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# Evolution of Institutions for Climate Policy in India

NAVROZ K DUBASH, NEHA B JOSEPH

The growing focus on climate policy in India is not matched by an equivalent level of attention to institutions. Effective institutions are also needed for the design, coordination and implementation of policy. This paper examines the functioning of institutions, organised around three periods: pre-2007; 2007 to 2009 and 2010 to mid-2014. Several key themes emerge: First, the formation of climate institutions has often been ad hoc and is inadequately geared to India's co-benefits based approach to climate policy. Second, there is a lack of continuity in institutions, once established. Third, coordination across government has been uneven and episodic. Fourth, while various efforts at knowledge generation have been attempted, they do not add up to a mechanism for sustained and consistent strategic thinking on climate change. Fifth, the overall capacity within government remains limited. Sixth, capacity shortfalls are exacerbated by closed structures of governance that only partially draw on external expertise.

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## Introduction

In recent years, there has been a proliferation of policy instruments aimed at addressing climate change in India. Since the release of the National Action Plan on Climate Change (NAPCC) in 2008, its eight subsidiary missions have been approved and started implementation. Several states have also embarked on processes for formulating state climate plans. To what extent will this proliferation of policies lead to meaningful action?

One possible answer is that the likelihood that policies and strategies will be translated into action is higher if there is a clear institutional transmission mechanism from policy to implementation. Robust institutional arrangements are necessary for both upstream functions like strategy formulation and knowledge creation, and downstream functions of coordination and implementation.

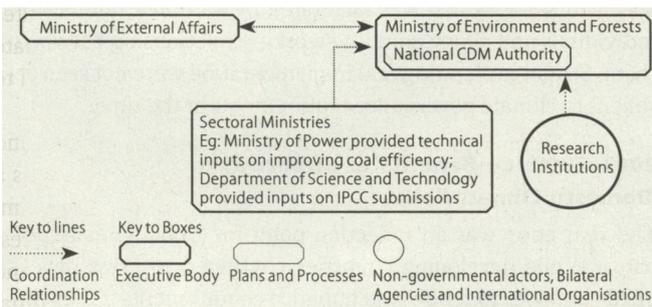
The literature suggests several aspects salient to effective institutions (Meadowcroft 2009; Dixit et al 2012; Kok and De Coninck 2007; Somanathan et al 2014). *Leadership capacity* and appropriate authority is important, particularly in an area like climate change which is a meta-issue operating in a context where existing sector-specific institutions proliferate. Closely related is the need for *institutional continuity*, as climate change is a long-term issue. Next, designing institutions to enable and enhance *interconnections across sectors* is important so that decisions do not occur in departmental silos, particularly since Indian climate policy is driven by the idea of co-benefits between development and climate outcomes. Climate institutions have to also provide mechanisms to integrate policy and action at *multiple scales*—international, national and local. Finally, given these complexities, facilitating *interactions between stakeholders and policymakers* in order to win buy-in and to draw on knowledge outside the formal policy process is important.

A central argument of this paper, therefore, is that understanding climate institutions is a necessary complement to understanding climate policies. To this end, this paper analyses the evolution of India's climate institutions, in an effort to add insights to India's engagement with the climate change debate. Institutions are understood here as "the formal or informal procedures, routines, norms and conventions embedded in the organisational structure of the polity or political economy" (Hall and Taylor 1996). This definition allows us to examine both practices as well as the organisational form within which they are contained.

After briefly outlining the context for Indian climate policy, we discuss the institutionalisation of domestic climate governance

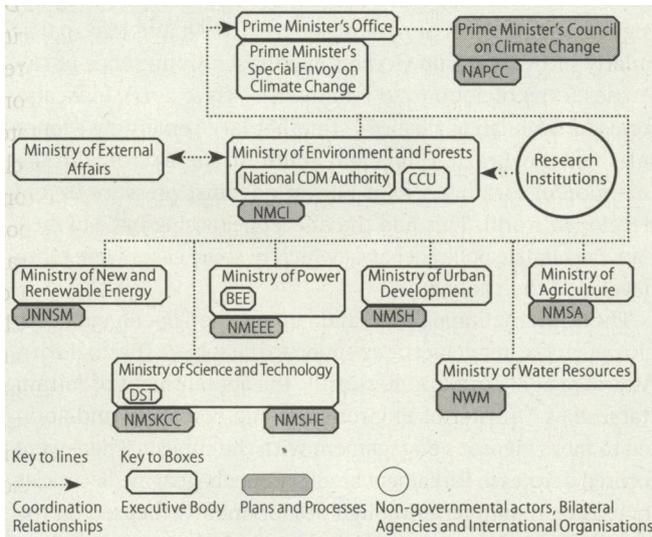
around three phases—pre-2007, 2007 to 2009, and 2010 to mid-2014. The three phases are demarcated by what we see as natural inflection points in institutional architecture. For each period, we develop an illustrative institutional chart (Figures 1–3). Notably, the charts do not include linkages with broader structures in the government, such as accountability institutions like the Comptroller and Auditor General, or judicial bodies such as the National Green Tribunal. Similarly, for missions under the NAPCC, we focus on the nodal agency while, in reality, often several agencies are involved. Despite these limitations, the charts provide a useful institutional snapshot as a device to reflect on the processes of institutionalising climate governance.

**Figure 1: Institutions in Climate Change Governance: Pre-2007**



Source: Authors' representation based on interviews.

**Figure 2: Institutions in Climate Change Governance: 2007–09**

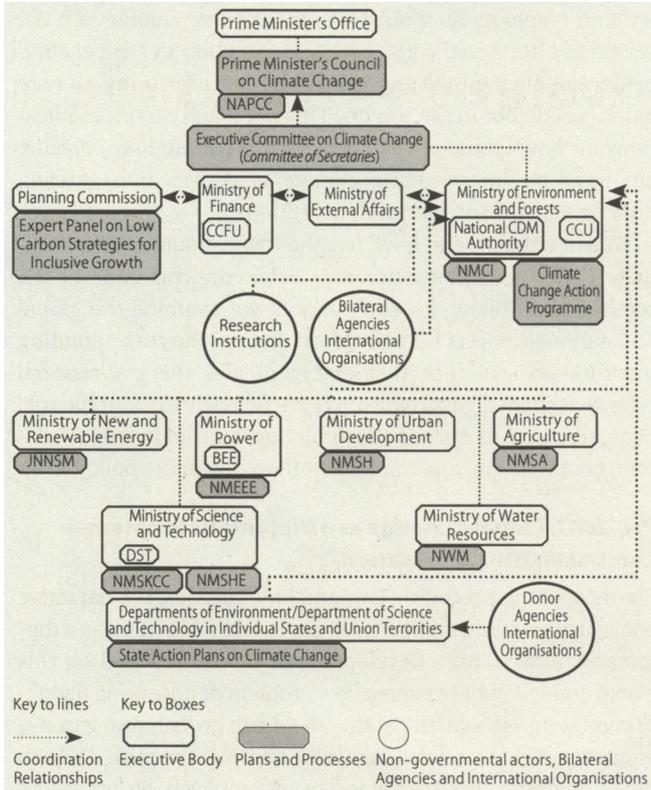


Source: Authors' representation based on interviews.

Methodologically, we draw on official documents that are publicly available, media accounts and interviews with key participants in climate policymaking. We have also supplemented our understanding with minutes of internal meetings obtained using Right to Information petitions.

The time period for this analysis extends to mid-2014. With a new government in place as of that date, these institutional structures are being revisited. An understanding of past institutionalisation could well be a useful input to that process. We conclude with the lessons of the past decade of climate governance and suggestions for the future.

**Figure 3: Institutions in Climate Change Governance: 2010–mid-2014**



Source: Authors' representation based on interviews.

**Indian Climate Policy Context**

Climate policymaking in India is a complex business because India carries multiple climate identities: it is simultaneously a highly vulnerable country; a “major emitter” when measured by annual emissions; and a very low contributor to the problem when measured by per capita or historical emissions.

India is vulnerable because projected variations in rainfall and an increase in the frequency and intensity of extreme events like cyclones, droughts, floods can have huge adverse impacts on agricultural yields, livestock, and water resources with implications for food security, human health, rural livelihoods, biodiversity and infrastructure investments (INCCA 2010). India is labelled a “major emitter” because its annual emissions are the fourth highest in the world, behind the United States (US), China and the European Union (WRI 2014). It is a small contributor to the problem because its contribution to global cumulative emissions stands at a relatively low 3%, compared to 27% by the US and around 70% by Annex 1 countries as a whole (WRI 2014). Moreover, India's per capita emissions in 2011 were 2.0t CO<sub>2</sub>/person, less than a third of the world average of 6.3t CO<sub>2</sub>/person and around one-fourth of China's per capita emissions (WRI 2014).

This confusing context and multiple climate identities strongly shape India's international and domestic climate positions. Internationally, based on its low level of responsibility as indicated by low per capita and historical emissions, India has sought to carve out space for domestic development policy, and insulate it from international pressures to mitigate. Increasingly, it has also stressed the need for attention to adaptation.

At home, attention to climate policy is slowly growing, but with an emphasis on mainstreaming climate change into development decisions, with particular attention to “co-benefits” or development-enhancing measures that also bring climate gains, as laid out in the NAPCC. This approach carries implications for how climate policy is to be institutionalised, placing emphasis on interweaving climate objectives into existing policymaking constructs and institutions.

To what extent, and how, has the institutionalisation of climate policy contributed towards achieving this end? In the sections that follow, for each period, we examine the global and national context for policy formulation, the corresponding institutional structure that emerged, and the institutional roles that shaped governance. We particularly explore the role of institutions in strategy formulation and knowledge creation, coordination, and implementation of climate policy.

### **Pre-2007: Climate Change as a Diplomatic Problem—Limited Institutionalisation**

For most of the preceding two and half decades, the narrative construction of the climate problem in India has been as a diplomatic rather than a developmental problem. Based on this construction, climate change is a problem of allocating a global commons—the earth’s ability to absorb greenhouse gases—equitably across nations (Agarwal and Narain 1991; Dubash 2013; Jakobsen 1998). This led to an emphasis on preparing diplomatically for negotiations. India played a leading role in championing the importance of equity and articulating the ‘concept of “differentiated responsibility” to ensure that primary responsibility for mitigation rested with the developed countries (Sengupta 2011; Dasgupta 2011).

Climate policy was thus synonymous with foreign policy on climate change and was handled collaboratively by the Ministry of External Affairs (MEA) and the Ministry of Environment and Forests (MOEF) by a small number of experienced officials.<sup>1</sup> There was little engagement with or oversight by Parliament; the cabinet or the Prime Minister’s Office (PMO) (Jakobsen 1998). Sectoral line ministries provided input on technical matters and general support during discussions before international meetings on specific issues, such as Ministry of Power (MoP) on improving coal efficiency, or Department of Science and Technology (DST) on inputs to the Intergovernmental Panel on Climate Change (IPCC).<sup>2</sup> There were links between the two key ministries and a few research organisations in the early years of the climate negotiations, but these were informal and unstructured. Consequently, there was limited institutionalisation and few formal institutional links during this period (Figure 1).

At the domestic level, while there was considerable domestic policy formulation and implementation in related areas—energy efficiency, electricity reform, and building codes—there was no explicit effort to link these to climate change. The resulting insulation of domestic politics from global climate politics was breached only partially through engagement with the Clean Development Mechanism (CDM). While there was initial concern that CDM was a Trojan Horse designed to

get developing countries to do the work of developed countries, this changed over time as Indian businesses saw opportunity in the new mechanism (Sengupta 2011; Das 2011). In 2003, the National Clean Development Mechanism Authority was established within the MOEF to evaluate and provide approval for CDM projects. Indian industry associations, and notably the Confederation of Indian Industry (CII), played a substantial role providing an interface between the MOEF and individual companies and sectors, managing details of greenhouse gas inventories, reporting and other requirements of the CDM process (Das 2011).

Thus, policy formulation in this period was characterised by limited and unstructured stakeholder interaction. There were limited requirements for coordination, other than between the MEA and MOEF, which was facilitated by a limited number of individuals and a long-standing working relationship between them. Strategic planning and implementation were not seen as salient to climate governance requirements at the time.

### **2007–2009: ‘Co-Benefits’ as a Doorway to Domestic Climate Policy**

The year 2007 was an inflection point for global climate debates. While developing countries continued to press developed countries to renew and enhance commitments under the Kyoto Protocol, large developing countries also came under considerable pressure to undertake mitigation action (Dubash 2009; Rajamani 2012). In addition, climate change became a regular agenda item at meetings of the G8+5 and G20, particularly in the build up to the Copenhagen Conference of the Parties (COP) of 2009 (G20 Information Centre 2011). India also formed a negotiating alliance with other large emerging economies, notably Brazil, China and South Africa (BRICS) with the intention of forming a joint bulwark against pressure by the developed world. This had the effect of exposing India to their national climate policy debates, which in some cases were more developed than at home.

These international shifts, and notably the Copenhagen COP, also led to greater domestic attention to the subject (Rastogi 2011; Atteridge et al 2012). Domestically, the appointment of Jairam Ramesh as Minister of Environment and Forests in mid-2009 led to more vigorous engagement with the subject. There were focused debates in Parliament around Copenhagen, media articles increased in number (although predominantly focused on the negotiations), environmental debates in India provided some indications of more serious engagement with climate concerns although local concerns remained dominant, and business associations developed focused platforms on climate change (Dubash 2013; Prabhu 2011; Jogesh 2011; Lele 2011; Das 2011).

The combination of greater international pressure and shifts in the extent and nature of domestic attention led to a re-formulation of India’s international climate position and attendant domestic policy changes. A NAPCC, organised around eight “missions” ranging from solar power development to energy efficiency promotion, a water mission and a special mission for the Himalayan states, was released in mid-2008. In the build-up to Copenhagen, under inexorable external

pressure and in the face of concrete pledges by BASIC allies, India also pledged in 2009 to reduce the emissions intensity of its economy by 20%–25% from 2005 levels by 2020 (Lok Sabha 2009; Sengupta 2011). In form and content, the pledge was, by authoritative accounts, an instance of horizontal diffusion from the example of other countries, particularly China.<sup>3</sup>

Institutional change during this period centred on two high-level policy formulation and coordination institutions, the Prime Minister's Council on Climate Change (hereafter referred to as "the council" or "PMCCC") and the Prime Minister's Special Envoy on Climate Change. In addition, at the level of the MoEF, a number of additional supportive bodies and processes were put in place. And finally, driven by the NAPCC, inter-sectoral coordination bodies and processes emerged. All these changes represented a substantial thickening of institutional linkages (Figure 2). We discuss each in turn.

The formation of the PMCCC in mid-2007 likely was stimulated, at least in part, by a perception that India needed to be better prepared to react to global pressures to address climate change. At this time, India had offered to limit its per capita emissions to the average of industrialised country per capita emissions at the G8 summit at Heiligendamm (MEA 2007). However, there was no mechanism in place to credibly devise an approach towards this end. Notably, China had released its domestic climate plan just days before the 2007 G8+6 meeting, which was reported in the Indian media as an important element in China's relative success, as compared to India, at deflecting international pressure (Sethi 2007).

Formally, the council was charged with formulating a national strategy to address climate change (later released as the NAPCC), overseeing the formulation of action plans, and monitoring key policy decisions (GoI 2007). The council was chaired by the prime minister and composed of 26 members, including ministers of various departments and eminent non-governmental and retired governmental experts. This level of stakeholder involvement helped ensure that any substantive content in the plan reasonably accommodated a wide range of interests. Indeed, the various members did provide thoughts, many of which informed the final NAPCC. For example, an emphasis on "no regrets" measures, a sectoral focus on renewable energy, energy efficiency, water, agriculture and transport were all mentioned in the initial meeting, and found substantial emphasis in the plan (PMO 2009; PMCCC 2008). The resulting NAPCC was released in June 2008 shortly before the G8 meeting at Tōyako, Japan, suggesting that, at least in part, the audience for the NAPCC was international.

The manner in which the council was used provided little scope either for detailed analytical input or for considered deliberation. With regard to the first, there were no focused studies commissioned to inform the plan preparation process, although council members had access to prior work undertaken by their various organisations. With regard to deliberation, the plan was finalised over the course of three sittings of the council from 13 July 2007 to 2 June 2008 (PMO 2009). Minutes of the second and third meetings provide few details of the discussion. And while there were many voices represented on

the council, there was no mechanism to enable broader consultation or provision of a comment period for the wider community of academics and stakeholders. As a consequence, the content of the document was strongly shaped by the primary authors, a three-member group from within the council, composed of the principal scientific advisor, former secretary of the MoEF and the director general of The Energy and Resources Institute. However, in the final analysis, the office of the special envoy played a significant role, since the final concise draft, which abstracted from technical details and focused on larger messages, was prepared in the PMO (*Down to Earth* 2008).<sup>4</sup>

Although its substantive and analytic role was limited, as an institutional platform, the council played an important role with regard to representing interests and winning agreement on the specific measures. The presence of key ministers, such as ministers of Agriculture and power ensured buy-in from other power centres within the government, and the presence of external members from the media, industry and civil society organisations helped win agreement and ownership from broader sections of society.<sup>5</sup>

Perhaps the most important use to which that representation role was put was to buy broad political agreement on the NAPCC through the idea of co-benefits, "measures that promote our development objectives while also yielding co-benefits for addressing climate change effectively" (PMCCC 2008). The political importance of this idea is hard to overstate. It allows India, while holding on to the political roots of its equity-based position, to start factoring climate change into national policy-making. On balance, the contribution of the council was as a representative body, and to a much smaller extent, as a substantive body with regard to strategy and content.

The council was relatively active only in its early years during the formulation of the NAPCC. It has met a total of eight times between August 2009 and February 2011 to consider and approve the mission documents of the eight subsidiary missions, and did not meet until after it was reconstituted with a new membership in November 2014 (PIB 2014).

### Special Envoy on Climate Change

In January 2008, shortly before the release of the NAPCC, a specialised office of the Prime Minister's Special Envoy on Climate Change (hereafter referred to as the "special envoy") was established within the PMO. It was staffed by a senior and seasoned diplomat, Ambassador Shyam Saran, who had been both foreign secretary and the lead negotiator on Indo-US civil nuclear issues. As with the council, the special envoy had no dedicated staff, but rather was able to draw on the broader personnel of the PMO and on ad hoc assistance from external researchers. The special envoy's office engaged in both domestic and international climate policy, and notably played a substantial role in bringing the unwieldy process of drafting an NAPCC to conclusion. Specifically, the detailed report prepared by three members of the council was tightened into a much shorter summary report, with the detailed report shifted to a technical appendix.

The office also played a significant coordinating role. The special envoy was able to exercise the authority of the PMO to convene other ministerial colleagues at a high level, and through a method of intensive networking and coordination, to identify and find ways around roadblocks, if necessary by “knocking heads together.”<sup>6</sup> Indeed, the special envoy’s office was more often focused with the hard work of negotiating a complex political and bureaucratic landscape than with high level strategic thinking. For example, in formulating the National Solar Mission, a key sticking point was figuring out where the finance would come from for a subsidy for new solar power, to be provided through an innovative reverse auction mechanism.<sup>7</sup> Providing additional budgetary support was out of the question. The creative answer arrived at was to blend solar power with low cost thermal power available with the National Thermal Power Corporation (NTPC) as reserve power for states, to bring down the average cost of power supplied through this mechanism. However, doing so required agreement by NTPC as well as buy-in from the finance minister. This agreement was won by the Prime Minister’s special envoy through personal visits and leg-work, backed by the authority of the PMO. In another example, agreement on the Himalayan Mission required personal visits by the special envoy to the various states, to ascertain interests and needs, and seed important themes regarding collective action across states.<sup>8</sup>

The special envoy’s office also played a supporting role to other ministries.<sup>9</sup> For example, in formulating the National Mission for Enhanced Energy Efficiency, the Bureau of Energy Efficiency sought the PMO’s help in ensuring finance for energy efficiency, following which the PMO contacted public sector banks encouraging support for the mission. In all, over the course of 2009, four missions were approved by the council, of which the special envoy had a substantial role in three: the National Solar Mission, the National Mission for Enhanced Energy Efficiency and the National Himalayan Mission. Due to pressures of time and lack of resources, the special envoy was relatively less focused on the remaining missions,<sup>10</sup> and this lack of high level focus may indeed be one reason for their slower pace.

In addition to driving the momentum on the NAPCC missions, the special envoy also raised the level of coordination on India’s international policy on climate change, convening regular meetings across the MEA, MoEF and other relevant ministries, and also calling in external experts, to formulate India’s international position and prepare country submissions on items in the negotiating agenda. A notable example was a position paper on technology innovation centres.<sup>11</sup> While this coordination had always existed at an informal level, the process was made more consistent during the tenure of the office.<sup>12</sup> Whether and to what extent the special envoy should control international climate policy ultimately became an issue for contention with the newly appointed minister at the MoEF, and was the cause for dismantling the office after two short years (Varadarajan 2010; Deshpande and Sethi 2010).

This period also saw preliminary engagement with climate change by sectoral ministries. The various nodal ministries for the NAPCC missions had to develop climate-specific expertise

and assign staff to manage the mission (Figure 2). In these initial years, activity was centred around formulation of mission documents. The exact processes for mission formulation have varied across ministries. In most ministries, this task was assigned to existing personnel, although, as detailed above, some missions also saw the involvement of the special envoy’s office. The extent and manner of stakeholder interactions during mission formulation has also varied across missions. The MoEF, for example, held five public regional consultations in Mysore, Dehradun, Nagpur, Jaipur and Guwahati, each of which was attended by around 5,000 people, making the Green India Mission’s consultative processes the widest among all missions. Thus, the NAPCC, despite being undertaken initially due to global negotiation pressures, allowed for linkages between climate change and domestic sectoral concerns and consequently, opened up a range of institutional spaces, more in some missions and less in others, that were material to India’s efforts to mainstream climate change.

Beyond these institutional innovations, the appointment of Jairam Ramesh as the Minister of Environment and Forests in mid-2009 ushered in an additional round of institutional building within the ambit of his ministry. Ramesh set his sights initially on domestic policy, and in particular on building a science knowledge infrastructure.<sup>13</sup> The Indian Network on Climate Change Assessment (INCCA), envisioned as “an Indian IPCC,” a network of 127 institutions, was set up to examine impacts of climate change, conduct greenhouse gas inventories and provide a mechanism for coordinating existing, hitherto disconnected research.<sup>14</sup> INCCA has produced a report which provides an assessment of impacts of climate change in 2030s on four key sectors of the Indian economy, namely, agriculture, water, natural ecosystems and biodiversity and health, in four climate sensitive regions of India, the Himalayan region, the Western Ghats, the coastal area and the north-east region (INCCA 2010). A second approach was to deepen the engagement of scientific bodies with the climate issue, such as the Indian Space Research Organisation, to harness its satellite technology for various monitoring purposes, and the Indian Council of Forestry Research and Education to make use of its detailed forest work.

Over time, Jairam Ramesh was drawn deeper into processes for formulating India’s international position, in a manner that placed him increasingly in conflict with long-standing climate negotiators in India (Varadarajan 2010; Dasgupta 2014). By his own account, Ramesh sought to position India as a forward-looking player in climate negotiations, calling for a “yes, but” approach emphasising the conditions for agreement (Ramesh 2010) and a shift to a “per capita plus” approach (Sarkar 2009) and even attempted to pursue domestic legislation in this regard.<sup>15</sup>

This narrative re-formulation ran against a strong current in Indian climate politics, held by senior negotiators as well as influential civil society groups: that domestic climate policy in India should be minimally linked to the international process (Agarwal and Narain 1991; Narain 2008; Dasgupta 2014). These differences are salient to questions of institutionalising

climate governance. If climate policy is intended to mainstream climate change into domestic policy, institutional change is required to drive climate concerns into domestic policy. If, instead, it is a minimalist effort at signalling international credibility while insulating domestic policy, then institutional change is superfluous. As the experience described here suggests, the outcome falls between these two extremes and is in part a reflection of the failure to completely settle the larger strategic debate about India's international climate stance.

In sum, the need for strategic planning and policy formulation in the early stages of Indian climate policy was incompletely met. The establishment of the PMCCC and the office of the special envoy were the capstone institutions intended to play this role. The former largely served a representation function for various voices and the latter was uniquely able to leverage the authority of the PMO to play an important convening and coordination role. However, neither institute fully served as a forum for strategic planning and neither led to a marked increase in research capacity and analysis.

Beyond these two high level institutions, the period from 2007 to 2009 was also one of general institutional fecundity, as Figure 2 shows, but in a qualified way. First, the sheer numbers of personnel involved remained relatively small, with climate change being added on to existing responsibilities in many cases. Second, and related, technical capacity and skills were inducted in an ad hoc manner through informal contacts with researchers and through formulation of working groups. Third, this institutional thickening was limited to the government, and did not lead to structured and ongoing mechanisms for consultation with other interests or stakeholders, limiting the effectiveness of these institutions as transmission pathways for broader mainstreaming of climate considerations. Finally, the unevenness of the institutional landscape reflected the unsettled and ongoing debate about India's international climate stance, which fell somewhere in between seriously internalising climate considerations, and merely gesturing towards doing so.

### **2010–Mid-2014: Diminished Momentum, Diminished Coordination**

Following the Copenhagen COP in 2009, the political momentum on climate change slowed. There was far less pressure to declare sweeping new measures or policies. But, by the same token, India, like other countries, had to give body, substance and form to what were often hasty pre-Copenhagen declarations.

At the domestic level, the biggest change in context was the consolidation of authority by Jairam Ramesh, the Minister of Environment and Forests, who had taken over the ministry just six months before the Copenhagen COP, but played a substantial role in Copenhagen (Ramesh 2014). He had acquired visibility and profile at home and overseas, through a high visibility approach complemented by rare parliamentary debates on climate change before and after Copenhagen (Lok Sabha Debates 2009; Prabhu 2011).

The period during Ramesh's tenure until July 2011 saw a flurry of new initiatives. Significant among these was an effort

to develop State Action Plans on Climate Change in each of India's states to complement the NAPCC. During this period, there was also a shift in the centre of gravity around climate governance back to the MoEF. Following Ramesh's departure from the MoEF in mid-2011, few additional domestic initiatives on climate change were apparent through the first half of 2014, with little evidence of institutional change and development in climate policymaking.

In the early years of this period, these contextual changes were manifested in four sets of institutional shifts, which led to a further change in the institutional map of climate governance (Figure 3). First, there was an institutional vacuum at the highest levels of coordination and strategic thinking, with the dissolution of the office of the special envoy. Second, there were complementary additional institutional efforts undertaken at knowledge creation and strategic thinking, which were only partly successful. Third, there was an initial attempt at building institutional capacity across sectoral ministries in the course of implementing NAPCC missions, albeit not at the scale necessary. Fourth, there was a corresponding introduction of dedicated climate entities at state levels, to prepare and implement state climate plans. We elaborate on each below.

In the build-up to Copenhagen, tensions between the MoEF and the office of the special envoy over control of the negotiating position were already apparent. The growing inter-institutional tension eventually led to the closure of the office of the special envoy in March 2010 (Varadarajan 2010; Deshpande and Sethi 2010) with implications for coordination of climate policy across the government. Coordination around international diplomatic policy has reverted back to a relatively unstructured process involving the MEA and the MoEF, with occasional input from external advisers, notably retired bureaucrats. However, the bigger change occurred in terms of coordination of domestic policy. While the special envoy's office was de facto playing this role during its existence, the MoEF subsequently picked up this task. As minister, Ramesh apparently took on this coordination at a personal level, making direct calls to secretaries of other ministries.<sup>16</sup> While the Prime Minister's special envoy was able to call on the authority of the PMO to sort out differences, the MoEF was hampered in playing this role by considerations of inter-ministerial competition.<sup>17</sup> From the MoEF perspective, they were "very careful to allow the individual ministries not to get the impression that the MoEF was becoming the single tsar."<sup>18</sup> Without an overarching authority, coordination, by all accounts, was less effectively handled despite the best efforts of the MoEF.

In an effort to address this challenge, in 2013, a new Executive Committee on Climate Change (ECCC) was instituted to establish oversight over mission implementation (PIB 2013). Composed of secretaries, the highest ranking bureaucrats in each ministry, the intention was that with deep knowledge of the system and an ability to speak for their respective ministries, such a committee would ease coordination challenges. A committee of secretaries is also an empowered committee which renders it the authority to demand that decisions taken by it are followed by line ministries. However, this

approach provides no solution to the possible problem of inter-ministerial competition. Thus, the closure of the special envoy's office has likely reduced effective coordination in what is also now a more complex institutional landscape, as we discuss below.

A second set of institutional changes were brought about by disparate efforts at broadening the information and strategic knowledge base for implementation of the Copenhagen pledge. The most significant step towards this was the establishment of an Expert Group on Low Carbon Strategies for Inclusive Growth (hereafter referred to as the "Expert Group" or "LCEG"). The LCEG was jointly convened by the MoEF and the Planning Commission, with the engagement of the latter signalling the entry of the government's in-house institution for integrated and strategic thinking into the climate discussion.

The formation of the LCEG promised a more systematic approach to harnessing technical input and working it into a larger strategic framework. It was composed of 20 expert members from both within and outside the government. However, the model for technical input tended to be ad hoc with individual members expected to depend on the resources of their home institutions. Little dedicated or focused new research was carried out with a reliance instead, on existing research.<sup>19</sup> The Expert Group took over four years to deliver its final report, well beyond its mandated time period of nine months, and was consequently relatively limited in influencing policy formulation during this period. Additionally, in its involvement with the formulation of the Twelfth Plan, it operated in parallel with and separated from various sectoral working groups drafting the plan. Thus, there were separate groups on power planning and environmental planning, the functioning of which were not coordinated with the Expert Group. Over time, and after a change in the leadership at the MoEF in mid-2011, the latter became progressively disengaged with and even critical of the work of the group (Sethi 2012), limiting its usefulness as an input to policy.

In recognition that climate change deserved a long-term approach, in 2013, discussions were initiated for the creation of an overarching National Institute for Climate Change Studies and Action. News reports indicate that the new institute will have four broad roles: scientific assessment; economic and legal analysis; policymaking, monitoring, capacity-building and training; and database management (*Business Standard* 2014; *Economic Times* 2013). The institute will be placed under the MoEF, but with representation on its governing body by other ministries and independent experts (Sethi 2013). Such an institution has the potential to increase overall capacity, but much depends on details of its implementation. In particular, its ability to serve as a broader hub to stimulate independent analysis and deliberation, versus being an in-house think-tank, will be critical.

Another central government organisation that was drawn into climate discussions was the Ministry of Finance (MoF). One of the concrete outcomes of the Cancun COP was a commitment by developed countries to mobilise \$100 billion a year by 2020 to support developing country activities on

climate change (UNFCCC 2010). Climate finance, covering both discussions about amount and deciding how it would be used, was therefore promised to be a growth area for negotiations, and was a key element of India's negotiating strategy. Subsequently, a Climate Change Finance Unit (CCFU) was created within the MoF in 2011. Since its creation, this unit has focused heavily on the international climate finance context, notably on representing India at discussions of the Green Climate Fund and in producing a chapter on climate and sustainable development in the annual *Economic Survey*.<sup>20</sup> The parallel set of tasks of increasing India's domestic capacity to develop projects and absorb climate finance are built around the MoEF and the National Bank for Agriculture and Rural Development (NABARD).

Engagement with climate finance also suffers from coordination failures (Jha 2014). For example, there is no intermediary body that enables the long list of projects emerging from state plans to be developed into bankable climate finance projects. Even more important, there is no mechanism for strategic consideration of various projects to enhance the chances that individual projects aggregate to the "directional shift" that is called for in the NAPCC.

Third, the biggest task for this period was to move from the broad contours of a national plan to specific design and implementation of missions. For this purpose, mission directorates have been set up within the various nodal ministries, comprising a mission director with administrative and financial powers, backed by other officers, experts and consultants. Simply the act of creating missions has led to an expansion of personnel in the official machinery charged with addressing climate change, although this likely occurred through redeployment of existing personnel rather than through induction of individuals with dedicated skills.

However, even after this process, overall levels of capacity remain limited. Table 1 (p 51) lays out existing staff in various central government ministries, and at various levels, dedicated to climate change. Even in the core nodal agency of MoEF, full-time employees focused on climate change in the Climate Change Unit are a section officer, three scientists, a director and a joint secretary (the latter also handling the Montreal Protocol), adding to six full-time staff. Across missions, the staff strength is similarly low, with the Bureau of Energy Efficiency a partial exception. In practice, many officials have multiple roles, making an exact estimate of staff strength in ministries challenging; these strengths are also complemented by additional consultants and other temporary staffing, which is harder to document. It is also unclear whether these additional personnel provide the continuity of engagement and the specialised capacity necessary.

Although a detailed mission-by-mission analysis is beyond the scope of this paper, a quick review of government documents reveals some differences in the approaches taken by missions. To begin with, the nature of the mission is relevant to its pace of implementation. Missions with a relatively tightly focused agenda have tended to move faster. For example, the National Solar Mission efforts to encourage investment

**Table 1: Personnel Capacity in the Climate Change Unit (MoEF), MEA, MoF and Nodal Ministries for Missions**

|                                      |   | Administrative Levels in Ministries <sup>1</sup>       |   |                                 |                                |
|--------------------------------------|---|--|---|---------------------------------|--------------------------------|
|                                      |   | Special / Additional / Joint Secretary / Scientist (G) | Director/Deputy Secretary / Scientist (D, E, F) | Under Secretary / Scientist (C) | Section Officer / Desk Officer |
| Ministry of Environment and Forests  | Climate Change Unit (CCU) <sup>ii</sup>   | 1  | 3   | 1                               | 1                              |
| Ministry of External Affairs         | UNES (United Nations Economic and Social) Division <sup>iii</sup>                   | 1  | 1   | 0                               | 0                              |
| Ministry of Finance                  | Climate Change Finance Unit (CCFU) <sup>iv</sup>                                    | 1  | 1   | 1                               | 0                              |
| Ministry of Environment and Forests  | National Green India Mission (NMGI) <sup>v</sup>                                    | 2  | 1   | 1                               | NA                             |
| Ministry of New and Renewable Energy | Jawaharlal Nehru National Solar Mission (JNNSM) <sup>vi</sup>                       | 2  | 2   | NA                              | NA                             |
| Ministry of Power                    | National Mission on Enhanced Energy Efficiency (NMEEE) <sup>vii</sup>               | 3  | 8   | 0                               | 0                              |
| Ministry of Science and Technology   | National Mission on Strategic Knowledge for Climate Change (NMSKCC) <sup>viii</sup> | 1  | 2   | NA                              | NA                             |
| Ministry of Science and Technology   | National Mission for Sustaining the Himalayan Ecosystem (NMSHE) <sup>ix</sup>       | 1  | 2   | NA                              | NA                             |
| Ministry of Water Resources          | National Water Mission (NWM) <sup>x</sup>   | 3  | 2   | 1                               | NA                             |
| Ministry of Urban Development        | National Mission on Sustainable Habitat (NMSH)                                      | NA   | NA  | NA                              | NA                             |
| Ministry of Agriculture              | National Mission for Sustainable Agriculture (NMSA)                                 | NA   | NA  | NA                              | NA                             |

i The politico-administrative structure in Ministries is divided into seven levels comprising minister/MOS; secretary; special secretary/additional secretary/joint secretary/scientist(G); director/deputy secretary/scientist (D,E,F); under secretary/scientist C; section officer/desk officer and assistant/upper and lower division clerk (Second Administrative Reforms Commission 2009; MoEF 2010a). For the purpose of comparing capacity among nodal ministries implementing missions, we focus on four of the above levels (as detailed in the table above). We exclude the levels of minister/MOS and secretary, since ministers and secretaries of all ministries oversee a wide range of issues under the jurisdiction of their ministry. We also exclude the level of assistant/upper and lower division clerk.

ii Information regarding personnel in the Climate Change Unit of the MoEF has been gathered from the Ministry's response to an RTI enquiry, dated 24.7.2014 (MoEF 2014a). This information reflects the bureaucratic shuffle that followed the formation of the new government. In addition to these officers, an Additional Secretary to the Government of India has responsibility over climate change activities as a portion of his work allocation (MoEF 2014).

iii Information regarding staffing in the UNES Division of the MEA has been gathered from the ministry's official website ([www.mea.gov.in](http://www.mea.gov.in)) (accessed on 3 May 2014) and personal communication, dated 29 July 2015, with Satwant Khanalia, Under Secretary in the ministry of External Affairs.

iv Information regarding staffing in the CCFU of the MoF has been gathered from the ministry's official website ([www.finmin.nic.in](http://www.finmin.nic.in)) (accessed on 3 May 2014).

v Information regarding staffing in the NMGI Directorate has been gathered from the ministry's official website ([www.moef.nic.in](http://www.moef.nic.in)) (accessed on 21 April 2015).

vi Information regarding staffing in the JNNSM Directorate has been gathered from the ministry's official website ([www.mnre.gov.in](http://www.mnre.gov.in)) (accessed on 3 May 2014).

vii Information regarding staffing in the NMEEE Directorate has been gathered from personal communication, dated 15 May 2015, with Ashok Kumar in the Bureau of Energy Efficiency, Ministry of Power.

viii Information regarding staffing in the NMSKCC Directorate has been gathered from the official website of the Department of Science and Technology ([www.dst.gov.in](http://www.dst.gov.in)) (accessed on 3 May 2014).

ix Information regarding staffing in the NMSHE Directorate has been gathered from the official website of the Department of Science and Technology ([www.dst.gov.in](http://www.dst.gov.in)) (accessed on 3 May 2014).

x Information regarding staffing in the NWM Directorate has been gathered from personal communication, dated 27 February 2015, with M Satyanarayana, Advisor (Coordination and Monitoring) in the National Water Mission Directorate.

Source: Authors' compilation based on government websites and documents, and personal communication with government officials..

in solar energy (MNRE 2009) and the National Mission for Enhanced Energy Efficiency efforts to create a trading mechanism for energy efficiency credits (MoP 2009) have made progress. The sprawling National Water Mission, with a particularly large and unfocused objective, has moved more slowly.

In addition, the degree of stakeholder engagement in implementation varies across the missions. The Green India Mission has perhaps gone the farthest towards engaging the public and multiple levels of government, establishing state-level steering committees, and integrating implementation with the existing framework of forest institutions at district and village scales (MoEF 2010). While this integration is desirable, the implementation challenge will be to ensure that the Green India Mission is not entirely subsumed by the existing structure and its incentives, but results in a change consistent with the larger purpose of the mission.

Monitoring arrangements also differ by mission, in part by whether the topic of the mission operates under central government control or rests with the states. In some cases, such as the Solar Mission, monitoring is conducted by an executive committee, chaired by the secretary to the Ministry of New and Renewable Energy (MNRE 2009). The Green India Mission includes a provision for remote sensing and third

party monitoring (MoEF 2010). In sum, the degree of institutionalisation of climate concerns in line ministries went up during this period, although it would be hard to argue that the result is adequate given the task.

Fourth, the formulation and implementation of State Action Plans on Climate Change has led to the creation of a complementary level of institutions at the state level, representing a significant expansion of the climate policy space. While the state plans considerably increased the scope of the mainstreaming efforts, they also have systematic weaknesses as strategic documents (Dubash and Jogesh 2014). These include: a focus on generating long and unprioritised lists of possible implementation actions without a corresponding strategy; a failure to build adequate implementation capacity; a consequent reliance on donors and consultants; an inability to foster integrative thinking and break out of departmental silos; a weak basis in the science of climate impacts; limited attention to the energy sector due to strategic concerns on implications for climate negotiations; lack of an analytical framework through which to mainstream development and climate mitigation and adaptation; and, with few exceptions, relatively non-participatory processes. Despite these limitations, the plans have led to a conversation at the state level,

and in some cases to deepened engagement by key bureaucrats in the state.

A limited sample of five states reveals, however, that relatively little institutional capacity had been created, and all the states relied heavily on donor agencies and consultants to prepare state plans (Dubash and Jogesh 2014). In many cases, climate change was added to the brief of existing institutions. For example, in Karnataka, the Environmental Management and Policy Research Institute (EMPRI) of the state government served as the nodal agency for preparation of the state's climate plan. In other cases, such as Odisha, a Climate Change Action Plan Cell was created within the Forest and Environment Department.

In sum, the period after 2009 witnessed a thickening of institutional structure, although this was focused in the period until mid-2011, while Ramesh was Minister of Environment and Forests. This included new capacity in central ministries such as the Planning Commission and the Ministry of Finance, and perhaps more significantly in line ministries and states. However, an analysis of institutionalisation within ministries reveals that capacity levels remain numerically very low. Most problematic, coordinating institutions atrophied, leaving no institutional spaces through which climate policy could be monitored, coordinated, and driven. The result risks a directionless effort at climate policymaking. While policy formulation, implementation and coordination functions were the focus of this period, strategic planning continued to be an important task, but one on which little activity was witnessed.

### Conclusions

Over the period covered by this paper, from 2007 to mid-2014, there has been a steady and growing spread of institutions for climate governance in India. This institutionalisation reflects the proliferation of policy instruments and objectives of climate policy. However, it is very much a work in progress. Towards strengthening this emerging institutional structure, we conclude with several observations.

First, institutionalisation around climate change has often been ad hoc, instead of being designed to suit India's stated development-focused approach to climate policy. The approach, thus far, has been creation of multiple institutional openings in a scatter shot manner, often in reaction to international circumstances. This reactive mode has filtered down to states, with states rather hastily setting up climate nodes in response to a central diktat to produce state climate plans. While this approach does create opportunities for enterprising bureaucrats, or space for new voices, such as solar entrepreneurs, it is far less deliberate than the approach other countries have chosen, such as China's centralised target setting and monitoring approach (Held et al 2011), or the UK's analysis and information-based regulation approach through its Climate Change Committee. While India's multivalent approach facilitates experimentation, a more deliberate process of institutional design, while maintaining some of the benefits of flexibility, may be warranted.

Second, institutions, once established, have not been stable or long-lasting. Notably, the office of the Prime Minister's

special envoy on Climate Change, which played an important role coordinating climate policy, was dismantled after two short years. As one implication of this instability, climate policymaking is more often driven by individuals than institutions. Such an approach can lead to both inconsistent engagement with the issue and create a vacuum when no strong and interested leader emerges. For example, after Ramesh was shifted out of the MoEF in 2011, there were relatively few new developments around domestic climate policy through the first half of 2014.

Third, coordination across various parts of the government has ebbed and flowed with different institutional configurations. Arguably, the most explicit coordination, both of domestic and international policy, existed when the PMO included a Special Envoy on Climate Change. The resultant ability to leverage the authority of the PMO to convene, resolve disputes and overcome hurdles was instrumental in implementing actions around Copenhagen. After 2010, coordination has occurred in an ad hoc manner, through special committees for missions and bilateral consultations between MEA and MoEF on international negotiations. An overarching structure that encompasses strategic thinking, promotes monitoring and allows for course correction would enhance climate policy formulation and implementation.

Fourth, while various efforts have been undertaken to enhance knowledge generation around climate change, they have not added up to a sustained and consistent mechanism for strategic thinking. The Prime Minister's Council on Climate Change did not play an active strategic role beyond initial input into the NAPCC; the special envoy's office had access to very limited internal analytical capability; and the LCEG was an ad hoc effort that fell short of its mandate and did not lead to creation of mechanisms for ongoing knowledge generation that cumulate over time. The initial visibility and activity of INCCA have not been sustained over time, with no reports being released beyond the initial analyses. Particularly since climate policy needs to bridge domestic sectoral concerns and global negotiation pressures, a sustained, strategic and analytically sound process is a necessity.

Fifth, the capacity within individual governmental organisations to address climate change remains limited. There are two aspects to this capacity shortfall. First, the absolute number of personnel in existing institutions dealing with climate change remains low, leading to a problem of over-burden. It is a considerable challenge for such small numbers to keep track of design and implementation of the NAPCC and its missions, oversee state climate plans, and cover the gamut of international discussions. Second, the cross-sectoral nature of the climate problem requires officials to understand linkages with other issue areas such as energy, urbanisation, agriculture, and so on. Currently, there exist no mechanisms within the government to mobilise such integrative knowledge. Addressing both aspects requires increasing absolute numbers and fostering specialisation within the civil service as well as supplementing the civil service with a cadre of specialists, who bring both specialised knowledge and institutional memory over

time. Finding a sustainable and consistent way to bring more and better capacity to bear on the problem is a prerequisite for effective climate institutions in India.

Sixth, the policy formulation and institution building process, so far, have provided few opportunities for public input and consultation. The NAPCC was a largely closed process, the LCEG had no consultations, the missions have been uneven in the extent of their consultative processes (an exception is the Green India Mission), and the state plans have been heavily bureaucratically driven processes. This is in contrast to some other emerging economies, notably South Africa and Brazil, that have put in place public deliberation processes (Raubenheimer and Younge 2011; Hochstetler and Viola 2012). Indian institutions could learn from this experience by going beyond treating climate change as a technical design challenge, to engaging the public in bringing about, as the NAPCC suggests, a shift in development trajectories.

While a detailed institutional design is beyond the scope of this paper, the contours of an approach can be drawn from these findings. Indian climate institutions should follow a facilitative approach that complements existing institutions to promote mainstreaming of climate considerations in a manner consistent with development. This implies nudging and

provoking existing sectoral bodies to seek co-benefits opportunities in mitigation and mainstream climate resilience into development decisions. A robust analytical capacity—to track the burgeoning climate literature, develop and adapt conceptual tools (such as on co-benefits), and serve as a repository for consistent data collection—is an indispensable function. Given the capacity shortfalls in the government, the ability to draw in academics, civil society representatives and others with expertise to complement governmental capacity would be very helpful. In architectural terms, having institutional structures at multiple levels—centre, states, and cities—would reflect the increasingly multilevel governance nature of climate policy responses. Finally, lessons of the past suggest that a complementary high-level strategy group that can serve a coordinating role and an accountability function for other climate institutions is necessary.

While the details, such as the institutional homes for these roles, require a great deal more consideration, the last decade of climate policymaking suggests that an ad hoc and reactive approach to institutionalising India's climate response has its limitations. A more deliberate approach, and one that is tailored to India's policy approach to climate change, will provide long-term payback.

## NOTES

- 1 Although the name of the ministry has been changed to Ministry of Environment, Forests and Climate Change in 2014, in this paper we use the older name, since that was the name in use during the period covered in this paper.
- 2 Personal communication with Surya Sethi, 7 January 2015.
- 3 Interview with Jairam Ramesh, 16 October 2014.
- 4 Interview with Shyam Saran, 21 March 2014.
- 5 Interview with Ajay Mathur, 7 May 2014.
- 6 See note 4.
- 7 See note 4.
- 8 See note 4.
- 9 See note 5.
- 10 See note 4.
- 11 Personal communication with Shyam Saran, 7 January 2015.
- 12 Interview with Surya Sethi, 28 April 2014.
- 13 See note 3.
- 14 See note 3.
- 15 See note 3.
- 16 See note 3.
- 17 See note 5.
- 18 See note 3.
- 19 One of the authors of this paper, Navroz K Dubash, was initially appointed as a member of the Expert Group. Some of these observations are based on personal experience. He resigned from the group in August 2013.
- 20 Interview with Dipak Dasgupta, 20 March 2014.

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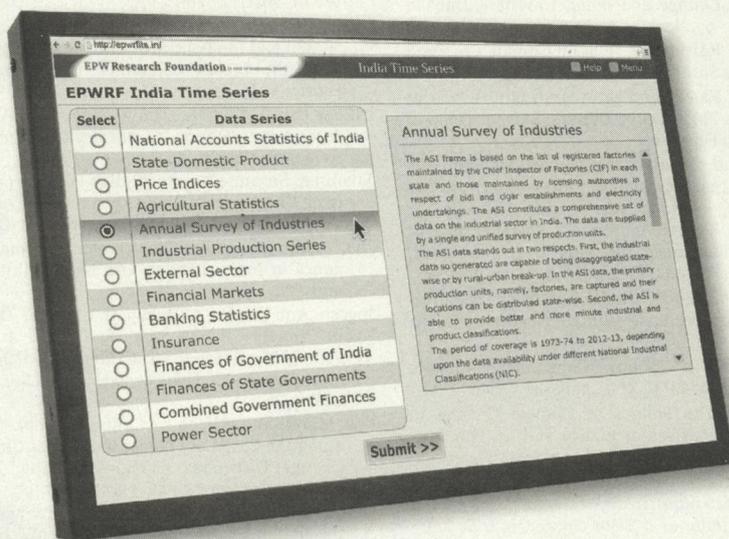
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