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## National Climate Policies and Institutions

*Navroz K. Dubash and Shibani Ghosh*

Over the last decade, India has seen a remarkable, if quiet, expansion in climate policy and institutions at national and sub-national levels. From being an exclusively diplomatic and foreign policy issue, government at various levels has experimented with internalizing climate change into national and sub-national policy.

In the mitigation area, this has, arguably, been driven by a growing sense that climate mitigation and domestic energy objectives need not necessarily be incompatible. In adaptation areas, growing awareness of impacts, backed by advances in climate science, has played an important role. In many ways, this advancement has happened iteratively, with the opening of small institutional spaces for consideration of climate change, followed by their occupation by enterprising bureaucrats and entrepreneurial civil society, leading to a further widening of institutional spaces.

Yet, this 'mainstreaming' of climate change into development should not be overstated. There is a multiplication of efforts and institutional spaces, as we discuss here, but the impacts on actual policy priorities and outcomes are far less visible. A novel policy

conversation was certainly initiated through efforts in national and state plans, but its results are far from clear.

The chapter traces the emergence of this domestic climate policy environment, starting with a series of policy actions spurred by the National Action Plan on Climate Change (NAPCC) and the deepening of these actions under the rubric of multiple objectives of climate and development. The next section discusses the articulation of these national efforts in India's Nationally Determined Contribution (NDC) submitted at the Paris Conference of the Parties (COP) in 2015. The following section focuses on parallel institutional developments, which often receive less attention than policy changes, but are an essential complement to them. On both policy and institutional developments, we focus on the national scale, with sub-national actions discussed in Chapters 20 and 21 of this volume. We conclude with reflections on the likely evolution of climate policymaking in India.

### **Emergence of National Climate Policymaking: The NAPCC**

If a single moment marks the emergence of national climate policymaking in India, it is the release of the NAPCC. In an example of a 'two-level game' between international and national climate policy (Atteridge et al. 2012), the NAPCC was put in place as part of a drum roll of political attention leading up to the Copenhagen COP of 2009 (Atteridge et al. 2012; Dubash 2013). For example, climate change featured high on the agenda in meetings of high-profile political fora, such as the G8+5, stimulating national actions in response to global attention. Thus, China released its national plan in June 2007, enshrining a national emissions intensity target, a month before the annual G8+5 head of government meeting (Permanent Mission of the People's Republic of China to the UN 2007) and, not coincidentally, India released its NAPCC a year later, just before the 2008 meeting.

Subsequently, in 2009, India also issued its concrete international climate pledge, that the country's emissions intensity (emissions per unit of gross domestic product [GDP]) would decrease by 20–5 per cent from 2005 levels by the year 2020 (Lok Sabha 2009). However, in operational terms, this pledge did not appear to concretely drive

national policy, but instead served only as an international statement. The operational role was played by the mechanisms put in place through the NAPCC.

The NAPCC served three important functions while jump-starting India's national climate change framework: narrative, policy, and institutional. From a narrative point of view, the NAPCC squared the circle between an international negotiations stance that remained focused on differentiated responsibility—calling for the North to take the lead on climate mitigation—and an active domestic climate policy. This was accomplished by foregrounding the concept of 'co-benefits', defined as measures that 'promote ... development objectives while also yielding co-benefits for addressing climate change effectively' (Prime Minister's Council on Climate Change [PMCCC] 2008). This definition allowed India to proceed with the climate policy consistent with its development objectives, while avoiding dissonance with its international negotiating stance. From a policy and institutional perspective, the NAPCC set in motion several policymaking efforts organized around eight national 'missions', each backed by an institutional structure (discussed later in this chapter) that forged linkages with different line ministries.

The missions around which the NAPCC was organized covered a sprawling array of areas, covering both adaptation and mitigation. Some, such as the National Solar Mission (NSM), were tightly targeted on specific goals; in this case, the promotion of solar power. Others, such as the National Water Mission, effectively cut across the work of several ministries and other institutions related to water. Yet others, such as the National Mission on Sustainable Habitat and the National Mission for a 'Green India' on forests, were narrowly mapped to individual ministries—in these cases, the then Ministry of Urban Development and the then Ministry of Environment and Forests (MoEF). The diversity in scale and scope, and the sprawling structure of the missions, has led to critiques of the NAPCC as 'neither vision, nor plan' (*Economic & Political Weekly* 2008).

Given its importance, there are remarkably few studies available on the NAPCC (Byravan and Rajan 2012; Rattani 2018). One evaluation of the processes, rather than outcomes, of individual missions suggests that the approach across missions is a mixed bag: while some missions are strategic and focused, such as those on energy efficiency and solar promotion, many others are diffuse and encompass broad

swathes of areas, such as water, that have long defied development planning; and yet others are singular in their focus but broad in scope, such as the knowledge mission (Byravan and Rajan 2012). This makes it challenging to define goals in a manner that enables accountability. Moreover, while the co-benefits approach provides the overall framing, the specification of particular co-benefits that drive missions is absent, and missions tend to, therefore, have a wish list-like approach rather than providing strategic direction.

Despite these criticisms, the NAPCC missions have left their mark on climate policymaking in India. In some cases, notably the more focused missions such as those on solar promotion and energy efficiency, the policy landscape has been entirely transformed (Chapter 24 in this volume), with multiple new policy initiatives being developed and implemented through the missions. In other cases, as discussed further in this chapter, the appointment of nodal officers on climate change in line ministries has, at minimum, created new institutional spaces, which provide openings for policy linkages. However, to understand the implications of these spaces, and whether and how they have been used, requires further research.

### Deepening Policymaking around Multiple Objectives

The co-benefits-based narrative construction of Indian climate policy has ensured that India's mitigation and adaptation efforts are multi-stranded. In the years since the NAPCC, a number of other policies have been put in place, sometimes emanating directly from NAPCC missions, but frequently motivated by non-climate issues. Whatever the provenance, energy-focused policy measures, in particular, take on a polyvalent character as measures that address a mix of objectives, such as energy security, energy access, air pollution, and climate change considerations.

So, both the NSM and the National Mission on Enhanced Energy Efficiency (NMEEE), originally set up as climate-focused missions, rested heavily on justifying their specific policy efforts as an energy security measure, which fit well with a co-benefits logic (Dubash 2011). The NSM could thus justify setting targets (originally 20 GW by 2022) for solar capacity addition, despite what were then substantially higher costs of solar power, as a step towards energy security;

selling this idea on the basis of climate mitigation alone would have likely been a political non-starter. While energy efficiency measures are cost-effective and therefore an easier sell, these too were marketed in policy documents as important contributors to energy security (The Energy and Resources Institute [TERI] 2009).

However, by no means did all energy-related efforts emanate from climate-focused institutional contexts, although even when not, they were often subsequently woven into India's larger climate mitigation story. A leading example is a clean energy cess on coal, established in 2010 at Rs 50 per tonne and subsequently increased annually to reach Rs 400 per tonne by 2016, with funds originally intended to support a transition to clean energy (Ministry of Finance [MoF] 2015, 2016; Ministry of Power [MoP] 2015). Another major example is the Ujjwala scheme to provide cooking fuel to all, which is motivated by energy access considerations, but will also have substantial consequences for indoor air pollution affecting human health and may provide mitigation gains too by displacing biomass burning (Press Information Bureau 2016).

A summary of several such far-reaching energy-related policy measures introduced in recent years is given in Table 19.1. The table suggests that, when understanding Indian climate mitigation, it is more appropriate to refer to policies that have the *effect* of climate mitigation, understanding that their institutional provenance may lie outside climate-focused institutions and that their objectives may be multiple. Indeed, a sensible way of understanding Indian climate policy, corresponding to the co-benefits narrative, is as a challenge of addressing multiple objectives simultaneously (Khosla et al. 2015).

In addition to national initiatives, there is a growing array of sub-national policy initiatives at both state and city levels. State-level climate policies (discussed in Chapters 20 and 21 in this volume) have been stimulated by a national mandate to prepare State Action Plans on Climate Change (SAPCCs), and have predominantly focused on adaptation actions. City-level climate action, by contrast (discussed in Chapter 25 in this volume), has been stimulated largely by global networks and donor organizations, and crosses both mitigation and adaptation efforts. At both state and city scales, these efforts are strongly shaped by efforts to link climate change to relevant local concerns, and imbue the co-benefits approach with meaningful substance.

**Table 19.1** India's Policies Relevant to Mitigation and Energy

<b>Year</b>	<b>Policy Area</b>	<b>Description</b>
<b>Energy Supply</b>		
2015	Renewables	175 GW target of renewable energy capacity by 2022.*
2015	Domestic coal production	Increasing domestic coal production to 1 billion tonne (BT) from government and 0.5 BT from private firms by 2020.
2010	Coal cess	A coal cess to finance clean technology. Set in 2010 at Rs 50 per tonne, it increased to Rs 400 per tonne by 2016.*
<b>Energy Efficiency and Clean Technology</b>		
2012	Industrial energy efficiency	A 'Perform–Achieve–Trade' domestic energy efficiency credit-trading scheme for industries.*
2014, updated in 2015	Subsidized light-emitting diode (LED) bulbs	Aims at replacing 770 million inefficient bulbs by 2019.*
2013, updated in 2015	Liquefied petroleum gas (LPG) access	Targeted subsidies for LPG cylinders and gas connections to women from families 'Below Poverty Line'.*
2015	Light vehicles fuel standards	Leapfrogging from Euro IV to Euro VI standards by 2020.*
2013, updated in 2017	Electric mobility	Aims at penetration of hybrid and electric vehicles, targeting no new fossil fuel-powered vehicles by 2030.*
<b>Infrastructure Transitions</b>		
2006	Dedicated freight corridors	Enhancing rail freight infrastructure between major metros.*
2014, updated in 2017	Electricity for all	Aims at 24/7 supply to all households by 2019.*

2015	'Make in India'	Encouraging manufacturing in India.*
2015	Urban infrastructure	Smart Cities Mission,* basic services,* and Housing for All by 2020.
2007, updated in 2017	Commercial building energy standards	A voluntary Energy Conservation Building Code.

*Note:* \* Mentioned in India's NDC.

*Source:* Authors' own assessment from websites of Government of India ministries.

### Consolidating but Not Extending: India's 'Nationally Determined' Climate Contribution

As with the Copenhagen COP of 2009, the Paris COP of 2015 was instrumental in generating statements of climate action from India. However, while in 2008–9 India was starting with a substantially blank slate of climate policy, on this occasion, as suggested by Table 19.1 and the aforementioned discussion, India had an array of actions on both mitigation and adaptation, including at the state level. India's NDC submitted in the run-up to the Paris COP substantially drew on, consolidated, and projected the aggregate effect of this track record (Ministry of Environment, Forest and Climate Change [MoEFCC] 2015a).

The formulation of the NDC provided India an opportunity to enhance its institutional capacity to strategize on climate issues, particularly their linkages with developmental concerns. While there is little to indicate that the NDC has further contributed to enhancement and development of national climate policy, the process of its formation exhibited deliberate attempts at inter-ministerial coordination. The MoEFCC initiated intensive consultations in 2014 with various ministries, departments, and state governments, and inter-ministerial committees were constituted to develop sector-specific background material for India's submissions.<sup>1</sup> The ministry

<sup>1</sup> Interview with Dr S. Satapathy, former MoEFCC official, 5 October 2018.



also reached out to think tanks and research organizations for inputs on modelling studies.<sup>2</sup> On energy demand and projections, specific inputs were sought from the MoP; and the India Energy Security Scenarios (IESS) 2047, developed by the NITI Aayog, formed the basis of the projections in the NDC (NITI Aayog 2016)

The NDC itself includes several elements salient for an international audience, such as locating India's contribution to climate change in the global context by noting its low levels of energy consumption. It summarizes India's policy framework for climate action by highlighting the NAPCC and SAPCCs, but also interestingly lists a range of other legal and policy frameworks as relevant, such as the National Environment Policy and National Policy for Farmers, indicating that climate action is part and parcel of larger sustainable development efforts.

The bulk of the document is taken up by a sector-by-sector listing of ongoing missions, policies, and schemes that the government has undertaken in all climate-relevant areas, such as energy supply, demand, transportation, agriculture, livelihoods, disaster management, and so on. The breadth of action is impressive in its range, but, equally, this breadth provides little indication of whether and how the government distinguishes or sees the need to distinguish climate from more general sustainable development policy. In this sense, the NDC is a missed opportunity to more rigorously engage with and operationalize the co-benefits framework, and utilize the NDC as an opportunity to organize the array of actions set in place since the NAPCC (Dubash and Khosla 2015). Instead, it is less of a guide to shape and prioritize future action and more of a harvesting of past ones.

The substantive core of India's NDC is organized around three quantitative pledges that provide a basis to explore implications for the development of future domestic climate policy. The document also includes five other pledges, such as enhancing domestic capacity and improving adaptation, that are framed too generally to enable analysis against past action or ensure accountability for future action. Of the quantitative pledges, the first mirrors and updates India's earlier pre-Copenhagen pledge by stating that India's emissions intensity

<sup>2</sup> Interview with Ajay Raghava, MoEFCC official, 11 December 2017.

will reduce by 33–5 per cent from 2005 levels by 2030. In principle, such a pledge could provide a target to guide future domestic action. However, a compilation and analysis of recent modelling studies suggests that existing domestic policy actions, which have been enhanced in recent years (as shown in Table 19.1), collectively are likely to take India into compliance with this pledge (Dubash et al. 2018b). Thus, this pledge is mostly an international statement of intent that signals the likely aggregate effect of current action, rather than a guide to future action.

The second pledge calls for India to increase its share of non-fossil fuel-based electricity to 40 per cent of total capacity by 2030 (see Chapter 24 in this volume). This is a substantial expansion of non-fossil electricity, and would represent adding almost the entire current electricity capacity only in renewable energy terms (including hydro and nuclear power) in a scant 15 years. Yet, understanding whether this represents a new direction for India is complicated by another, prior domestic statement of intent to add 175 GW of wind, solar, and biomass renewable energy by the much earlier date of 2022 (Khosla and Dubash 2015). Interpreting the significance of the former in light of the latter is a challenge because they use different metrics: the NDC is in terms of share of capacity and includes all non-fossil fuel sources; and the domestic statement is in terms of capacity and is limited to modern renewables. However, it seems highly likely that if the domestic 2022 pledge is achieved, the NDC pledge on renewable energy capacity will be comfortably exceeded (Dubash and Khosla 2015).

A third quantitative pledge calls for creation of an additional carbon sink of 2.5–3 billion tonnes of carbon dioxide equivalent through enhanced forest cover. This is likely the most significant of the three, in that it represents a step beyond domestic policy, but is likely to face substantial implementation challenges (see Chapter 26 in this volume).

The NDC also makes it clear that the realization of these pledges is ‘contingent’ on an ambitious global agreement, including ‘means of implementation’, a term that refers to financial and other support. Moreover, it includes an explicit discussion on the climate finance required for the realization of the proposed actions. While a careful accounting could have provided a useful guide for future

policy development, the approach in the NDC is to simply provide summary numbers on required finance without citations or underlying reasoning. Indeed, the numbers on adaptation cost (US\$206 billion at 2014–15 prices) and mitigation cost (US\$834 billion at 2011 prices) sum up to less than the total projected cost of US\$2.5 trillion (at 2014–15 prices).

Collectively, this reading of India's NDC suggests that the document is guided more by harvesting and consolidating domestic action in a statement for the international negotiation process, than as a document to further guide policy development. In its function as an international statement, the document showcases what is a wide, albeit somewhat ad hoc, range of actions in both mitigation and adaptation arenas, with what appears to be the intent of signalling that India is indeed pulling its weight through substantial domestic engagement with climate policy. However, in being limited, with the possible exception of the forest pledge, to ongoing domestic actions rather than new actions, the NDC traces a middle-of-the-road trajectory, seeking to provide 'neither brake nor accelerator' to the international process (Dubash and Khosla 2015).

## Development of India's Climate Institutions

Institutions and governance processes are key to defining, and constraining, climate policymaking and action. They are instrumental in setting the incentive structures for decision making and shaping the political context that influences the decision-making process (Somanathan et al. 2014). They are also sites for moulding bureaucratic and political thinking on new concepts, policy design, and objectives, and mechanisms to achieve these objectives. Therefore, understanding institutions dealing with climate change in India is a necessary complement to understanding India's climate policies (Dubash and Joseph 2016).

Evolution of institutions dealing with climate change in India may be studied in four distinct periods: pre-2007, 2007–9, 2010–mid-2014, and mid-2014 to present. Figure 19.1 (between pages 326 and 327) is an institutional chart that shows the growth of institutions involved in climate change in India over the aforementioned four time periods.

### Pre-2007: Climate, a Foreign Policy Issue—Limited Institutional Engagement

Prior to 2007, climate policy in India was seen as a matter of foreign policy. As India championed the importance of equity in climate negotiations and articulated the concept of ‘differentiated responsibility’, diplomatic negotiations were led by a small number of experienced officials from the Ministry of External Affairs and the MoEF. Parliament, the Prime Minister’s Office (PMO), or the Cabinet had little engagement with the process. Some sectoral line ministries, like the MoP and the Department of Science and Technology, provided inputs on technical matters and there were links with a few research organizations. The one domestic institutional action that, however, did take place was the constitution of the National Clean Development Mechanism Authority in 2004, within the MoEF, to facilitate the participation of Indian companies in the Clean Development Mechanism under the Kyoto Protocol (MoEF 2004).

### 2007–9: Domestic Climate Policy Formulation Begins—Significant Climate Institutionalization

From 2007, there was a shift in international climate negotiations. Along with the developed world, even large developing countries like India and China were now coming under intense pressure to formulate domestic mitigation actions. In India, this period witnessed a lot of activity on the climate institutions front. In June 2007, Prime Minister Manmohan Singh constituted the PMCCC—a high-level advisory body with ministers and heads of key ministries and departments, as well as non-governmental organizations and media houses. Notably, the prime minister held charge of the MoEF at this time, which may account for the high level of activity on the subject during this period.<sup>3</sup> The PMCCC was charged with the task of coordinating ‘national action plans for assessment, adaptation and mitigation of climate change’, and advising the government on measures to deal with climate change (Government of India 2007). The Office of

<sup>3</sup> Interview with Dr S. Satapathy, former MoEFCC official, 5 October 2018.

the Special Envoy on Climate Change was also set up within the PMO in January 2008 to assist with international and domestic climate policymaking, as well as specifically facilitate coordination between different agencies. The PMCCC initiated the formulation of a national strategy to address climate change, a process brought to close by the special envoy, and finally, the document was released as the NAPCC in June 2008.

The release of the NAPCC triggered significant climate institutionalization. The nodal central ministries responsible for the eight national missions embarked on the process of framing mission documents. The process varied across different ministries, and some were supported by the special envoy's office in their efforts (Dubash and Joseph 2016).

Jairam Ramesh, appointed as the environment minister in mid-2009, initiated efforts to increase domestic knowledge capacity around climate change. For instance, the Indian Network for Climate Change Assessment (INCCA)—a network of 127 institutions—was set up to examine climate change impacts, prepare greenhouse gas (GHG) inventories, and provide a mechanism to coordinate research in the country. In the run-up to the Copenhagen COP, India announced a 20–5 per cent reduction in the emissions intensity of its economy from 2005 levels by 2020. During this time, Parliament also discussed the issue of climate change on several occasions, particularly before and after the COP at Copenhagen (Lok Sabha, 2009; Rajya Sabha, 2009).

#### 2010–mid-2014: Environment Ministry Takes Lead in Inter-ministerial Coordination

In March 2010, due to inter-institutional tensions, the Office of the Special Envoy was closed and the task of coordination of climate policy across the government fell to the MoEF. Although the then Environment Minister Jairam Ramesh took personal interest in ensuring coordination across ministries, unlike the special envoy, he did not enjoy the heft of the PMO, and inter-ministerial power equations often came in the way of effective coordination on domestic actions on climate change. To overcome this problem, a new Executive Committee on Climate Change (ECCC), chaired by the

principal secretary to the PM was constituted (PMO 2013). It was composed of secretaries of all relevant ministries, who could speak for their respective ministries and therefore ease coordination challenges.

Meanwhile, climate finance became an important point at climate negotiations; and one of the outcomes of the Cancun COP was a US\$100 billion by 2020 pledge by developed countries. A Climate Change Finance Unit (CCFU) was created in the MoF in 2011 to act as the nodal point on climate change financing-related issues for the MoF and to provide guidance and inputs to the MoEF during negotiations. In 2012, the National Bank for Agriculture and Rural Development (NABARD) was accredited as the National Implementing Entity for the Adaptation Fund under the United Nations Framework Convention on Climate Change (UNFCCC).

Efforts to develop SAPCCs were initiated during this period. To ensure that the SAPCCs were designed and implemented in accordance with the NAPCC, a National Steering Committee on Climate Change (NSCCC), composed of secretaries of various ministries and departments, and chaired by the environment secretary, was constituted in February 2011 (MoEF 2011). The design and implementation of the national missions progressed at varying pace in each line ministry. Although specific personnel were assigned to climate change-related tasks, often as part of mission directorates, climate institutionalization within these ministries remained thin.

#### Mid-2014 to Present: Climate Institutionalization Slows Down

Soon after coming to power, the Modi government renamed the MoEF as the Ministry of Environment, Forest and Climate Change—signalling, perhaps, an intention to take seriously the challenge of climate change. However, this period has not seen significant growth in climate institutions or enhancement of the government's capacity to consider climate issues. The Climate Change Division at the Environment Ministry currently has a core team of 7 persons working on climate issues, which is assisted by a group of 12–15 persons engaged on a consultancy basis.<sup>4</sup> There has been some streamlining

<sup>4</sup> Telephone interview with Ajay Raghava, MoEFCC official, 11 October 2018.

of the Biennial Update Report (BUR) preparation process under the UNFCCC. A Project Management Unit (PMU) has been set up within the MoEFCC to coordinate the preparation of the BUR, and the first BUR was submitted in 2015. The process involved not just the relevant ministries and departments but also 17 expert institutions which compiled data on GHG emissions, mitigation actions, and other components of the BUR.<sup>5</sup>

The government has also established a National Adaptation Fund on Climate Change (NAFCC), with a budget provision of 350 crores (about US\$50 million) over two years, 'to assist States that are particularly vulnerable, based on the needs and priorities identified under the SAPCC and the relevant Missions under NAPCC' (MoEFCC 2015b). The NABARD has been designated as the National Implementing Entity for financing adaptation projects under the NAFCC.

The past decade has witnessed a rise in climate institutions in India, but it has been a reactive and ad hoc process. It has not led to the creation of stable, long-lasting, and well-coordinated institutions and governance processes that can appropriately respond to climate concerns. A survey of the websites of relevant line ministries reveals that the number of personnel working on climate issues is still very small (see Table 19.2); and their lack of capacity is aggravated by the fact that the personnel are not exclusively working on climate issues. The cross-sectoral nature of the climate problem also requires government officials to understand the linkages of climate change with other issues, like urbanization, energy, agriculture, water scarcity, disaster management, and so on, but currently, there is no mechanism to mobilize such knowledge sharing (Dubash and Joseph 2016). Although the MoEFCC is the nodal agency dealing with climate change in the government, policymaking and implementation of climate actions has been fragmented and has met with varying degrees of success as different line ministries are responsible for each mission under the NAPCC. A December 2018 report of the Parliamentary Committee on Estimates on the performance of the NAPCC has underscored the importance of coordination and

<sup>5</sup> Personal interview with Dr J.R. Bhatt, MoEFCC official, 4 December 2017.

**Table 19.2** Personnel Working on Climate Change Issues in the Line Ministries

<b>Ministry</b>	<b>Designation</b>	<b>Special/Additional Joint Secretary/ Scientist(G)/ Advisors</b>	<b>Director/Dep. Secretary/Scientist (D.E.F)/Joint Director</b>	<b>Under Secretary/ Scientist(C)/ Dep. Director</b>	<b>Section Officer/ Desk Officer</b>	<b>Consultants</b>
<i>Ministry of External Affairs</i> <sup>1</sup>		•	•			
<i>Ministry of Environment, Forest and Climate Change</i> <sup>2</sup>		• • •	• • • •	•	•	• • • • • • • • • •
<i>Ministry of Finance</i> <sup>3</sup>		•	•	•		• • • •
<i>Ministry of New &amp; Renewable Energy</i> <sup>4</sup>		• • • • • • •	•	• • • • •		
<i>Ministry of Power</i> <sup>5</sup>		•	•	•		
<i>Bureau of Energy Efficiency</i> <sup>6</sup>		• • •	• • • • • • • • • •			
<i>Ministry of Agriculture and Farmers' Welfare</i> <sup>7</sup>		• •	•	• •		•
<i>Ministry of Water Resources, River Development and Ganga Rejuvenation</i> <sup>8</sup>		• • •	•	• •		• • • • • • • •

(cont'd)



**Table 19.2** (cont'd)

<i>Ministry of Science &amp; Technology</i> <sup>9</sup>	• •	• • • •	•
<i>Ministry of Housing &amp; Urban Affairs</i> <sup>10</sup>	N/A	N/A	N/A

*Notes:* Each black circle represents one official in that category working on climate change and/or involved in the implementation of a relevant mission under the NAPCC. Data are updated from Dubash and Joseph (2016), based on websites of Government of India ministries and BEE, supplemented by written requests for information and telephone interviews with ministry officials.

*Sources:*

- 1 One official in the United Nations Economic and Social (UNES) Division is shown as in-charge of climate change. An email enquiry elicited no further information. See <https://www.mea.gov.in/divisions.htm>; accessed on 24 October 2018.
- 2 See <http://www.moef.nic.in/division/contact-us-23> and <http://www.moef.nic.in/about-ministry/chart1-environment-wing>; accessed on 24 October 2018. Information verified by phone interview with Ajay Raghava, MoEFCC official, 11 October 2018.
- 3 See <https://dea.gov.in/divisionbranch/climate-change-finance-unit>; accessed 24 October on 2018.
- 4 Data provided by Dr P.C. Maithani, ministry official, 9 October 2018, via phone interview. Although many officials in the ministry work in areas relating to renewable energy and climate change, Dr Maithani listed personnel working on policy linkages between renewable energy and climate change, as well as those working on NSM specifically.
- 5 See [https://powermin.nic.in/sites/default/files/uploads/organisation\\_chart\\_Ministry\\_of\\_Power.pdf](https://powermin.nic.in/sites/default/files/uploads/organisation_chart_Ministry_of_Power.pdf); accessed on 24 October 2018.
- 6 Dubash and Joseph (2016). The Bureau of Energy Efficiency's (BEE) website does not provide information and we did not receive any response to the emails sent for verification.
- 7 See <https://nmsa.dac.gov.in/firmContacts.aspx>; accessed on 24 October 2018.
- 8 Subsequently re-named Ministry of Jal Shakti. See <http://nwm.gov.in/?q=organization-setup>; accessed on 24 October 2018.
- 9 See [http://www.dst.gov.in/about-us/email-directory?field\\_tags\\_fid\\_1=2302](http://www.dst.gov.in/about-us/email-directory?field_tags_fid_1=2302); accessed on 24 October 2018.
- 10 See <http://mohua.gov.in/cms/National-Mission-on-Sustainable-Habitat.ph>; accessed on 24 October 2018.

collective action across various ministries and departments for the successful implementation of the NAPCC (Committee on Estimates 2018). It has recommended the constitution of a 'Mission Mode Authority', consisting of representatives of all missions and headed by the prime minister, to review implementation efforts, and to ensure an integrated, rather than fragmented, approach to climate change. Whether the government adopts this recommendation is yet to be seen.

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Just over 10 years ago, climate change was considered an exclusively diplomatic and foreign policy issue in India. However, now, there is a slew of policy and institutional activity at the domestic scale. National and sub-national levels of government are internalizing climate change in various ways, as well as building linkages across climate and non-climate actions. This enhanced climate change-related activity has come about as the result of the interplay between international and domestic drivers, although domestic factors have been determinative. The formulation of the NAPCC, sparked by international pressure, set in motion a series of institutional and planning processes through the eight national missions, and introduced the co-benefits approach to climate policymaking in India. In the international arena, India has tended to reflect domestic actions, rather than international pledges driving domestic actions. For example, India's NDC is more a compilation of ongoing actions than guidelines for development of future action. Mirroring active policymaking has been the growth in institutions dealing with climate change. Spaces have been created within existing ministries and departments, and through new inter-agency bodies to strategize on climate issues, and develop or deepen the cross-sectoral linkages. However, the government's institutional capacity on climate issues continues to be low, and needs significant enhancement for substantive engagement. As India intensifies its efforts to mainstream climate change in the development agenda, climate policymaking in the country will continue to be driven, or restrained, by domestic imperatives and the country's institutional capacity to influence political decision-making.

## References

- Atteridge, A., M.K. Srivastava, N. Pahuja, and H. Upadhyay. 2012. 'Climate Policy in India: What Shapes International, National and State Policy?', *Ambio*, 41(Suppl. 1): 68–77. Available at <https://doi.org/10.1007/s13280-011-0242-5>.
- Byravan, Sujatha and Sudhir Chella Rajan. 2012. 'An Evaluation of India's National Action Plan on Climate Change', Social Science Research Network, Rochester, NY. Available at <http://ifmrlead.org/wp-content/uploads/2016/05/NAPCC%20Evaluation.pdf>.
- Committee on Estimates (2018–2019). 2018. 'Performance of the National Action Plan on Climate Change: Thirtieth Report'. In Sixteenth Lok Sabha. New Delhi: Lok Sabha Secretariat. Available at [http://164.100.47.193/lssccommittee/Estimates/16\\_Estimates\\_30.pdf](http://164.100.47.193/lssccommittee/Estimates/16_Estimates_30.pdf); accessed on 11 June 2019.
- Dubash, Navroz K. 2011. 'From Norm Taker to Norm Maker? Indian Energy Governance in Global Context', *Global Policy*, 2(s1): 66–79. Available at <http://onlinelibrary.wiley.com/doi/10.1111/j.1758-5899.2011.00123.x/full>.
- \_\_\_\_\_. 2013. 'The Politics of Climate Change in India: Narratives of Equity and Cobenefits', *Wiley Interdisciplinary Reviews: Climate Change*, 4(3): 191–201. Available at <https://doi.org/10.1002/wcc.210>.
- Dubash, Navroz K. and Neha B. Joseph. 2016. 'Evolution of Institutions for Climate Policy in India', *Economic & Political Weekly*, 41(3): 44–54.
- Dubash, Navroz K. and Radhika Khosla. 2015. 'Neither Brake Nor Accelerator', *Economic & Political Weekly*, 50(42): 10–14.
- Dubash, Navroz K., Radhika Khosla, Ulka Kelkar, and Sharachandra Lele. 2018a. 'India and Climate Change: Evolving Ideas and Increasing Policy Engagement', *Annual Review of Environment and Resources*, 43. Available at <https://doi.org/10.1146/annurev-environ-102017-025809>.
- Dubash, Navroz K., Radhika Khosla, Narasimha D. Rao, and Ankit Bhardwaj. 2018b. 'India's Energy and Emissions Future: An Interpretive Analysis of Model Scenarios', *Environmental Research Letters*, 13: 074018. Available at <https://doi.org/10.1088/1748-9326/aacc74>.
- Economic & Political Weekly*. 2008. 'Climate Change: Not Vision, Not Plan', 43(28): 5–6.
- Government of India. 2007. 'PM's Council on Climate Change Constituted'. Available at <http://archivepmo.nic.in/drmanmohansingh/press-details.php?nodeid=575>; accessed on 31 October 2018.
- Khosla, Radhika and Navroz K. Dubash. 2015. 'What Does India's INDC Imply for the Future of Indian Electricity?', 15 October. Available at <https://cpclimateinitiative.wordpress.com/2015/10/15/>

- what-does-indias-indc-imply-for-the-future-of-indian-electricity/; accessed on 31 October 2018.
- Khosla, Radhika, Srihari Dukkupati, Navroz K. Dubash, Ashok Sreenivas, and Brett Cohen. 2015. 'Towards Methodologies for Multiple Objective-Based Energy and Climate Policy', *Economic & Political Weekly*, 50(49): 49–59.
- Lok Sabha. 2009. 'Discussion Regarding Impact of Climate Change' Session XV-III (19th November–18th December, 3 December 2009, reproduced in Navroz K. Dubash (ed.) 2012, *Handbook of Climate Change and India*. New Delhi: Oxford University Press.
- Ministry of Environment and Forests (MoEF). 2004. 'MoEF Notification S.O. 515(E)'. Available at <http://ncdmaindia.gov.in/ViewPDF.aspx?pub=notification.pdf>; accessed on 31 October 2018.
- . 2011. 'Reconstitution of the National Steering Committee (NSC) on Climate Change ... Regarding'. Available at [http://mahenvis.nic.in/Pdf/Laws/cc\\_reconstitution\\_nsc\\_260911.pdf](http://mahenvis.nic.in/Pdf/Laws/cc_reconstitution_nsc_260911.pdf); accessed on 31 October 2018.
- Ministry of Environment, Forest and Climate Change (MoEFCC). 2015a. 'India's Intended Nationally Determined Contribution: Working towards Climate Justice', Press Information Bureau. Available at <http://pib.nic.in/newsite/PrintRelease.aspx?relid=128403>; accessed on 31 October 2018.
- . 2015b. 'Government has Established National Adaptation Fund on Climate Change: Javadekar', Press Information Bureau. Available at <http://pib.nic.in/newsite/PrintRelease.aspx?relid=124326>; accessed on 31 October 2018.
- Ministry of Finance (MoF). 2015. 'From Carbon Subsidy to Carbon Tax: India's Green Actions'. Press Information Bureau. Available at <http://pib.nic.in/newsite/PrintRelease.aspx?relid=116058>; accessed on 31 October 2018.
- . 2016. 'Additional Resource Mobilization for Agriculture, Rural Economy and Clean Environment', Press Information Bureau. Available at <http://pib.nic.in/newsite/PrintRelease.aspx?relid=136995>; accessed on 31 October 2018.
- Ministry of Power (MoP). 2015. 'Initiatives to Improve the Efficiency of Coal Based Power Plants', Press Information Bureau. Available at <http://pib.nic.in/newsite/PrintRelease.aspx?relid=116893>; accessed on 31 October 2018.
- NITI Aayog. 2016. *Knowledge Initiatives: National Conference on Energy: Data Management, Modelling and GIS Mapping*. New Delhi: NITI Aayog.

- Permanent Mission of the People's Republic of China to the UN. 2007. 'China's National Climate Change Program (June 2007)', 4 June. Available at <http://www.china-un.org/eng/gyzg/t626117.htm>; accessed on 31 October 2018.
- Press Information Bureau. 2016. 'Cabinet Approves Pradhan Mantri Ujjwala Yojana—Scheme for Providing Free LPG Connections to Women from BPL Households'. Available at <http://pib.nic.in/newsite/printrelease.aspx?relid=137647>; accessed on 31 October 2018.
- Prime Minister's Council on Climate Change (PMCCC). 2008. 'National Action Plan on Climate Change'. Available at <http://www.moef.nic.in/downloads/home/Pg01-52.pdf>; accessed on 31 October 2018.
- Prime Minister's Office (PMO). 2013. 'Executive Committee on Climate Change Constituted', Press Information Bureau. Available at <http://pib.nic.in/newsite/erelease.aspx?relid=91924>; accessed on 31 October 2018.
- Rajya Sabha. 2009. 'Session 218, Tuesday, December 2009', reproduced in Navroz K. Dubash (ed.) 2012, *Handbook of Climate Change and India*. New Delhi: Oxford University Press.
- Rattani, Vijeta. 2018. 'Coping with Climate Change: An Analysis of India's National Action Plan on Climate Change'. Available at <https://www.cseindia.org/coping-with-climate-change-8488>; accessed on 31 October 2018.
- Somanathan, Eswaran, Thomas Sterner, Taishi Sugiyama, Donald Chimanikire, Navroz K. Dubash, Joseph Kow Essandoh-Yeddu, Solomon Fifta, Lawrence Goulder, Adam Jaffe, Xavier Labandeira et al. 2014. 'National and Sub-national Policies and Institutions', in *Climate Change 2014 Mitigation of Climate Change: Working Group III Contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, O. Edenhofer, R. Pichs-Madruga, Y. Sokona, E. Farahani, S. Kadner, K. Seyboth, A. Adler, I. Baum, S. Brunner, P. Eickemeier et al. (eds), pp. 1141–205. Cambridge: Cambridge University Press. Available at [https://www.ipcc.ch/site/assets/uploads/2018/02/ipcc\\_wg3\\_ar5\\_chapter15.pdf](https://www.ipcc.ch/site/assets/uploads/2018/02/ipcc_wg3_ar5_chapter15.pdf).
- The Energy and Resources Institute (TERI). 2009. *India's Energy Security: New Opportunities for a Sustainable Future*. New Delhi: TERI.