retrieved 23 June 2011 from <http://moef.nic.in/downloads/public-information/India-china%20Agreement%20on%20Climate%20Change.pdf>.
- MoEF (Ministry of Environment and Forest). 2009b. Climate change negotiations: India's submissions to the United Nations framework convention on climate change. Retrieved 21 Nov 2011 from <http://www.moef.nic.in/downloads/home/UNFCCC-final.pdf>.
- MoEF Ministry of Environment and Forest. 2010a. Towards a common framework for preparation of state level strategy and action plans on climate change. National Consultation Workshop, New Delhi, India. Retrieved 28 June 2011 from <http://moef.nic.in/downloads/others/Experts-SAPCC-Preeti.pdf>.
- MoEF Ministry of Environment and Forest. 2010b. Press release: Experts, minister reiterate primacy of equity for a climate change solution. New Delhi, India. Retrieved 21 Nov 2011 from <http://moef.nic.in/downloads/public-information/MEF-Release-on-CC-Equity-Workshop.pdf>.
- MoEF (Ministry of Environment and Forest). 2010c. Joint statement issued at the conclusion of the fifth BASIC ministerial meeting on climate change. Tianjin, China, 11 Oct 2010. Retrieved 21 Nov 2011 from <http://moef.nic.in/downloads/public-information/Fifth-BASIC-Ministerial-Meeting-on-Climate-Change.pdf>.
- MoEF (Ministry of Environment and Forest). 2010d. Press release: Indian event at Cancun re-emphasises importance of equity. Retrieved 21 Nov 2011 from <http://moef.nic.in/downloads/pub>

- lic-information/2010-12-06%20Press%20Release%20-%20Equity%20Side%20Event.pdf.
- MoEF (Ministry of Environment and Forest). 2010e. Statement of Mr Jairam Ramesh, Minister Of Environment & Forests (Independent Charge) Government Of India, at the 7th MEF Meeting, Rome, Italy. Retrieved 21 Nov 2011 from <http://moef.nic.in/downloads/public-information/speech-mef.pdf>.
- MoEF (Ministry of Environment and Forest). 2010f. Summary of discussion: National consultation workshop on preparation of state level strategy and action plan on climate change. 19th Aug 2010. New Delhi, India. Retrieved 28 June 2011 from <http://moef.nic.in/downloads/others/SAPCC-workshop-summary-2010.pdf>.
- MoEF (Ministry of Environment and Forest). 2011. Joint statement issued at the conclusion of the seventh basic ministerial meeting on climate change. Durban. Retrieved 21 Nov 2011 from <http://moef.nic.in/downloads/public-information/Joint%20statement%20BASIC%2029th%20May.pdf>.
- Noronha, L. 2009. Climate Change and India's Energy Policy: Challenges and Choices. In *Indian Climate Policy: Choices and Challenges*, ed. D. Michel, and A. Pandya, 61. Washington: Henry L. Stimson Centre.
- Ochel, W. 2004. Learning from abroad: Chances and limitations of transferring institutions. CESifo DICE, Report 4. pp 44–52.
- Oliveira, J.A.P. 2009. The implementation of climate related policies at sub-national level: An analysis of three countries. *Habitat International* 33: 253–259.
- Pahuja, N. and B.O. Linnér. 2010. NAMAs: Key to resolve open issues in negotiations. Clipore policy brief. Retrieved 28 June 2011 from http://www.clipore.org/download/18.5004bd9712b572e3de6800038/Namas+Clipore+Policy+Brief+_2.pdf.
- Pew Centre. 2008. Climate change mitigation measures in India. The Pew Centre on global climate change, Arlington, U.S.A., International Brief 2. Retrieved 2 Aug 2010 from <http://www.pewclimate.org/publications/brief/climate-change-mitigation-measures-india>.
- Putnam, R.D. 1988. Diplomacy and domestic politics: The logic of two-level games. *International Organisation* 42: 427–460.
- Ramakrishna, K. 1985. The emergence of environmental law in developing countries: A case study of India. *Ecology Law Quarterly* 12: 907–936.
- Ramesh, J. 2010. The two cultures revisited: The environment-development debate in India. *Economic and Political Weekly* XLV.
- Rangarajan, M. (ed.). 2007. *Environmental Issues in India: A Reader*. New Delhi: Pearson-Longman.
- Reich, M.R., and B. Bowonder. 1992. Environmental policy in India: Strategies for better implementation. *Policy Studies Journal* 20: 643–661.
- Rong, F. 2010. Understanding developing country stances on post-2012 climate change negotiations: Comparative analysis of Brazil, China, India, Mexico and South Africa. *Energy Policy* 38: 4582–4591.
- Saran, S. undated. Global governance and emerging economies: An Indian perspective. Retrieved 28 June 2011 from <http://www.icrier.org/pdf/Shyam%20Saran.pdf>.
- Saran, S. 2010. Climate change negotiations: The challenge for Indian diplomacy. Speech delivered at Vivekanand International Foundation, 19th March 2010, New Delhi, India. Retrieved 21 Nov 2011 from <http://www.vifindia.org/node/299>.
- Shah, S. 2011. Gujarat clean development mechanism (CDM) cell: A state level CDM nodal agency. Retrieved 28 June 2011 from <http://www.gujaratcmfellowship.org/document/Fellows/Carbon-Development-Mechanism-%28CDM%29-Cell-Shwetal-Shah-26-Nov10.pdf>.
- Shrivastava, M.K. 2007. Convergence in climate change institutions and consequences for developing countries: A case study of supercritical technology adoption by NTPC. Centre for Studies in Science Policy, School of Social Sciences, Jawaharlal Nehru University, M.Phil. Dissertation, New Delhi, India.
- Shrivastava, M.K., and N. Goel. 2010. Shaping the Architecture of Future Climate Governance: Perspectives from the South. In *Global Climate Governance Beyond 2012: Architecture, Agency and Adaptation*, ed. F. Biermann, P. Pattberg, and F. Zelli. Cambridge: Cambridge University Press.
- Stuligross, D. 1999. The political economy of environmental regulation in India. *Pacific Affairs* 72: 392–406.
- Subramanian, A., N. Birdsall and A. Mattoo. 2009. India and climate change: Some international dimensions. *Economic and Political Weekly* XLIV:43–50.
- Terradaily. 2010. In Cancun climate talks, India enjoys place in sun. Retrieved 23 June 2011 from http://www.terradaily.com/reports/In_Cancun_climate_talks_India_enjoys_place_in_sun_999.html.
- The Hindu. 2010. NGOs divided on Jairam's climate stance. Retrieved 23 June 2011 from <http://www.hindu.com/2010/12/11/stories/2010121156641500.htm>.
- UNFCCC. (2008). Government of India submission to UNFCCC on long term co-operative action. Retrieved 21 Nov 2011 from http://unfccc.int/files/kyoto_protocol/application/pdf/indiasharedvision_v2.pdf.
- UNFCCC. 2010. Government of India's communication on information on India's domestic mitigation actions. Retrieved 21 Nov 2011 from http://unfccc.int/files/meetings/cop_15/copenhagen_accord/application/pdf/indiacphaccord_app2.pdf.

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