The Elephant in the Room: The Rise and Role of India in the Climate Change Negotiations.

by

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Abstract

The climate change negotiations under the United Nations Framework Convention on Climate Change have been ongoing since the first conference of the parties in 1995. Twenty years on there has been little progress reducing greenhouse gas emissions, the climate regime is in a state of flux and the role of developing countries therein is changing. During this period the majority of the work on climate change from within the International Relations discipline has been framed in a neoliberal institutionalist or neorealist frame. Studies in the climate policy canon have been predominantly similarly located, albeit implicitly. In its focus on India this dissertation provides a bridge between the climate policy literature and the theoretically framed climate change policy studies in the International Relations literature.

This dissertation employs the Critical International Relations theoretical framework of Robert Cox. His theory outlines a 'framework for action' that enables and constrains how states act, and how they conceive of their agency. This framework, or historical structure, is created by a particular configuration of the forces exerted by ideas, institutions, and material capabilities, which when aligned, create a hegemonic historical structure. In the climate negotiations, India has been a vocal proponent of the ideas of equity and common but differentiated responsibilities from the earliest days of the Convention. India's changing material circumstances and geo-political status in the past decade raised the question of its role in the regime in relation to its long-supported ideas.

This is a qualitative case study using documentary evidence triangulated with interview data from a range of key Indian stakeholders. I found that in the transition from abstract principle to operational precept the intersubjective idea of addressing climate change did not transmute into an intersubjectively shared idea of differentiation. Furthermore, once the idea of differentiation was to be operationalised in the negotiations, its primacy, indeed its very "intersubjectiveness", was contested by the idea of symmetry of obligations and responsibility. The ongoing regime flux is the outcome of this contestation between ideas held collectively by groups, as no stabilising hegemonic historical structure has been created. India's emergence has been insufficient to reinstate differentiation as an intersubjectively held idea and it is thus unable to secure a hegemonic historical structure in favour of differentiation.

Dedication

This work is dedicated to Deirdre who is deeply and daily missed.

Life is a process of becoming, a combination of states we have to go through.
Where people fail is that they wish to elect a state and remain in it.
This is a kind of death.
– Anais Nin –

Most people believe the mind to be a mirror, more or less accurately reflecting the world outside them,
not realizing on the contrary that the mind is itself the principal element of creation.
– Rabindranath Tagore –

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It is said that it takes a village to raise a child; well, this is my child, and these are the people who inhabit this village.

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And lastly, my thanks go to DSL who helped me navigate through the swamplands and who (still) reminds me of Robert Frost's phrase: "the best way out is always through".

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Abbreviations and glossary

AAU.....Assigned Amount Unit (aggregate amount of CO_2 equivalent emissions - unit created pursuant to KP Art. 17/Emissions trading)

ADP.....Ad Hoc Working Group on the Durban Platform for Enhanced Action

AF.....Adaptation Fund

AGBM.....Ad hoc group on the Berlin Mandate

Annex I.....Parties to the Convention: industrialized countries, OECD, EIT counties (see Non-Annex I below)

Annex B.....Parties to the Kyoto Protocol having binding emission reduction targets

APEC.....Asia-Pacific Economic Cooperation

APP.....Asia-Pacific Partnership on Clean Development and Climate

AR4.....Fourth Assessment Report (of the IPCC)

AR5.....Fifth Assessment Report (of the IPCC)

ASEAN.....Association of Southeast Asian Nations

AWG-LCA.....Ad hoc group on long-term cooperative action

AWG-KP.....Ad hoc working group on further commitments for Annex I countries under the Kyoto Protocol

BAP.....Bali Action Plan

BAPA.....Buenos Aires Plan of Action

BAU.....Business as Usual

BEE.....Bureau of Energy Efficiency

BGE.....BASIC Group of Experts

BJP.....Bharatiya Janata Party

CBDR & RC.....Common but differentiated responsibilities & respective capabilities

CCFU.....Climate Change Finance Unit

CCU.....Climate Change Unit/Division

CDM.....Clean Development Mechanism

CER.....Certified Emission Reduction (unit created pursuant to KP Art 12/ Clean Development Mechanism)

Cess.....A tax (Indian tax on coal)

CIRT ..... Critical International Relations Theory

CMP ..... Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol (initially known as the MOP)

CTBT ..... Comprehensive Nuclear Test Ban Treaty

CO_2 ..... Carbon Dioxide – one of the GHGs covered by the Kyoto Protocol

CO_2e ..... Carbon Dioxide equivalent – comparative measure of global warming potential of the range of GHGs

COP ..... Conference of the Parties to the UNFCCC

Congress ..... Indian National Congress Party

CTCN ..... Climate Technology Centre and Network

EGLCSIG ..... Expert Group on Low Carbon Strategies for Inclusive Growth; also called the low carbon expert group (India)

EGTT ..... Expert Group on Technology Transfer

ET ..... Emissions trading

ENB ..... Earth Negotiation Bulletin (hosted by IISD)

ERU ..... Emission Reduction Unit (unit created pursuant to KP Art 6/ Joint Implementation)

FAR ..... First Assessment Report (of the IPCC)

Flexible Mechanisms ..... Emissions trading (ET), Joint Implementation (JI), and the Clean Development Mechanism (CDM)

FSF ..... Fast-start Finance

FYP ..... Five Year Plan

G8 ..... Group of 8 highly industrialized States: France, Germany, Italy, the United Kingdom, Japan, the United States, Canada, and Russia(up until 2014)

G20 ..... Group of 20 States: Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Republic of Korea, Mexico, Russia, Saudi Arabia, South Africa, Turkey, the United Kingdom, the United States and the European Union

GCF ..... Green Climate Fund

GEF ..... Global Environment Facility

GEG ..... Global Environmental Governance

GHGs ..... Greenhouse Gases

GIM ..... Green India Mission

GW .....Gigawatt = 1000 MW

HDI .....Human Development Index

ICA.....International Consultation and Analysis

IMF .....International Monetary Fund

INC .....Intergovernmental Negotiating Committee

INCCA .....Indian Network of Climate Change Assessment

INDC.....Intended Nationally Determined Contribution

INR .....Indian Rupees (Rs)

IPCC.....Intergovernmental Panel on Climate Change

IPR.....Intellectual Property Rights

IR/T.....International Relations / Theory

JI.....Joint Implementation

JNNSM .....Jawaharlal Nehru National Solar Mission

KP.....Kyoto Protocol to the UNFCCC

LCEG .....Low Carbon Expert Group; see also EGLCSIG above

LDCF.....Least Developed Countries Fund

Lok Sabha.....Lower house of India's Parliament

LTF .....Long Term Finance

LULUCF .....Land use, Land-use Change and Forestry

MEA .....Ministry of External Affairs (India)

MEF .....Major Economies Forum

MoEF .....Ministry of Environment and Forests (India) (prior to 2014)

MoEFCC.....Ministry of Environment, Forests and Climate Change (India) (Ministry renamed after BJP win in 2014)

MNES .....Ministry of Non-Conventional Energy Sources (India)

MNRE .....Ministry of New and Renewable Energy (India)

MOP .....Meeting of the Parties to the Kyoto Protocol (latterly called the CMP)

MPI.....Multidimensional Poverty Index

MRV.....Measurement, Reporting and Verification

Mtoe.....Million tons of oil equivalent

MW ..... Megawatt – a million Watts (10^6 Watt)

NAI ..... Non-Annex I Parties to the Convention

NAM ..... Non-Aligned Movement

NAMA ..... Nationally Appropriate Mitigation Action

NAPCC ..... National Action Plan on Climate Change

NCEF ..... National Clean Energy Fund (India)

NGO ..... Non-Governmental Organisation

NMEEE ..... National Mission for Enhanced Energy Efficiency

NMGI ..... National Mission for a Green India; also GIM

NMSA ..... National Mission for Sustainable Agriculture

NMSH ..... National Mission on Sustainable Habitat

NMSHE ..... National Mission for Sustaining the Himalayan Ecosystem

NMSKCC ..... National Mission on Strategic Knowledge for Climate Change

NPT ..... Treaty on the Non-Proliferation of Nuclear Weapons

NWM ..... National Water Mission

Non-Annex I ..... Parties to the Convention: mostly developing countries

ODA ..... Official Development Assistance

OPEC ..... Organization of the Petroleum Exporting Countries

PA ..... Paris Agreement

PAT ..... Perform, Achieve and Trade

PMCCC ..... Prime Minister's Council on Climate Change

ppm ..... Parts per million (measurement of concentration in atmosphere)

QELRO ..... Quantified Emission Limitation and Reduction Objective

QERT ..... Quantified Emission Reduction Target

QELRC ..... Quantified Emission Limitation and Reduction Commitment

Raj Sabha ..... Upper house of India's Parliament

RMU ..... Removal Unit (unit of GHGs created pursuant to Marrakech Accords)

Rs ..... Rupees (also, INR)

SAARC ..... South Asian Association for Regional Cooperation

SAR ..... Second Assessment Report (of the IPCC)

SBI.....Subsidiary Body for Implementation

SBSTA.....Subsidiary Body for Scientific and Technological Advice

SCCF.....Special Climate Change Fund

SCF.....Standing Committee on Finance

SPM.....Synthesis (of IPCC ARs) for Policy Makers

TAR.....Third Assessment Report (of the IPCC)

TPCES.....Total primary commercial energy supply

TEC.....Technology Executive Committee

TTF.....Technology Transfer Framework

TNA.....Technology Needs Assessment

UNDP.....United National Development Programme

UNEP.....United National Environment Programme

UNFCCC.....United Nations Framework Convention on Climate Change

UNGA.....United Nations General Assembly

UNSC.....United Nations Security Council

WB.....World Bank

WG.....Working Groups of IPCC authors for the Assessment Reports

WTO.....World Trade Organisation

Selected UNFCCC country groupings

AOSIS.....Alliance of Small Island States

BASIC.....Brazil, South Africa, India & China

G77 + China.....Largest intergovernmental organization of developing countries

LDC.....Least Developed Countries

LMDC.....Like-Minded Developing Countries: Bolivia, China, Cuba, Dominica, Ecuador, Egypt, El Salvador, India, Iran, Iraq, Malaysia, Mali, Nicaragua, Philippines, Saudi Arabia, Sri Lanka, Sudan, Venezuela.

SIDS.....Small Island Developing States

Umbrella Group.....US, Canada, Japan, Australia, New Zealand, Norway, Iceland, Russia and Ukraine

1 Introduction

In the final days of the snowed-in United Nations Framework Convention on Climate Change's (UNFCCC) Copenhagen Conference of the Parties (COP) in 2009 – when the public-relations juggernaut that was "Hopenhagen" was clearly grinding to a halt, without agreement on a fair and binding treaty or a confirmed second-commitment period of the Kyoto Protocol – rumours surfaced concerning the behind-the-scenes role of Brazil, South Africa, India and China (BASIC). Depending on which reports on the COP one reads and believes, a BASIC meeting held on the 18th of December 2009 was "inadvertently" stumbled upon by President Obama of the United States of America (Express News Service, 2009; Lustig, 2009; Stone, 2009). This meeting was apparently pivotal in the formulation of the Copenhagen Accord, which saved the multilateral process from complete stalemate that year, even though the Accord was not accepted as a COP decision.

This widely reported anecdote was central to some of my earliest thoughts, and prompted two lines of questioning for me. The first line of questioning related to the seemingly stuttering multilateral process itself and the influence that might have on state-level ambition and therefore on global mitigation efforts.

For the past 20 years, sovereign states have met once a year as a Conference of the Parties to the UNFCCC. One of the primary reasons for doing so - as set out in the objective (Article 2) of the Convention – is to achieve a "stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system". This stabilisation should also take place within an unspecified time-frame, which would still allow ecosystems time to adapt naturally to changes and ensure unthreatened food production, while in addition enabling sustainable economic development. At the time of writing (November 2015), however, the negotiations among signatories to the UNFCCC have failed to stabilise greenhouse gas emissions, and globally carbon dioxide (CO_2) emissions in particular have continued to rise since 1992 (WMO Global Atmosphere Watch Programme, 2014).

The apparent shakiness of the multilateral process (as embodied by the UNFCCC) and the failure of international cooperative negotiations to effectively compel the achievement of meaningful emissions reductions by Annex B[1] countries to date has thus increasingly turned the

[1] Annex B countries are developed countries and "Economy In Transition" (EIT) countries that agreed to an emissions reduction target under the Kyoto Protocol. For a list see: http://unfccc.int/kyoto_protocol/items/3145.php

spotlight on national-level mitigation efforts. State-driven mitigation efforts feature prominently in the voluntary "pledge-and-review" approach favoured as part of the so-called "bottom-up" alternative to the "top-down" focus of the Kyoto Protocol in the climate change literature (Rayner, 2010). Thus it seemed particularly pertinent to explore the interaction between state-based drivers and international forces on global emission reduction efforts.

The second line of questioning prompted by the anecdote related to the changing role of developing countries in the climate change negotiations. That the larger developing countries like China, Brazil, India and, to some extent, South Africa had been increasingly flexing their diplomatic muscles on the international stage in other fora had been evident for some time by 2009's COP15. This increased influence has been even more apparent in the wake of the global economic recession that evidently weakened some developed countries' economies relative to the less affected economies of larger developing countries like Brazil and South Africa.

The question of the changing role of developing countries was underlined again in 2011. The wording of Paragraph 2[2] of the Durban Platform for Enhanced Action has ushered in the possibility that developing countries – particularly larger ones like India and China – will also have to take on mitigation targets of some sort under the new agreement (whatever its form), to be negotiated between 2012 and 2015 (UNFCCC, 2012a: decision 1/CP.17).

Thus these two lines of questioning led me to pose myself the following broad questions: How fundamentally different is the "new geopolitics" of climate change? Given that large developing countries like India have been at the forefront of calls for equity and fairness in the international climate change regime, what, if anything, would be the effect on the regime should they become more dominant players? If the international, multilateral "top-down" approach as embodied in the Convention's Kyoto Protocol is not producing emission reductions as fast as science suggests is necessary to avoid anthropogenic climate change, would not state-driven (i.e. national level or even local-level) mitigation actions become more important to the overarching agenda of reducing emissions? Therefore, would an explanatory theory that does not hold to a strict national-international analytical division be a more useful analytical tool than one that does? With all these questions in mind I formulated the research question that this dissertation will explore.

[2] In Article 7 the COP17 "Also decides to launch a process to develop a protocol, another legal instrument or an agreed outcome with legal force under the Convention ***applicable to all Parties*** (author's emphasis), through a subsidiary body under the Convention hereby established and to be known as the Ad Hoc Working Group on the Durban Platform for Enhanced Action".

1.1 Research Question

In response to these areas of interest I decided to ask: what are the factors that have shaped India's position at the UNFCCC climate change negotiations? My broader aim is to explore why India's stance on the equitable distribution of the burden of effort to reduce emissions has not markedly changed over more than two decades despite India's remarkable emerging economy, national institutional developments and the evolution of the UNFCCC in the same period. I have decided to do this exploration and analysis by employing a Coxian Critical International Relations framework which will be elaborated on below in chapter two.

1.2 Background

Though interdependent and interlinked in reality, it is useful to separately consider the scientific, institutional and geopolitical contexts that form the background to this question. These three contexts are outlined below, in order to provide a rationale for the choice and current importance of the research question.

1.2.1 The science of climate change

The idea that temperatures would rise in response to the concentration of greenhouse gases (particularly – but not limited to – Carbon Dioxide or CO_2) in the atmosphere was first postulated by Swedish scientist Svante Arrhenius[3] in 1896 (Paterson, 1996). However, it was only after the technological and institutional arrangements related to collecting CO_2 concentration and weather data became more advanced in the 1960s that awareness of climate as an issue began to leave the lab and enter mainstream consciousness. Continued research and data collection led to a declaration at the 1979 World Climate Conference directly linking fossil fuel burning, deforestation and land-use change with increases in atmospheric carbon dioxide levels. The declaration stated that it was plausible that increased CO_2 levels could contribute to the warming of the lower atmosphere, which in turn would affect temperature distribution, rainfall etc. Furthermore the declaration called on nations "to prevent potential man-made [sic] changes in climate that might be adverse to the well-being of humanity" (Paterson, 1996). Broadly speaking, this sentiment was to underpin future discussions and efforts in the climate sphere.

Nearly 30 years later, the Intergovernmental Panel on Climate Change (IPCC) issued its Fourth Assessment Report in 2007, in which it stated that the "warming of the climate system is

[3] Although Arrhenius was the first to draw this particular link he was building on earlier 19th century research by Baron Jean Baptiste Joseph Fourier and British scientist John Tyndall.

unequivocal" (IPCC, 2007a) and furthermore that "most of the observed increase in global average temperatures since the mid-20th century is very likely (greater than 90%) due to the observed increase in anthropogenic GHG concentrations. It is likely (greater than 66%) there has been significant anthropogenic warming over the past 50 years averaged over each continent (except Antarctica)" (IPCC, 2007b). The assessment report continued that there was "high agreement"' and "much evidence"[4] that current mitigation policies and related sustainable development practices will ensure that global GHG emissions will continue to rise over the next few decades (IPCC, 2007b). Later academic research provided emission scenarios demonstrating that the "probability of exceeding 2°C rises to 53–87% if global GHG emissions are still more than 25% above 2000 levels in 2020" (Meinshausen et al., 2009).

A 2°C (about 35.6 degrees Fahrenheit) temperature increase has gained widespread acceptance as the point beyond which adaptation to climatic changes by human society and natural ecosystems becomes increasingly difficult, with concomitantly increased risks of social and ecological disruption due to water and food shortages, health impacts and biodiversity loss (Richardson et al., 2009; IPCC, 2012). This is still, however, a contentious limit and well known figures like NASA scientist James Hansen have called it "a prescription for long-term disaster" (McKibben, 2012); the Association of Small Island States (AOSIS), Least Developed Countries (LDCs) and Africa Group blocs all champion a 1.5°C limit in temperature rise.

Since about 2009, the idea of planetary boundaries has gained traction in the academic and even in the more mainstream literature. Planetary boundaries in this sense represent biophysical thresholds: to go beyond the conjectured "safe operating space" is to enter a "zone of uncertainty" that is postulated to be a tipping point beyond which there is no possibility for stopping the changes wrought (Rockström et al., 2009a). Climate Change is only one of the nine earth-system processes but it is one of the three – climate change, biodiversity loss rates and nitrogen-cycle interference – that analysis suggests have already transgressed their safe boundaries. The other six earth-system processes are global freshwater use, change in land use, ocean acidification and interference with the global phosphorous cycle (part of the nitrogen cycle), stratospheric ozone depletion and atmospheric aerosol loading and chemical pollution (Rockström et al., 2009b)

The writing of this dissertation has coincided with a series of extreme weather events around the world. In 2012 the United States of America alone experienced a gamut of events from

[4] This is IPCC terminology for qualitatively assessed data giving a relative sense of the amount and quality of evidence - more discussion of the IPCC terminology and assessments follows in section 2 of the dissertation.

extreme heat and raging wild-fires in several western states to floods in June in Minnesota and Florida while two-thirds of the country was experiencing drought (Freedman, 2012). The year 2013 was classified the 6th hottest on record and it saw the strongest tropical cyclone on record to hit land – the devastating Typhoon Haiyan. While Australia perspired through its hottest year ever, China and Russia suffered severe flooding and the United Kingdom experienced its coldest spring since 1962 (Kostigen, 2014; Vaughan, 2014).

The first two months of 2014 saw an unusual number of rain, cold and heat extremes across the globe – for instance, while on some days Chicago was colder than the poles, California experienced no winter (Erdman, 2014; Huffington Post, 2014; Vidal, 2014). While it is not possible to draw direct causal links between each event and climate change, an increase in the heat in the atmosphere caused by heat-trapping carbon dioxide molecules creates conditions that facilitate extreme weather events. It is precisely this increase in extreme weather events that climate scientists posited in the fourth assessment report[5] (IPCC, 2007b) and in the "Special Report on Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation" (SREX) (IPCC, 2012). Some scientists, like Thomas Lovejoy, a former World Bank chief biodiversity advisor, suggest that "[i]f we're seeing what we're seeing today at 0.8 degrees Celsius [rise above pre-industrial temperatures], two degrees is simply too much" (McKibben, 2012). Thus the combination of empirical science and observable events underscores the fact that the climate is changing and therefore that the window for negotiating reduced emissions, to forestall even worse future changes, is rapidly closing.

[5] "Altered frequencies and intensities of extreme weather, together with sea level rise, are expected to have mostly adverse effects on natural and human systems" (3.3.5) (IPCC 2007b)

1.2.2 Institutional background

The end of 2012 marked the end of the first commitment period of the Kyoto Protocol to the UNFCCC. The European Community and 37 industrialised countries (known as Annex I countries[6]), having agreed to an average 5% reduction on 1990 emission levels in the form of Quantified Emissions Limitation and Reduction Objectives (QELROs), should have reduced their emissions by at least that percentage by the end of 2012. The "Final Accounting Period" for the first commitment period began on the 10th of August 2015; it will lead to a comprehensive compliance assessment by the Secretariat that should be completed in early 2016 (UNFCCC, 2015a). A final report for each Annex B[7] Party will then be published. Preliminary figures released by the UNFCCC Secretariat claim a 22.6% reduction from the 1990 baseline by the end of 2012 (Nuttall & Hayes, 2015) with individual countries' contributions varying widely as shown in Figure 1, although not all of this was attributed to the KP.

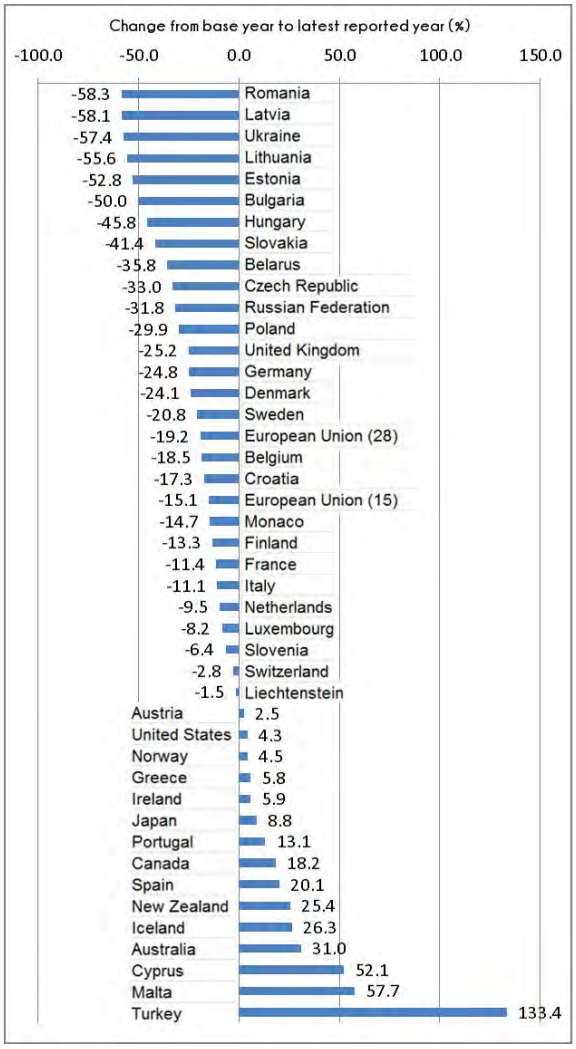


Figure 1: Percentage change of total aggregate greenhouse gas emissions of Annex I Parties, 1990-2012 (including LULUCF)
Source: UNFCCC (2015f)

It should also be taken into account that, however successful these Annex I countries may actually be in the official accounting, together they represent only a fraction of global greenhouse gas emissions (UNFCCC, 2007a). Indeed even 100% compliance would have a negligible impact on slowing climate change, given that the Kyoto targets lacked the serious ambition really needed to avoid "dangerous" climate change. From the beginning of the second commitment period – 1st of January 2013 – this fraction will be even less, as just days after the end of COP17 Canada withdrew from the Kyoto Protocol and Russia and Japan refused to take on new emission-reduction targets. Thus legally binding emission reduction targets will apply to

[6] Annex I roughly equated to OECD membership at the time the Convention was agreed and thus comprised developed countries, whereas developing countries, were termed Non-Annex I (NAI) countries.
[7] Annex B Parties are countries with quantified emission limitation or reduction commitments and are so called as they are listed in Annex B of the Kyoto Protocol.

only 34 industrialised countries (UNFCCC, 2012b), the commitments of which together represent only approximately 17% of global GHG emissions (SEAN-CC, 2012).

Critics point to numbers like this to question the utility of both the Protocol and the multilateral UNFCCC process that produced it. Indeed, as the process has stuttered over the past few years, there has been an ongoing debate between proponents of a "bottom-up", pledge-and-review system and supporters of the "top-down" system currently exemplified by the Convention's Kyoto Protocol and led by multilaterally built consensus on targets (Dubash & Rajamani, 2010; Hare et al., 2010; Rayner, 2010; Bodansky, 2011). Supporters of the Kyoto Protocol – including the BASIC countries – point to the fact that the Protocol remains the only legally binding agreement to reduce emissions. Furthermore they maintain that the Protocol's differentiation between Annex I and Non-Annex I countries is key to operationalising concepts of historical responsibility and common but differentiated responsibility (CBDR).

In paragraph 1 of the Copenhagen Accord (UNFCCC, 2010: decision 2/CP.15) and then paragraph 4 of the Cancun Agreement (UNFCCC, 2011: decision 1/CP.16), countries recognised that GHG emissions would have to be cut in order to maintain global temperature increase below 2°C above pre-industrial levels. Several scientists have pointed out that the combined Copenhagen Accord emissions-reduction pledges will be insufficient to keep the temperature rise to below 2°C (Meinshausen et al., 2009; Rogelj et al., 2010). However, states' disagreements over the status of the Protocol, the role of developing countries in emissions reduction and the flux and uncertainty in the process resulted in a compromise agreement in the form of the Durban Platform for Enhanced Action (DPEA) at COP17 in 2011.

Despite the applause and palpable relief at the end of the marathon 2011 COP17, the Durban Platform for Enhanced Action (DPEA) left the climate change regime in a state of flux, since, it called for a decision by COP21 in 2015 to adopt a "protocol, legal instrument or agreed outcome with legal force" (UNFCCC, 2012a: decision 1/CP.17, para 4) to be implemented from 2020. The DPEA effectively delayed the hard decisions regarding emissions reductions to 2015, with implementation by 2020; these decisions will eventually be made in the context of an ever-narrowing window of opportunity to keep temperature increase below a 2°C rise. Achim Steiner, head of the UNEP, put the dilemma succinctly when he remarked that using a 2020 emissions "peak" was a high-risk strategy, and that a "bottom-up" approach by nations "needs a top to which it can aim – and a time-line for building that top is narrowing every year" (Steiner, 2012).

In addition to the internal problems besetting the UNFCCC, several other fora have been established in the past few years that also discuss climate change issues, but in a much less inclusive format. For instance, the Group of 8 (G8)[8] industrialised countries, which meets annually to discuss international economic issues, convened the Gleneagles Dialogue on Climate Change, Clean Energy and Sustainable Development in November 2005 and the USA established the Major Economies Forum on Energy and Climate (the MEF) as an annual high-level political meeting. In addition the USA was instrumental in setting up the Asia-Pacific Partnership on Clean Development and Climate (Vihma, 2009). These are all non-UN initiatives with a limited membership, no time-tables, targets or compliance mechanisms (i.e. they are voluntary); they primarily emphasise technology and consider climate change only in the context of a range of other topics. Most importantly, in the context of this discussion of the UNFCCC and Kyoto Protocol, these non-UN fora make no explicit differentiation between the roles or responsibilities of developed and developing countries (van Asselt, 2007).

Thus the current state of flux in the climate change regime and the ongoing evolution thereof makes it a very interesting time to undertake the research presented here.

1.2.3 Geopolitical milieu

It seems almost redundant to state that the world as it is now is a radically different place to the world in which the UNFCCC first came into being in 1992, or even to the world of 2005, when the Kyoto Protocol was finally ratified and came into force. UNFCCC negotiations do not take place in a vacuum, but are influenced and affected by the prevailing geopolitical winds.

Larger developing countries like China, Brazil, India and, to some extent, South Africa have been increasingly flexing their diplomatic muscles on the international stage, in other fora. In 2003, Brazil, India and South Africa institutionalised their trilateral engagement by forming IBSA (India, Brazil, and South Africa), which is driven by the Foreign Ministers through the Trilateral Commission. This initiative facilitates ministerial-level consultations in order to voice common concerns, deepen ties and contribute to constructing a new international architecture (IBSA, 2015). It is explicitly acknowledged as a stepping stone towards broader "south-south" developing country cooperation and the re-legitimatisation of failing global governance institutions (like the UN) through increased regional representation (Alden & Vieira, 2005). In this way IBSA can be seen as one of several attempts by larger developing countries to be less

[8] G8 members are Germany, France, the United Kingdom, Italy, Japan, the United States, Canada (since 1976) and Russia (since 1998) (Peichert & Meyer-Ohlendorf, 2008); Russia was excluded/withdrew in 2014 over its annexation of Crimea.

reactive and more proactive in setting global agendas and often to situate themselves in leadership positions.

These four countries are also grouped with Russia as countries considered to be at a similar stage of emergence in terms of their economic development. The acronym BRIC (when it still excluded South Africa) was coined in 2001 by Jim O'Neill, then the research director of Goldman Sachs (Hounshell, 2011), and denoted a group of countries that together looked extremely likely to substantially increase their share of world GDP. Indeed in 2001 China's and India's economies, when calculated using a Purchasing Price Parity (PPP) weighting (rather than current GDP), were the second and fourth largest global economies respectively (O'Neill, 2001). South Africa lobbied, and was accepted as the "S" of BRICS in 2010. Despite this growth, the countries of the 'global South' continue to have lower per capita incomes than those of the industrialised states. One recent study, for instance, projected that "average income per capita … will still be significantly higher in the advanced economies than the emerging economies in 2050" and attributed this to the enormous extent of the existing disparity in income per capita (Hawksworth & Chan, 2015). In the past decade BRICS has become shorthand for a group of countries increasingly accepted as having the potential to challenge the existing order of the international system (Downie, 2015) – particular in relation to global economic governance (Kahler, 2013). In other areas of international governance, a recent analysis of their voting patterns at the UN General Assembly (UNGA) indicates a high and growing degree of voting cohesion between BRICS, although nuclear disarmament and human rights remain persistent areas of divergence (Ferdinand, 2014).

As of 2009, China, Brazil, India and South Africa belong to the enlarged Group of 20 (G20) – a high-level body for international economic cooperation that includes the G8 industrialised countries. This enlarged G20 indicates an acknowledgement on the part of the G8 industrialised nations of the growing economic standing and importance to long-term decision-making of large developing countries (Ghosh, 2009a). Developing countries are increasingly a force to be reckoned with in any global economic or diplomatic undertaking, as has been particularly evident in the wake of the global economic recession that began in America in 2008. The global "Made in America" recession weakened some developed countries' economies relative to the less affected economies of larger developing countries like Brazil (Barrionuevo, 2008). It has also "undermined the capacity and credibility of the world's global economic architects – the United States and Europe" while accelerating nascent trends toward a more multi-polar world (Quinlan, 2011).

The UNFCCC negotiations are not immune to any of these changes in affluence, influence and agenda setting. A fundamental issue is that, while industrialised, developed countries still have higher per capita incomes (even since the recession of 2008) despite slower economic and population growth rates, developing countries of the South have lower incomes per capita, growing populations and (often) growing economies (Whalley & Walsh, 2009). This opposition creates differing priorities between developed and developing countries; however, larger developing countries' interests are likely to alter with time and development. Consider that by 2010 India had joined China as one of the top five net importers of oil along with USA, Germany and Japan (Siddiqi, 2011) and that a 2012 report by the European Commission put the average Chinese person's carbon footprint only just a little lower than that of the average European (PBL, 2015). Understanding how the changes "outside" the UNFCCC negotiations influence the process and the negotiating stance of India at the UNFCCC will be an important part of this dissertation.

1.3 Situating the research in the literature

In order to situate the research in the context of the broader literature, this dissertation has sought to find overlapping literatures relating to international climate change science and policy, India, and critical International Relations theory. The area of this overlap is the locus of this dissertation. This approach of reviewing literatures has been called the "bedraggled daisy" approach to situating research (Luker, 2008) but can also be visualised as the more familiar Venn diagram in Figure 2 In this particular case, however, there appears to be little that could be situated at the nexus of all four of these literatures.

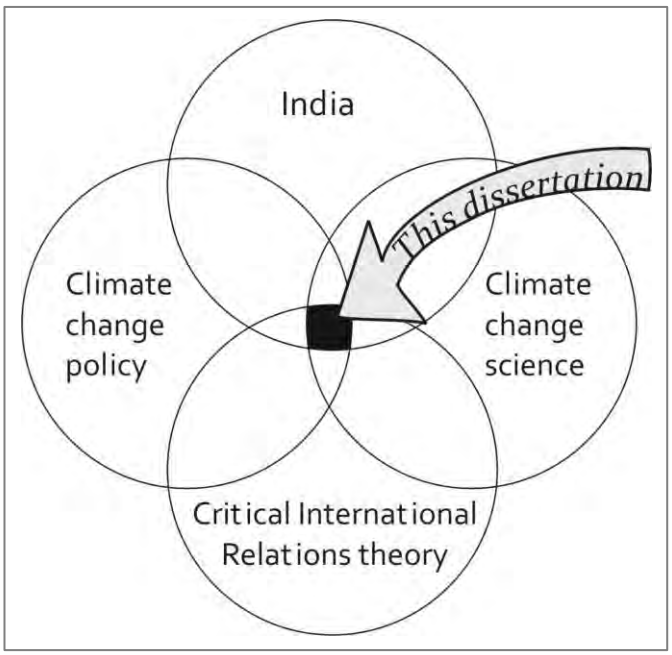


Figure 2: Venn diagram showing overlapping literatures

Literature is available, however, where any two of these circles overlap – for instance, literature on India and climate change policy, or climate change science focussing on the impacts on India. In response, these literatures have been woven throughout the four chapters in Section II, and the latter literature in particular has been signposted under the heading of science in the ideas sub-sections. The climate change science literature alone is voluminous and the research purpose would not be served by reviewing it all. In fact the review and assessment of the scientific literature has already been undertaken in the form of the IPCC's Assessment Reviews in 1990 (IPCC, 1990), 1995 (IPCC, 1995), 2001 (IPCC, 2001), 2007 (IPCC, 2007b), and 2014(IPCC, 2014). Thus the relevant science of the reviews is discussed where appropriate during each of the phases in Section II.

Where International Relations as a discipline and expositions of climate change policy overlap, the focus may be on the determinants of successful climate regime formation or operation (Bättig & Bernauer, 2009; Bailer & Weiler, 2014), international diplomacy and negotiation (Ott, 2001; Alden & Vieira, 2005); climate-related conflict (Theisen, 2008; Ahmed, 2011) and the impact on food and water availability (Tir & Stinnett, 2012; Hendrix & Haggard, 2015; Yeeles, 2015), the role of carbon markets (Caney, 2010; Purdon, 2013; Ervine, 2014) and a focus on the role of actors – business, epistemic communities, NGOs and civil society (Newell & Paterson, 1998; Bernstein & Cashore, 2007; Foa, 2010; Bernauer, 2013; Prys & Wojczewski, 2015). Many of these same concerns are reflected in a number of texts exploring the international politics of climate change that have emerged since 1992 (Paterson & Grubb, 1992; Luterbacher & Sprinz, 2001; O'Neill, 2009) but which were presaged by texts on the broader topic of environmental change and IR (Hurrell & Kingsburg, 1992; Vogler & Imber, 1996).

As an exercise to assess the overlap of (three venn circles) International Relations, climate change and India-focused literature, a thorough scoping of the literature in peer-reviewed International Relations (IR) journals was undertaken. Table 1 ranks the top fifteen journals in this subject category according to the ISI Web of Knowledge five-year impact factor rankings (Thompson Reuters, 2015). The search results for the very broad topic-related search strings are included in the final three columns – as can be seen below, India and climate change negotiations at the UNFCCC have been the subject of very few peer-reviewed journal articles in the International Relations disciplinary sphere. Notably, the few higher results in the table above are a result of India being mentioned as an example – usually in the same sentence as China and sometimes, Brazil – not of India being the focus of the articles surveyed.

Table 1: Search results from top 15 International Relations journals
Source: Thompson Reuters (2015)

			Metrics		Search strings		
Rank	Journal	Available from	Impact factor	5 year impact factor	India AND "climate change" NOT nuclear NOT Pakistan	India AND "climate change" AND equity NOT Pakistan	India AND "climate change" AND "UNFCCC"
1	*International Organization*	1947	3.019	4.922	4	2	0
2	*World Politics*	1948	2.45	4.02	0	0	0
3	*International Security*	1976	4.455	3.899	0	0	0
4	*Journal of Peace Research*	1964	3.387	3.549	11	2	1
5	*Journal of Conflict Resolution*	1957	1.609	3.099	10	1	0
6	*Marine Policy*	1995	2.61	2.768	0	0	0
7	*European Journal of International Relations*	1995	1.972	2.541	3	0	4
8	*International Studies Quarterly*	1992	1.705	2.189	5	0	1
9	*Security Dialogue*	1999	1.356	2.078	4	0	1
10	*Foreign Affairs*	1922	2.009	1.951	12	8	1
11	*Review of International Political Economy*	1994	1.875	1.929	1	0	0
12	*J. Common Market Studies*		1.855	1.814	no access to this journal		
13	*New Political Economy*	1997	1.75	1.731	8	3	2
14	*Common Market Law Review*	1963	1.881	1.723	4	1	3
15	*Review of International Organizations*	2006	1.714	1.698	8	1	7

Despite the apparent dearth of literature focusing on climate change in the IR journals, there is a wide array of literature in the climate policy field. Indeed, since the turn of the century, peer-reviewed journals like *Global Environmental Change*, *Climate Policy*, *Global Environmental Politics*, *Nature Climate Change* and *Climate and Development* have been established, focusing specifically on the policy aspect of climate change in contrast to the several natural science journals that have publish articles on the science of climate change.

Much of this international climate policy literature would be, from the perspective of an International Relations theorist, broadly categorised as neoliberal-institutionalist in its theoretical perspective, whether or not the authors themselves explicitly position themselves as such. In this subset of the literature the emphasis is on the nature, architecture and agency of

international institutions (the UNFCC in this case) and on how the institution could be amended, augmented or replaced. The focus on an *institution* as an organisation or more broadly as a set of norms or rules underpins much of current writing in both Europe and the US (Aldy, Barrett & Stavins, 2003; Michaelowa, Tangen & Hasselknippe, 2005; Bäckstrand & Lövbrand, 2007; Evans & Steven, 2009; Bodansky, 2011; Verbruggen, 2011).

GEG literature burgeoned in the 1970s, and in the decades since has diversified from its initial single-issue focus (like migrating birds or whaling) and "simple" trans-boundary issues (pertaining to watercourses for instance) to the multi-scale, multi-actor issues of the late 20th and early 21st centuries (Andonova & Mitchell, 2010). The proliferation of multilateral environmental agreements under the auspices of the United Nations has driven the marked growth in analyses of the design of environmental institutions or regimes (Sanwal, 2007), placing many analyses (Levy, 1996; Thoms, 2003; Biermann & Dingwerth, 2004; Kanie, 2007) firmly in the neo-liberal-institutionalist paradigm since they focus on "overlapping networks of inter-state regimes" (Paterson, Humphreys & Pettiford, 2003). This interpretation of GEG was gradually contested by the growing conceptualisation of GEG as multilevel and trans-national governance including non-state stakeholders (Arts, 2005; Bäckstrand, 2008; Andonova, Betsill & Bulkeley, 2009; Andonova & Mitchell, 2010).

In this literature the multilateral climate change negotiations are conceptualised as taking place within a subset of global environmental governance that deals particularly with the thematic issue area of climate change (Biermann & Pattberg, 2008; Buehrs, 2009; Dellas, Pattberg & Betsill, 2011; Held, Hervey & Theros, 2011). Thus global *environmental* governance (GEG) is just one subset of global governance, along with, for instance, global economic governance (IMF, World Bank and WTO) and global security governance (UN Security Council, NATO etc.). GEG encompasses a very broad range of international environmental-policy issues, from waste to biodiversity, deserts, the oceans and the atmosphere (Chasek, Downie & Brown, 2010). In turn the climate regime complex is just one of many subsets of GEG, dealing exclusively with the negotiations on climate change and the current multilateralism embodied by the UNFCCC and an increasing number of other fora.

In the climate policy literature, this move was expressed in the rise of the concept of regime complexes – a loosely grouped set of issue-specific regimes (Keohane & Victor, 2011; Orsini, Morin & Young, 2013; Abbott, 2014). Also within this paradigm can be found literature on restructuring specific aspects of the architecture of the UNFCCC itself (Aldy, Barrett & Stavins, 2003; Evans & Steven, 2009; Keohane & Raustiala, 2010; Werksman, 2010) or addressing flaws

in the design of the market mechanisms under Kyoto Protocol (Michaelowa, Butzengeiger & Jung, 2005; Wettestad, 2009) or expositions on the workings of the climate-finance institutions (Roberts, Stadelmann & Huq, 2010; Saran, 2010; Schalatek, Bird & Brown, 2010). In contrast, writers of a more critical theoretical inclination are more likely to question the underlying issue of neo-luiberal capitalism and the global consumption that drives production, trade and the associated emissions (Newell & Paterson, 1998; Princen, Maniates & Conca, 2002; Dauvergne, 2010; Paterson, 2010; Purdey, 2010; Harris & Symons, 2013) or the very nature of the relationship between humans and the environment (Kolbert, 2007; Wapner, 2008; Antal & Hukkinen, 2010; Khor, 2010), for instance.

Within the literature on climate policy is a body of work focusing on the architecture of the climate-regime complex (Aldy, Barrett & Stavins, 2003; Biermann et al., 2009; Evans & Steven, 2009; Keohane & Raustiala, 2010; Bodansky, 2011; Verbruggen, 2011; Dirix et al., 2013). The main point of contention has long been between the proponents of so-called "top-down" architectures (Biermann et al., 2009; Hare et al., 2010) like the Kyoto Protocol and supporters of a more "bottom-up" approach (Rayner, 2010; Diringer, 2011). Top-down architectures are heavily reliant on institutional reinforcement of globally agreed-upon goals, entailing both mitigation-reduction targets and a timetable within which these should be achieved. While not explicitly discussed in terms of an international relations theoretical framework, this kind of architecture is very much in keeping with a neoliberal-institutionalism in which a common-resource/collective-action problem is addressed through the interactions of states as filtered through an international institution. Conversely, bottom-up architectures place prime importance on the sovereignty of states and the nationally determined nature of their actions, and consider institutions to be epiphenomenal, optional or merely facilitative – thereby sharing key features of IR neorealism, especially inasmuch as the insistence on the setting of nationally determined limits allows for calculations of relative gains in relation to other countries.

The overlap of climate policy and India is the site of a body of literature which has burgeoned since the late 2000s and particularly in the 2010s. India's rise on the international stage has made it the subject of several studies of its actions at the climate change negotiations (Betz, 2012; Michaelowa & Michaelowa, 2012; Hochstetler & Milkoreit, 2013; Negi, 2014). These are frequently found within the 'emerging powers' literature and often framed as political economy analyses (Mehra, 2008; Rastogi, 2011; Sengupta, 2012a) or alternatively, as more constructivist analyses (Gupta, 1999; Mathur & Varughese, 2009; Stevenson, 2011). In addition, much of the climate policy-India literature emanates from Indian Civil Society - one of the earlier and most

famous being Agarwal & Narain's 1991 book, "Global Warming in an Unequal World" (Agarwal & Narain, 1991) which sought to challenge the prevailing Developed-country view of how burden sharing should be allocated. Other more contemporary books have included several compilations - generally broad in scope - produced by think tanks and academic institutions (Michel & Pandya, 2009; Scott, 2011; Dubash, 2012a).

Much of the focus of the literature at the overlap of International Relations and India is focussed on its relations with Pakistan and China and nuclear security concerns (for instance Chiriyankandath, 2004; Pant, 2007; Ferdinand, 2014; Boggs, 2015) or competition for energy resources (Noronha, 2009; Siddiqi, 2011). Additionally, a prevalent IR focus concerns India's role as a regional power in Southeast Asia and as an Indian Ocean nation (Scott, 2011; Stewart-Ingersoll & Frazier, 2011) and post-cold war realignment (Chiriyankandath, 2004; Hurrell, 2006; Chacko, 2013). A flourishing strand of IR literature explores the role of the emerging powers in global governance, in exercising multilateralism and in moving from a post-cold war unipolar to a more multipolar order (Panagariya, 2008; Safadi et al., 2009; Heine, 2010; Nel, 2010; Roberts, 2011; Hurrell, 2013; Kahler, 2013; Mohan, 2013; Sidhu, Mehta & Jones, 2013).

What is lacking is a study which bridges the divide between the often theoretically-lite India-focused climate policy literature and the India and climate change-lite Critical IR literature. This is the lacuna this dissertation - a Critical International Relations theory-framed study of India's role in the climate change negotiations over the lifespan of the UNFCCC - intends to fill.

1.4 Theoretical framework

In order to explore the factors influencing India's changing role in the climate change negotiations, a critical theoretical or conceptual framework has been employed. A "critical" theory by its very nature does not preclude the possibility for change as the more "problem-solving" theories of neorealism and neoliberal institutionalism typically do. Since this dissertation explores how India's role has changed over time, it makes use of Robert W. Cox's critical theory, which proposes that at any point in time three types of forces (or potentials) – ideas, material capabilities and institutions – can be conceptualised as being in a historically specific configuration (Cox, 1985). This historicity creates a "framework for action" in which the three types of forces or potentials are reciprocally constitutive and influential. This framework may change over time as each of the three forces change and affect the prevailing configuration, which in turn enables or contrains the three types of forces. Thus any one of the forces could potentially be the driver for change, which might explain how the climate change regime might be transformed. Therefore the structure of international politics is capable of

change and may well already be changing, given that the material capabilities of key developing countries are changing and in so doing potentially changing the key institution in this field (the UNFCCC). The language of the Durban Platform for Enhanced Action places the idea of CBDR under scrutiny/pressure, as it does the notion of respective capabilities (RC) (both key tenets of the UNFCCC). This language could potentially provide impetus for change in the ideas force too, as changing the implementation of these key tenets would constitute a change in the intersubjective idea of justice and equity embodied in the Convention, which would in turn influence the institutional force and possibly create change. The conceptual framework is elaborated upon in Chapter 2 below.

1.5 Methodology

Cox is typically thought of as a neo-Gramscian critical theorist in the discipline of International Relations. As such, his theory posits that human consciousness has both a "constitutive and transformative" role to play in society. Indeed it is posited that the prevailing discourse in some ways actually "creates" the reality (Femia, 2009). Cox's theory thus lends itself to use in a qualitative method of inquiry that attempts to understand the ways in which different world views and conceptualisations are represented through language (in the case of the text of, and submissions to, the UNFCCC). The case study methodology allows for in-depth scrutiny of the case of India at the UNFCCC and is discussed in detail in Chapter 3 below .

1.6 Chapter outline

The thesis will be developed over the course of the following chapters. It has been divided into two sections: the first comprises the introduction, theoretical framework and methodology chapters; the second contains the four phases of analysis and the conclusion.

Thus Chapter Two of section one introduces the critical theory of international relations theorist Robert W. Cox, which will be used as the theoretical framework for the dissertation. On the whole this research has an explorative, emergent nature due to the "inescapable inter-subjective quality" (Kratochwil & Ruggie, 1986) of international regimes (of which climate change is but one), international collaboration and public discourse itself.

Chapter Three discusses the case study as a qualitative research methodology and its appropriateness for a study of India's role in the UNFCCC, as well as the different kinds of data generation and analysis employed in this study. This chapter concludes with an elaboration of the limitations and delimitations of the research.

Section Two begins with Chapter Four, which covers the period between 1988 and 1994, leading up to and including the negotiation of the UNFCCC in 1992. As in all four phases, an analysis is undertaken of the configuration and interaction of Robert Cox's three types of forces at, and between, the national level in India and the international level of the climate regime. Chapter Five covers the early years of the operation of the UNFCCC, from the first COP in 1995, through to the negotiation of strengthened commitments leading up to the Kyoto Protocol, and the operational rules in Marrakech 2004 – in sum, the pre-Kyoto Protocol years. The ratification of the Kyoto Protocol in 2005 initiates the third phase, which is analysed in chapter six. This phase encompasses the negotiations toward a second commitment period of the Kyoto Protocol and thus the (in)famous COP15 at Copenhagen, which did not secure that agreement. Chapter seven covers the period 2011 to 2015. 2011 was selected as the beginning of the fourth phase of analysis since the outcome of COP17 was the Durban Platform for Enhanced Action (ADP), which mandated a process in which a "protocol, legal instrument or agreed outcome with legal force applicable to all" should be negotiated (UNFCCC, 2012a: decision 1/CP.17). The ADP ushered in the negotiations surrounding the successor of the Kyoto Protocol, which would be agreed upon at COP21 in Paris in 2015 and implemented from 2020. The negotiations under the Durban Platform thus also make the 2011-2015 period a natural "unit" of analysis.

Finally, Chapter Eight concludes with a synthesis of the analysis of chapters Four, Five, Six And Seven and a concluding analysis on the role of India, the place of hegemony in the Coxian sense in the UNFCCC, and an overall answer to the research question posed.

2 Robert Cox's theory of the configuration of forces

It is the aim of this dissertation to examine and understand the role played by India in the climate change negotiations. The climate change regime under the UNFCCC is observably in a state of flux or change. Negotiations are underway to supersede the differentiated "Annexes" system of the KP with some other form of "protocol, legal instrument or agreed outcome with legal force under the Convention applicable to all" (UNFCCC, 2012a: 1/CP.17 para. 2), to be implemented from 2020. These negotiations are pursuant to the Durban Platform for Enhanced Action agreed upon at COP17 in South Africa in 2011 (UNFCCC, 2012a: 1/CP.17 para. 4).

Flux is also apparent in the broader international milieu, as larger developing countries like China, Brazil and India begin to exert more influence in different fora. India, Brazil and South Africa (co-ordinating as the IBSA dialogue forum), for instance, form the nucleus of the G20 in the WTO negotiations and had some success in putting agricultural liberalisation on the agenda, despite the opposition of the European Union (Hurrell & Narlikar, 2006; Narlikar, 2010). These countries now frequently dominate headlines with stories of economic growth, growing populations and emissions while developed countries work their way out of the lingering aftermath of the 2008-2009 recession and contend with declining working populations.

The flux in the UNFCCC, combined with the relative power of developed and developing countries, necessitates use of a theory of international relations that both accommodates and actively allows for the presence of change in the international system. Cox's historical structures or "configuration of forces" theory has been selected for this purpose: it allows for change by facilitating the analysis of how the social forces of a particular period interact with each other – and in so doing characterise periods of time – and provides the frame for how people can conceive of acting and what people they choose to do.

This chapter will begin with a brief biography of Robert W. Cox to provide a context for his work and then introduce and elaborate on his configuration of forces theory. Following the theory is a discussion of Cox's ontological stance, in particular his insistence on the historical structure as both theory and method. The configuration is a trilectic of the forces of ideas, institutions and material capabilities – these three forces interact, at times, to create a hegemonic historical structure. This discussion of hegemonic structures is followed by an exposition of the Coxian account of how change occurs and of the benefits of using his theory.

2.1 Robert W. Cox: a brief biography

Canadian theorist Robert W. Cox joined the International Labour Organisation (ILO) in 1947 after graduating with a Master's degree in History. He worked at the ILO for 25 years, eventually becoming the first director of the International Institute of Labour Studies. He left the ILO in 1972 to take up a professorship at Columbia University in New York, USA. Five years later Cox moved to the Department of Political Science at York University in Toronto, where he stayed until becoming a Professor Emeritus after his retirement in 1992 (Hoogvelt, Kenny & Germain, 1999). This background in the study of history – rather than in the discipline of International Relations (IR) – and immersion in issues of international labour clearly influenced his philosophical stance and scholarship. Indeed Cox lays claim to a somewhat idiosyncratic and historicist revision of the disciplinary divisions and traditional agenda of international relations, emphasising instead issues of the formation of knowledge in societies and social transformation (Cox, 1985: 241)

In 1981, while at Canada's York University, Cox published an article entitled "Social Forces, States and World Orders: Beyond International Relations Theory" in the *Millennium Journal of International Relations*. This paper has become a seminal contribution to Critical International Relations Theory (CIRT) literature, and the foundation of a body of literature that has earned him the informal title of "father of critical international relations" (Sinclair, 1996; Moolakkattu, 2009). It is in this article that Cox outlines his "attempt to sketch a method for understanding global power relations" (Cox, 1981: 128) by including in his analysis social forces and processes and their effect on forms of state and world orders. This approach was quite contrary to the prevailing International Relations theory of the time, which emphasised not only the uniformity of forms of state, but also the centrality of the state to world order, to the exclusion of other actors (Cox, 1981). In addition to outlining the use of understanding the particular configuration of social forces as a method of analysing a world order, in the 1981 article Cox also posited the importance of allowing for change in the world order and outlined his belief in the necessity of adopting a historicist approach to studying international relations. These facets will be explored in greater detail below. This dissertation will use the "Social Forces, States and World Orders" article as a foundation, but will draw upon Cox's later writings too, where he expanded upon these particular aspects of his theory. This chapter expands on Cox's historicism and then unpacks the three social forces of Cox's trilectic or "configuration of forces" theory.

2.2 Use of Cox's theory

Cox's theory was selected for three primary reasons: it allows for and tries to explain change in the system; it emphasises production, which in our current techno-economic structure is primarily fossil fuel based; and it affords a useful combination of political economy and constructivist analyses.

Production is at the heart of Cox's theoretical framework and at the core of the problem of GHG emissions. Fossil-fuel consumption is the fundamental problematic of climate change – 80% of global energy consumption is fossil fuel consumption (IEA, 2015). As discussed above, Cox postulated that the social forces created by changes in the organisation of production processes may in turn bring about changes at the level of states. Consumable products are produced in fossil-fuel-intensive processes and even more fossil fuels are expended in transporting these products from the point of production, via points of assembly, to points of distribution, consumption and finally disposal.

Climate change is a problem unlike any that humanity has faced before in that it has a wide range of social, technological and economic drivers; whether it is addressed or not it will have wide-ranging ramifications for the whole biosphere. Given the nature of this problem – a super-wicked problem according to some researchers (Levin et al., 2007) – a political economy approach alone seemed inadequate to the task of analysis but nevertheless still an essential component. Constructivism allowed for an acknowledgement of the importance of the role that humans play in affecting their surrounds; Cox's theory – which combines elements of political economy and constructivist analysis – thus provides a flexible and useful theoretical framework with which to analyse India's role in the climate change negotiations. Not only did it enable a critical "step back" to look at the broader picture of how production and consumption are enabling the climate crisis, but it also afforded an opportunity to analyse the role of humans (irrespective of domicile) as part of a larger "ecosystem" of material concerns and institutional constructs.

2.3 Historicism: ontology and method

Cox asserted that theory and reality are mutually constitutive: theory both precedes and reflects reality, and is shaped by it (Cox, 1996), making an ahistorical position untenable. Historicism for Cox is thus both an ontological standpoint and a method of analysis. As will be discussed in greater depth in the research design chapter, this ontological standpoint is a good fit for the qualitative, case study research design selected for this dissertation.

Cox eschews the positivism of the natural sciences (and of some other schools of mainstream IR theory), identifying instead with an anti-foundational ontology in the form of historicism. To embrace this ontological stance is to acknowledge that the world order is co-created by subjects and not an a priori "given" object separate from them (Savigny & Marsden, 2011). Thus he asserts that social structures (institutions) are created by humans through their collective reactions to a collectively perceived problematic (i.e. the physical, material context). Institutions should not be conceived of as existing independently of either the activities being governed or the conceptions of the subjects being governed (Cox, 1985). Indeed analysing the situation in this manner, Cox contends, would reveal a pattern of coherence of minds and institutions (Cox, 1981: 133). This approach, he wrote in a later paper, "views the world in an evolutionary manner, not as a given but as a process" (Cox, 2007: 515), such that the apparently "objective" realities (states, for example) are rather co-created mental representations or intersubjective ideas (Cox, 1985: 242–43; Hay, 1995). Thus Cox proposes that the research programme of historical materialism should be to find the links between, on the one hand, the "mental schema" within which, and through which, people may conceptualise action and, on the other, the material world that may delimit not only what people are able to achieve, but also their actual perceptions of their own agency (Cox, 1985).

In what has become an oft-quoted statement, Cox wrote that "theory is always *for* someone and *for* some purpose" (emphasis in original) (Cox 1981, 128), highlighting that there is no theory independent of its historical context; that knowledge is both shaped and driven by interests. Theory is as much a product of the minds of the time as it precedes those minds and helps to shape them (Cox, 1995). It is the role of critical theory to question the prevailing organisation of institutions, practices and power relations. Critical theory must therefore stand outside of the prevailing organisation of forces and question how and why a particular arrangement has come into existence: whose interests served, whose discourse perpetuated, whose voices drowned out (Cox, 1985; Smith, 2007).

In order to explain the differences between historical periods, Cox proposed analysing three categories of forces – ideas, institutions and material capabilities – the specific configuration and interaction of which conferred on each historical era its characteristic specificity. As all theory was embedded in, and a product of, its time and place, he posited that a specific configuration of forces characterises any historical period (Cox, 1981). Indeed, the raison d'être of the historicist approach is to unveil the "historical structures characteristic of particular eras" (Cox, 1985: 244), as these have been produced by historical processes that "frame, shape and

promote or impede civilizational change" (Cobbett & Germain, 2012). The three categories of forces are discussed in more depth in section 2.4 below. The analysis seeks to explore each of the social forces at work in each of the four phases identified, in order to assess what kind of enabling or constraining pressures these impose on India at the UNFCCC.

2.4 *Historical structures: a configuration of forces which frames action*

Cox's theory of historical structures is captured graphically below in Figure 3. It was his contention that the *particular* configuration of forces – i.e. of ideas, material capabilities and institutions – characterised periods of time. This configuration framed the possibilities of action or exercising agency as an application of pressure in the form of constraints to which those acting (both state and civil society actors) could either resist or surrender, but which could not be ignored (Cox, 1981). In this, Cox echoed Marx by asserting that historical structures create frameworks within which people make history, even though the framework might provide conditions that people themselves would not have chosen (Cox & Schechter, 2002).

As indicated by the double-headed arrows in Figure 3, the forces (or potentials) are mutually influential and do not exist in a hierarchy, although in any one historical period one kind of force may come to be dominant. The forces described below act on both the state and the broader civil society. The dominance of any particular force will be highlighted in the discussion of the forces in the chapters of section two of this dissertation.

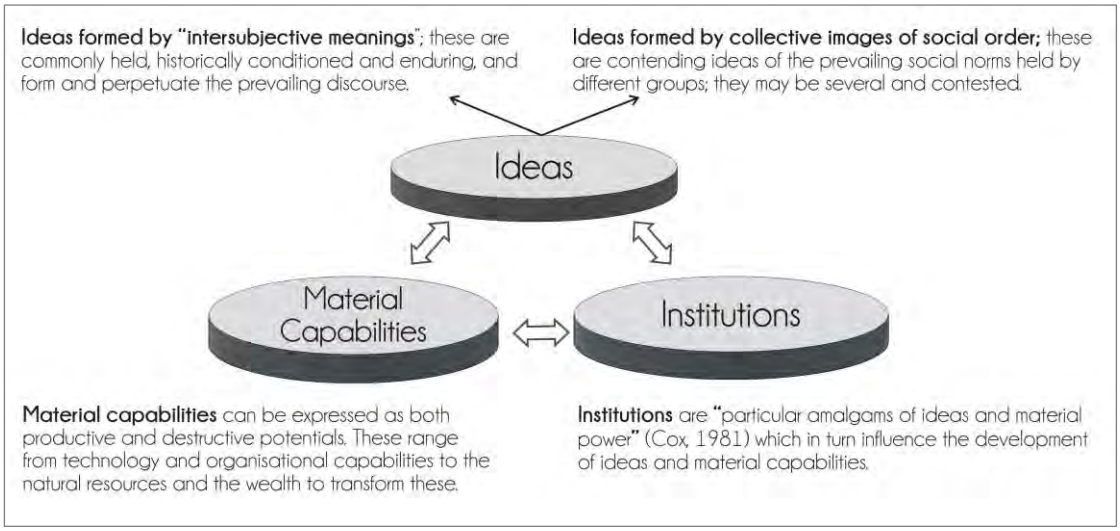


Figure 3: Cox's configuration of forces that characterise historical structures
Source: Based on Cox (1981)

As depicted in Figure 3 above, ideas constitute a type of force that can be disaggregated into two different kinds: ideas formed by "intersubjective meanings" and ideas formed by "collective

images of social order" (Cox, 1981: 136). Intersubjective ideas are what form the prevailing picture of the nature of the world: the commonly held "common sense" of what reality looks like to a society. Cox considered them the "cumulative collective response by people to their conditions of existence" (Cox, 2001: 53). Intersubjectively formed ideas give people a sense of who they are in a society and what that society – be it local, national or international – looks like. They are historically conditioned (the idea of the existence of states, for example), and constitute the prevailing discourse, enduring over long periods. As such they tend to work to perpetuate habits, expectations and behaviours.

Conversely, ideas formed by collective images are contending ideas held by different groups of people. Different groups may, for instance, hold divergent views about issues of social order, such as the nature and legitimacy of the state, the primacy of the individual or the family, or the meaning of justice or equity (Cox, 1981; Moolakkattu, 2009). It is in the conflict between multiple and opposing collective images that the potential for alternative paths to the status quo may become apparent (Cox, 1981).

The dynamic created by the interplay of intersubjective ideas and collective-image ideas renders India the ideal case study. From the very beginning of the negotiations, India has consistently been a vocal proponent of the need for equity to guide the global response to climate change. The idea or image of equity cleaved to by India has not, however, been universally accepted, rendering it by definition a contending idea of a group or collective, instead of being an enduring, commonly held intersubjective idea.

The forces exerted by the material capabilities – also termed the material base – are understood less in terms of the explicitly economic Marxist conceptualisation and more as a broader range of concepts that are linked to material existence (Mittelman, 1998). Material capabilities include "productive capacity, destructive capacity (military), natural resources, technology, industry and wealth (economic growth/development) as well as the technical and organisational capabilities of society and states" (Leysens, 2002). Capabilities exert both productive and destructive forces on the people living within the context they provide (Cox, 1981). India has experienced a noticeable and notable shift in its material capabilities in the two decades since the UNFCCC began – this makes it a potentially fascinating study of the effect of a change in material capabilities on the historical structure.

The third category of force suggested by Cox is the force exerted by institutions. These are often stabilising and perpetuating, and serve to reflect and reproduce the existing social order

while buffering against competing ideas and institutions. Institutional forces work to entrench the status quo and effectively discourage collective images of social order that are inconsistent with the prevailing power relations at the historical point at which the institution was created (Cox, 1981). Over time institutions evolve to acquire a certain level of autonomy, sometimes going as far as to take on a "life of their own" and becoming self-perpetuating.

Institutions are furthermore, and to a significant extent, created and shaped by the state (or states) for whose benefit the hegemony that the institution helps to sustain operates. In this manner they mirror and reinforce the ideas and perspectives that favour those states and groups of people that dominate the institution (Leysens, 2008). Institutions in this Coxian sense are "particular amalgams of ideas and material power" (Cox, 1981: 137). In Cox's view an institution would not need to wield any of its inherent force to quell resistance if the prevailing power relations were uncritically accepted as legitimate by those who are ruled. Understood in this manner, institutionalisation has similarities to Antonio Gramsci's concept of hegemony insofar as the exercise or expression of power in a hegemonic structure (power relations, authority) remains in the background of public consciousness, so much so that it is seen as the "natural order" of things (Cox, 1981: 136; Schouten, 2009: 7).

This trilectic – of ideas, institutions and material capabilities – forms a heuristic device to understand the character of the abstract concept that is the historical structure. Two elements of this trilectic – ideas and institutions – overlap to a significant extent. This overlap can be partially attributed to Cox's definition of institutions as "particular amalgams of ideas and material capabilities" (Cox, 1981: 137); institutions are partially constructions of ideas, making it difficult at times to distinguish between ideas and that what might be construed as institutions in the broader sense of norms or thought patterns. Distinguishing between an idea and institution (in this broader sense) can be challenging due to the intangible, and sometimes ephemeral, nature of both. Thus, for the purpose of this dissertation, the dividing line between ideas and institutions has been drawn where material resources are dedicated to implementing an idea or where an organisational structure has been formed; ideas have been conceptualised as largely abstract, "broader picture" constructs. Cox's definition of institutions also indicates an overlap of institutions and material capabilities. As discussed above, Cox's material conditions include, for instance, natural resource endowments, technology and wealth to acquire or alter these. As such material capabililites are easier to distinguish from institutions when employing Cox's heuristic device.

In 1981, Cox's insistence on the inefficacy of theories that constrained analysis to only the actions between states positioned him outside the then-dominant neorealist tradition in International Relations theory. Instead he suggested that civil society actors were as important in the understanding of international relations as the state, going so far as to state that "state and civil society are so interpenetrated that the concepts have become almost purely analytical" (Cox, 1981: 127). He went on to propose that thinking instead about the state/society complex as the basic unit of analysis in international relations was both necessary and useful. He elaborated that he was not advocating that the role of states be underestimated, but rather that due cognisance be given to the role social forces exert on the development of states and thus also on the development of world orders (Cox, 1981).

2.4.1 The configuration of forces at different levels

As this method – understanding the configuration of the forces of ideas, institutions and material capabilities – is a heuristic device, it can also be applied to understanding hegemonic structures at different levels of organisation: the micro level of social forces, particularly related to the social forces brought about by the production processes; the meso level of forms of states; and the macro level of world order. These levels are interrelated and mutually influential (Cox, 1981), as depicted in Figure 4. For instance, changes in production (i.e. a social force) influence the forms that states take, and the world order is influenced by changing forms of production and also influences decisions made by states (Cox, 1981).

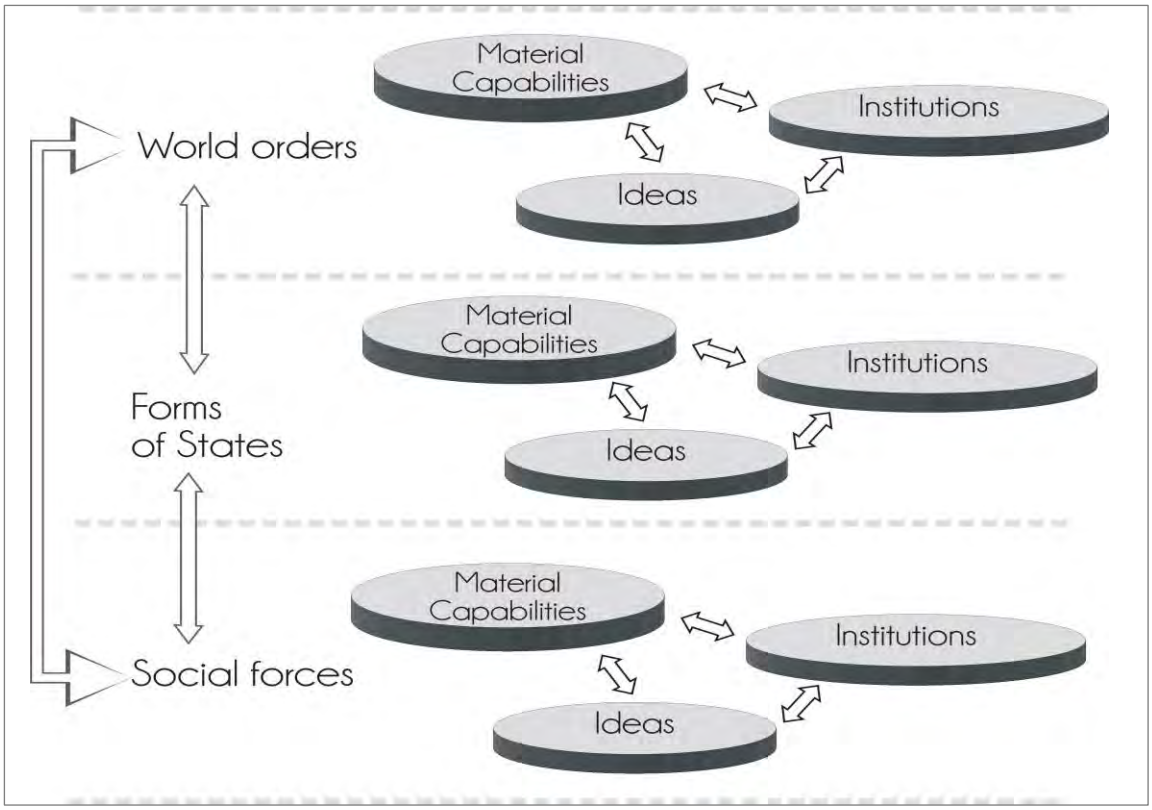


Figure 4: Configuration of forces at multiple levels and interaction between them

To flesh out this heuristic model with a brief overview of the Indian context, it is notable that in the decades since the UNFCCC was signed (1992) and came into force (1994), the relative economic strength of India has altered dramatically, in part due to the effects of the 1991 economic reforms and the phenomenal growth in the IT and business-processes outsourcing sectors (Chandra, Mukherjee & Mukherjee, 2008). These significant changes in production capacity and economic emphasis have had a knock-on effect on the role of the Indian state (making it more "mercantilist" and less "developmental" for instance), which has both facilitated and benefited from the increase in GDP. The changes in these two forces – material capabilities and institutions – would have in turn, according to Cox's model, influenced and been affected by the "idea" of India as an emerging power.

2.4.2 The limited totality that is addressing climate change

As conceived by Cox, a historical structure represents what he termed a "limited totality" or a particular, circumscribed sphere of activity contextualised by its historical moment/era (Cox, 1981: 137). This dissertation will be focusing on the limited totality that is the international effort to address climate change through the UNFCCC. Four phases in the evolution of the regime have been identified for the purposes of analysis and used as a structuring device. The first phase revolves around the emerging consensus on the need to address climate change and the establishment of the Framework Convention, and runs from 1988 to 1994. The second

phase encompasses the negotiation of the Kyoto Protocol and the Marrakech Accords establishing specific rules for it. The ratification of the Kyoto Protocol in 2005 initiated the third phase, which includes the negotiations leading up to the second commitment period of the KP. The fourth phase runs from 2011 and the agreement of the Durban Platform at COP17 and covers the Durban Platform (ADP) negotiations towards a 2015 agreement to supersede the Kyoto Protocol after 2020.

2.5 Hegemonic structures

Following on the first two aspects of Cox's critical theory – his emphasis on historicism and on the trilectic of social forces that create historical structures – this sub-section will discuss hegemonic historical structures. This third aspect will play an important role in understanding India's role in the climate change negotiations.

Historical structures can be both hegemonic and non-hegemonic: a historical structure can be said to be hegemonic when the all the social forces are in alignment, or when they "fit" (Leysens, 2008: 3). Ordinarily the inherent material power relations in a structure provide sufficient enforcement of the status quo that rulers need not resort to force or coercion. Force would not be necessary if there was consensus about the legitimacy of prevailing power relations, such that it was accepted by those who were ruled (Cox, 1981). The essence of the hegemonic structure is the "internalized coherence" and consensus between the ruled and the rulers, whether through side payments to sub-ordinates or through a process whereby external order is internalised or transformed into an intersubjectively created reality (Chase-Dunn et al., 1994). It is this consensus and coherence that differentiates a hegemonic from a non-hegemonic historical structure (Cox, 1985).

Hegemony and dominance are not interchangeable concepts – rather dominance is a necessary, but insufficient, element of hegemony (Cox, 1985). Cox posited that "hegemony is an internalized coherence which has most probably arisen from an externally imposed order but has been transformed into an intersubjectively constituted reality" (Chase-Dunn et al., 1994: 366). In other words, in a hegemonic structure, dominance fades into the background, becoming part of the scaffolding of the structure itself to the extent that it achieves the appearance of being the natural order of things (Cox, 1985: 246; Chase-Dunn et al., 1994). Cox further posited that hegemony was a quality of the whole structure rather than just indicative of the relationship between the parts of the structure (Chase-Dunn et al., 1994).

Cox highlighted the "historically transitory nature of a hegemonic order" by positing that it provoked opposition through the contradictions it generated (Chase-Dunn et al., 1994). If sufficiently strong, these contradictions may disrupt the alignment or "fit" of the three social forces and in so doing allow space for transformation in the guise of a counter-hegemonic challenge within the realm of what is possible (Leysens, 2008). The analysis in section two of this dissertation explores the fit of the forces at the national (India) and international (UNFCCC) levels. It further analyses the coherence of the forces throughout the phases, with a view to assessing whether or not a hegemonic structure has existed during the evolution of the UNFCCC regime and the nature of India's role in relation thereto.

2.6 Critical theory and the possibility of change

Cox eschewed the implicitly ahistorical positivism of the many mainstream International Relations theories that are more adept at explaining stability than change (Finnemore & Sikkink, 1998). His early training as a historian and his ontological perspective (discussed above) informed his belief in the necessity and efficacy of analysing world order as a series of historical structures – historical structures that he posited were more "modes" than "givens" and that were made transformable by human action since they were the result of collective human action (Cox, 1987). Divorcing particular forces from any historical structure by making them ahistorical precludes the possibility of change in those forces and thus also in that structure. For instance, conceptualising states as enduring entities of world order – as realists do – does not allow for these states to be co-created by the historical milieu in which they exist, thereby precluding the possibility of change (Cox, 1985). Historical processes, he averred, "frame, shape and promote or impede civilizational change" and in so doing produce historical structures and human agency and – most importantly for the purposes of this dissertation – "explain transformations from one structure to another" (Cox, 1985: 244). This ability to explain transformation renders Cox's theory a useful tool of analysis during periods of apparent flux.

The centrality of Cox's belief in the possibility of change in the world order renders his theory particularly useful as a framework for trying to understand how the role of India within the UNFCCC is changing as it is buffeted by – and potentially also creating or influencing – changes in the world order. The architecture of the UNFCCC itself is also in flux, with the Durban Platform negotiations in the post-2010 period centring on the redistribution of CO_2 emission mitigation responsibilities and the way forward in the "post-Kyoto Protocol" / post-2020 era. To quote Cox in a 2009 article, a critical theoretical approach is useful if the purpose of the enquiry is to uncover what "kind of future … might be latent within the present", while a problem-

solving approach would be more useful as "a guide towards managing the present" (Cox, 2009: 317).

Cox was clear, however, that at a time of apparent imminent change – when the existing framework or knowledge no longer appears to fit the observable reality – a different kind of knowledge would need to be sought (Cox & Schechter, 2002). The existing framework of annexes that underpins the differentiation within the UNFCCC regime no longer fits the observable reality, given the geopolitical and economic changes since 1992, especially if historical contribution (to GHG emission stocks) is not taken into account. It is at these times of instability and change that members of civil society and the state become more receptive to theories or knowledge that challenge the status quo (Sinclair, 1996) and that are "directed towards an appraisal of the very framework for action, or problematic, which problem-solving theory accepts as its parameters" (Cox, 1981: 129). This dissertation defines the status quo of the UNFCCC negotiations as the differentiation between Annex 1 and Non-Annex 1 country Parties encoded in the Convention. The flux or instability of the regime invites a critical approach.

Cox proposed that the characteristic features of different types of theory or knowledge-generation lay in how they conceptualised the purpose of theory (Cox, 1981). From this starting point he sought to distinguish between theories or knowledge that he termed problem-solving and those he termed critical – a rubric under which he situated his own theory.

Problem-solving theory, Cox posited, is constructed as a guide to solving problems while embedded in a particular perspective, i.e. the existing structure (Schouten, 2009). Accordingly, in mainstream International Relations theory, problems are most frequently conceptualised as problems between states. This type of theory accepts the status quo; it considers the prevailing configuration of social, political and economic forces – without question – as the parameters within which the theory must address the identified problem. This prevailing configuration Cox termed a "framework for action" (Cox, 1981). Problem-solving theories are suited to addressing specific problems within well-defined parameters by paring down and isolating variables for close scrutiny. This is reductionism at its finest, playing to its strengths. At times of relative stability in the world order, Cox held that problem-solving work would likely be most relevant (Cox, 1981), as the explanations offered by this type of theories would likely fit with the prevailing view of the world held by most people (Sinclair, 1996); this type of theory would also be more consistent in providing legislators and politicians with policy recommendations (Schouten, 2009).

In the course of its application, critical theory, like problem-solving theory, starts with a focus on a particular issue but then "takes a step back" in order to formulate a view of the whole, rather than disaggregating the problem to its constituent parts or zooming in to focus on an aspect of an problem (Cox, 1981). The overarching issue for analysis therefore is the slow progress of state action to reduce CO_2 emissions through the UNFCCC process. Emissions remain high despite over twenty years of international negotiations, near-certainty among scientists on the anthropogenic origins of the changing climate, and increasing clarity on the quantification of the deep cuts in emissions required to prevent a more than 2°C global-temperature rise from temperatures in the pre-industrial era (IPCC, 2014).

Writers implicitly informed by problem-solving theories such as neo-realism or neo-liberal-institutionalism might, for instance, tend to focus on restructuring specific aspects of the architecture of the UNFCCC itself (Aldy, Barrett & Stavins, 2003; Evans & Steven, 2009; Keohane & Raustiala, 2010; Werksman, 2010) or correcting flaws in the design of the market mechanisms under Kyoto Protocol (Michaelowa, Butzengeiger & Jung, 2005; Wettestad, 2009) or problems of climate finance (Roberts, Stadelmann & Huq, 2010; Saran, 2010; Schalatek, Bird & Brown, 2010). In contrast, writers of a more critical theoretical inclination are more likely to question instead the underlying issue of consumption that drives production, trade and the associated emissions (Newell & Paterson, 1998; Dauvergne, 2010; Harris & Symons, 2013) or the very nature of the relationship between humans and the environment (Wapner, 2008; Antal & Hukkinen, 2010; Khor, 2010), for instance.

There is also a strongly normative, emancipatory facet of Cox's critical theory – a characteristic it has in common with other critical theory. For this reason it was selected as a theory that could help explicate India's insistence on equity in the negotiations. India's belief that the North-South divide continues to pervade the climate negotiations informs its insistence on the operationalisation of equity in the regime. The North has developed and industrialised through its historical contribution to the stock of emissions in the atmosphere. In other words, developed countries are responsible for creating the current climate crisis through the exploitation of the shared atmospheric space. From this perspective, an equitable negotiated outcome includes an opportunity for developing countries to develop and so to be freed from the burdens of underdevelopment. Differentiation between the responsibilities of developed and developing countries is therefore a key component of that emancipation. This differentiation is a source of dissatisfaction for some developed countries – the United States of America forwarded this as one of the reasons it would not ratify the Kyoto Protocol in 1995 –

but is seen as crucial by developing countries for facilitating their poverty-alleviating development.

Critical theory allows for the possibility that actors might decide in favour of, and act to bring about, a social, economic or political alternative to the prevailing order. Change in this sense is not inevitable, but dependent on human agency (Leysens, 2008). This alternative order, however, is likewise bound by the exigencies of historical processes and in acknowledging these constraints, critical theory "must reject improbable alternatives just as it rejects the permanency of the existing order" (Cox, 1981: 130); neither the permanent order, nor the unachievable utopian order, would be considered a viable alternative order. Thus India's "emancipatory ideal" of a differentiated climate regime must still operate within the bounds of the possible.

The following chapter expands upon the research design chosen for the analysis of India's role in the climate change negotiations.

3 Research design: the "why?" and the "how?"

3.1 Introduction

The previous chapter outlined the conceptual framework that guides this analysis of India's role in the climate change negotiations. It introduced the Critical International Relations theory of Robert W. Cox, specifically his theory that a configuration of the forces of ideas, institutions and material capabilities characterises a period of history and provides a framework of action (Cox, 1981). The purpose of this chapter is to outline why and how the research into India's role at the UNFCCC was conducted. As mentioned in Chapter Two, Cox rejected the positivism underpinning research in the natural sciences and some other schools of mainstream IR theory, and posited an anti-foundational ontology in the form of historicism. In historicism there is unity of subject and object (Cox, 1981) and institutions are "collective responses to a collectively perceived problematic that produce certain practices'" (Cox, 1985: 242); in other words, historicism can be understood as compatible with a interpretivist world view.

This chapter is fundamentally the interplay of answers to two questions – "why" and "how" – which provides the organising schema of the chapter. Before turning to these two major parts, a brief reminder of the "what": this research is a qualitative case study of India's role in the climate change negotiations at the UNFCCC. Section 3.2 explicates the rationale behind the choice of approach and there is a discussion of the case study as a strategy of inquiry or methodology, including the critiques frequently levelled at this strategy, the boundaries of the case and the decision-making involved in the choice of India at the UNFCCC as the case. Sections 3.3 and 3.4 outline the "how" or the methods used to answer the research question. These are separated into the methods with which data are generated and the methods with which these data are then analysed. The former include semi-structured interviews of key informants, documentary evidence in a range of forms and from a variety of sources and, lastly, observations made by the researcher in various fora.

The neatness of the eventual research design depicted in Figure 5 below belies the actual nature of the research process. In other words, the research design emerged during the process – rather than unfolding in a neat step-by-step manner – and was prescribed by what was feasible, useful and relevant to the researcher's non-PhD-related work. In addition, the skills and the epistemological and ontological leanings of the researcher were factored into the decision. Thus, in contrast to the apparent neat flow in Figure 5 below, the first decision made was actually the selection of India as a case study (methodology or strategy of inquiry). The next

decision was the selection of the conceptual framework through which to attempt the analysis of India's role (Robert Cox) and from that point on the decisions revolved around access to people and information – factors that had also partly informed the initial selection of India as the focus of the case study.

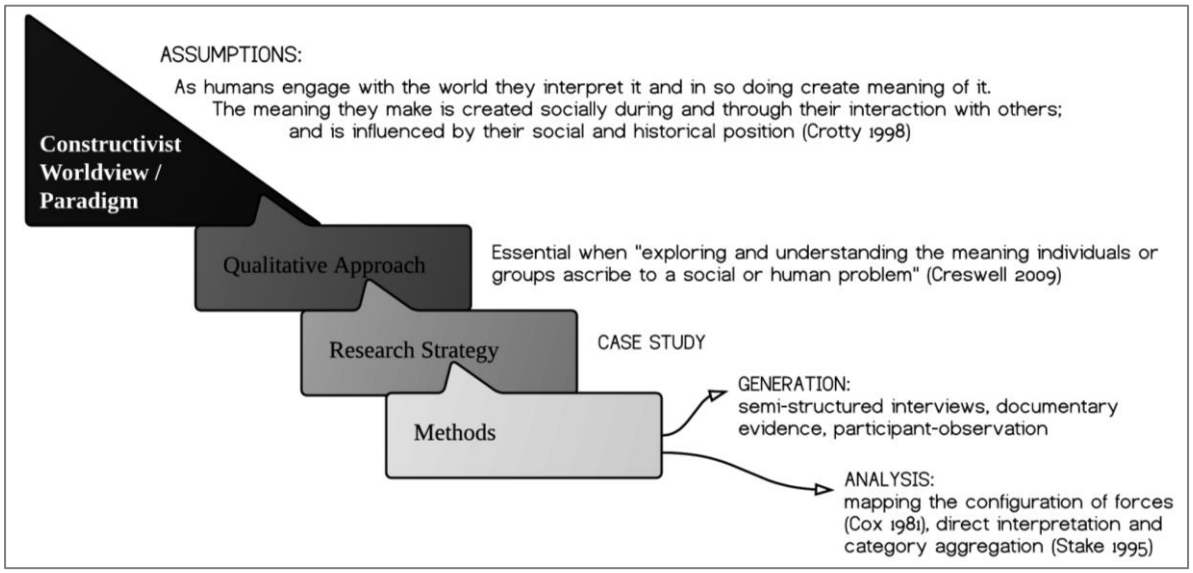


Figure 5: Research design components
Adapted from Cresswell (Creswell, 2003)

3.2 *Rationale for research decisions: the "why?"*

3.2.1 Qualitative approach

Creswell wrote that a qualitative approach was essential when "exploring and understanding the meaning individuals or groups ascribe to a social or human problem" (Creswell, 2003) and that it begins with a world view, assumptions, and possibly the use of a theoretical frame. Qualitative researchers collect data in a natural setting, and try to be as unobtrusive and sensitive to the people and places they are studying as possible (Creswell, 2007).

Qualitative research focuses on text and not on numbers. Text in this sense is broadly construed as including the more obvious words-on-paper (electronic or otherwise) and the less obvious artefacts like photographs and other images (Schutt, 2012). A qualitative approach has thus been chosen to address this research question because the UNFCCC is essentially a text-based - (narrow-sense) negotiating forum. While discussion is the mainstay of the negotiations, all the words eventually agreed upon find their way onto paper as COP or CMP decisions and information or technical documents issued by the UNFCCC Secretariat, or are added to the record as submissions by governments and civil society.

Qualitative research is primarily about human perception and understanding (Stake, 2010). Key characteristics of qualitative research are that it is interpretive, experiential, situational and personalistic (Stake, 2010). One of the forces Robert Cox posited in his conceptual framework was that of the ideas and perceptions held by people of themselves and of others. This suggests that there would be multiple meanings, a diversity of practices, viewpoints and understandings to be accommodated, hence the interpretive nature of the study. Miles and Huberman phrased the objective of qualitative study as being "to explicate the ways people in particular settings come to understand, account for, take action and otherwise manage their day-to-day situations" (1994: 6–7). Qualitative research anticipates and accommodates these understandings, as they are expressions of different subjective perceptions and social backgrounds (Flick, 2009).

By interviewing a cross-section of people in their own environments (often offices, sometimes in their homes), the researcher sought to maintain as natural an experience as possible while eliciting the observations of interviewees. A qualitative approach considers pivotal the study of the subjective and social meanings people create (specifically in relation to the research question) as well as their knowledge and interactive practices.

The fact that India is embedded in, and inextricable from, the context – the UNFCCC – renders it much more suitable as the subject of a qualitative rather than a quantitative study. A quantitative approach would require the isolation of phenomena in order to control variables, which would be near impossible in this case and ultimately counterproductive. Therefore, in taking a more naturalist approach (Miles & Huberman, 1994), emphasising the "situated-ness" of India within the UNFCCC, a qualitative approach is much more applicable to the research question. Methods can be designed to allow "space" for the complexity of the object being studied (Flick, 2009) whereas research data can only be gathered in its context in natural or real-life situations (Aaltio & Heilmann, 2010).

The research is also personalistic (Stake, 2010): in sharp contrast to the much striven-for objectivity of the observer-researcher characteristic of quantitative research, the researcher was called upon during this study to be her own "instrument" as she conducted interviews and discussions and thereby effectively co-created interview data, while also noting her own observations for use as data (Aaltio & Heilmann, 2010). Actively acknowledging the subjectivities of both the interviewees and the researcher is a necessary aspect of the research approach (Flick, 2009), even in a study of macro-level interactions such as this research. The interactive element demands a great deal of reflexivity from the researcher; an awareness of his

or her own bias is particularly germane to being able to distinguish between the statements of interviewees and the interpretation offered by the researcher. This delineation and a clearly documented audit trail are essential if the qualitative study is to claim that its findings are reliable (Flick, 2011): two elements of the audit trail, namely the list of interviewees with places and dates of meetings and the interview guide, are included in the appendices .

In summary, a qualitative approach allows for a research design compatible with the complexity of the case, the documentary nature of the evidence, the blurred lines between the case and its context, and the historicist world view underpinning Cox's conceptual framework, which will be used to analyse India's role in the climate change negotiations.

3.2.2 India as the case study

India was chosen as the case to study for a number of analytical and practical reasons. Firstly, India is now one of the bigger emerging economies and it is the third-largest emitter of GHGs (World Resources Institute, 2015) and as such is an exemplar of a power shift in world geopolitics. This case is made more interesting by the internal contradictions of the country - despite its impressive economic growth story, India still has a low per capita income level and is faced with huge internal inequalities that it has so far been unable to eradicate. In addition, despite becoming one of the largest cumulative GHG emitters in XXX, the country's per capita emissions are still among the lowest of the emerging economies (World Resources Institute, 2015).

Secondly, India is a longstanding and vocal proponent of the concept of "equity" in the climate change negotiations, but has done little to further define the concept since its involvement in ensuring that equity and CBDR were included in the text in the very early days of the inter-governmental negotiations (INC). Instead of still being identified as an agenda setter, India is in 2015 more readily identified as a source of blockage in the negotiations.

It is the world's most populous democracy and the second most populated country on earth – projected to surpass China by 2022 (Department of Economic and Social Affairs, 2015). As a democracy it has more in common with other democracies than does centrally planned, communist China and hence the findings of the study would be more readily transferable - rather than generalizable - to other democratic countries. That said, and for all the reasons outlined above, India remains a fascinating case in and of itself, whether or not the findings of this study may be transferable.

A number of practical considerations weighed in India's favour, namely: the researcher's work-related and existing academic connections, and language. The candidate worked as a part-time researcher on the Mitigation Action Plans and Scenarios (MAPS) programme[9] for a number years, focusing on the "BASIC workstream" of Brazil, South Africa, India and China. In this capacity the candidate attended several BASIC Ministerial Meetings on Climate Change between 2011 and 2014 as part of the South African contingent of the BASIC Group of Experts (BGE). The fact that English is the language of officialdom and legislation in India as well as the researcher's mother tongue played a crucial part in the decision to focus on India.

3.2.3 Case study methodology

This dissertation answers the research question primarily by applying a qualitative case study approach. The case study methodology is grounded in an constructivist (sometimes also referred to as interpretive) research philosophy, the aim of which is not to seek causal links so much as to understand complex social phenomena (Schutt, 2012). Selecting the qualitative case study as a strategy of inquiry enables researchers to study complex phenomena within their context (Baxter & Jack, 2008), without attempting to either extract these phenomena from the context or control the context or behaviour of actors within it – both of which may be impossible (Yin, 2003). Case studies are useful in instances when the "case" is inextricably linked to its context and the context itself might be a pertinent subject of the study (Yin, 2003). In the case of India, and specifically its role in the climate change negotiations, its role is difficult to delineate or separate out from its interactions with other sovereign states at negotiations and meetings. Furthermore, its role internationally is continuously mediated and negotiated at a national level. This is particularly true when contemplating the state as part of a greater state-society complex, a formulation that is fundamental to the Coxian theoretical framework employed in this dissertation. Thus seeing the state as part of, and embedded in, society renders a case study approach both useful and necessary.

A case can be a range of subjects or objects from individuals to institutions, from responsibilities to outcomes (Stake, 1978), or "a phenomenon of some sort occurring in a bounded context" (Miles & Huberman, 1994). Given the qualitative nature of the study (discussed below) and the chosen conceptual framework introduced in Chapter Two, this dissertation asserts the constructivist stance that "cases" are theoretically and socially constructed by researchers in order to answer questions, rather than simply existing "out there in the world" and ripe for the

[9] http://www.mapsprogramme.org

picking (Burton, 2000). As such the case, as defined by the researcher, effectively becomes the unit of analysis (Miles & Huberman, 1994).

Robert Yin and Robert Stake both suggested a taxonomy of case studies;[10] both are useful ways of considering the case study and are not to the researcher's mind mutually exclusive (Baxter & Jack, 2008). Thus this case study is considered to be an explanatory, intrinsic case study. There will certainly be elements of description but predominantly (and in keeping with the theory of change espoused by Cox) the research question seeks to understand the role played by India in the negotiations.

For reasons elaborated upon above the study of India's role at the climate change negotiations as a case is considered of interest not because it necessarily illustrates other cases, issues or characteristics but "because in all its particularity and ordinariness, the case itself is of interest. The purpose is not [necessarily, though this is an option] to come to understand some abstract construct or generic phenomenon" (Stake, 1995).

3.2.3.1 Methodological critiques of the case study approach

One of the most widely levelled critiques against the case study as a research strategy is that its findings lack representativeness, being the product of "too small a sample" (Burton, 2000: 224), and thus that the findings of a case study are not generalisable beyond the particular case. Given these limitations, the case study cannot further scientific development nor are its outcomes replicable in the manner of quantitative experiments (Tellis, 1997; Ritchie & Lewis, 2003). For many researchers trained in quantitative research methodology and steeped in the positivist world view, these limitations were grounds enough to claim that the scientific credentials of the case study as a research strategy were "ambiguous" at best (Lijphart, 1971).

These critiques are primarily rebutted by emphasising that the case study as a research strategy is not *intended* to produce statistical inferences, but rather to deepen the knowledge of the case being researched and to test theoretical propositions in order to produce analytical – not statistical – generalisations (Burton, 2000; Yin, 2003). The aim of qualitative researcher after all is not to seek causality or generalisability in the way quantitative researchers might, but rather to find illumination, understanding and, if possible, theoretical or analytical transferability to similar situations (Golafshani, 2003). The link between case study findings and the theory being

[10] Yin distinguishes between exploratory, descriptive, and explanatory case studies (Yin, 2003) and Stake between intrinsic, instrumental and collective case studies (Stake, 1995).

tested is of prime importance and any attempt to make statistical generalisations is to attempt to have the case study strategy produce what it was never intended to (Burton, 2000).

A further critique is that the case study is effectively one of the "lesser" research methodologies, only appropriate for generating hypotheses in the initial, exploratory phases of a larger research strategy and not for the weightier tasks of description and explanation (Yin 2003, 3). This hierarchical view has been repeatedly disputed in more recent literature on research methods (Yin, 2003; Flyvbjerg, 2006; Baxter & Jack, 2008). As Yin points out, one of the best-selling analyses of the 1962 Cuban missile crisis is Graham Allison's single-case *explanatory* case study, "Essence of the Decision: Explaining the Cuban Missile Crisis" (Yin, 2003: 3–4).

A serious critique is that case studies lack rigour and have a bias toward verification (Yin, 2003; Flyvbjerg, 2006). However, this is a critique that cannot be levelled at the case study strategy to the exclusion of other methodologies. For instance, as much as quantitative data appear unbiased and objective, the collection thereof is guided and moulded by the research question, chosen methods, and even the selection and phrasing of questions (where appropriate). Thus there is a distinct element of potential subjectivity even to quantitative data (Wisker, 2008). Lastly, the experience of many case study researchers reveals that the very depth of understanding gleaned frequently reveals initial assumptions to be incorrect and therefore not verifiable (Flyvbjerg, 2006)

The last of the major critiques is that case studies can be too time-consuming to undertake and (often) to read (Yin, 2003; Flyvbjerg, 2006) as well as difficult to summarise. In relation to the latter point, case studies should be read as narratives in and of themselves that do not *need* to be summarised (Flyvberg 2006, 239-241). These narratives can sometimes be long as they contain detailed, highly nuanced understandings of complex cases, and not necessarily because researchers are particularly verbose. A strength of the case study strategy is that it is an "expanding" and not an "expounding" strategy. It opens up enquiry by producing a depth of understanding, rather than narrowing down inquiry by distilling essences and looking for universal laws and rules (Stake, 1978); that said, the process of concluding such studies would also include drawing out lessons to be learnt from the study. In other words it is a comfortable "fit" with a qualitative approach that seeks to elaborate understanding and considers knowledge creation to be an emergent enterprise – how that emerging knowledge is generated is the subject of the following section.

3.3 Methods of data generation: the "how?"

The methods used in this dissertation are categorised into methods of data generation and methods of data analysis. As discussed above, broadly stated, the qualitative approach applied to climate negotiations determines a focus on text – rather than numbers – as one of its most important features (Miles & Huberman, 1994; Schutt, 2012). One of the key characteristics of the qualitative case study as a strategy is that it is sufficiently flexible to make use of multiple data sources (both qualitatively generated and quantitatively collected), which also enhances data credibility (Stake, 1995; Yin, 2003). The data from the various sources are integrated in an attempt to create a more "holistic" understanding of the case and increase the overall rigour of the research findings (Baxter & Jack, 2008).

In order to research the case study of India's role in the climate change negotiations, three different methods were used to generate information or data. These methods were

(1) semi-structured interviews of key informants or elites,
(2) documentary evidence in the form of India's submissions to the UNFCCC, its key domestic documents, and reportage of the Earth Negotiations Bulletin, and
(3) the notes from the researcher's own observations
    a. from participation in UNFCCC process and
    b. on the periphery of BASIC Ministerial Meetings as a member of the BASIC Group of Experts (BGE).

This mixing of the methods of generation was used to facilitate depth and richness in the findings to enable a more holistic and comprehensive analysis of the social interactions at the heart of this research (Schutt, 2012). All these methods have been chosen as they are considered appropriate to providing data for a complex research question (Silverman, 2009). The strengths and weaknesses of each of the sources of data are tabulated in Table 2 and are elaborated upon in sections 3.3.1 to 3.3.3 below.

Table 2: Strengths and weaknesses of different kinds of data
Source: Adapted from Yin (2003: 86)

Source of data	Strengths	Weaknesses
Documentary evidence	• repeated review is possible • unobtrusive - exist prior to case study • broad coverage of an extended time span	• can documents be found/retrieved? • selection bias • reflects author bias • access may be blocked • older documents might be unavailable
Interviews	• targeted - focuses on case study topic • insightful - provides perceived causal inferences	• bias due to poor questions • response bias • incomplete/inaccurate recollection • reflexivity - interviewee expresses what interviewer wants to hear
Direct Observation	• covers events in real time • covers context of an event	• time-consuming • selectivity - might miss facts • reflexivity - observer's presence might cause change • cost - observers need time
Participant Observation	• as for direct observation • insightful into interpersonal behaviour	• as for direct observation • bias due to investigator's actions

3.3.1 Interviews

Interviews are a well-established method of generating data in qualitative case studies and were a crucial source of primary data to this research. At its core the interview is a "face-to-face interchange, in which one person, the interviewer, attempts to elicit information or expressions of opinion or belief from another person" (Maccoby and Maccoby, 1954:449 in Mishler, 1986: 9).

Interviewees in case studies are frequently "key-informants" either as government and other civil servants/officials or as influential professionals or commentators in the field. The key informants for this research were chosen explicitly because of their previous involvement with India's negotiation team or government structures, or for their familiarity (historical or current) with or knowledge of India's climate change-related policy discourse. This kind of interviewing is also termed "elite interviewing" (Gillham, 2000) and requires a great deal of preparation, since such informants are busy and there is frequently only one opportunity to conduct an interview. It also requires enough self-confidence to be able to interview high-ranking people and sufficient interviewing skill to get beyond any facade or "party-line" they might present (Burton, 2000).

Interviewing techniques can be placed on a continuum (see Figure 6) from the unstructured, simple noting of conversations all the way to the highly specific, closed questions of the structured questionnaire.

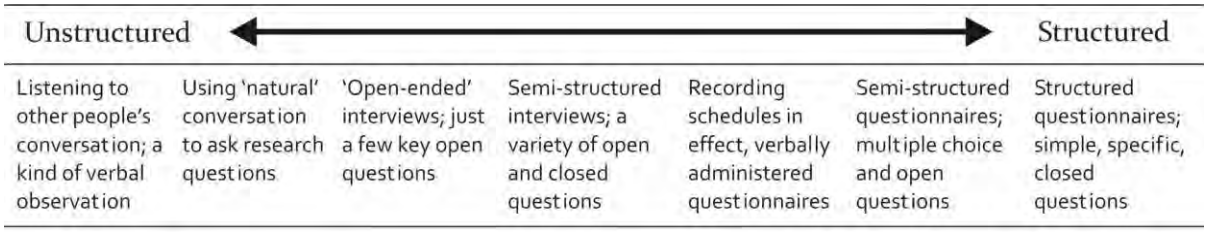


Figure 6: Spectrum of types of interviews
Source: Gillham (2000)

In keeping with the interpretivist world view outlined in the introduction, the interviews conducted were predominantly semi-structured, placing them in the centre of this continuum. This technique was chosen for its ability to facilitate the analytic depth, insight and understanding required to answer the research question (Gillham, 2000). Interviews where a good rapport was easily established, however, often resembled more the "open-ended interviews" seen in Figure 6, as interviewees warmed to their subject and needed little more than occasional prompting. A trend emerged that has also been noted by other researchers: often the shorter and more direct the question, the more elaborate the answer, and vice versa (Luker, 2008). The researcher was also able to attend several meetings and conferences that provided the opportunity for asking research-related questions in a more natural setting during tea breaks and question-and-answer sessions. These conferences also enabled participant and direct observation (discussed below). A list of these meetings is in appendix 9.4 .

Semi-structured interviewing demands of the interviewer a flexibility of approach with sufficient adaptability to allow the interviewees the freedom to express their opinions, combined with the ability to maintain enough focus to make the interview a useful source of data and to provide information on key aspects across interviews that can be analysed (Burton, 2000). Reflexivity can pose a challenge in interview situations: there is the possibility of influence of the interviewer on the interviewee, and vice versa (Yin, 2011). Documentary evidence can be used to complement the interview data in order to offset this issue somewhat, as is discussed below.

A large number of the interviews (17 out of 19) were held face-to-face during two periods of fieldwork activity and predominantly at the offices of the interviewee.[11] The remaining two were conducted online in May 2014 using Skype. A full list of interviewees and the interview schedule are included in the appendices (9.1 and 9.2) and Figure 7 below is a graphical representation highlighting the sectors of the interviewees. All interviewees signed a consent form in which they gave (or declined to give) permission for the interview to be recorded, and which gave them options in relation to confidentiality and anonymity. A copy of this consent form is in appendix 9.3. All the people in Figure 7 gave their consent to be identified as interviewees in this dissertation although some requested any quotes be attributed to them in the individual, not organisational, capacities.

Great effort was made to reach a wide cross-section of interviewees in line with Cox's belief in the state-civil society complex – see Figure 7 of interviewees – but the most elusive sector proved to be the state sector itself. This was interpreted as the result of very busy working schedules on the part of the bureaucrats approached and possible reluctance to spend the time speaking with an unknown, foreign researcher. In all likelihood, the impending elections in India (April and May 2014) compounded these two impediments. Nonetheless, three government officials (serving and retired) were interviewed. As this was not an unanticipated hurdle, the main sources of information about the government "opinion" were the official Indian submissions to the UNFCCC; this approach will be elaborated upon in the documentary evidence sub-section that follows the image.

[11] Consequently the researcher spent much time in auto-rickshaws (also called "autos" or "three-wheelers") crisscrossing New Delhi, over time honing her negotiation skills in bargaining for a fair fare and developing an admiration for the determined dexterity of drivers and the fearlessness of pedestrians!

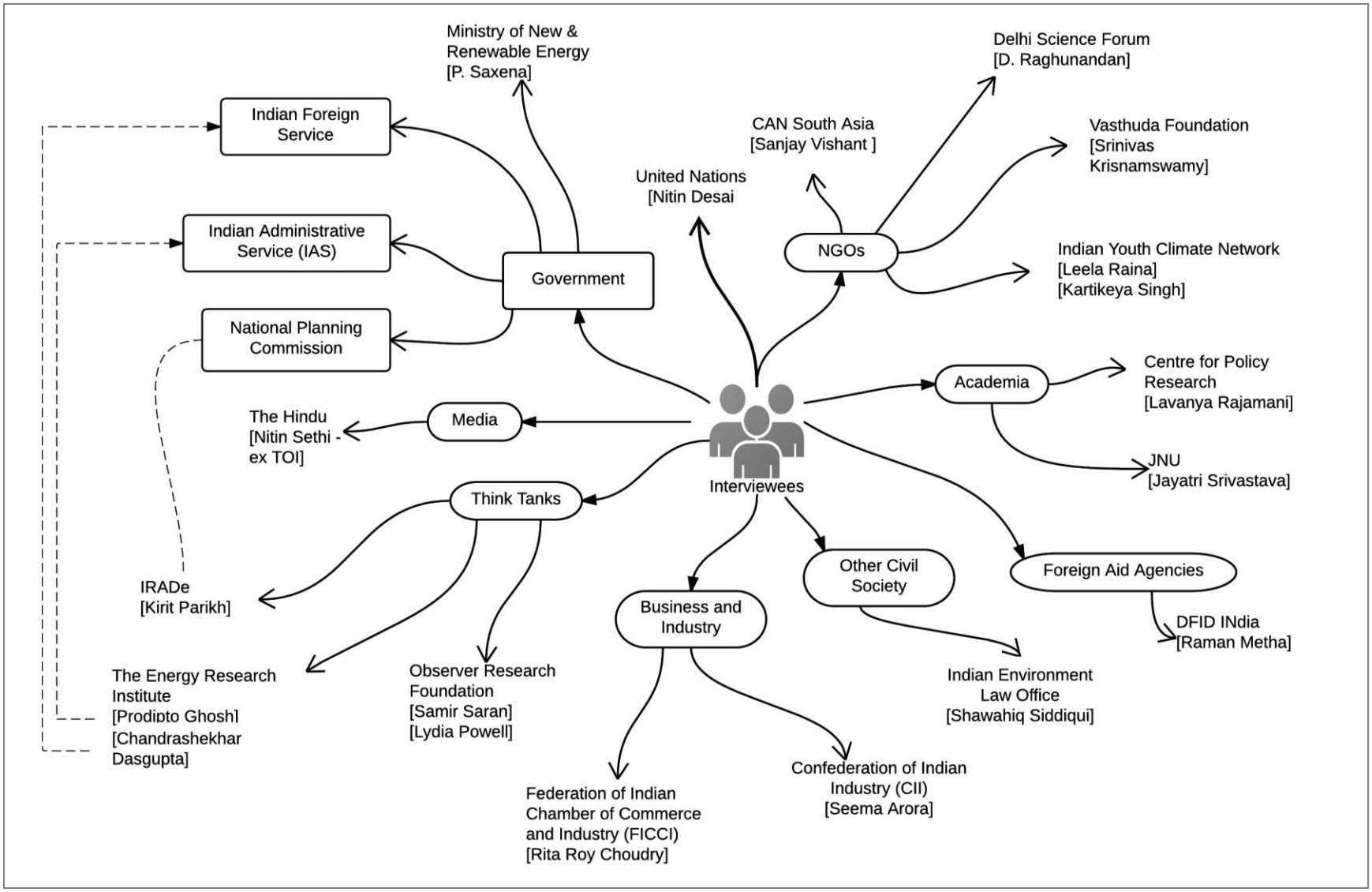


Figure 7: Interviewees and their sectors

3.3.2 *Documentary evidence*

For the purposes of the analysis, a range of documentary evidence was accessed and assessed in order to provide depth to the study through triangulating the interview data. The main sources of primary documentary evidence were the UNFCCC, the IPCC and the Indian Government. The current UNFCCC website (www.unfccc.int) was an invaluable tool through which to access COP and CMP decisions, secretariat information and technical documents. Where information was not available through that site – which was especially the case for earlier COP decisions – legacy websites were accessed where available, or information was retrieved from several CDs of information provided by the UNFCCC secretariat. The IPCC's assessment reports and special reports added to these sources of primary documentation. Primary documents focusing on India were predominantly sourced from Indian governmental ministry or department websites. These documents included Indian governmental submissions to the UNFCCC process, as well as domestic climate change plans, policies and public statements. Domestic documents included five-year plans from the seventh (1985-1990) to the twelfth plans (2012-2017), acts of parliament, and policy documents from the environment, power and finance ministries in particular, and data from the 2001 and 2011 censuses.

In addition to the primary evidence outlined above, a wide selection of secondary sources were accessed and assessed. One such source is the *Earth Negotiations Bulletin* – a daily record of interactions (including verbatim snippets) at plenary meetings of the Subsidiary Bodies (SBI and SBSTA) as well as the COP and CMP (IISD, 2015). As the ENB has been produced at every meeting since the 11th session of the INC in February 1995, it provides an invaluable historical record of events beyond that of the COP/CMP decisions recorded in the official primary UNFCCC sources. Other secondary sources include commentaries from the predominantly Northern hemisphere-based climate focused NGOs and think tanks that have emerged over the years of the regime, and peer-reviewed articles from academics and online news reports.

Documentary evidence is not as susceptible to issues of reflexivity as interview data are; thus they can be used to reduce the impact of reflexivity or bias on the study data, especially when the documents were not created specifically for the present research (Yin, 2011). Nevertheless, documents are still produced for particular purposes and should not be considered without taking into account the context of both production and use – thus it was important to be cognisant at all times of potential bias in the documentary evidence used (Flick, 2009; Yin, 2011). With this caveat in mind, documentary evidence can be used fruitfully to cross-reference

or "triangulate" interview data and observations. Triangulation is discussed in section 3.5 on trustworthiness below.

3.3.3 Participant observation

The final method used to generate data was participant observation. Participant observation is considered one of the most natural of the data-generation methods and the researcher was able to leverage opportunities from working on the Mitigation Action Plans and Scenarios (MAPS) Programme, which included involvement with the BASIC Group of Experts (BGE) and attendance at COPs between 2009 and 2013.

Thus it is a simple technique but its very simplicity belies the challenge of bringing structure to an inherently fluid and "natural feeling" activity. In addition the observer role requires a level of critical thinking and then engagement in order to tease out aspects of social interaction that as a participant one might take for granted (Guest, Namey & Mitchell, 2013). The researcher spent several weeks in India and has attended several UNFCCC COPs as both an NGO observer and a junior member of the South African delegation. These opportunities have provided at least two of the three key elements of a participant-observation method according to Guest, Namey and Mitchell: being "in situ", or on location; and spending enough time "in the field", working to build up a rapport with key members of the broader Indian climate change community (Guest, Namey & Mitchell, 2013).

In this latter respect it has been particularly difficult to build rapport with members of the Indian government delegation during COPs, which are a fast-paced series of smaller and larger meetings that spread a small delegation – like the Indian contingent – very thin. The researcher gained greater access to observing members of the Indian delegation as a member of another delegation herself; however, delegation membership also constricted her ability to act as a free agent in selecting which meetings to observe, or present herself as an impartial researcher. Engaging with the Indian NGO community was much more achievable and led to productive interviews.

3.4 Method of data analysis

There is no single manner in which to conduct qualitative research and indeed analysis, as a process was not confined to a delimited period, but rather woven throughout the research (Stake, 1995; Yin, 2011). Thus it is for the sake of the coherence of this discussion that the analysis appears to "begin" where it does in Figure 8 below. The analytic process in this dissertation has been guided by the five-phased cycle proposed by Robert Yin (2011), namely (1) compiling, (2) disassembling, (3) reassembling (and arraying), (4) interpreting, and (5) concluding.

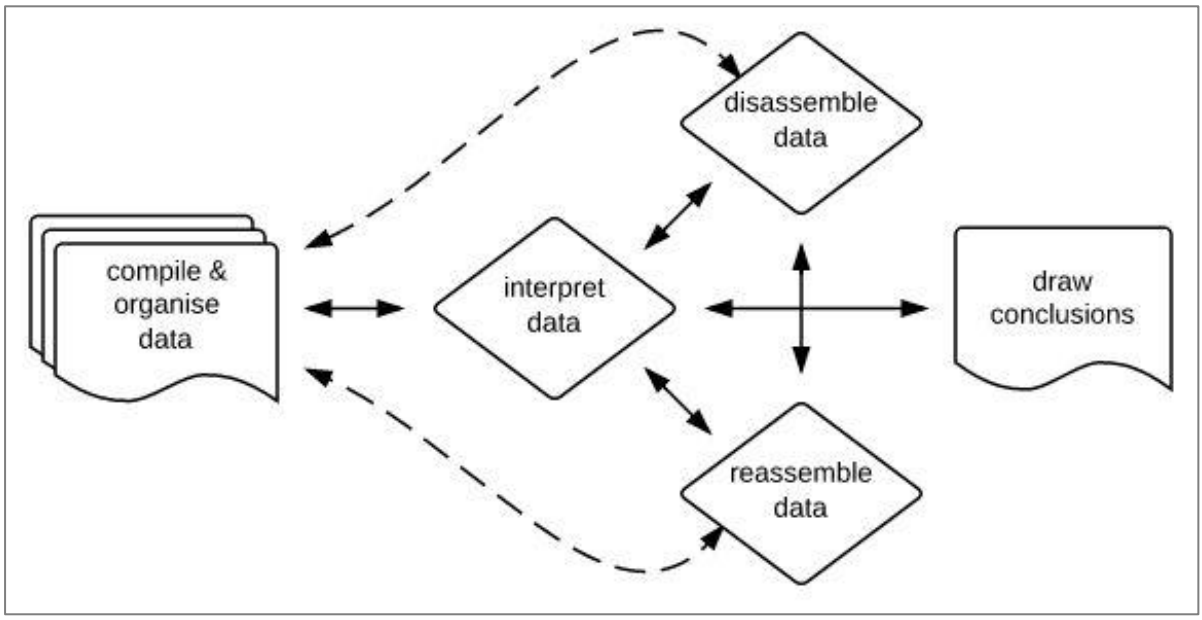


Figure 8: Cycles of analysis
Source: adapted from Yin (2011)

The first phase was to compile the data gathered through the methods discussed above in section 3.3, that is, to compile transcripts of interviews, documents from international and national sources, news articles, observation notes and organise them in a coherent manner. Next began the process of disassembling the data, of looking for different ways to package or even label the data (from its original state) (Yin, 2011). Thereafter the data was reassembled – with a light touch – into clusters around the three forces identified by Robert Cox: ideas, institutions and material capabilities. Having done so, the researcher looked for emerging patterns and categories that make sense to the interviewees, being careful to listen closely to the interview recordings to hear any categories that emerged which were not shaped or circumscribed by the theoretical forces (Stake, 1995; Luker, 2008). The dashed lines in Figure 8 indicate that gathering and compiling more data may also be necessitated during the disassembling and reassembling phases if lacunae in the data are identified. The recursive and iterative nature of the entire process is depicted by the double-headed lines – for instance,

reassembled data might highlight a need for more data, which in turn would need to be disassembled and interpreted before being incorporated into the existing reassembled data. This fourth phase is the interpretation phase, in which new narratives are formed about the data; these are built upon patterns identified in the reassembling phase. This interpretive phase provided the analytic sections of chapters four through seven. In the final phase, conclusions are drawn from the data through the interpretation phase.

Analysis is both inductive and deductive throughout the research. Analysing the data for signs of repeated patterns, themes, ideas or representations is an inductive process, as the researcher is working from the generated data "up" to a more conceptual or thematic level (Strauss and Corbin 1998,12 in Thomas, 2006: 238; Yin, 2011). The researcher's intention is that, by doing so, unanticipated findings will become clear by examining the data and following its lead to develop broader concepts (Aaltio & Heilmann, 2010). This is the predominant mode of analysis in this dissertation; however, there are times when the analysis becomes more deductive in nature, in order to "test" elements of the conceptual framework against the data.

3.4.1 Document analysis

In this dissertation the data is in the form of documents. These include transcripts of the semi-structured interviews, the documentary evidence of UNFCCC submissions and statements, Indian domestic policy and statements, and the notes of the researcher from participant and direct observation. Central to this analysis is the understanding that qualitative analysis is essentially "a shaping of 'reality,' rather than an exact point-for-point recapitulation of sense data" (Yanow, 2006). In this study, the analysis is conducted on words, since "words can be assembled, sub-clustered, broken into semiotic segments. They can be organised to permit the researcher to contrast, compare, analyse, and bestow patters upon them" (Miles & Huberman, 1994) during the phases of analysis.

Cox posited that his configuration of forces theory could also be used as a method of analysis (Cox, 1981); thus generated data was reassembled into the categories of ideas, institutions and material capabilities in order to understand the differences between the identified historical periods of the UNFCCC's evolution. The analysis seeks to explore each of the forces at work in each of the four phases identified, in order to assess and understand what kind of enabling or constraining pressures these impose on India at the UNFCCC.

3.5 Issues of trustworthiness

In light of the preceding discussion of philosophy, strategy and methods, it is worth concluding by considering what differentiates qualitative research findings from polemic and opinion, or as the question is posed by Lincoln and Guba: "How can an inquirer persuade his or her audiences that the research findings of an inquiry are worth paying attention to?" (1985: 290).

The concept of standardised criteria for evaluating findings is most at home in the realm of quantitative research but has been borrowed and transformed by its use (over time) in the more subjective and naturalistic realm of qualitative research. Given the noted differences between quantitative and qualitative approaches, however, scepticism regarding the appropriateness or even the possibility of using these concepts to assess qualitative research has grown in the preceding decades. Several writers have proposed alternatives to the quantitative tests for reliability, validity, and objectivity. Two such sets of suggested criteria shall be employed by the researcher to strengthen the credibility of this research. The first could be termed a "source criteria"; in other words individual data could be assessed by determining the credibility of the informant; the spontaneity with which statements are delivered or information imparted; and the similarity between what is observed by the researcher and what is reported by individuals that is corroborated in some sense by reports of others in the group (Schutt, 2012). The second set was proposed by Denzin, who proposed a list of "interpretive criteria" against which to assess conclusions: namely whether the conclusions come alive as lived experience based on in-depth descriptions that are historically and relationally grounded, and whether the evolution or progress of the conclusions can be traced from and situated in existing research (Denzin & Lincoln, 2002).

Another way in which the researcher can persuade the reader to trust the findings would be to incorporate a variety of perspectives through a triangulation of either data, methods, researchers or theories (Tellis, 1997; Flick, 2011). This study triangulates data by using texts generated from semi-structured interviews and observational notes from conferences and meetings in addition to using document analysis of a range of official documentation. Triangulating in this way increases the accuracy and reliability of the interpretations made (Stake, 2010).

3.6 Limitations and delimitations

This dissertation makes no claims to being the definitive analysis of India's role in the climate change negotiations; rather it is this researcher's application of a critical international relations theoretical perspective on the question. Furthermore, while Robert Cox applied the method of analysing the configuration of forces at three levels – that of social forces, states and world orders – this dissertation has applied Cox's trilectic method in examining the interactions of one state with others within a limited totality circumscribed by the negotiations on climate change being held under the auspices of the UNFCCC. It should also be noted that this dissertation is focused on the role of India *at* the UNFCCC negotiations, not in the various other fora that have begun to also address climate change, like the MEF or G20.

As much as the subject of the case study – India – is embedded in and inextricable from the context of the climate change negotiations, it was necessary, for the sake of the clarity of the research finding and manageable scope, to define some boundaries for the study. Case studies can be "bound" (Baxter & Jack, 2008: 546–7) by delimiting them in terms of definition, time, place, activity, or various combinations of these (Miles & Huberman, 1994; Creswell, 2003; Yin, 2003). This dissertation "binds the case" in terms of context, time, and activity: the unit of analysis is not simply India, but rather "India in the climate change negotiations" and the case study covers approximately 27 years, from before the signing of the UN Framework Convention on Climate Change in 1992 to the run up to the COP21 in Paris, 2015. These boundaries have been selected as they cover the "lifespan" of the UNFCCC as a multilateral environmental agreement: including the important milestones of the agreement, ratification and consecutive commitment periods of the Kyoto Protocol (KP) and the Ad-hoc Durban Platform on Enhanced Action (ADP) and hopefully an agreement on "post-2020" architecture.

This dissertation is also focused on what might be termed the "English world" that is inhabited by a (relatively) small, elite stratum of the Indian population. The researcher would have written a different dissertation had she been able to read texts and speak with people in other Indian languages; that said English is one of the official languages of both India and the UN. There is also no claim that the findings of this case study can be generalised to all large developing countries acting within the climate regime. The key findings of this dissertation should be understood with these limitations in mind.

Section II: overview

This section traces the story of how India's role within the climate change regime has changed over time. In order to do so, the 20-plus years of the climate regime have been divided into four phases to structure the analysis in the following chapters. The aim in each chapter is to describe and understand India's role at key junctures in the evolution of the regime.

These specific four phases were delineated as they represent key processes or inflection points in the evolution of the climate regime as seen in figure 9. The first is the negotiations toward the establishment of the Framework Convention; the second is the negotiation of the Kyoto Protocol and of the Marrakech Accords establishing specific rules for it; the third phase begins with the entry into force of the Kyoto Protocol and includes the negotiations leading up to the second commitment period of the KP; the forth and final phase (covered by this dissertation) encompasses the ADP negotiations towards a 2015 agreement to supersede the KP after 2020. Each phase is considered individually in Chapter Four to Chapter Seven in this section.

Figure 9: Four phases of the evolution of the climate regime

This phased analytical approach has been adopted because it is commensurate with Robert Cox's method of historicism. Each phase will be analysed in order to identify and isolate (to the extent possible) the forces of ideas, institutional arrangements and material capabilities in India and how these impact and are impacted upon by these same types of forces at the international level of the evolving climate change regime. The interaction of these three types of forces – a trilectic of forces – characterises each phase, and in any particular phase one of the social forces may (but may not) dominate the others.

This trilectic forms a heuristic device to understand the "shape" of the abstract that is the historical structure; however, two elements of this trilectic, namely ideas and institutions, are hard to distinguish between in reality. To an extent this can be ascribed to Cox's definition of institutions as partially constructed of ideas, making it difficult at times to tease out what is an idea and what is more usefully thought of as an institution. For the purpose of this dissertation ideas have been conceptualised as largely abstract, "broader-picture" constructs. The dividing line between ideas and institutions has been drawn where material resources are dedicated to implementing an idea or where an organisation is formed. Thus, for example, although the

Indian five-year plans are ideas of where India should be headed, they are also part of the budgetary planning process of how to get to that ideational end result and have therefore been discussed under the rubric of institutions, not ideas.

As the evolution of the climate regime is used as a structuring and focusing device for the dissertation, the analysis is only of climate change –related institutions at both national and international levels. It is acknowledged that these institutions represent only a partial view of the full range of institutions that may influence (or are influenced by) human activity; however choosing this focus is in keeping with Cox's method of examining historical structures. In this case the historical structure – a specific, delineated, "particular sphere of human activity" (Cox, 1981: 137) – is the climate change negotiations and thus it is appropriate given the research question to limit the examination of institutions to those related to, or created in the name of, responding to climate change. It is also necessary to limit the scope of the dissertation in order to complete it in a timely manner.

The history of international interaction on climate change is a relatively short one, going back a little over 20 years (depending on what is used to mark the "start" of the interaction). This dissertation uses the marker of the 1988 UNGA resolution (discussed in chapter four), but while this signals the beginning of state-level interaction on this issue, the interaction was somewhat slow to evolve. This is very apparent from the relative brevity of the chapters of the first two phases spanning 1988 to 2004 in comparison to the chapters covering 2005 to 2015. Simply put, chapter three, covering 2005-2010, covers the period that has been described as "the high-water mark" of climate policy (Keegan, 2007), when the idea that the climate was changing reached a critical mass and a variety of new institutions were created in response at the national level. The last two chapters are thus substantially longer because there are more of the forces interacting and influencing each other in those latter phases.

It is the interaction of these forces that makes change of the configuration possible. According to Cox, this is because historicism posits the unity of subject (the human mind, and thus ideas) and object (e.g. practices, institutions and material capacities). Forms of thought (ideas) are produced by – and in their turn produce – a particular historical structure of social forces/relations (Cox, 1981). Institutions and practices are a "result of the collective responses to the challenges of the material (natural) environment" (Leysens, 2008: 44). Thus, as humans change – influenced by new ideas, by the institutions they help to construct or by the material environment they are surrounded by and interact with – they are also able to *bring about* changes in the historical structure; these changes are the subject of the analysis in the following chapters.

INC to FCCC

1988-1994

Establishment of the Convention

4 India in the audience: the first phase (1988–1994)

This phase covers the period from the UN General Assembly resolution in 1988 until the end of the year preceding the first COP held in 1995. The chapter is organised around the trilectic of forces identified by Cox; within each sub-section is a description of the force at work at an international level, both broadly – in order to sketch the milieu – and more narrowly within the emerging regime. This is followed by a discussion of the forces at work within India during this phase of the evolution of the climate change regime.

The analysis that follows applies Robert Cox's historical structure method as a means of exploring the interaction of the forces at work during this phase. The predominant forces are discussed in order to highlight connections between the mental frameworks within which, and through which, people and states conceive of action in the material world. These frameworks constrain and enable both what people and states are able to achieve and how they conceive of doing so (Cox, 1985). All the important events and milestones are depicted in Figure 10 below: international events above the date line and Indian events and data shown below it.

4.1 Ideas

4.1.1 Ideas internationally

The late 1980s and early 1990s were a time of far-reaching changes in the geopolitics of the world. Often pinpointed as a significant event was the dismantling of the Berlin wall separating East and West Berlin in October 1989. It was, however, just one of a number of momentous geopolitical events in this period. Early in the 1990s Iraq invaded Kuwait, leading to the First Gulf War/Kuwait War; wars erupted in the Balkans as the communist state of Yugoslavia fractured into new entities (Croatia, Slovenia, Bosnia and Herzegovina, and Macedonia) while Germany reunified in October 1990 and that same year in South Africa Nelson Mandela was freed from prison, leading the newly unbanned ANC into negotiations with the National Party government to end apartheid and white-minority rule. An epoch-defining moment in world geopolitics took place in December 1990 when the Union of Soviet Socialist Republics (USSR) dissolved, thus marking the official end of the Cold War that had so defined geopolitics since World War Two. Geopolitical shifts were also taking place in Europe: the European Union (EU) was created in 1992 with the conclusion of the Maastricht Treaty between 12 countries.

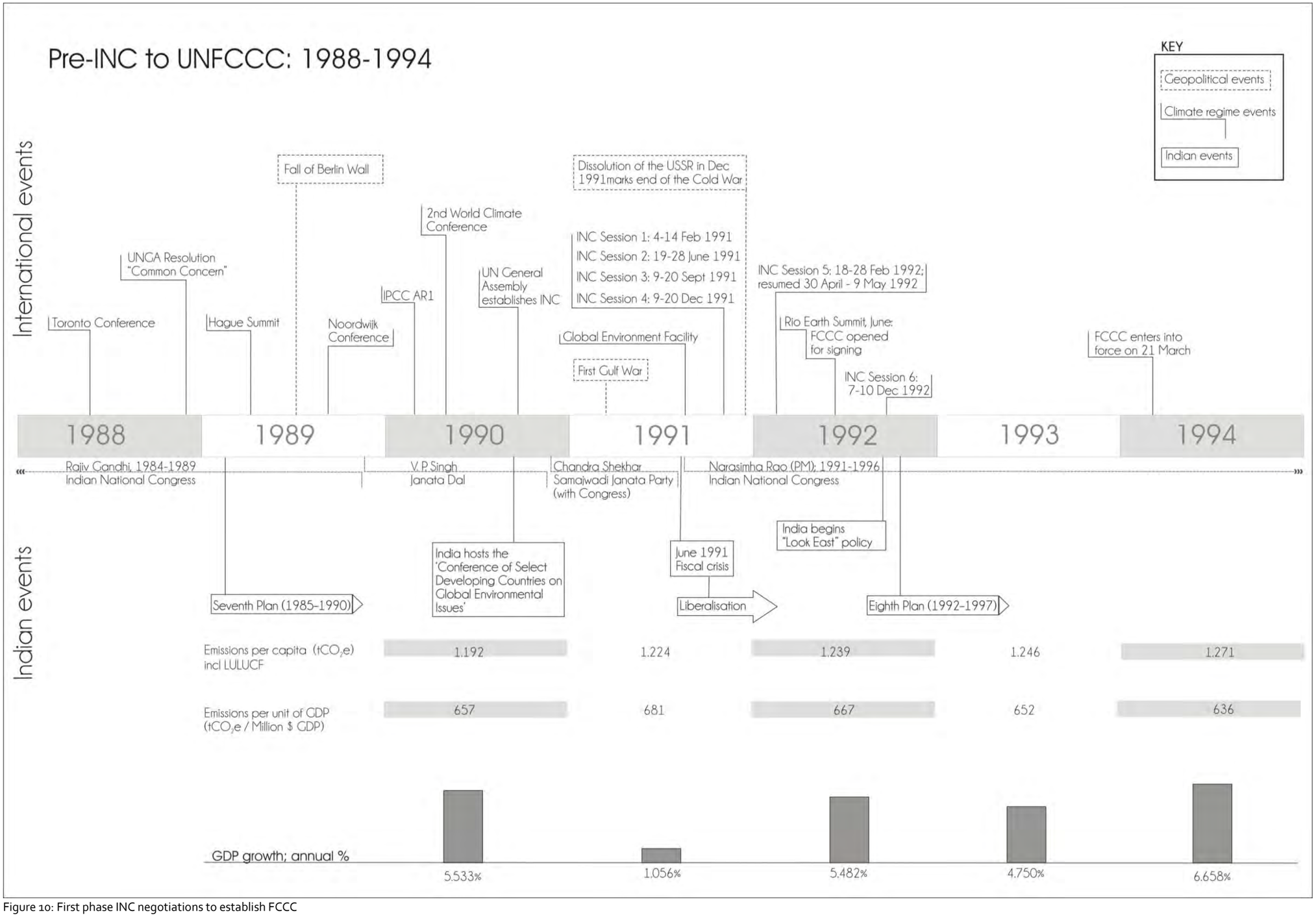


Figure 10: First phase INC negotiations to establish FCCC

In the 1980s, the climate regime as we have come to know it in the post-Rio Convention years had not yet been constructed; however, serious concerns about the possible effects of fossil fuel consumption on the climate were beginning to bridge the gap between the scientific and political communities. The 1980s witnessed several key international developments that paved the way for the construction of the regime by raising awareness of the importance of environmental issues that crossed the boundaries of sovereign states. These included *Our Common Future* – the final report of the World Conference on Environment and Development (WCED) in 1987 – and the discovery of the depleting impact of CFCs on the stratospheric ozone layer (and eventually of the ozone "hole"[12] over the Antarctic in 1985), and the international response in the form of the Vienna Convention (1985) and its Montreal Protocol (1987). In addition, the 1980s also experienced a pattern of freak weather occurrences as well as six of the hottest years (to date) on record. Frequently cited as key to raising awareness and politicising the science (at least in America) was a statement by NASA's chief climate scientist, James Hansen, to the US Senate's Energy and Natural Resources Committee that the scientific evidence indicated that the greenhouse effect was already a reality (Paterson, 1996). Between 1985 and 1989 four international high-level meetings[13] were held that progressively raised the level of importance of global warming on the international stage (Bodansky, 2001). In 1988 the World Meteorological Organisation and the UN Environment Programme (UNEP) jointly established the Intergovernmental Panel on Climate Change (IPCC) (see Figure 10 above). The mandate of the IPCC was to subject emerging science to scrutiny: first by a panel of international scientist-peers and then by a panel of government representatives. Two critical objectives were the detection of any warming trend and the attribution thereof to human interference in the climate system (Yamin & Depledge, 2004).

By December 1988 global warming was in the spotlight in the UN General Assembly: the GA issued Resolution 43/53 (1988) endorsing the establishment of the IPCC and recognising climate change to be a "common concern of mankind" (Paterson, 1996). In 1990 – the same year as the Second World Climate Conference (the first was held in 1979) – India hosted the "Conference of Selected Developing Countries on Global Environmental Issues". The outcome was a clear decision by developing countries to assign the responsibility of climate change to developed countries and to take a firm stand not to agree to any commitments to reduce emissions (Sharma, 2005). This presaged the belief in the legitimacy of differentiated commitments between developed and developing countries that will be discussed below.

[12] The 'hole' in the ozone layer is really the geographic area defined by a thinning out of ozone in the stratosphere to below 220 Dobson Units.

[13] These were held in Villach, Toronto, The Hague and Noordwijk - see Figure 9 above.

4.1.1.1 The science: First Assessment Report (1990)

In this early phase the international scientific community and the knowledge it generated played a significant role in helping the political community to begin to formulate an agenda (Bodansky & Rajamani, n.d.). The IPCC produced the First Assessment Report (FAR) in August 1990 in response to a request from the UN General Assembly (UNGA). The UNGA in turn recognised the findings of the FAR during its 45th Session and, using this as justification, established the Intergovernmental Negotiating Committee (INC) and then tasked it with the formulation of a framework convention on climate change, which could be signed at the UN Conference on Environment and Development in June 1992 (IPCC, 2010). This government-scientist interaction has remained a characteristic of the IPCC Assessment Report process. As illustrated in Figure 11 below, governments interact at three crucial stages, namely: nominating expert authors, reviewing the "second-order draft" and reviewing the Synthesis for Policymakers (SPM), a crucial synthesis of highlighted findings from all three working groups that is agreed to line-by-line by government representatives (IPCC, 2010).

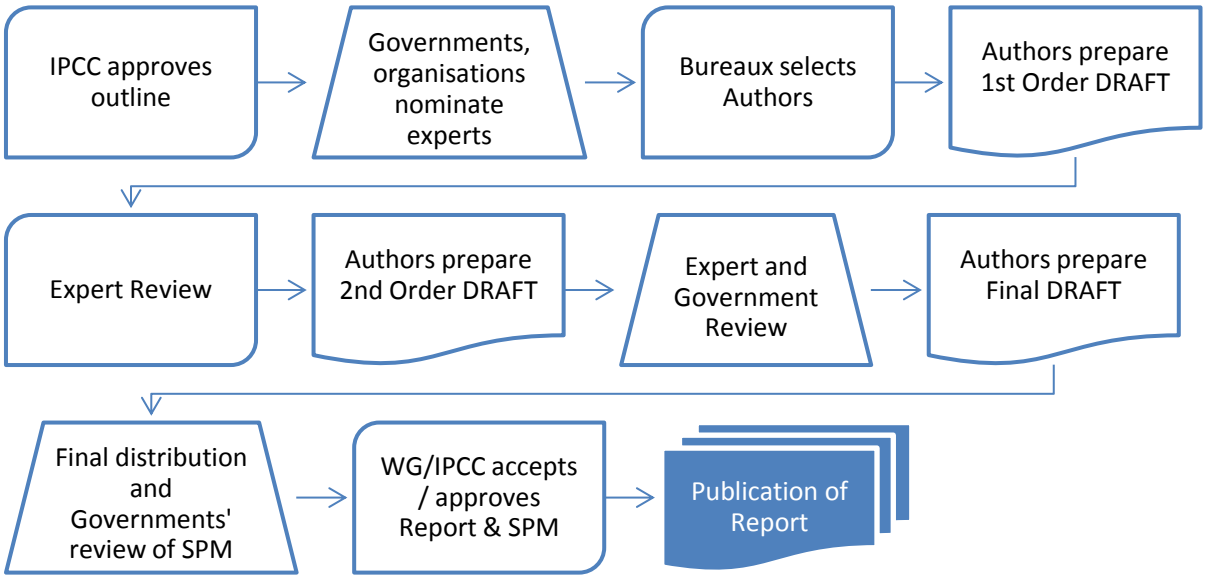


Figure 11: IPCC Assessment Report process
Source: Own rendering based on IPCC (2010: 3)

The first IPCC Assessment Report comprised three volumes – one by each of the working groups of scientists on the scientific assessment of climate change, the possible socio-economic impacts of climate change and the response strategies and elements for inclusion in any future convention on climate change. These working groups, formed in response to the tasks outlined

by the UN General Assembly Resolution 43/53 of 6 December 1988 (IPCC, 2010), are depicted in Figure 12.

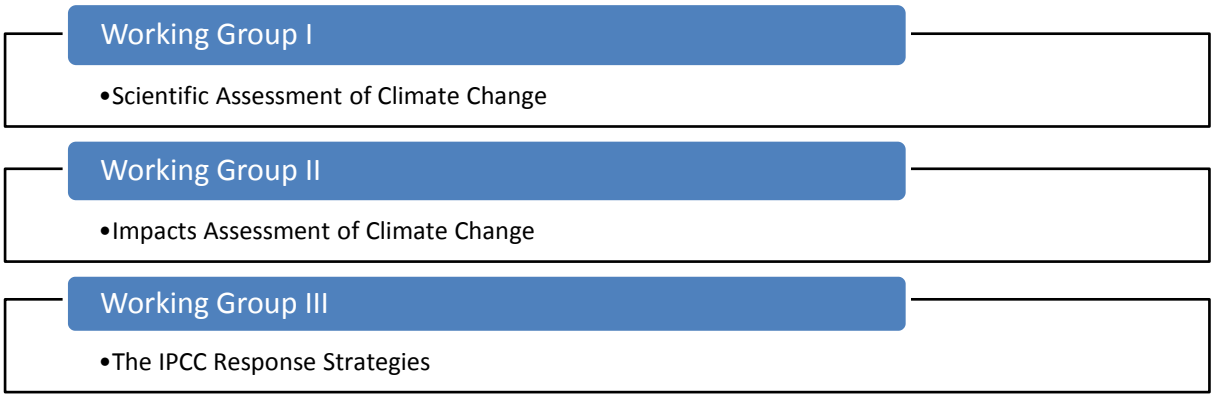


Figure 12: Working groups of the First Assessment Report of the IPCC
Source: Own rendering based on information available on http://www.ipcc.ch/publications_and_data/publications_and_data_reports.shtml [Accessed on 20/02/2015]

The role of the IPCC was (and remains) the assessment of available literature: it communicated its assessment in the language of levels of confidence as well as of certainty and uncertainty. Working group I – the assessment of the science – found with certainty that concentrations of carbon dioxide (CO_2), methane (CH_4), chloro-fluorocarbons (CFCs) and nitrous oxide (N_2O) were increasing. These increased concentrations would stimulate the earth's natural greenhouse effect, causing the average warming of the earth's surface, which would in turn increase water vapour (IPCC, 1990: 1.0.1). In relation to the role played by humans in the warming, the FAR stated, "We calculate with confidence that … the steady anthropogenic emissions into the atmosphere represent a significant disturbance of the natural carbon cycle" (IPCC, 1990: 1.0.2).

The report's authors projected that if there was no reduction in the prevailing trend of emissions (termed "Business as Usual" or BAU), global mean temperatures could rise by 0.3°C per decade in the 21st century. Cumulatively this would result in a rise of global mean temperatures by 2°C above pre-industrial temperatures by 2025, and 4°C above before the end of the 21st century. Global mean sea level was also predicted to rise by approximately 20 cm by 2030, and 65 cm by the end of the next century (IPCC, 1990: 1.0.3).

The report contained the caveat that there remained uncertainties in the forecasts made specifically in relation to "the timing, magnitude and regional patterns of climate change" and that these uncertainties held particularly with regard to changes in precipitation (IPCC, 1990). In addition the report acknowledged that policymakers would find it difficult to make scientifically sound decisions, as they were hampered by two key uncertainties, that is, the effectiveness of

response options in actually averting potential climate change, and nature and extent of the social and economic costs of responding (IPCC, 1990: 3.0.1).

4.1.1.2 Common but Differentiated Responsibilities & Respective Capabilities (CBDR & RC)

The idea of differential treatment as applied to burden sharing in the interests of protecting environmental commons was not uncommon in international law prevailing at the time (Rajamani, 2006). The concept of differentiation can be found as far back as the Declaration of the UN Conference on the Human Environment in 1972 (United Nations, 1972) and in Principle Seven of the Rio Declaration of 1992 (UNEP, 1992). Differentiation was also considered key to the argument in favour of an equitable approach to addressing the changing climate. In relation to climate change the idea was that different countries had different responsibilities with regard to the cause of the issue – often referred to as "historical responsibility" (Friman, 2007) for increasing the "stock" of GHGs in the atmosphere – and that countries also had different capacities to respond to the anticipated costs and ensuing problems (Cazorla & Toman, 2000).

These ideas - of differences in responsibility and capacity to respond - featured prominently in the now well-known Centre for Science and Environment (CSE) response to the 1990 report by the Washington, USA based think-tank, the World Resources Institute (WRI)[14]. The CSE's rebuttal, *Global Warming in an Unequal World*, drew attention to the inequity of focussing on the future emissions of developing countries instead of the historical emissions of developed countries. Co-authors Agarwal and Narain averred that doing so obscured the fact that the stress on the global atmospheric commons was in large part caused by the energy use and consumption patterns of those of the North. It was also crucial, they argued to account for the different drivers of emissions. Whereas emissions from paddies and livestock in developing countries were "survival emissions" produced to feed people, emissions from consumption in developed countries could be termed "luxury emissions", since these often came from consumption of products and services over and above those needed to simply survive (Agarwal & Narain, 1991). The co-authors asserted that "in a world that aspires to such lofty ideals like global justice, equity and sustainability, this vital global common [the atmosphere] should be shared equally on a per capita basis" (Agarwal & Narain, 1991: 9).The WRI-CSE exchange epitomised the different approaches to equity and differentiation (and hence symmetry) between the North and the South.

[14] World Resources Institute. 1990, World Resources 1990-91: A Guide to the Global Environment, Oxford University Press: New York.

Perhaps at least partially informed by the widely publicised WRI-CSE exchange, India took a firm position (as articulated by head of delegation Dasgupta) in the early INC negotiations that every person had an equal right to the atmosphere as a global resource and that those who were responsible for the incremental warming of the earth (by increasing the stocks in the atmosphere) had a corresponding obligation to take corrective action (Dasgupta, 2012a). Indeed India lays claim to having provided the pivotal conjunction of the phrase "common *but* differentiated responsibilities" (CBDR), which is now found in Article 3.1 (Desai, 2014), in order to distinguish between the responsibilities of different countries. Even so, the principle of CBDR was highly contested during the FCCC negotiations – indeed, even the rubric "principles" under which it is found and the legal standing thereof was contested. Developing countries, and India as a leading proponent of equity among them, eventually prevailed on the inclusion of Article 3 of the Convention, but not before it had been circumscribed to apply only to parties to the Convention (not states), and only in relation to the operation of the Convention, rather than as customary international law (Bodansky, 1993). This renders the concept of equity as encapsulated by CBDR & RC a fine exemplar of Cox's second type of idea: namely the "collective image of social order held by some groups" (Cox, 1981: 136).

From the very beginning of the negotiations for the nascent climate regime, the Indian government took a firm stance that global warming (the term favoured at the time) was caused by greenhouse gas emissions produced by developed countries. During the pre-UNCED INC meetings, India produced a "non-paper" (A/AC.237/Misc.1/Add.3 pp3-17) containing its ideas of an equitable solution that acknowledged the responsibility of the developed countries and framed the responsibility of developing countries as contingent upon national circumstances and the provisions of material resources by developed countries. This was in sharp counterpoint to the insistence by developed countries that developing countries also take on emission-reduction commitments (Dasgupta, 2012a). The non-paper took the form of extensive proposed text for a framework convention in order to assume a proactive stance at the beginning of the negotiations and start to provide an alternative framing of the evolving debate (Dasgupta, 2012b). A key article related to differentiated responsibilities and respective capabilities was drafted by the Indian delegation and became the core of Article 4.7 of the FCCC after tough negotiation (Dasgupta, 2012a; Desai, 2014). This article is a key clause as it links the (prospective) actions taken by developing countries with the commitment to the provision of finance and technology by developed countries, thus helping to entrench the voluntary and contingent nature of actions to be taken by developing countries under the FCCC as well as the uneasy pact between developing and developed countries (Rajamani, 2007; Dasgupta, 2012a).

In what has become a characteristic of the text-based negotiations, INC and early FCCC negotiations were marked by highly semantic arguments that frequently prevailed over the substantive issues. In the words of a long-time commentator, "[p]roposed formulations took on a symbolic and even talismanic quality, only distantly connected to the actual meaning of words. Linguistic debates became a proxy for political confrontation, with success or failure measured not just by the substantive outcomes but by the inclusion or exclusion of particular terms" (Bodansky, 2001: 38). Words and phrases were debated as much for their political meanings as for their legal merits or scientific significance.

From as early as the second World Climate Change conference in November 1990, the emerging schism between the North/developed countries and South/developing countries was becoming apparent, as were the intra-North and intra-South divisions (Bodansky, 2001; Yamin & Depledge, 2004). Broadly speaking the US maintained a firm line against any substantive targets (of emission reductions) or timetables (by which to achieve reductions), instead promoting the idea of national strategies and more research (Bodansky, 2001); the sentiment underpinning this argument was summed up in the infamous 1992 statement by the then U.S. president, George H. W. Bush, that "the American way of life is not up for negotiations. Period." (Vidal, 2012). In contrast to the USA, the Western European states, and to a lesser degree Canada, Australia and New Zealand (CANZ), promoted the "targets and timetables" approach in which both a global emissions-reduction target and a timetable for achieving these targets would be agreed – a more top-down approach (Bodansky, 2001).

In order to counter pressure from countries like the USA and Australia – that larger developing countries should take on emission-reduction commitments – India played a pivotal role in building a "Green Group" coalition of 72 like-minded developing country states. This occasioned the only public, if temporary, split in the G77 as it included the Alliance of Small Island States (AOSIS) but excluded OPEC states (Yamin & Depledge, 2004). The "Green Group" called for a strong, legally binding protocol without additional commitments for developing countries. The "Green Paper" this group tabled became the basis of the Berlin Mandate that launched the negotiations for the Kyoto Protocol at COP1 (Paterson, 1996). The accepted differentiation between developed and developing countries was institutionalised in the form of the Annexes appended to the FCCC – with Non-Annex I developing countries exempt from action without being enabled by assistance from Annex I developed countries (Article 4.7).

It is this encoding of differentiation as the operationalisation of equity that is the pivotal idea of this phase and indeed provides a crucial ideational foundation for the climate regime.

4.1.2 India: ideas for change

Finance Minister under Narasimha Rao, Manmohan Singh, used the 1991 macro-economic crisis as an opportunity to introduce far-reaching and radical changes in India's economy: from inward-looking import substitution policies to outward-looking policies concomitant with a liberalisation of the economy. Broadly speaking the reforms of 1991 were of two kinds: industrial policy and external economic relations (Kohli, 2006). Industrial policy reforms — which included the easing of the Monopolies and Trade Restrictive Practices Act's constraints, the opening of some hitherto exclusively public sectors of the economy to private competition, and the introduction of labour reforms and tax concessions—could be viewed as a continuation of reforms begun during the 1980s under Rajiv Gandhi (Sharma, 2009).

What was a significant break with the past were the reforms that fell under the rubric of external economic relations: the devaluation of the currency, removal of import quotas and reduction of tariffs (albeit slowly), as well as the easing of restrictions on foreign financial transaction and the liberalisation of the rules governing foreign investment (Nayar, 2003). Although these were significant changes to the way business was done in India, relatively speaking, the reforms brought about moderate changes in the openness of the economy – indicated, for example, by the level of foreign trade as percentage of GDP in figure 13 below – especially in comparison with the openness of the rest of the Southeast Asian economies (Nayar, 2001).

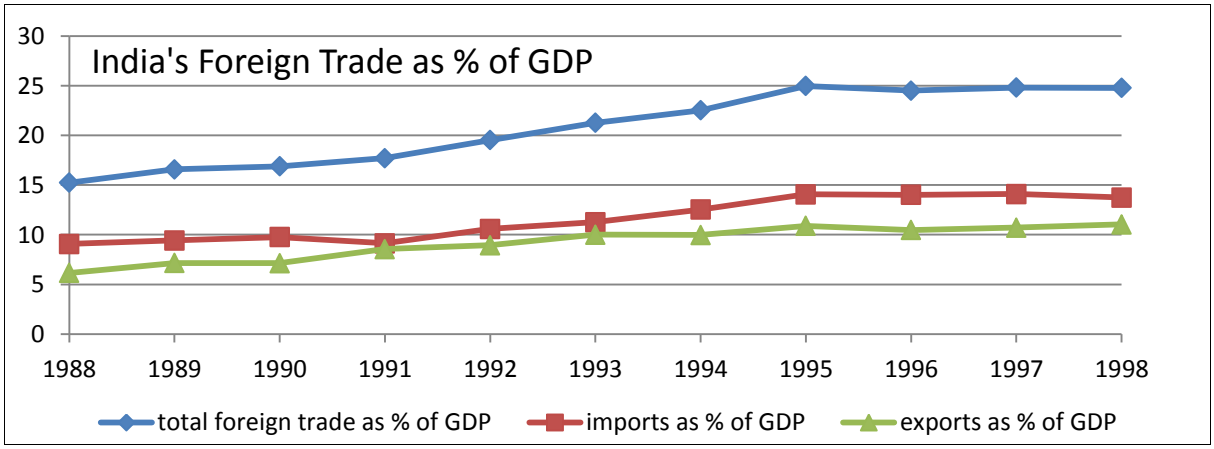


Figure 13: Foreign Trade as percentage of GDP 1988-1998
Source: World Bank Indicators Database (2015)

The progress made was, however, all the more remarkable given that the civil service had hitherto been "adept at using the instruments of central planning" (Ghosh, 2014). The idea of a liberalised, deregulated economy was not – at least initially – a commonly held, shared idea: it was consistently and strongly opposed by the left wing of the Indian political establishment who cited concerns about the effect on the poor, and by the right wing who worried about an influx

of western culture and mores (Malone, 2011; Mohan, 2013). The combination of objective circumstances (macro-economic crisis and then improvement) and the political signal (of liberalisation and deregulation) eventually succeeded in creating a "paradigm shift", whereby "the civil service sort of moved seamlessly to the next, onto the new regime" (Ghosh, 2014).

Since independence, India had created a history of multilateral activism at the international level – most notably in the form of the Non-Aligned Movement (NAM). The ending of the bipolar certainty of the Cold War made the NAM effectively redundant and augured the beginning of a unipolar future. India had long prided itself on its moral leadership of developing countries and in taking an ethical stance (supporting the anti-apartheid struggle was just one example) on international issues. Thus it was unsurprising that it should see multilateralism as a buffer against impending unipolarity or interference by great powers: the "multipolar world" became a growing "Leitmotif" of Delhi's projection of Indian views to an international audience (Ganguly, 2003; Malone, 2011). What did change, however, was the tenor of its interactions. As the need to integrate more with the world economy became more pressing given its material circumstances, India's previous resort to a "moral foreign policy" was displaced by foreign relations based more on diplomatic and economic common interests (Sagar, 2009) . Consequently, in the 1990s, "India could no longer credibly claim to be 'a spokesman of the Afro-Asians, the non-aligned, the under-developed and the small states'" as in terms of economic stance it gave little credence to previously held ideas of third world solidarity (Malone, 2011: 257–8).

This inward-looking emphasis on addressing its material shortcomings was also informed by the intersubjectively held idea – at the national level – that India, as a poor, developing country, should not be held responsible for reducing emissions as it had not contributed to the stock of GHGs in the atmosphere. India's belief was that developed countries should address emissions as they bore the historical responsibility for creating the problem (Agarwal & Narain, 1991; Friman, 2007; Negi, 2014). A related idea was that a priori India's emphasis should be on development in order to address poverty and underdevelopment (explored more in the section on material capabilities below), not on addressing a global problem it had not helped to create. Indeed, at least one eminent India scholar has referred to the eradication of mass poverty as the "single, intrinsic and overarching objective of national development" (Srinivasan, 2011), casting this as an overriding intersubjectively shared idea. These two related ideas informed its approach to institution building – it did not see the need to create them at national level – and its stance in favour of CBDR at the international negotiations.

4.2 Material capabilities

4.2.1 Material capabilities at international level: pervasive globalisation

The late 1980s show the world average real GDP growth rates declining somewhat from above four percent to just above two percent in 1992 – see Figure 14 below. The deceleration in the advanced economies was more pronounced than the average rates of growth in the emerging and developing countries, which hovered between 2 and 4% for most of this period – with the exception of India's precipitous drop in GDP around 1991.

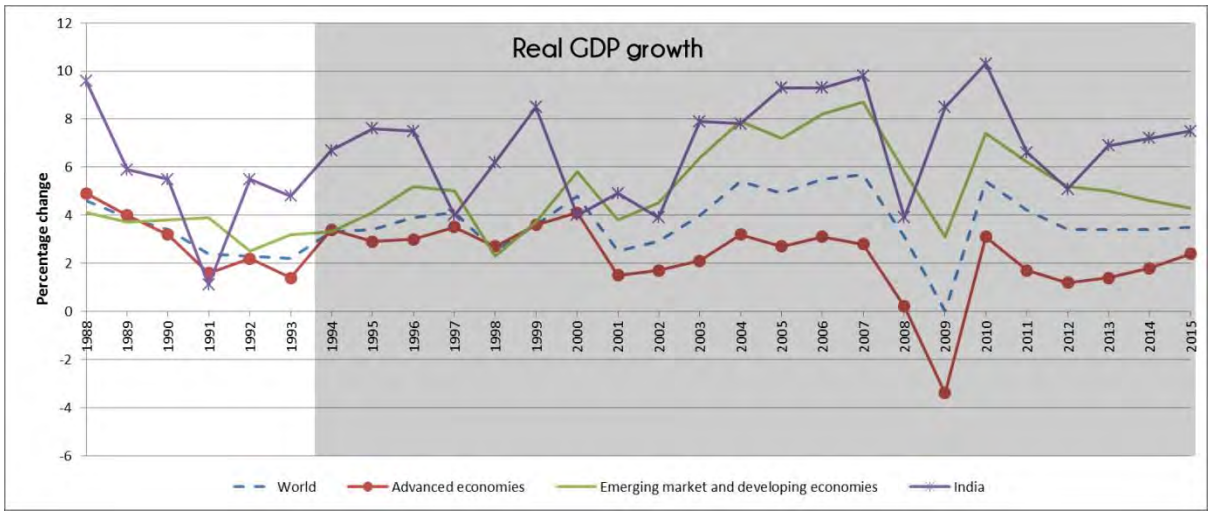


Figure 14: Real GDP Growth – annual percentage change
Source: April 2015 World Economic Outlook (IMF, 2015a)

The 1990s marked the beginning of an overt and pervasive phase of economic and political globalisation. A key characteristic of this time was that the reach and ease-of-use of information technology increased dramatically, rendering existing geo-political boundaries increasingly porous (Guttal, 2007). Globalisation encompassed a number of trends, which included the increased transnational movement of people, capital, commodities and technology, as well as the creation of legal, technological, organisational frameworks and infrastructure to facilitate and promote these changes (Chasek, Downie & Brown, 2010). While international trade had existed for centuries, the transnational movement of capital, services and commodities in the 1990s became markedly more pronounced and ubiquitous. This transnational boundary-hopping also contributed to (and benefitted from) the increasing homogenisation of consumer desires, the spreading of ideals of democratisation and the consolidation and expansion of transnational corporations (Guttal, 2007). Former UNDP administrator James G. Speth argued that globalisation was seen as a way to supplant the aid-

provision agenda, as encapsulated in the mantra of "trade, not aid" that gained traction in the US in the free-market Reagan era and continued to be espoused by the Bush Administration in the 1990s (Chasek, Downie & Brown, 2010).

4.2.2 *India: struggling out of a macro-economic crisis*

After faltering and unsustainable reforms in the 1980s under Indira, and then Rajiv Gandhi, a severe macro-economic crisis hit India in 1991 – one that might have been weathered had India's economy had a more stable fiscal base (Joshi & Little, 1993). The 1991 crisis manifested most noticeably in a decline in the valuation of the Indian currency against major foreign currencies through the first half of 1991 (Cerra & Saxena, 2002), a rise in the rate of inflation above 10% and an increase in the government's fiscal and current account deficits (Joshi & Little, 1994; Srinivasan, 2011). These factors culminated in a sharp drop in the country's GDP from just below 6% in both 1989 and 1990 to 1.056% in 1991, as can be seen in the white section of Figure 15 below.

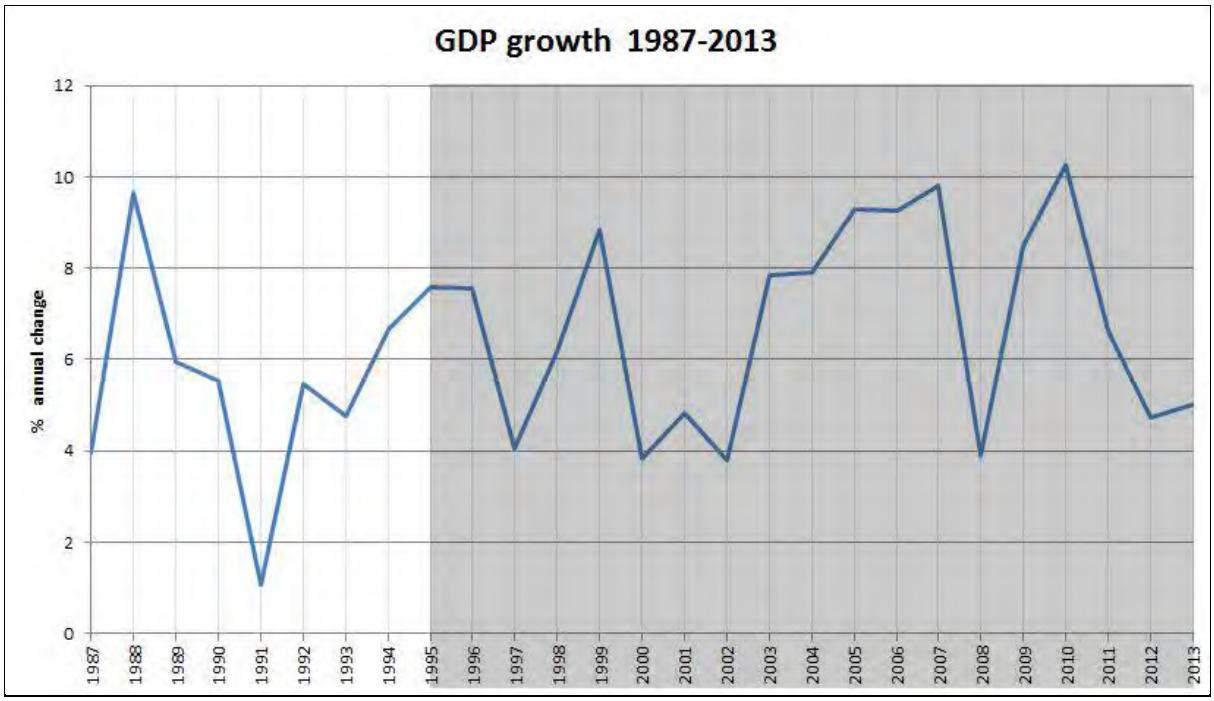


Figure 15: India's GDP growth between 1987 & 1994
Source: Own graph based on data from World Development Indicators, World Bank (2015)

The increase in the current account deficit was brought on by three interconnected factors centring on the first Gulf War of 1991 and the collapse of Eastern Bloc markets following the collapse of the Soviet Union. The Indian Government's reaction to the first Gulf War was to anticipate a rise in oil prices and buy considerable quantities on the spot market, which had the effect of draining the foreign exchange reserves (Ganguly & Pardesi, 2009). In addition, India not only had to foot the costs of repatriating over 100 000 workers from the Persian Gulf, but in

so doing it also lost the foreign exchange remittances they provided when working overseas. The dire financial straits in which these factors left India were compounded by the loss of Eastern European export markets – up to a 40% decline – brought on by the collapse of the Soviet Union at the end of the Cold War (Joshi & Little, 1993; Ganguly & Pardesi, 2009). However, several authors have pointed to these exogenous shocks as being necessary, but insufficient, to cause the dramatic upheavals that followed (Joshi & Little, 1994; Ganguly & Pardesi, 2009). Indeed, the liberalisation reforms were ushered in with a relatively small support base of pro-business and government interests – evidenced by, for example, crucial industrial-policy reforms being enacted by executive decision instead of through Parliament (Kohli, 2006).

Finance Minister Manmohan Singh introduced a range of "systemic reforms" to the economy over and above those required by the IMF and World Bank to which India had turned for financial assistance during the crisis (Srinivasan, 2011). As a result of the variety of interventions, India's GDP strengthened between 1991 and 1994, as can be seen in Figure 15 above. Two concurrent geopolitical events may be considered as influencing Singh's systemic reforms as opposed to more piecemeal reforms of the 1980s. The first of these two events have been alluded to above; the collapse of the Soviet Union undermined the India state's longstanding application of a Soviet-style central planning model and heavy-industry based industrialisation strategy (Srinivasan, 2011). The rise of India's great rival, China – apparently as it opened its economy to the world – can also be inferred as a pertinent factor motivating the extensive scope of the reforms. China had lagged behind India in per capita income, but this gap was rapidly closing (Srinivasan, 2011). Thus this period of reform was seen as a potential crossroads for the Indian economy – with one route leading to greater growth at the expense of human development, especially the poor, and another path leading to pro-poor growth with equity between people as a major driving force (Basu, 1993).

Robert Cox's definition of material capabilities extends beyond the fiscal standing of a country to include the broader material circumstances faced by people. One measure of that is GDP, but arguably it is worth considering more indicators for a finer-grain picture. Below a selection of indicators draw a more complex picture of the material capabilities of the first phase.

The Human Development Index (HDI) is an institutionalised embodiment of this idea; indeed the UN Development Programme's website states that "[t]he HDI was created to emphasize that people and their capabilities should be the ultimate criteria for assessing the development of a country, not economic growth alone" (UNDP, 2015a). As such the HDI is a composite

measure of three major dimensions, namely, the experience of a long and healthy life, the possibility of the attainment of knowledge, and a decent standard of living. The mean of the assessments of each dimension is expressed as a number between zero (extremely poor performance) and one (excellent performance). Countries are grouped into one of four categories: low human development, medium, high and very high. At position 135 out of the 187 countries analysed, India is towards the bottom end of the medium human development category. Historical figures are only available for the years 1980 and 1990, but these show a moderate improvement from 0.369 in 1980 to 0.431 in 1990. India's improvement largely tracked the improvement of the South Asian regional average, although it was distinctly below the regional trend line, as can be seen below in Figure 16 (UNDP, 2015b).

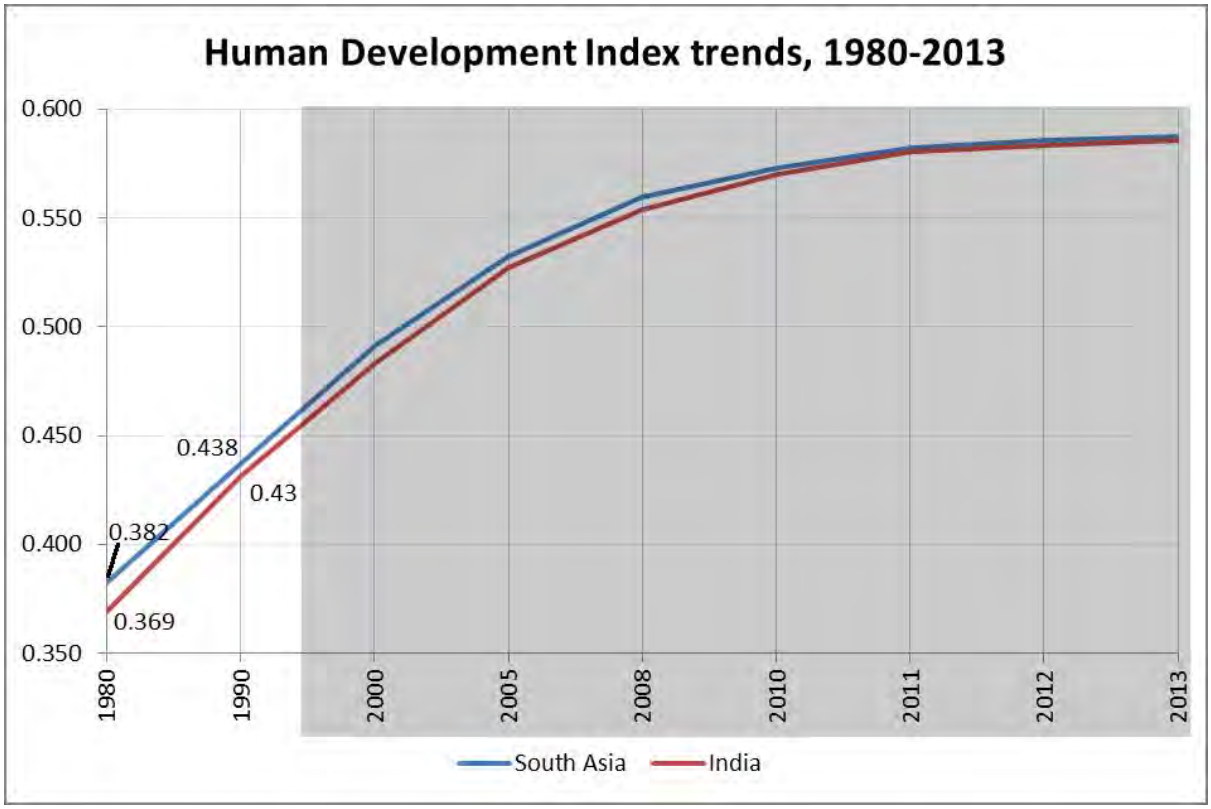


Figure 16: UNDP Human Development Index trend from 1980 to 2013
Source: Own graph based on data from UNDP (2015b)

Given India's low score on the composite Human Development Index, it is unsurprising to find that in 1988 more than half of the population (53.59%) lived below the international poverty line of US$1.25 a day (at 2005 international prices). Although data is not available for every year in this phase, the economic recovery of the 1992-1994 period brought down the percentage to just under 50% by 1994 (49.4%) (World Bank, 2015).

One example of the material circumstances of people is their access to sanitation facilities. When figures begin in 1990 under a fifth of the Indian population had access to some kind of

sanitation facility (a broad definition including flush/pour flush systems, pit latrines and composting toilets), and this number increased by less than 3% between 1990 and 1994 (World Bank, 2015). Another useful indicator of the populace's material capabilities is the distribution of income across the population – an indication of the relative equality within the country. Data captures the immense disparity between the income earned by the top 20% of the population – over 41% of total income earned in 1988 – and the approximately 9% earned by people in the bottom quintile. In fact the disparity is such that in this phase the bottom 60% of the population cumulatively earned less than the top 20% alone (World Bank, 2015). What is noteworthy is that this ratio of earnings remained fairly stagnant throughout the first phase (figures are available for 1988 and 1994), not only between the highest and lowest quintiles, but across the spectrum. This would indicate that domestic measures to address inequality were having very little effect in redistributing income across the population.

Energy is central to any economy as it is intrinsic to production of goods and services. Much like other developing countries (and indeed many developed countries) at this point in history, fossil fuels dominate the energy mix. Between 1988 and 1994 the percentage of fossil fuel consumed shows a slight upward trend but remains between 50% and 60%. Net energy imports[15] as a percentage of energy use also increased – 5.68% of fuel used was imported in 1988 and this amount almost doubled to 11.81% in 1994. The contribution to the mix made by alternative, or clean, fuels and nuclear energy is negligible and remains under 5% for the duration of the phase - a trend in keeping with much of the rest of the world (World Bank, 2015).

The final graph in this sub-section is of the Greenhouse Gas (GHG) intensity of the economy: the amount of emissions produced in order to produce one unit of GDP. Data are currently only available from 1990 to 2011. In 1990 India produced 687 tons of carbon dioxide equivalent (CO_2e) gas for every million dollars of GDP produced; by 1994 this had been reduced to 662 CO_2e – an indication that the economy was becoming more efficient at using fossil fuels to create GDP.

[15] Net energy imports are the estimated energy use minus a country's production of energy

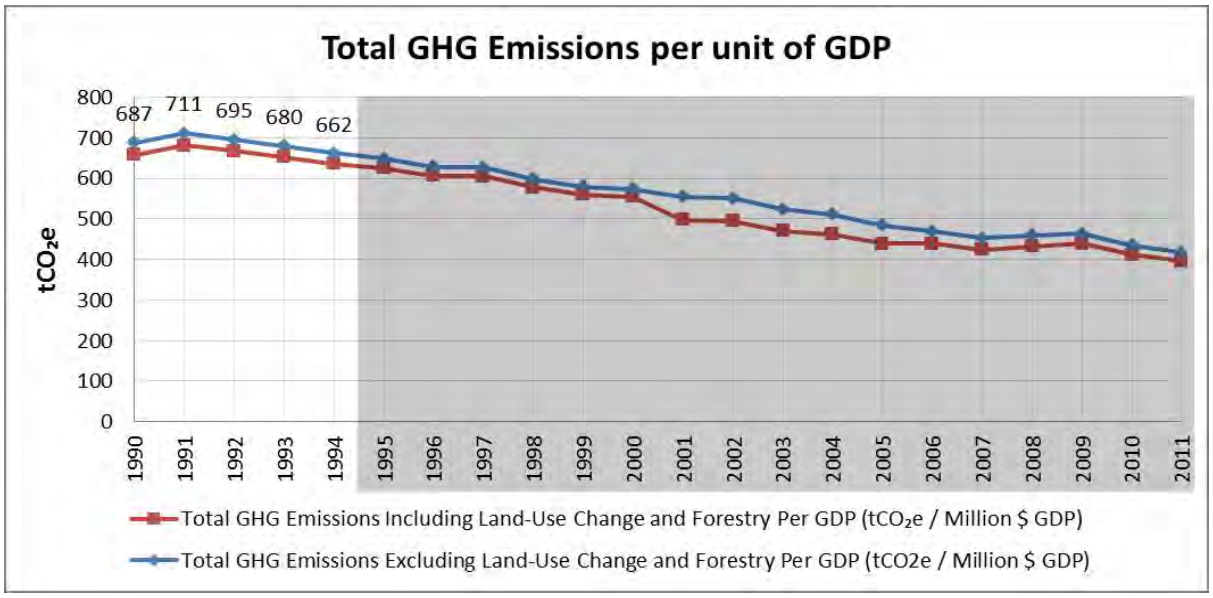


Figure 17: Emissions Intensity of the Indian economy
Source: Own graph based on data from Climate Analysis Indicators Tool (CAIT) (World Resources Institute, 2015)

In this initial phase of the emergence of the climate regime, India is still very much a developing country shackled by domestic material constraints, as evidenced by indicators such as its low HDI ranking, low provision of sanitation facilities which are combined with high levels of poverty and income inequality. Characteristic of this phase is that material capabilities are inversely correlated with ideas – Manmohan Singh's ideas of liberalisation are driven to a large extent by the *lack* of resources in the form of fiscal and current account deficits, etc. in other words, the very lack of material capabilities had an effect on the ideas prevalent at state level.

India's economy was still essentially (despite reforms begun in the 1980s) an inward-looking import-substitution economy, and thus when subjected to a range of exogenous shocks emanating from the international arena in the form of oil price increases, loss of remittances and markets and so on, a macro-economic crisis developed. These exogenous shocks were necessary, but not sufficient, to bring about ideational change at the national level of the Indian state in the form of liberalisation. What tipped the state in direction of liberalising its economy and opening it up (however cautiously) to globalising forces were the ideas of a small elite within the newly elected (in 1991) government of Narasimha Rao. In Cox's terminology these ideas could be thought of as an example of coherent patterns of thought of a smaller collective, because at this point the idea of liberalisation was not yet pervasive enough to be considered "common sense" and defined as Cox's other type of idea – that of the intersubjective or commonly shared mental image (Cox, 1981). Indeed commentators noted that the reforms of 1991 were introduced without much popular support and with contestation from both the left

and right wings of the political spectrum (albeit for different reasons), which are both characteristics of Cox's second kind of ideas, namely ideas that are images originating from within groups or collectives.

India's noted lack of material capability at national level very evidently contributed to shaping its ideational stance toward climate change at the international level. It justifiably viewed itself as a poor country, and furthermore as a poor country that had not contributed to the problem it was now jointly facing with other countries. India's very low per capita emissions, not rising above 1.3 tons of CO_2e annually in this phase (see Figure 10 above), were among the lowest in the world and in the vicinity of sub-Saharan Africa figures. India's lack of material capability also caused it to remain more inwardly focused – toward all the poverty-related challenges it faced – instead of looking outward to the international community and its place therein.

4.3 Institutional arrangements

4.3.1 Institutional arrangements at the beginning of phase one

4.3.1.1 The INC

The institutional response to the emerging international political concern about climate change coalesced in the form of the establishment of the Intergovernmental Negotiating Committee (INC) in December 1990 by the UN General Assembly (resolution 45/212). The INC held five negotiating sessions between February 1991 and May 1992 in the lead up to the UN Conference on Environment and Development (UNCED, also known as the "Rio Summit") – see Figure 18.

Figure 18: Intergovernmental Negotiating Committee meetings, venues and dates - also shown on Figure 10 above

The text produced at these negotiations was to be presented as the framework convention for signature at the UNCED (Bodansky & Rajamani, n.d.). This tight deadline provided much needed stimulus for the process, but even so most of the negotiations on substantive topics took place in the fourth and fifth sessions as the deadline loomed (Paterson, 1996). The pressing deadline, combined with the wish to make decisions by consensus, provided individual states with much leverage in the process – even an effective veto over decisions (Bodansky, 2001). The newly penned Framework Convention was opened for signature by states at the UNCED/Rio Earth Summit in June 1992. India signed the Convention at the summit and ratified it domestically in 1993. The Convention provided for the INC to continue working until the first Conference of the Parties (COP1) in 1995 in order to make preparations for the COP and also to prepare possible amendments or protocols to the convention (Paterson, 1996).

On average, the Indian delegation to the INC was comprised of three people, occasionally four. This was in sharp contrast to delegations from the developed states, which frequently fielded 10 or 15 people at each meeting. When the institutional affiliations of the Indian delegates are plotted in Figure 19 below, an interesting picture emerges of the Indian government's institutional involvement.

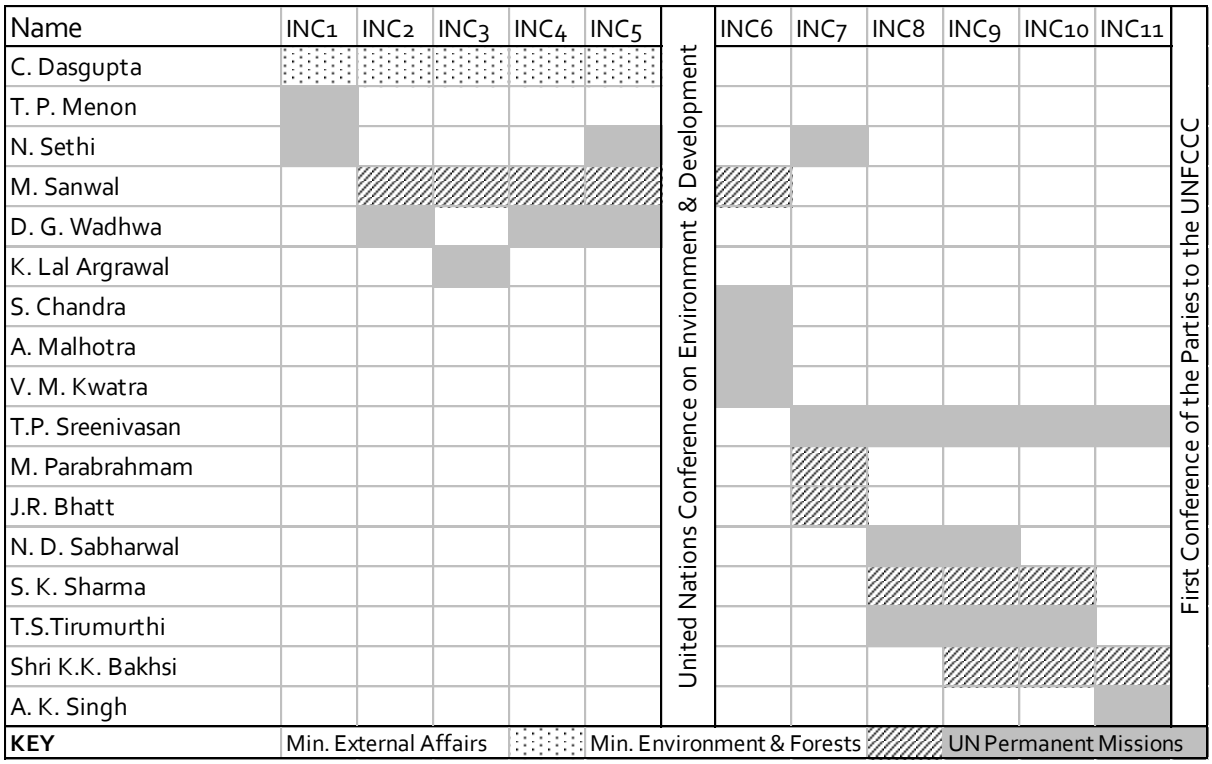


Figure 19: Indian delegates to INC meetings and their institutional affiliation
Source: Own analysis based on INC participants' lists compiled and published by the UNFCCC secretariat

What is striking is the lack of continuity of personnel between the pre-UNCED INC meetings (1-5) and the post-UNCED/pre-COP1 INC meetings (6-11). While some change of personnel is to be

expected given the different emphasis of the first five meetings and the final six, it is notable that there was no involvement of the Ministry of External Affairs – which had been leading the negotiating team according to the Government of India's (GoI) "rules of business" – after UNCED. The head of delegation in the pre-UNCED INC meetings, Additional Secretary (International Organisations) Chandreshekhar Dasgupta, reported to both the environment secretary and the foreign secretary (Dasgupta, 2012b). Notably India most frequently sent members of the UN Permanent Missions to the particular country that was hosting the INC meeting (particularly Switzerland or New York, USA) – an indication of the novelty of the subject area in the political sphere.

The idea of common but differentiated responsibilities and respective capabilities (CBDR & RC) was formally encoded into the Convention as annexes to the FCCC. A list of the common responsibilities of all signatory countries (known as Parties) is found in Article 4.1 of the Convention. These responsibilities include communicating their attempts to reduce emissions and preparations for adapting to unavoidable changes (United Nations, 1992). Inclusion in Annex I signalled a further level of responsibility in terms of a commitment to the reduction of emissions – though not quantified – and a list of other commitments specific to Annex I countries as outlined in Article 4.2 (United Nations, 1992). Countries included in Annex II of the Convention had a further commitment to provide funding for the specified activities of NA I countries as outlined in Articles 4.3 to 4.5.

In the early days of the INC negotiations, the mechanism of financing responses to climate change was a source of tension between developed and developing countries. Developed countries argued against the creation of a separate finance mechanism, and proposed instead the use of the World Bank's newly established (1991) Global Environment Facility (GEF) (UNFCCC, 2004), going so far as to link their financial pledges to the adoption of the GEF as the financial mechanism (Streck & Chagas, 2011). In 1992, therefore, the GEF became an "interim operating entity" of the UNFCCC's financial mechanism, despite the reservations about a World Bank pilot facility expressed by many developing countries. The concession wrested by the developing countries was that the GEF's interim status would continue until the outcome of GEF restructuring and would be pursuant to the completion of the first review of the financial mechanism in 1998. Negotiations in 1994 led to restructuring of the GEF as an independent entity in order to address developing country concerns about universality, transparency and legitimacy through participatory decision-making and seat-parity between developed and developing countries (Streck & Chagas, 2011). These improvements aside, the "double-

weighted" majority system (in which the size of the contribution to the fund determines a second voting right) combined with consensus decision-making practices that effectively gave veto rights to large donors (Gomez-Echeverri & Müller, 2009) remained a cause for concern among developing countries.

Perhaps because of this early source of tension and the short time-frame in which the Convention text was negotiated, the finance mechanism was only briefly outlined in the Convention. Article 11 defines it as a mechanism for "the provision of financial resources on a grant or concessional basis, including for the transfer of technology", to be accountable to and guided by the COP and operated by "one or more existing international entities" (United Nations, 1992: Article 11.1) in such a manner as to ensure the "equitable and balanced representation of all Parties within a transparent system of governance" (United Nations, 1992: Article 11.2). The brevity of the guidance provided by the Convention, combined with the inevitable structural issues of a newly formed institution with several international implementing agencies of its own (the UNDP, UNEP and the WB), made for an uneasy and unwieldy relationship between the COP and the GEF Council. The "indeterminate" legal personality of both the COP and the GEF Council further hampered the interactions between them to the point that only a loose memorandum of understanding could be agreed upon to guide the operations of the GEF (Ballesteros et al., 2010). In fact, even though it was the operating entity of the UNFCCC's financial mechanism, the GEF remained functionally and structurally independent of the Convention – an arrangement that significantly undermined the accountability of the GEF Council to the COP (Wiser, 2007), indirectly weakening the role of recipient / developing countries in the oversight of finance.

4.3.2 Uncertain times in India

This period was an unsettled time in post-independence Indian political history: after nearly ten years of Indian National Congress (Congress) rule, there were three elections in as many years in 1989, 1990, and 1991. The 1989 election heralded the end of direct rule by the Nehru/Gandhi family and the end of the unspoken assumption that the Congress Party – the party of liberation – could claim the sole right to be the legitimate rulers of India (Metcalf & Metcalf, 2006). V.P. Singh headed a Janata Dal-led coalition government that collapsed under the weight of its own contradictions (communist parties and Bharatiya Janata Party (BJP) among them) a little over a year later when the BJP withdrew its support in protest over the government's decision to implement the Mandal Commission recommendations. This 1980 Commission report had recommended reserving 49.5% of positions in higher education, federal government and the

public sector for people classified as "Other Backward Castes" – this led to physical clashes between high and low caste groups, and Delhi itself virtually ground to a halt amid an outbreak of violence in September 1990 (Metcalf & Metcalf, 2006). In this milieu the elections in late 1990 brought to power, for little under a year, a minority coalition under Chandra Shekhar that included Congress. During 1991 the economic situation in India worsened and eventually the late-June 1991 election ushered in a new Congress government (under Narasimha Rao) with promises to both stabilise the economy in the short to medium term and institute macro-economic reforms in the longer term (Joshi & Little, 1993). The Rao government succeeded in remaining in power for a full five-year term.

In this phase there were no climate-specific institutions in India, and the Ministry of Environment and Forests (MoEF) had itself only been established as a Union ministry[16] in 1985 under Rajiv Gandhi (Khagram, 2004). In 1992 India did, however, elevate its existing Department of Non-Conventional Energy Sources - established in 1982 under the Ministry of Energy - to fully-fledged ministry status (Ministry of New and Renewable Energy, 2016). The Department was established in response to energy security concerns stemming from the international oil shocks of the 1970s, and not in response to climate or GHG emissions concerns. The Ministry of Non-Conventional Energy Sources (MNES) was tasked with "[facilitating] research, design, development, manufacture and deployment of new and renewable energy systems" in an effort to explore and promote energy self-sufficiency (Ministry of New and Renewable Energy, 2016) .

India's Five Year Plans are discussed under "institutions" as they are examples of an "amalgam of ideas (in the form of plans) and material capabilities (in the form of budget allocations)" (Cox, 1981: 137) that in turn constrain and enable future ideas and material capabilities. Thus institutions serve to perpetuate a prevailing order by providing for and even encouraging intersubjectively shared ideas that are consistent with the existing power relations (Cox, 1981).

The Planning Commission's 7th Five Year Plan (FYP) did, however, recognise the growing problem of the destruction of the environment as "unintended side-effects of the very attempts at development" that were intended to alleviate the "poverty and…underdevelopment [that] led to many of the environmental problems that confronted the nation" in the first instance (Planning Commission, 1989: 18.4-18.5). Central concerns related to: inducing all levels of government to incorporate environmental safeguards in planning processes; improving public participation in environmental management efforts; establishing a strong scientific and

[16] The Government of India had established a Department of Environment earlier during the 6th FYP (1980-1985).

technological basis for environmental activities and strengthening punitive measures for existing degradation (Planning Commission, 1989: 18). The 7th FYP also asserted that environmental management (including conservation, research, education, etc.) was an accepted guiding principle for national development, which had received progressively more technical, legislative and administrative support at both Union and State levels (Planning Commission, 1989: 18.4-18.5) during the preceding Sixth FYP and which would be continued during the Seventh plan (Planning Commission, 1989: 18.22). Environmental management was to be supported through increasing staffing support to the existing network of decentralised, subject-specific, Distributed Information Centres (DICs), which together comprised India's computerised Environmental Information System (EN-VIS); the plan proposed expansion to include DICs on Forestry, Desertification, Mining, Himalayan Ecology and Renewable Energy (among others) (Planning Commission, 1989: 18.59).

The 8th Five Year Plan in 1992 is the first to mention climate change; perhaps unsurprisingly it is mentioned in the context of the imminent United Nations Conference on Environment and Development (UNCED) to be held in June 1992. The plan acknowledged the global nature of concerns about the ozone layer, GHGs and climate change, but emphasised the importance of still being able to address the needs of impoverished people and of not being subject to any rules that either imposed burdens on developing countries or interfered with a state's right to use its resources. In addition the plan noted that the "[t]ransfer of technology, flow of new and additional resources … to fully meet any additional cost are pre-requisites to international cooperation in the environment sector" (Planning Commission, 1992: 4.16.7). This stance – or idea of India's relative position in the world – would echo through India's early engagement with the emerging climate regime.

4.4 Configuration of forces and influences in phase one

Cox's theory posits that it is the configuration of forces that would influence not only how India could act, but also how it conceptualised its ability to do so. The preceding sections have provided details of the forces at work in phase one and this section will discuss the interaction of the forces at work in the years 1988 to 1994.

Early in this phase at international level it becomes increasingly apparent to scientists that increased concentrations of GHGs posed a danger to the earth - this knowledge eventually leads to the creation of an an institution - the IPCC - which gathers, synthesizes and publishes

scientific information, which helps to galvanise the UNGA into establishing the INC. The INC in turn negotiated the Framework Convention. The interplay of influence between ideas and institutions in this early phase is indicated by lines "A" and "B" in Figure 20 below.

Notwithstanding the impetus to create the IPCC there remained sufficient uncertainty about the impacts and human origin of, and the link between, concentrations and temperature rise (for example) for the idea to remain open to challenge by both scientists and politicians. Thus it would be useful to think of early IPCC Assessment reports as containing the type of ideas that Cox referred to as "collective images" (Cox, 1981) or coherent thought patterns of specific collectives (Cox, 1987) in that the ideas were held by Assessment authors and scientists of peer-reviewed work on which assessments were based – but these were still held and contested to some degree by other scientists. These collective images aside, the objective (Article 2) of the FCCC pointed to the existence of an international intersubjective idea that climate change posed a threat to humanity and required the "stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system" (United Nations, 1992: Article 2). Plainly put, "something should be done.

Even thought the science was still contested, the idea of climate change as an emerging problem was sufficient to prompt the formation of the INC by the UN GA which in turn negotiated the Framework Convention. As Cox defined them, institutions are a combination of ideas and material forces (Cox, 1981); this can be seen in the emergence of first the INC and then the FCCC – the idea of concentrations being harmful leads to the creation of institutions at the international level to facilitate problem-solving by the states (influence is represented by line "A" in Figure 20).

In this phase India is severely constrained by its material circumstances. It is a poor developing country with significant development challenges - daily life is daunting for most of its population as it measures very low on the Human Development Index and is working its way through a macro-economic crisis. Thus when confronted by this nascent knowledge of the threat posed by a changing climate it is understandable that India should develop the intersubjective ideas favouring a differentiated approach to addressing the issue. India could not conceive of having to direct scarce resources to address an issue it did not create (stocks of GHG in the atmosphere) and posited therefore that the creators of the problem should be the first movers and resource providers. The interaction of these ideas and material capabilities are indicated by lines "C" and "D". The idea of being responsible for solving a problem they believed they did not create must have struck the Indian government as both absurd and unfair and

certainly led it to advocate CBDR at international level Certainly it seemed so to members of civil society who gained worldwide recognition for their refutation of a developed country report claiming that India, Brazil and China were among the top six GHG emitters due to their emissions of methane from rice paddies and livestock, and carbon dioxide from deforestation (Agarwal & Narain, 1991; Forsyth, 2005). Agarwal and Narain's book captured the key intersubjective idea in India that atmospheric space should be shared on a per capita basis because whilst India's emissions were produced in the effort to survive, developed countries' emissions stemmed from consumption of products and services over and above those needed to simply survive (see line "E" in Figure 20) (Agarwal & Narain, 1991).

What is also notable is that during this early phase the existence of the intersubjective idea at international level that climate change was a threat did not prompt the Indian government to create any domestic institutions geared toward dealing with climate change: there were no specialist "climate change" portfolios in the Ministry of Environmental Affairs and members of UN permanent missions are sent to the INC negotiations (see Figure 19 above). In addition the 7th and 8th Five Year Plans barely mention Climate Change rather focussing on other more pressing local environmental issues like air and water quality and deforestation: note therefore the *absence* of lines of influence between ideas – international and national – and domestic institutions in Figure 20.

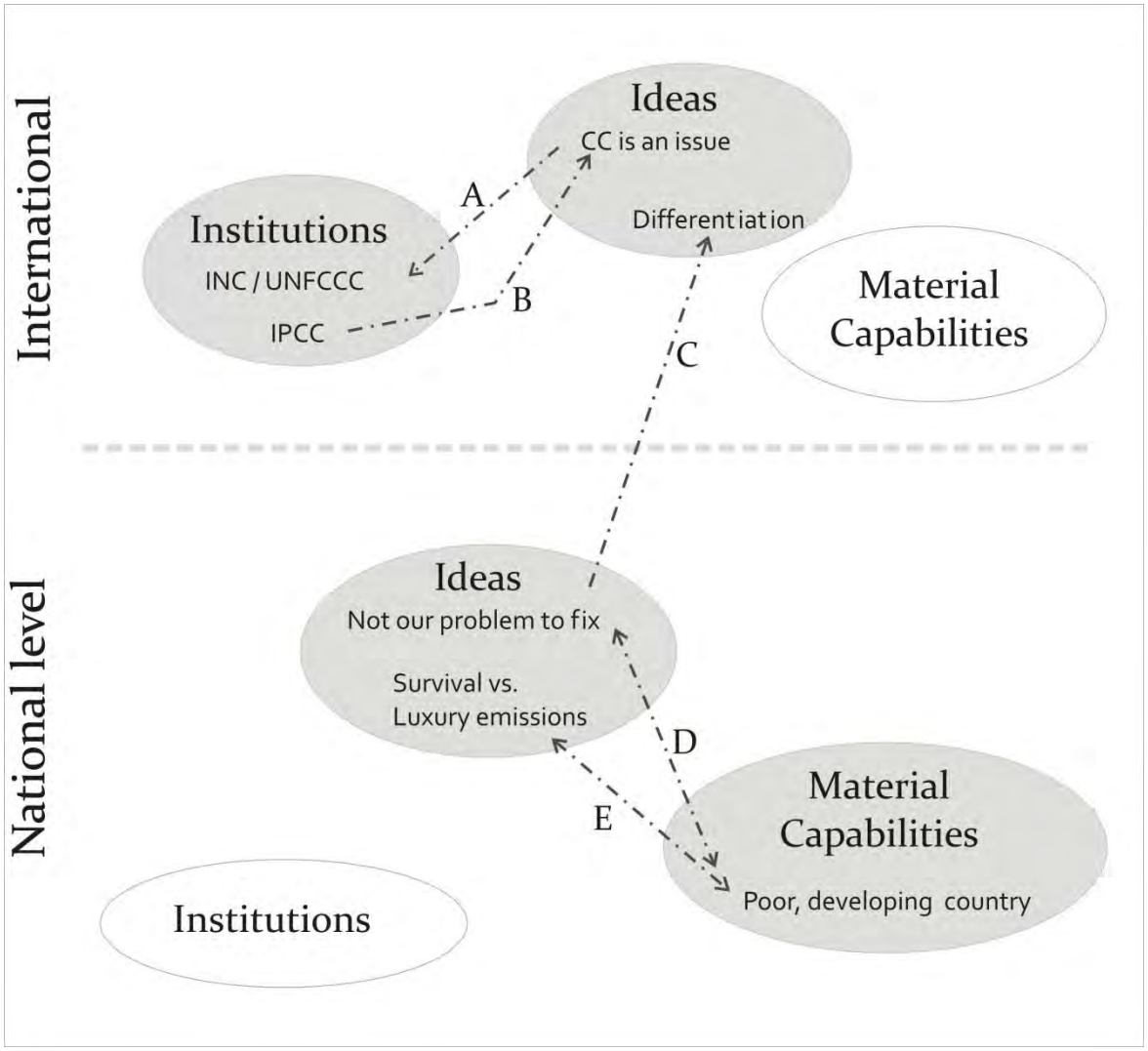


Figure 20: Visual representation of configuration of forces in phase 1.
Note: Line indicates influence; arrow indicates directionality

Given the material constraints (improvments in the economy after 1991 notwithstanding), the insubjectively held idea that developed countries were responsible for the global warming (they had created the problem and had the wherewithal to address it) and the need to pursue economic development in order to lift people out of poverty, it is the contention of this thesis that in the first phase India could not but conceive of equity and CBDR as an expression of "differentiation" as essential to their positioning at the negotiations. Thus a prominent feature of phase one is that at both national and international level several of the forces 'lined up' in favour of a regime characterised by differentiation - indicating a nascent hegemonic state. That is not to suggest that differentiation in the form of CBDR & RC was uncontested, but merely that in this early phase of regime development India found its position largely 'in sync' with the prevailing alignment of forces.

Berlin Mandate to Marrakech Accords
1995-2004
Negotiation & operationalisation of the Kyoto Protocol

5 India in the wings: the second phase (1995–2004)

This second phase covers the period from the first COP in 1995, through to the Marrakech Accords to the end of 2004, the year preceding the ratification of the Kyoto Protocol. The following chapter describes the each of the forces as they operated at India's domestic level and at the international level of the climate regime, with important events shown in Figure 21 below.

Crucial ideas (both intersubjectively and collectively held) are found in the IPCC's Second and Third Assessment Reports. India was adjusting to a more liberalised economy with attendant variations in GDP in this phase while still battling high levels of poverty and underdevelopment. In the climate regime, material capability in the form of finance, technology and capacity building – important to developing countries, including India – were seemingly low down on the international agenda during this second phase. The regime was in an institution-building phase as the states agreed to the Kyoto Protocol and then elaborated and operationalised it with the Marrakech Accords.

This section is an attempt to highlight connections between the mental frameworks within which, and through which, people and states conceive of action in the material world. These frameworks constrain and enable both what people and states are able to achieve and how they conceive of doing so.

5.1 Ideas

5.1.1 International ideas: the Second and Third Assessment Reports of the IPCC

The three working groups had all published their contributions to the Second Assessment Report (SAR) by mid-1996. Figure 22 indicates the subtle shifts in the emphasis of the working groups from the foci of the working groups in the First Assessment Report (for comparison see Figure 12 above). The working groups reported the changes in the science of climate change, the "Scientific-Technical Analyses of Impacts, Adaptations and Mitigation", and the "Economic and Social Dimensions of Climate Change" (IPCC, 1995).

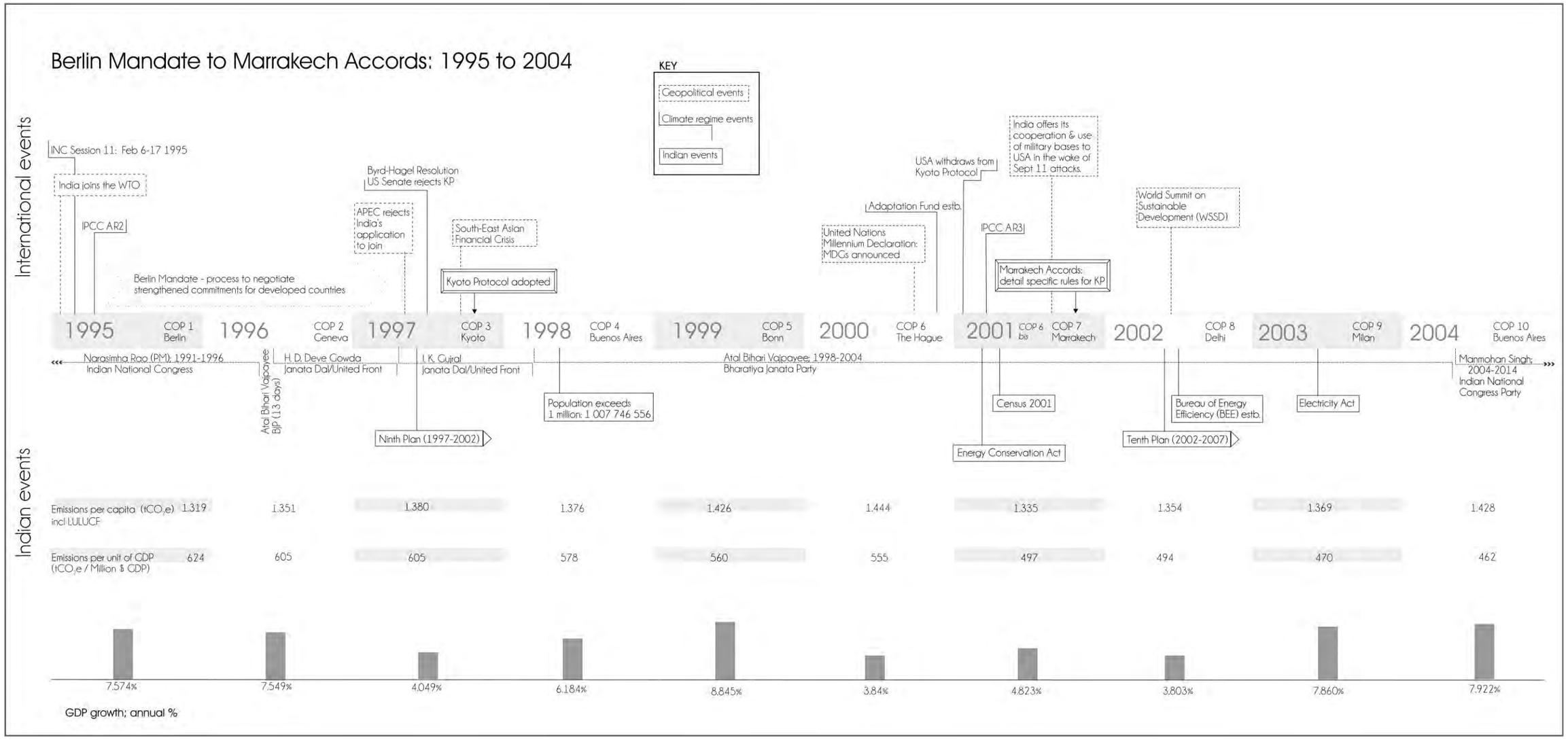


Figure 21: Second phase from Berlin Mandate (1995) to the year preceding the ratification of the Kyoto Protocol.

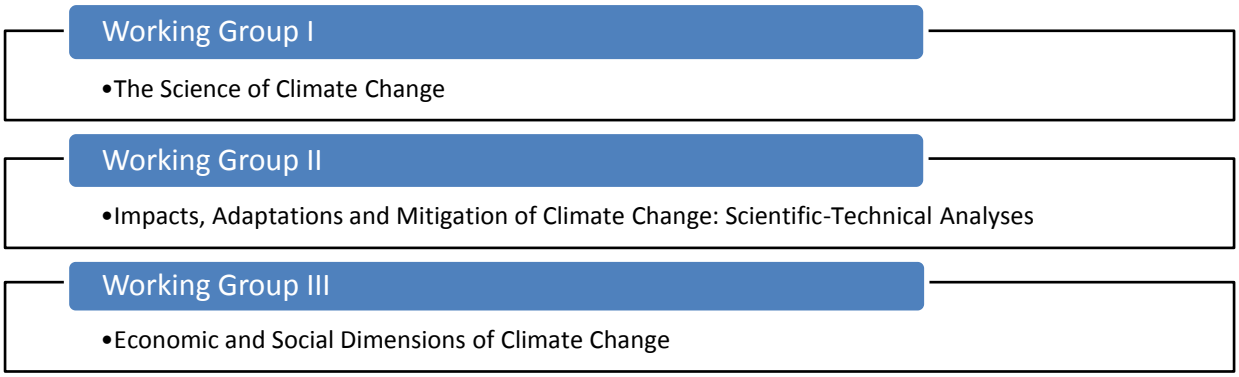


Figure 22: Working groups of the Second Assessment Report of the IPCC
Source: Own compilation based on information available on http://www.ipcc.ch/publications_and_data/publications_and_data_reports.shtml [Accessed on 20/02/2015]

The SAR was published at a crucial time in the emerging climate change regime's history, given its publication in the lead up to COP2 – a COP at which the mandate issuing from COP1 was to begin to negotiate a Protocol to the Convention with binding reduction targets and a timetable to which countries would need to adhere. Given that the USA had resisted the so-called "targets and timetable" approach by pointing to the uncertainties of the science, any SAR statements evincing further certainty in the science were viewed as crucial to the forward momentum of the regime. Thus it was important that the COP – including the USA – decided that the SAR was "the most comprehensive and authoritative assessment now available of the scientific and technical information regarding global climate change" (UNFCCC, 1996: decision 6/CP.2, para. 2). When the rumoured change in US Policy did materialise, and the USA formally announced to COP2 that it would support "the adoption of a realistic but binding target" for emissions, the SAR certainly appeared to be the proximate cause of the turnabout (Edwards & Schneider, 2001).

The SAR states that atmospheric concentrations of three of the greenhouse gases – Carbon Dioxide, Methane, and Nitrous Oxide – have all increased since pre-industrial times, an increase that can be "attributed largely to human activities, mostly fossil fuel use, land-use change and agriculture" (IPCC, 1995: 21, point 1). In addition fossil fuel combustion and biomass burning have led to increases in tropospheric aerosols, which are known to increase direct negative (cooling) radiative forcing[17] as well as potentially increase indirect negative forcing. This would seem to have the potential to counteract any warming locally, but the rate of cooling is unknown; what is known is that aerosols are short-term climate forcers, unlike the known long-term forcing of GHGs (IPCC, 1995: 21, point 2). The report states that the "balance of evidence…suggests a discernible human influence on global climate," despite the persistence of uncertainties due to the limited ability to

[17] Radiative forcing is a measure of the transfer of heat between the earth and surrounding atmosphere – a negative number means more heat is being transmitted back to the atmosphere and the climate is cooling whereas a positive number indicates more heat is trapped near the earth's surface and the opposite is true.

quantify the precise measure of human interference, and other key factors such as the "magnitude and patterns of long- term natural variability" (IPCC, 1995: 22, point 4). The SAR went some way towards calculating and clarifying the limitations to emissions required to stabilise concentrations of carbon dioxide in the atmosphere, thereby effectively providing a carbon budget (Bolin, 2007).

In the years since the FAR had been published, improved technology had enabled more realistic climate model projections. These suggested that general warming could be expected to increase the number of extremely hot days and reduce the number of extremely cold days; this warming would also lead to a dynamic hydrological cycle that would increase and decrease the severity of droughts or floods, depending on local conditions (IPCC, 1995: 22-23, point 4).

This second phase also covers the publication of the Third Assessment Report (TAR) by the IPCC in 2001. The TAR was released at a difficult time for the climate change regime: COP6 had been suspended in November 2000 when negotiators could not reach agreement on the outcome of the Buenos Aires Plan of Action. Negotiations had broken down amid USA-EU and intra-EU tensions (Ott, 2001), with the key obstacles being fundamentally political and not technical In an unprecedented occurrence, the sixth COP was resumed (known as COP6 bis) in July 2001 in order to make progress towards finalising the technical details operationalising the Kyoto protocol. The focus of the three working groups was also slightly adjusted from the working groups of the SAR as shown in Figure 23 below (compare with Figure 22 above). This has remained the arrangement of the working groups (at least until AR5 in 2014).

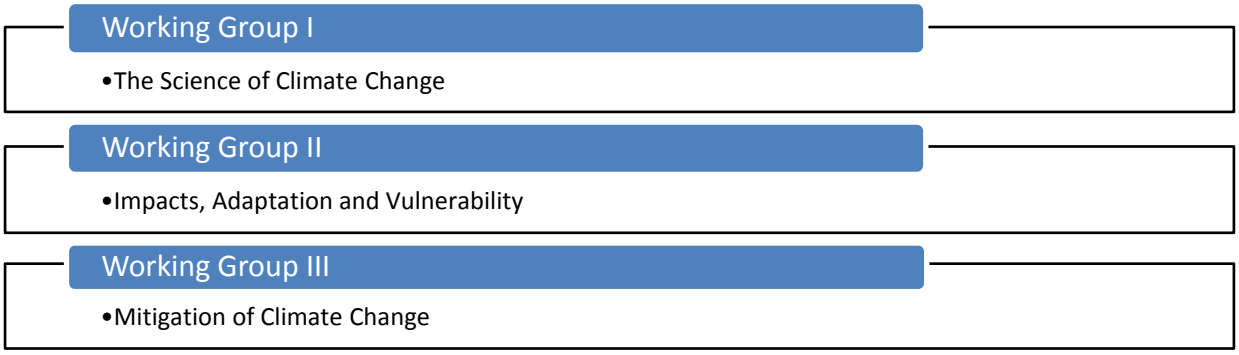


Figure 23: Working groups of the Third Assessment Report of the IPCC
Source: Own compilation based on information available on Bolin (2007) and http://www.ipcc.ch/publications_and_data/publications_and_data_reports.shtml [Accessed on 20/02/2015]

In an effort to standardise reference to certainty the TAR introduced specific language expressing the assessed findings of WGI (scientific basis for climate change) on a continuum from "virtually certain" findings or observations (a greater than 99% chance) through the middle or "medium likelihood" (33-66%) all the way to exceptionally unlikely (less than 1% chance). WGII findings

stipulated calibrated confidence levels between high (greater than 95%) through to medium (33-67%) all the way to low (less than 5%) (IPCC, 2001: 5, Box SPM-1). Uncertainty and confidence levels are depicted in Figure 24 below.

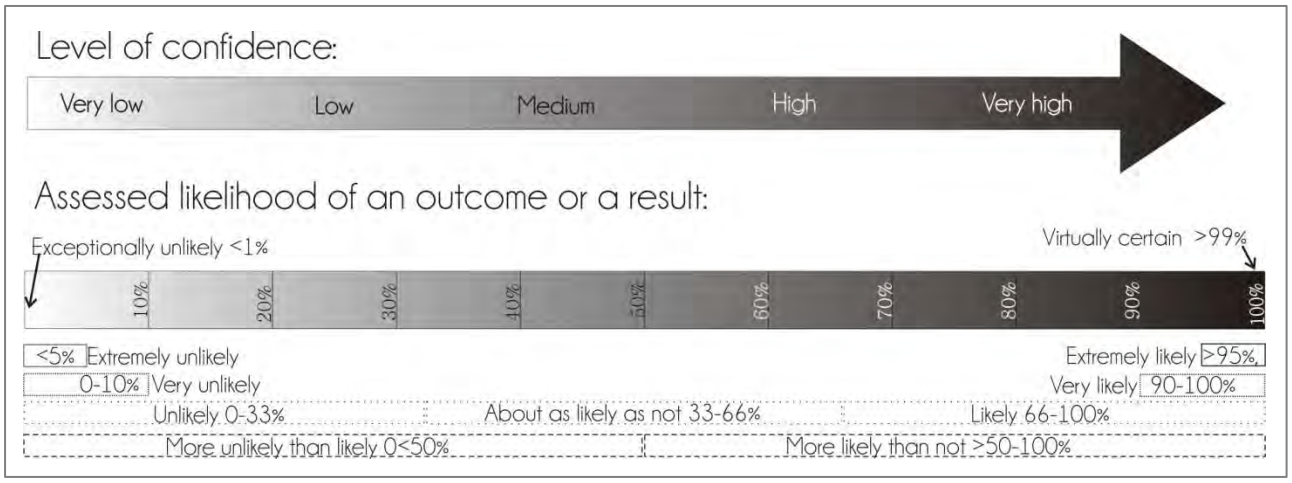


Figure 24: IPCC authors' language for confidence and certainty
Source: Own rendering of text in IPCC's Third Assessment Report (2001)

The TAR author teams reported that observations of the earth's surface showed a clear warming trend and it was very likely that the 1990s would prove to be the warmest decade since records began. Globally atmospheric concentrations of GHGs showed an upward trend, and human activity was likely the cause of the observed warming over the preceding 50 years (IPCC, 2001: 31, point 9.8). The outlook for the future continued to be bleak: global average surface temperatures were likely to rise at rates unprecedented in 10 000 years; warming above the global average was very likely over nearly all land areas, increasing hot waves and extremely hot days and decreasing cold snaps and extremely cold days (IPCC, 2001: 14, points 4.2-4.7). WG I assessed that an intensification of the hydrological cycle was very likely to produce increased average global precipitation with more extreme precipitation events in some areas and increased summer drying and attendant risk of drought in others (IPCC, 2001:31 point 9.14), while sea level was projected to continue to rise for centuries (IPCC, 2001: 21, point 6.8).

Impacts, adaptation and vulnerability were assessed by Working Group II, which found that action to mitigate GHGs would lead to less pressure on natural systems (IPCC, 2001: 21, point 6.9-6.10) and that adaptation would be a necessary complement to mitigation efforts (IPCC, 2001: 23, point 6.13-6.15). Adverse impacts were more likely the faster the rate, and the larger the change (IPCC, 2001: 14, point 3.28), and would disproportionately affect developing countries and poor people in all countries (IPCC, 2001: 23, points 6.16-6.18), raising issues of equity. Assessing the available literature, WGIII noted that successfully implementing GHG mitigation would require overcoming a range of social, technological, economic and institutional obstacles (IPCC, 2001: 24, point 7.6) and

would be more effective at national levels if deployed as part of a portfolio of policy and regulatory instruments aimed at sustainable development (IPCC, 2001: 24 point 7.7 and p29, points 8.1-8.2).

The interplay of negotiations focusing on mitigation and adaptation is a story about choices: in the beginning and considering the stocks of GHGs already in the atmosphere, mitigation was the focus of the negotiations by both developed and developing countries. This was as much because of the more powerful voice of the developed countries as it was because of the belief that focusing on adaptation meant admitting to the defeat of mitigation attempts (Rayner, 2010). So focus was initially on mitigation, not adaptation, but in the absence of meaningful, mitigation measures as required by science, adaptation has become more important and urgent. In some ways developing countries have inadvertently stymied themselves as, by not pushing (or being able to push) the adaptation agenda from the beginning and being unable to ensure mitigation, they now stand to suffer most from the climatic changes.

5.1.2 India: multilateral aspirations and globalisation

During this second phase, the moves India had begun to make towards integration with the wider world in the first phase became more embedded in the picture of itself that India portrayed to the outside world. Economic liberalisation was well underway, though slow, and deregulation and reforms continued to be implemented throughout the 1990s, with the overriding intention of integrating India into the global economy (Nayar, 2001). By this phase this quest for global economic integration had all but replaced India's historical idea of itself as 'moral exemplar' (Sagar, 2009) with an acknowledged emphasis on striving for "mutually beneficial relations with all our neighbours, with all major powers and with all our economic partners" (Singh, 2008) irrespective of their ideological or moral positions.

The slow pace of economic liberalisation was in part due to the contested nature of the reforms – challenging the imposition of liberalisation was common cause for both the left and right wings of Indian politics (albeit for different reasons). Therefore, since "Indian reactions to globalisation [could] not be considered independent of Indian reactions to liberalisation" (Karmakar, Kumar & Debroy, 2008), domestically, the merits of globalisation were not considered incontrovertible in light of the perceived potential negative economic and destructive social consequences (Nayar, 2006).

As an essential step towards globalisation, however, India joined the World Trade Organisation on the 1st of January 1995. In part this was seen as an opportunity to begin to exercise multilateral leadership (Malone, 2011) and an acknowledgement of the need to emulate the drivers of

development in the developed world (Hurrell & Sengupta, 2012). That same year, as a result of its more open, outward looking "mind-set" and an institutionalised "Look East" policy adopted in 1992, India became a full dialogue partner at the Association of Southeast Asian Nations (ASEAN) (Malone & Mukherjee, 2009). Integrating with the region was not, however, without impediments: India's application to join the Asia-Pacific Economic Cooperation (APEC) forum in 1997 was rejected ostensibly because India showed reluctance to "embrace the norms of free trade and investment that are the foundations of APEC's existence" (Carmichael, 2014), despite, for instance, evidence to the contrary in the form of India joining the WTO in 1995 and liberalising trade (albeit fairly slowly).

On the international stage, at the United Nations, India ran for a non-permanent seat on the UN Security Council (UNSC) in 1996. It had come to believe that as the world's most populous democracy and a leading developing country, it was entitled to a greater say on the UNSC. Unfortunately other countries did not share this view and India was humiliated when it lost the vote, and therefore the seat, to Japan (Malone, 2011). Eight years later India and Japan, in collaboration with Germany and Brazil, launched a joint UN reform initiative to gain accession to permanent seats on the UNSC. When Japan's accession was blocked by China, India's ambitions were also thwarted (Malone, 2011).

India also interacted with the UN following the series of nuclear tests it conducted in May 1998 in the arid Pokhran region of Rajasthan. After detonation, the newly elected BJP government declared India to be a fully-fledged nuclear state, to a largely appreciative domestic audience. The UNSC issued a resolution (Resolution 1172, May 1998) condemning India's tests (and also Pakistan's retaliatory tests), but it did not issue sanctions. Sanctions were applied automatically by the USA, pursuant to the Glenn Amendment (section 102 of the US Arms Export Control Act of 1994), imposing sanctions on any non-nuclear state that detonated a nuclear device. Within six months however, most of the US sanctions had already been lifted and a dialogue was opened between the USA and India (Morrow & Carriere, 1999).

Notwithstanding the indicators that will be discussed below as examples of continued widespread poverty, the Indian Government sought to assert itself internationally in the nuclear realm by detonating an underground nuclear weapon. Being able to do so was considered a matter of national pride and prestige befitting a country that had been a leader in multilateralism during the Cold War and was asserting its sovereignty in the face of what it saw as "nuclear apartheid". India had steadfastly refused to join the Treaty on the Non-Proliferation of Nuclear Weapons[18] (NPT) (and

[18] According to the Nuclear Non-Proliferation Treaty there are five nuclear states – China, France, Russia, UK and USA – defined as states that detonated a nuclear weapon prior to 1st January 1967 (United Nations, 2010)

its extension) or the Comprehensive Nuclear Test Ban Treaty (CTBT) as it believed that the nuclear regime divided the world into countries that had nuclear weapons and those that did not and effectively precluded any change in that status quo regardless of the defensive needs of a country or of any geopolitical changes that might occur (Singh, 1998).

In fact India's relationship with the USA had long been one fraught with conflicting agendas and priorities, but the turn of the century witnessed the beginning of a change in relations between the world's two most populous democracies. In 1998 Indian PM Vajpayee visited the USA, professing to be "baffled" by the "unsatisfactory" state of Indo-US relations and calling for these to be "restructured on an equal footing" in order to create a relationship that would be the "mainstay of tomorrow's stable democratic world order" (Vajpayee, 1998). Vajpayee went on to pointedly argue for the USA to be cognisant of India's "sensitivities" and not to impinge on its defence and scientific cooperation arrangements with Russia. He added what sounded like a subtle warning when he said, "For democratic governments like ours, which desire closer understanding with the USA, it becomes extremely difficult to move forward in the face of such public declarations" – a comment only a country seemingly very assured of its emerging importance would make (Vajpayee, 1998). India's prompt offer of assistance to the USA in the wake of the September 2001 World Trade Centre attacks further reflected this thaw (Kronstadt, 2005a).

India also set about strengthening ties with other emerging countries; in 2003 it signed the "Brasilia Declaration", establishing the India-Brazil-South Africa Dialogue Forum (IBSA) with Brazil and South Africa. The aim was to strengthen ties between emerging democracies of the "global South" and to create a "purely South-South grouping of like-minded countries, committed to inclusive sustainable development, in pursuit of the well-being for their peoples and those of the developing world" (IBSA, 2015). IBSA provided a forum to share views on issues of mutual interest – both regional and international – and to promote cooperation in a range of areas, including international trade, environment, defence and technology for instance (Alden & Vieira, 2005). The increased institutionalisation of ties with other large developing countries is an indication of India's growing confidence in dealing with its allies on an equal footing and in providing a challenge to the prevailing institutions of global governance (Alden & Vieira, 2005); a challenge given added clout by India's growing material capabilities.

Despite India's growing material capabilities, however, domestic finance for tertiary institutions was still in short supply. This in turn had an impact on the type of climate science studies that could be undertaken - computer processing power, for instance, being both essential for running general circulation models (GCM) and expensive to acquire. In contrast, climate policy studies were most

often funded by international donor agencies and so tended to reflect the interests and research agendas of the funders (Kandlikar & Sagar, 1999). This international influence likely constrained the development of an intrinsically Indian climate change policy canon in this phase by instead diverting minds and attention to address better-funded issues of less relevance. For example, despite India's reliance on the monsoon and vulnerability to climate impacts, few studies into impacts and adaptation were undertaken, whereas studies of mitiagation abatement options proliferated (Kandlikar & Sagar, 1999). The development of 'home-grown' analysis of domestically important issues would determine whether Indian researchers and politicians would be captive audiences to international assessment, critics reacting to their undesirable features, or equal collaborators" in the production of knowledge (Sagar & Kandlikar, 1997).

Like many developing countries, international environmental issues - as climate change was generally perceived to be - were overshadowed by urgent domestic issues of underdevelopment and concomitant environmental degredation. Even the Center for Science and the Environment (CSE) which had engaged so forcefully on the issue of equity in relation to climate change in 1991, had been focussing more on domestic environmental issues like urban air and water pollution (Narain in Kandlikar & Sagar, 1999). Thus to the extent that India began to formulate its ideas about climate change policy it was due to the activities of a small number of researchers and government officials (Kandlikar & Sagar, 1999) and was framed by broader concerns that the Developed countries would use environmental problems as a means to "sabotage the South's developmental aspirations" (Najam, 2005).

5.2 Material capabilities

5.2.1 Material capabilities at the international level

Globally, real GDP growth in this phase was a tale of two worlds: while the GDP growth of advanced economies largely hovered below the world average, the GDP growth of emerging economies consistently outperformed the average. This remains the case despite the turmoil wrought by the Asian economic crisis of 1997/1998, although the effect thereof can be seen in the slowdown of GDP growth in these years as indicated in Figure 25.

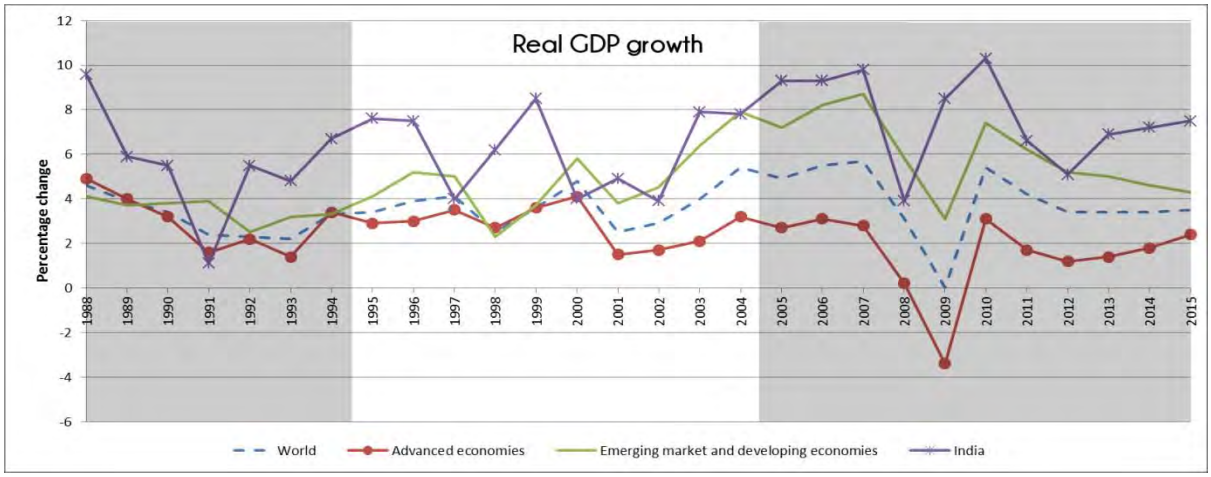


Figure 25: Real GDP Growth – annual percentage change
Source: April 2015 World Economic Outlook (IMF, 2015a)

"The decision adopted by the Plenary (FCCC/CP/1996/L.16) expresses concern over the slow pace of technology transfer" (IISD, 1996a). This was a refrain that was heard repeatedly throughout this phase. Some developing countries highlighted an incompatibility between the technical information offered by developed countries and the developing countries' requirement for the transfer of technology on preferential and non-commercial terms (IISD, 1997a), but overall technology transfer was slow and not facilitated at the international level of the regime. The little technology transfer that did take please largely focused on mitigation and not adaptation (South Centre and Center for International Environmental Law, 2008) reflecting the concerns of the donors and not the needs of the recipients.

The Adaptation Fund was established in 2001 as part of the Marrakech Accords (UNFCCC, 2002: decision 10/CP.7, para. 1) and was to be "financed from the share of proceeds on the clean development mechanism project activities and other sources of funding" (UNFCCC, 2002: decision 10/CP.7, para. 2). As it was established as a fund under the Kyoto Protocol, the Fund could not come into effect until the Protocol itself was ratified and came into effect in 2005. The Fund was eventually only officially launched in 2009 as negotiations over its governance and working procedures took almost five years (Trujillo & Nakhooda, 2013); thus the Fund will be fully considered in phase three.

5.2.2 *India's material capabilities: slow but (mostly) steady improvement*

The graph of GDP growth in Figure 26 shows India's fluctuating fortunes in the mid to late-1990s. Two good years of over 7.5% growth – 1995 and 1996 – were followed by a slump in GDP by almost half in 1997, the year of the onset of the Southeast Asian economic crisis. Ironically, India's economy was somewhat sheltered from this crisis due to its lack of full integration with the region. Given the imposition of economic sanctions by the USA following the nuclear tests at Pokhran II, the recovery

of the GDP growth rate in 1998 might have been somewhat unexpected, "were it not for the absence of the foreign exchange constraints of the past" (Nayar, 2006). 1998 was also the year that the population exceeded 1 billion people (World Bank, 2015). By 1999 the percentage GDP growth rate had increased to nearly a robust 8.8%.

Unfortunately the GDP growth was not sustained in the early years of the new century: growth plummeted to 3.8% (2000), 4.8% (2001) and 3.8% (2002) before recovering steadily in 2003 to 2004 to just below 8% as can be seen below in Figure 26. Nevertheless, India's performance in this phase on the Human Development Index improved steadily, although remaining below the average HDI of its smaller and less economically dynamic neighbours in the South Asian Association for Regional Cooperation (SAARC).

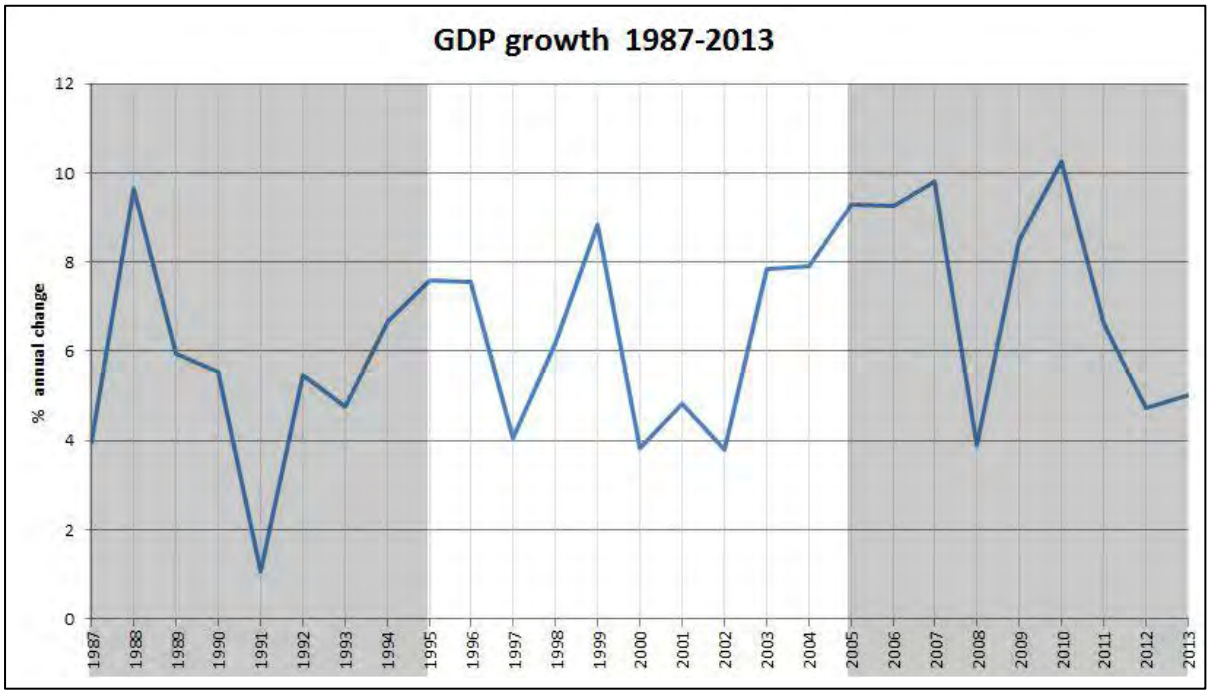


Figure 26: India's GDP growth between 1995-2004
Source: Own graph based on data from World Development Indicators, World Bank (2015)

Cox's conceptualisation of material circumstances realistically include factors like sanitation and access to water, as these are the material conditions that frame the lived experience of people. By the end of this phase, 29% of the population had access to improved[19] sanitation facilities - up from 21.2% in 1995 (World Bank, 2015). Data extracted from the decadal census of 2001 relating to both the location and the main source of drinking water indicates that only 39% of households had access to water on the premises while the majority of the population still had to walk some distance

[19] defined as a range of interventions from providing a covering for an open latrine to the installation of indoor plumbing

to find water[20]. In addition, the largest proportion of households was still without a piped water supply and instead procured water from wells (18.2%) or sources like rivers or canals (3.9%) or handpumps etc. (35.7%) (Ministry of Home Affairs, 2001). These numbers, and those realting to sanitation above, are indicative of the scale of developmental challenges still faced by India at the beginning of the new century – challenges that shaped India's approach to economic growth and its conception of equity at an international level.

India's growth was primarily fossil fuel driven - an economic growth-model it shared with the majority of developed and developing countries. The percentage of fossil fuels in the overall fuel mix rose just on 6% over the period from 1995 to 2004. Of more concern, however, the country's net energy imports as a percentage of the total energy used nearly doubled from 12.62% to 21.42% in the same period (International Energy Agency, 2014; World Bank, 2015). This rising trend was indicative of the Indian state's increasing reliance on imports to fuel the economy, which in turn raised concerns about the country's energy security.

India's emissions intensity of GDP showed a significant decline in this phase as seen in Figure 27 below. Given the significant variation in GDP growth seen in Figure 26 above it would not have been unreasonable to anticipate some slowing of the downward trend of GHG emissions per unit of GDP. The downward trend remained strong however, indicating the government's continued efforts to address the energy intensity of the economy and perhaps also the increasing relevance of the low GHG-producing service sector to the economy. In just under a decade, the country reduced the GHGs emitted to produce GDP of US$ 1 million by 138tCO2e – remarkable for a country still on a development trajectory. In fact, by 2004 the emissions intensity of India's economy equalled that of Japan and had surpassed Germany and significantly undercut China's GHG intensive growth (Bacon & Bhattacharya, 2007).

[20] "Away" was classified as more than 100m in urban areas and more than 500m in rural areas.

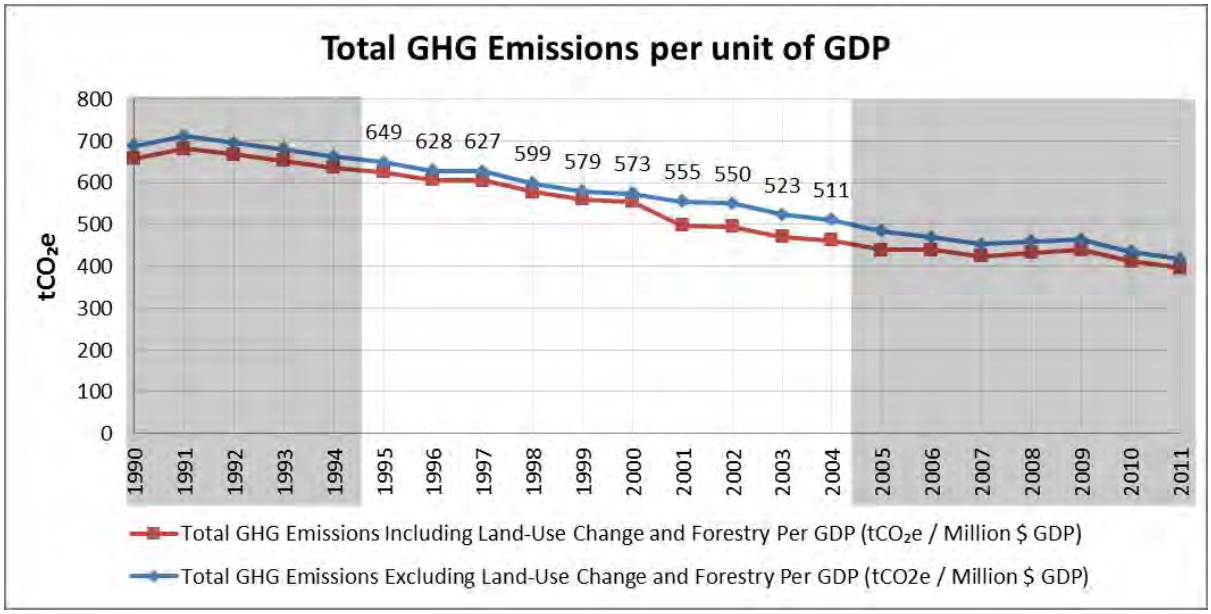


Figure 27: Emissions Intensity of the Indian economy
Source: Own graph based on data from Climate Analysis Indicators Tool (CAIT) (World Resources Institute, 2015)

This sub-section has discussed a selection of indicators of the material capabilities of the Indian state in this phase. While there were slow but steady improvements in some areas (provision of improved sanitation for instance), and a decrease in the energy intensity of the economy overall, the poor showing on the Human Development Index and the fluctuating GDP growth still indicated a developing country with both huge developmental challenges and an uneven income stream with which to deal with them.

Even given this status quo, the Indian Government – regardless of which party or coalition was in power – continued to pour large sums into the nuclear programme. India established an Atomic Energy Commission the year after independence and the Department of Atomic Energy in 1954. By the 1970s it was one of the few countries to have realised the complete nuclear fuel cycle from uranium exploration to waste management (Ahn & Graczyk, 2012). To its advocates the nuclear-energy industry held the potential to make India fossil fuel import free and energy secure; thus far this possibility had not transpired. While India had historically been a vocal opponent of nuclear-weapon proliferation internationally, it established and perpetuated a military nuclear capability under the guise of the nuclear threat posed by China and Pakistan. India chose to cross the nuclear weapon threshold with a test in 1974 (Pokhran-I) and again in 1998 in Rajasthan. The Pokhran-II tests were conducted in spite of, and possibly because of, the looming extension of the nuclear non-proliferation regime to include the CTBT (Ganguly & Pardesi, 2009; Chacko, 2013). India had long refused to sign the NPT as a non-nuclear-weapon state (as was outlined in 5.1.2 above) – construing it as a threat to its sovereignty and national dignity.

5.3 Institutional arrangements

5.3.1 Institutions at the international level: the FCCC negotiations

The Framework Convention entered into force in March 1994 – less than two years after its presentation at Rio – setting the stage for the first ever Conference of the Parties to the Framework Convention on Climate Change to take place between 28 March and 7 April 1995 in Berlin, Germany.

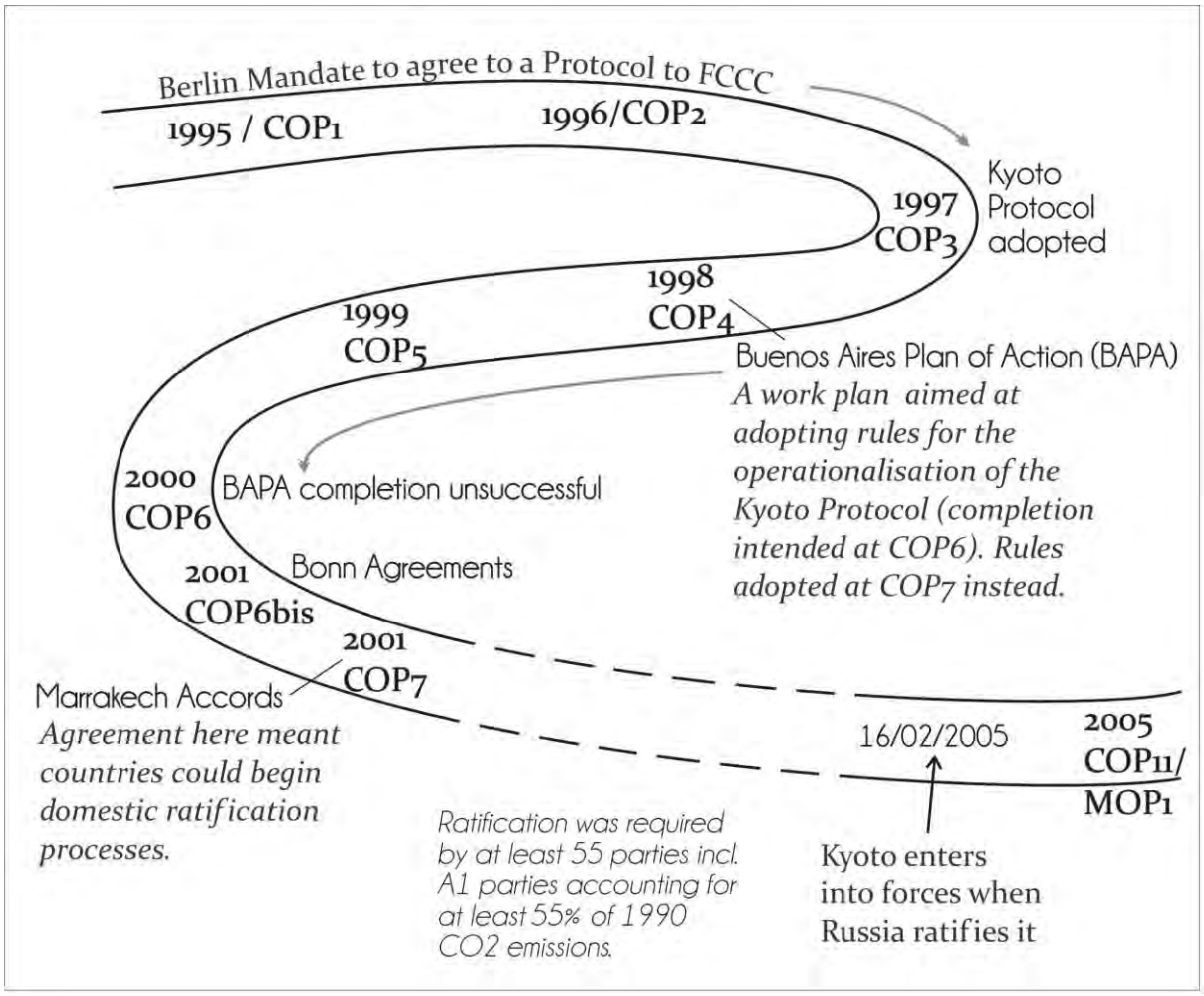


Figure 28: The road to a ratified Protocol to the FCCC

In the final INC meetings (10 and 11) in 1994/5, there had been general recognition that the commitment to emission reduction in the FCCC text was inadequate; therefore, there was pressure for countries to strengthen the regime commitments at the first COP in 1995. Owing, however, to the emerging North-South tension and some South-South disagreements (notably between AOSIS and OPEC states), instead of a firm protocol under the new convention to increase reductions, the outcome of COP1 was instead merely a mandate to begin a negotiation process to do so. This was the Berlin Mandate, a negotiating process aimed at "strengthening the commitments in Article

4.2(a) & (b) of the convention" (UNFCCC, 1995a). Given the inability to arrive at any real consensus of opinions the "provisions of the FCCC did not resolve differences so much as paper them over…The Convention, therefore, represented not an end point, but rather a punctuation mark in an ongoing process of negotiation that continues to this day" (Bodansky, 2001: 34). The evolution of the regime from the Berlin Mandate onwards is depicted graphically in Figure 28 above.

At COP1, India (in conjunction with China and Brazil) played a significant role in supporting the call by the newly formed AOSIS that developed countries should take the lead in formulating policies and measures and setting quantified limitation and/or emission reduction goals (QELROs). This was premised on the "polluter pays principle" and on the fact that they had been responsible, for the most part, for creating the problem. The quid pro quo for this support was that AOSIS agreed to support the larger developing countries' resistance to accepting new commitments in the next round of negotiations: the Berlin Mandate process (IISD, 1997b). The Ad Hoc Group on the Berlin Mandate (AGBM) convened for eight sessions between August 1995 and October 1997. Central to the Mandate, and echoing concerns reiterated by India (IISD, 1995), was that any adopted protocol would have quantified emission-reduction targets for developed countries only and that there would be no new commitments for developing countries (UNFCCC, 1995b). A telling contribution by India to the AGBM 3 (1996) discussions centred on the implications of policies and measures adopted by Annex I countries on international trade. The concern was that policies and measures put in place by Annex I countries in order to achieve emissions reductions might negatively affect trade with developing countries by, for example, requiring labelling or prior informed consent to transport goods. Given India's increased and ongoing integration with the global trading system, any policies or measures that potentially placed restrictions on its trade certainly would be cause for concern (IISD, 1996b).

In terms of finance and technology, little progress was made beyond that achieved in the first phase. At the first COP in Berlin, the interim status of the GEF as operating entity of the financial mechanism was extended until the first review of the financial mechanism was to be conducted at COP4 (UNFCCC, 1999: decision 9/CP.1, para. 1). At COP4, after the first review, the GEF was confirmed as an operating entity and subject to review every four years (UNFCCC, 1999: decision 3/CP.4). India, much like other developing countries, repeatedly raised the concern regarding the slow pace of technology transfer from developed to developing countries during the AGBM process (IISD, 1996a,c).

The evolving climate change regime experienced its first major test from domestic action when the United States' Senate unanimously passed the Byrd-Hagel Resolution (Senate Resolution 98 of

1997) in July 1997. Byrd-Hagel resolved that the USA would not ratify the Kyoto Protocol – or any protocol to the UNFCCC – to limit GHG emissions that did not also include limits or reductions for developing country parties within the same term of compliance. Given this Resolution, the US executive did not forward the Kyoto Protocol to the Senate for ratification and the USA became, at the time, the only developed country outside of the Kyoto Protocol. This positioning of the US in turn caused a hardening of positions: the G77/China sought and used every opportunity to reject attempts to assign to developing countries anything that could be described as new commitments during subsequent AGBM meetings (IISD, 1997b).

The following paragraphs are a brief description of the evolution of the regime after the signing of the Kyoto Protocol. Specific attention is given to the operationalisation of the Protocol through the Marrakech Accords in order to highlight the preponderance of attention paid to mitigation matters that primarily concerned countries with quantified emission-reduction objectives (QELROs): the Annex I countries.

5.3.1.1 Kyoto to Marrakech

In 1997 the Kyoto Protocol was adopted at COP3 in Kyoto, Japan fulfilling the Berlin Mandate (Figure 28 above). It is a binding legal instrument that creates binding targets on Annex I (industrialised) countries and allows for carbon sinks and three "flexible mechanisms" for achieving these emission reductions. The cornerstone commitments of the KP are found in Article 3, which requires Annex I countries to reduce their GHG emissions by at least five percent below 1990 levels in the first commitment period between 2008 and 2012 (United Nations, 1998). Article 3, paragraph 3 stipulates that countries may use land-use changes (afforestation, reforestation and deforestation) since 1990 to meet their commitments. The three flexibility mechanisms – intended to make emission reductions as affordable as possible for Annex I countries (Vespa, 2002) – were emissions trading (ET) (Article 17), Joint Implementation (JI) (Article 6) and the Clean Development Mechanism (CDM) (Article 12) (United Nations, 1998).

The Marrakech Accords represented the culmination of difficult negotiations initiated by the Buenos Aires Plan of Action (BAPA) to flesh out the political agreement that was the Kyoto Protocol. The BAPA initially projected that work would be complete by COP6 in The Hague in 2000, but the intricate negotiations proved highly divisive and eventually became deadlocked instead. The four critical issues on which the negotiations foundered were Kyoto's flexible mechanisms, carbon sinks[21], compliance (with targets), and the mechanisms for financial and technology transfer

[21] A sink is defined under Article 1(8) of the Convention as "Any process, activity or mechanism which removes a greenhouse gas, an aerosol or a precursor of a greenhouse gas from the atmosphere."

to developing countries (Vrolijk, 2001). Procedurally speaking the COP was suspended until July the following year, when parties agreed to continue negotiating in an unprecedented resumed session – COP6*bis* (Vespa, 2002). Before the session could be reconvened, however, George W. Bush succeeded Bill Clinton as president of the USA and in March 2001 the Bush Administration rejected the Kyoto Protocol by unequivocally refusing to ratify it as had been signalled by the Byrd-Hagel resolution (Gupta, 2010). Despite (or perhaps because of) this unilateral rejection, the negotiations did not end as many commentators predicted; indeed the absence of the USA allowed many parties to be more flexible on some issues as the USA would no longer be a primary beneficiary of the decisions (Babiker et al., 2002). It was only at the resumed session, however, that sufficient political agreement was forged (the "Bonn Agreements" – see Figure 28 above) and that momentum was regained towards operationalising the Protocol. The political agreement that provided the breakthrough in Bonn was hailed at the time by the G77 and China spokesperson as "a triumph of multilateralism over unilateralism" (IISD, 2001a). COP7 in Marrakech later that year was able to convert political agreement into technical detail and culminated in the agreement of the Marrakech Accords in November 2001. These accords added much-needed substance (218 pages in four volumes) to the skeletal frame of the Kyoto Protocol (Ott, 2002). Importantly, it should be noted, that the advances made by the Marrakech Accords were on issues of importance primarily to Annex 1 Parties like flexible mechanisms, with little attention being paid to issues of adaptation crucial to NA1 Parties.

The Kyoto Protocol was finally operationalised by the Marrakech Accords in four main respects, namely: flexible mechanisms; carbon sinks; accounting, reporting and review; and a compliance regime. Firstly, the Accords put in place a range of operating rules for the various flexible mechanisms (decision 8/CP.7; decisions 15 – 19/CP.7) (UNFCCC, 2002). Negotiations settled the eligibility criteria for participation in the mechanisms as being ratification of the Protocol compliance regime with the rules on measurement, reporting and verification (MRV) (see below) and instituting national credit inventories (UNFCCC, 2002, decision 15/CP.7). Decision 15(6) provides for full fungibility of Units generated through the Kyoto mechanisms – JI, CDM, ET – and land use, land-use change and forestry (LULUCF) activities; each unit would be equal to one metric tonne of carbon dioxide equivalent (Yamin & Depledge, 2004). Crucially parties also decided the extent to which reductions from mechanisms could be supplemental to domestic mitigation actions taken by not imposing quantitative limits on their use (Vespa, 2002; Dessai & Schipper, 2003). In political moves to get the buy-in from the Umbrella Group, the flexible mechanisms were not linked to the compliance system (Dessai & Schipper, 2003).

Secondly, the Accords attempted two resolve two "sinks" issues left unresolved in the Kyoto Protocol, namely, the extent to which net emission-reduction calculations could include domestic land-use change or forestry activities and the extent to which these activities could accrue CDM credits (Vespa, 2002). The final agreement in Marrakech allowed for Annex I parties to include reductions from human-induced activities like re-vegetation, forest, cropland, and grazing-land management, provided these had not already been counted pursuant to Article 3.3 in their sink calculations (UNFCCC, 2002). The second issue concerned the extent to which LULUCF activities in developing countries could be used to offset developed countries' emissions through CDM projects (Vespa, 2002) – the agreement reached permitted afforestation and reforestation projects but only during the first commitment period (2008-2012) and with a cap of up to one percent of a party's declared 1990 emissions (UNFCCC, 2002: decision 12/CP.7). Unresolved issues remained, relating to the reporting of sinks activities and the nature of sink credits, and many methodological issues were left for the Subsidiary Bodies to attend to in future sessions (Dessai & Schipper, 2003).

Crucial to the operationalisation were agreements on accounting, reporting and review of emissions reductions under the Protocol; specifically Articles 5 (methodological issues), 7 (communication of information) and 8 (review of information) (IISD, 2001b). In FCCC parlance, these issues are referred to as "MRV" or measurement, reporting and verification. Negotiations covered the fungibility of credits, i.e. whether credits under all three mechanisms were interchangeable, and the possibility of "banking" credits from the first commitment period to be used in the second; they created a new unit called a Removal Unit (RMU) specifically for sinks activities (Dessai & Schipper, 2003). While banking was limited to credits from JI and CDM projects (but not RMUs) up to 2.5% of Assigned Amount Units (AAU), developed country parties could, however, transfer an unrestricted amount of credits among themselves to comply with the targets for the first commitment period (Ott, 2002).

Lastly, in decision 24/CP.7, the Marrakech Accords put in place a compliance regime that was considered "the most innovative and elaborate non-compliance procedure for any existing multi-lateral environmental agreement" (IISD, 2001b). It was also considered unique in the realm of international environmental law (Dessai & Schipper, 2003) at the time. Despite the interpretation of compliance to the Bonn Agreements being a sticking point, the compliance regime was one of the first domains to be agreed to at Marrakech (Dessai & Schipper, 2003), even though the final resolution of some key points were deferred to the first meeting of the MOP – Meeting of the Parties to the KP (Babiker et al., 2002). One such key sticking point was the actual legal status of the compliance regime due to the language formulation in Article 18 (Werksman & Herbertson, 2010)

and in particular the legal nature of any decisions made by the enforcement branch (IISD, 2001b; Dessai & Schipper, 2003).

In addition to operationalising the Kyoto Protocol, the Marrakech Accords also established three new funds as channels for developed-developing country assistance: the Special Climate Change Fund (SCCF), the Least Developed Countries Fund (LDCF) and the Adaptation Fund under the Kyoto Protocol (UNFCCC, 2004). The SCCF was designed to support adaptation, technology transfer, economic diversification and activities in the energy, transport, industry, agriculture, forestry and waste management sectors (UNFCCC, 2002: decision 7/CP.7, para. 2). The LDCF was intended to support a work programme for LDCs, including, but not limited to, support for preparation and implementation of National Adaptation Programmes of Action (NAPAs) (UNFCCC, 2002: decision 7/CP.7, para. 6). Under the Kyoto Protocol, an Adaptation Fund (AF) was created to assist in financing adaptation projects and programmes in developing country parties that were parties to the Protocol (UNFCCC, 2002: decision 10/CP.7, para. 1); this fund would be financed by a 2% levy of CDM transactions. All three funds would be initially operated by the GEF in its capacity as an operating entity of the UNFCCC's financial mechanism under the guidance of the Conference of the Parties to the Convention (UNFCCC, 2004). Once the Kyoto Protocol came into force in 2005 the Adaptation Fund would be guided by the Conference of the Parties, serving as the meeting of the Parties to the Kyoto Protocol (UNFCCC, 2002).

Article 4, paragraph 5 of the Convention stipulates that developed country parties should take practical steps to "promote, facilitate and finance, as appropriate, the transfer of, or access to, environmentally sound technologies and know-how to other Parties, particularly developing country Parties, to enable them to implement the provisions of the Convention". As an essential precursor to the transfer of technologies thus mandated, the Marrakesh Accords agreed to put in place a "technology framework" (UNFCCC, 2002: decision 4/CP.7, para. 1) and established an Expert Group on Technology Transfer (EGTT) tasked with "analysing and identifying ways to facilitate and advance technology transfer activities" (UNFCCC, 2002: decision 4/CP.7, para. 2). The technology framework was to be driven at both the national and sectoral level by multiple stakeholders in developing countries, and would include "activities on technology needs assessments (TNAs), technology information, enabling environments, capacity building and mechanisms for technology transfer" (UNFCCC, 2002: decision 4/CP.7, Annex para. 2). The TNAs in particular became the focus of early technology-transfer work.

Developing countries – including India – consistently and successfully resisted US calls to put in place a process that would culminate in QELROs or any new commitments for Non-Annex I

countries (Bodansky & Rajamani, n.d.; Dessai & Schipper, 2003). The level of detail in the Accords provided countries with sufficient detail to begin domestic Kyoto Protocol ratification procedures (Vespa, 2002). Despite the USA's withdrawal, at least some negotiators hoped that having a legal framework in place would enable the USA to re-join the process at a later date (IISD, 2001b).

5.3.1.2 Post-Marrakech and pre-ratification

In 2002 India ratified the Kyoto Protocol and hosted the 8th COP in New Delhi. At the COP the Prime Minister, Atal Bihari Vajpayee, outlined the strides India had taken in its renewable-energy sector while still calling for sufficient atmospheric space in which developing countries could develop (IISD, 2002). Vajpayee took the opportunity to highlight the importance of addressing adaptation and vulnerability and providing for capacity building for developing countries. He also stated firmly that "consideration of developing country commitments would be premature due to, among other things, inequitable per capita emissions rights, and differences in per capita income between developing and developed countries (IISD, 2002). On the final day of COP8 the "Delhi Declaration on Climate Change and Sustainable Development" was adopted; it reaffirmed developing countries' prioritisation of poverty eradication and development. In addition the Declaration reemphasised CBDR and the role of national priorities in relation to the implementation of FCCC commitments and adopted rules and procedures for the Executive Board (EB) of the CDM.

COP9 brought with it similar messages from the Indian government: calls for Annex I parties to take the lead and begin to address the impacts of climate change and to make good on the provision of financial and technological assistance to developing countries. India's Joint Secretary for Environment and Forests, C. Viswanath, also rejected any commitments for developing countries (IISD, 2003).

After the change of government in India in 2004, the new Minister of Environment and Forests, A. Raja, expressed the view at COP10 that GHG emissions by developing countries would rise in order for them to address poverty and achieve sustainable development. Much like Vajpayee two years before, and Viswanath the year prior, Raja also emphasised that contemplation of future commitments for developing countries was premature, as was any proposal to create new categories of parties under the FCCC (IISD, 2004).

5.3.2 Institutional arrangements in India

The mid- to late-1990s were a fractured time in Indian politics; indeed during the 1990s no single party succeeded in obtaining majority support from the electorate and thus the governments were all coalition governments (Metcalf & Metcalf, 2006). These are delineated in Figure 21 on page 79

above. The 1996 election ushered in a period of roughly two years of United Front coalitions after the BJP – standing alone – was unable to muster enough support on the floor of the Lok Sabha (Lower House of Parliament) to create a government; Atal Bihari Vajpayee's term ended after only thirteen days. Following the collapse of the BJP government, a coalition of thirteen parties formed the first of the United Front governments led by H. D. Deve Gowda of the Janata Dal party (Khilnani, 2003). This coalition did not include the Congress, but Congress had pledged its working support for the government. Gowda resigned in April 1997 amid a dispute over communication between the coalition and the Congress Party and was replaced by fellow Janata Dal member, I. K. Gujral. Both led the country for less than one year.

When Gujral resigned, fresh elections were called for in 1998. These elections also did not yield a clear winner. The next government was formed by the BJP-led National Democratic Alliance (NDA), a coalition of 20 parties, which returned Atal Bihari Vajpayee to power, where he remained until the 2004 elections (Panagariya, 2008). This 1998 election marked the first time that the Congress Party lost consecutive elections; notable about these elections was that a coalition remained in power for the full term for the first time since independence (Malone, 2011). A notable continuity, however, was the maintenance of the economic reform agenda (albeit with different speeds and emphases) throughout this period, irrespective of the government's ideological leanings. This indicates a clear, if specifically unarticulated, cross-party consensus that the inward-looking, import-substitution model had to be replaced (Panagariya, 2008).

In the publication of the ninth Five Year Plan (FYP) (1997-2002) climate change is mentioned a few times. However, climate change was clearly not a priority: the plan stated that the "main environmental problems in India relate to air and water pollution, degradation of common property resources, threat to biological diversity, solid waste disposal and sanitation" (Planning Commission, 1997, para. 8.3). Climate change was also seen as a developed world problem given that the average per capita emissions from Indians were extremely low – see Figure 29 below for the table from the ninth FYP included in support of that position.

Table 8.1: CARBON EMISSIONS LEVELS IN SELECTED COUNTRIES*

(million tonnes)

Country	Share of World Population 1996	Share of Gross World Product 1994	Share of World Carbon Emissions 1995	Emissions per capita
United States	5	26	23	5.3
Russia	3	2	7	2.9
Japan	2	17	5	2.4
Germany	1	8	4	2.9
China	21	2	13	0.7
India	17	1	4	0.3
Indonesia	4	1	1	0.3
Brazil	3	2	1	0.4
Total	56	59	58	0.9

(* Compilation from several international published sources)

Figure 29: Table from Ninth Five Year Plan (formatting as per original)
Source: Planning Commission (1997, para. 8.2)

Even so the Planning Commission recognised the need for multi-disciplinary research and development related to climate change (para. 8.42) and initiated studies in order to have some scientific inputs to the international negotiations and to meet anticipated reporting requirements from the FCCC (Planning Commission, 1997, para. 8.43). Work on preparing India's first National Communication to the UNFCCC began in 2001.

By the publication of the tenth FYP (2002-2007), however, climate change had risen in importance such that it was mentioned alongside environmental degradation, deforestation, increasing droughts and desertification as threats to a "sustainability [that] is not an option but imperative" (Planning Commission, 2002, para. 9.1) in the opening paragraph of the Environment and Forests chapter. The Planning Commission made clear the dual nature of the challenge facing India: "We have to improve our economic growth rate, provide basic minimum life support services to a large section of our population and deal with the problems of poverty and unemployment. At the same time, we have to pay attention to conserving our natural resources and also improving the status of our environment" (Planning Commission, 2002, para. 9.1). One of the natural resources singled out in relation to climate change was forests – the plan acknowledged the important role forests played as sinks by sequestering carbon (Planning Commission, 2002, para. 9.26)

The plan pointed to the voluntary nature of the mitigation measures required of developing countries under the Kyoto Protocol in relation to, for example, "improving efficiency of energy

conversion and utilisation, afforestation, stabilising population growth, limiting methane emissions through proper waste management and phasing out subsidies on power utilisation" (Planning Commission, 2002, para. 9.97). New work proposed under the tenth plan included programmes addressing climate change with international and bilateral financial and technical assistance from the Global Environment Fund (GEF) and from Canadian, Dutch and German NGOs, and gearing up for anticipated programmes under the Clean Development Mechanism (one of the flexible mechanisms of the Kyoto Protocol – discussed further in 6.3.1.1 below) in conjunction with credit-seeking developed countries (Planning Commission, 2002: 9.86).

In the energy sector, two important Acts were promulgated in this phase, as noted in Figure 21 above. The first was the Energy Conservation Act (Act 52 of 2001), which mandated the government to establish the Bureau of Energy Efficiency (BEE) in March 2002, which was in turn tasked with the crucial objective of lowering the energy intensity of the Indian Economy (BEE, 2015). The second Act, the Electricity Act (Act 36 of 2003), is considered a "landmark development in the history of electricity policy in India" as it radically altered the structure and governance of the sector (Panagariya, 2008). Even though reform itself has been slow, the new act allowed for relatively free entry to generation providers, removal of restrictions on captive generation and the beginnings of a change from the previously dominant single-buyer model (Bhattacharyya, 2005). Institutional changes were not driven by climate change concerns, but were an internal response to a slew of domestic concerns. The country faced major energy access and security hurdles; these included having the highest number of people without access to electricity (International Energy Agency, 2014), and the concomitant need for large-scale infrastructural investment in new power-generation capacity and the bankruptcy of the vertically integrated State Electricity Boards (Rao, 2001; Bhattacharyya, 2005).

5.4 Configuration of forces and influences in phase two

This next section charts the configuration of forces prevalent in this phase that shaped India's position at the climate negotiations by either enabling or constraining India's actions or perspective of how it might be able to act.

In Figure 30 below, line "A" indicates the influence of two ideas on institution building. One idea was that the Convention would be inadequate to the task of reducing emissions by itself and that the commitments contained therein would require strengthening. This idea was prevalent toward the end of the INC (in the previous phase) but, instead of leading to stronger commitments at COP1 in 1995, it led to a negotiation process in the form of the AGBM. The second idea circulating early in this phase was the growing certainty relating to the anthropogenic origins of climate change. Expressed in the SAR, this was important in shoring up support for the emerging top-down "targets and timetable" approach during the AGBM negotiations (1995-1997).

The idea that some countries were both more responsible for the stock of GHGs and more able to respond to the repercussions was still - in its broadest form - an intersubjectively shared idea at international level and had been encoded in the FCCC (Article 4.1). This differentiation was institutionalised in the Kyoto Protocol's system of Annexes (see line "B" in Figure 30) and the associated anticipated flow of resources from developed to developing countries. During this phase, however, the 'intersubjectiveness' of the idea of differentiation is increasing contested and undermined by developing countries, notably the USA and Umbrella group, leading to the emergence of an idea of a collective in favour of symmetry. This is signalled most obviously when the USA refuses to ratify the KP, but the contestation is played out whenever there are challenges to the Annex system of the KP.

In this phase of the evolution of the climate regime, India is still significantly constrained by the material deficits of a developing country with high levels of poverty; however, its nuclear-weapons ability seems to have emboldened it on the international stage, even though its UN Security Council bids had been repeatedly thwarted. In the climate negotiations, India continually reiterated its position on equity and the need for finance and technology transfers from developed countries, notwithstanding the differentiation that was being operationalised through the Annexes and the operationalisation of the rules agreed upon in the Marrakech Accords (see line "B" in Figure 30).

India's material circumstances both provided pressures to act in particular ways and constrained its ability to act in others. During this phase India's annual GDP growth fluctuated between 3.8% and 8.8%, its population passed the one billion mark, its HDI rating barely improved and its imports of

fossil fuels continued to rise steadily. On a more positive note, India's emissions intensity continued to decline. Essentially India's ability to act at international level was constrained by its focus inwards towards its lack of domestic material capacity (represented by line "D") and by its national level intersubjective belief that India had not helped to create the climate change problem and should not be called upon to fix it. Chief among its priorities was the need to develop its economy to pull more people above the poverty line: given the energy mix in India, however, development was still dependent on coal consumption to drive the economy. With an overwhelming need to drive GDP growth, and with no technology being transferred from developed countries to enable it to develop in a low carbon manner, India was certain to be a vigorous opponent of any potential emission reductions commitments for developing countries such as itself. Hence any attempts to renegotiate differentiation within the climate regime were firmly rebuffed year after year. These are represented by lines "C" and "D" in Figure 30.

Internal Indian institutional instability in the early years of this phase had an impact on government priorities, which in conjunction with constraints imposed by material conditions and the prevailing idea that climate change mitigation was a "Northern" problem meant that it was not all that surprising that climate change garnered very little attention in the ninth FYP. By the turn of the century and the tenth FYP (2002-2007), however, the macro-institutional arrangements had settled in the country and the economy was showing improvement. The government responded by addressing climate change more systematically. Although the Clean Development Mechanism was only created by the Marrakech Accords (as one of the flexible mechanisms) in 2001, by the tenth Five Year Plan (2002-2007), the Indian Government was already positioning itself to take advantage of being a CDM partner for developed countries and had lined up six unconventional energy projects in conjunction with the Netherlands (Planning Commission, 2002: 9.85). This is a clear example of a national-level institution being created in response to perceived advantages and pressures emanating from the international institutional level and also in response to the possibility of international resources/material forces (see line "E" in Figure 30).

It is the contention of this thesis that technology transfer and finance constitute material capabilities at the international level of the regime, as much as equity, given expression in the concept of CBDR, constitutes a key idea of the climate regime. The idea of equity at the international level, however, did not receive much specific attention beyond that directed to it by developing countries.

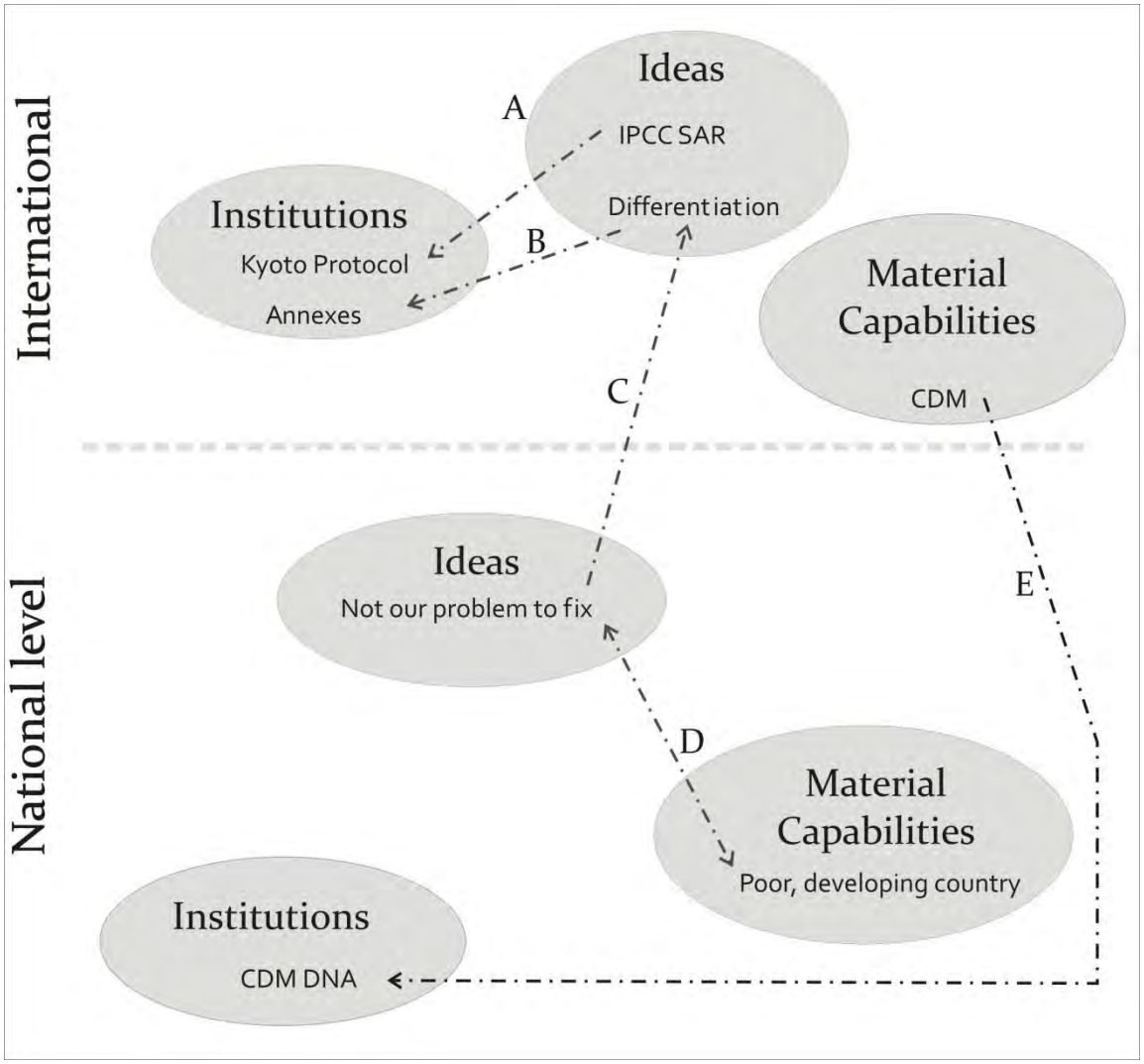


Figure 30: Visual representation of configuration of forces in phase 2
Note: Line indicates influence; arrow indicates directionality

The latter made frequent requests that they not be burdened with commitments and that there be no moves to create more annexes (which might include larger developing countries). They asserted that the provision of finance and technology by developed countries was woefully inadequate. These calls were made because, within the institution of the UNFCCC, the idea of differentiation (between developed and developing countries' commitments based on CBDR) was consistently contested by developed countries as evidenced by calls for commitments (voluntary or otherwise) for developing countries. In this phase, those developed countries with a material and political dominance in the international arena were able to transmute this into agenda-shaping and ultimately institution-building. Institution-building (of the KP) was thus largely driven by developed countries and so reflected their agenda by emphasising mitigation and the inclusion of flexible mechanisms in the KP.

KP Ratification to Cancun
2005-2010
Negotiation toward 2nd commitment period

6 India onstage – as part of the chorus: the third phase (2005–2010)

The following chapter contains a narrative and analysis of the three social forces outlined by Cox – ideas, material capabilities and institutions – and how these interacted with each other at national and international level to create the "framework for action" (Cox, 1981) within which states operate.

Figure 31 is a timeline of the phase that includes all the most important milestones that will be discussed below in this chapter. As in previous timeline figures, international events are depicted above the date line and Indian events and data below it.

6.1 Ideas

During this phase the science of climate change was becoming far more robust, and accepted beyond just scientists and activists. In particular the forecast impacts for India noted in AR4 had the effect of galvanising the political elite into action, as did the increasingly loud calls at international level for developing countries to take on mitigation targets, despite the concept of CBDR. In addition the idea of India as deserving of a place at the high table of international affairs – as held by the Indian elite as a group – became a more commonly held belief at international level. India's emergence was a function of how its growing material capabilities (discussed in detail below) served to further internationalise its ambitions. As an emerging power India sought to realign itself with the post-Cold-War unipolar power as well as take its place in several multilateral fora like the G8+5 and the G20. India's hitherto uncontested view in relation to the role that equity should play in the negotiations became contested at the domestic level.

6.1.1 Equity and differentiation

In this phase India remained committed to the idea of common but differentiated responsibilities (CBDR) as a cornerstone of the equitable distribution of the burden of addressing climate change. It also began to take a more proactive stance at times – for instance, via the abovementioned suggestion of a "new paradigm" submitted to the G8 Gleneagles Dialogue in 2005. CBDR still featured prominently in India's submission, as its new paradigm was "based on the internationally accepted principle of common but differentiated responsibilities" (Ministry of External Affairs, 2005a).

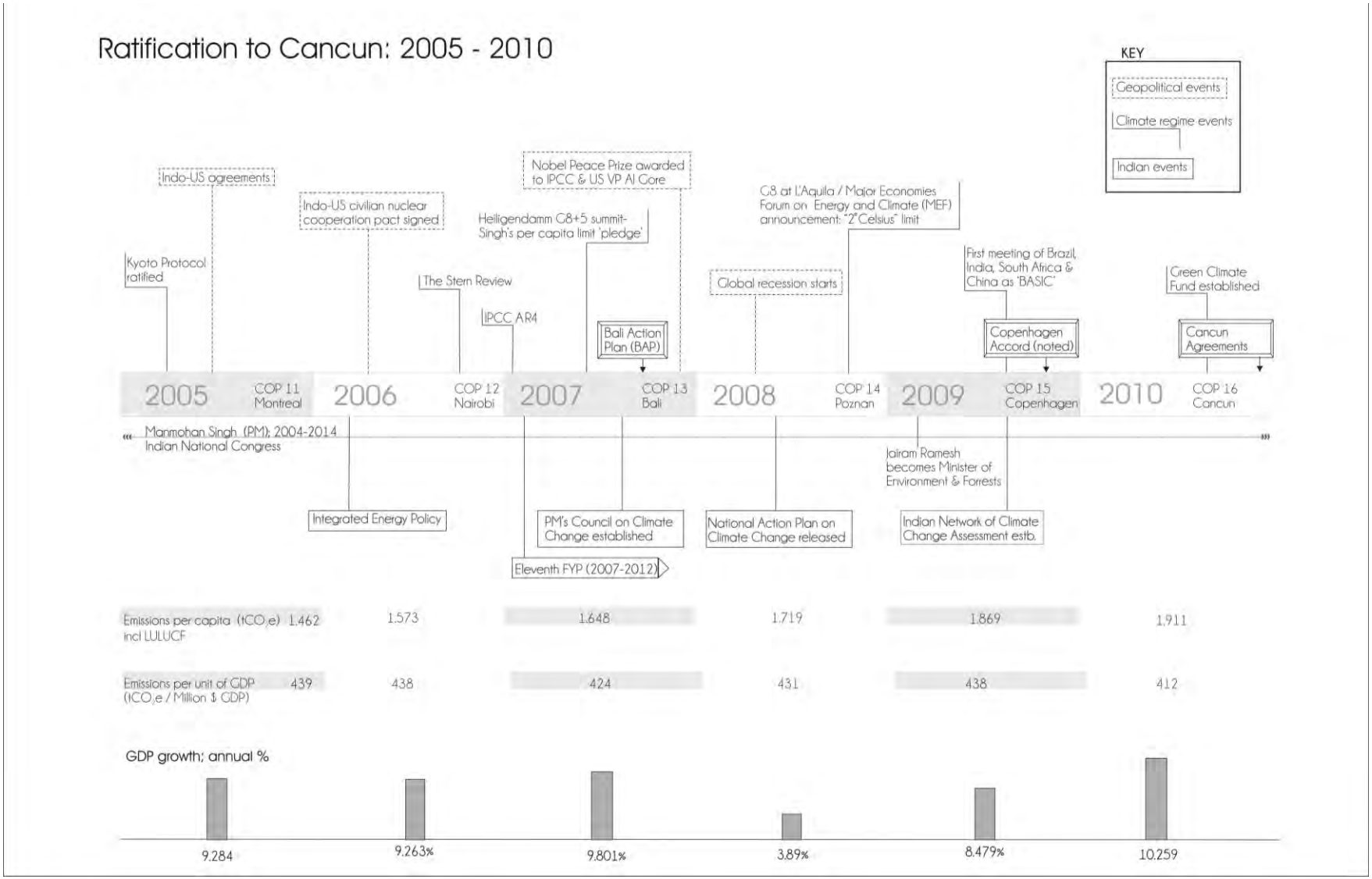


Figure 31: Third phase: from ratification of the Kyoto Protocol (2005) to the Cancun Agreements (2010)

After the Kyoto Protocol came into effect in 2005[22] much of the focus of negotations at COPs and CMPs turned to planning for the second commitment period (from 2013 onward). By 2006 all parties were highlighting the urgency of agreeing to a post-2012 architecture, but countries were split as to whether this would mean all emitters agreeing to emission reductions or only developed countries, as per CBDR and according to the KP's so-called "firewall". India took a firm line on the necessity of maintaining the differentiation inherent to the CBDR principle, apparently struck by the gross unfairness of developed countries – not having done what they undertook to do in the first commitment period – now demanding action from developing countries in the second. In fact India went as far as to describe calls for action by developing countries as "surreal" and a "threat to poverty alleviation efforts" (IISD, 2006). A t COP13 in Bali, India was not, however, able to prevent the inclusion of language on nationally appropriate mitigation actions by developing countries (UNFCCC, 2008a: 1/CP.13, para 1(b)(ii)) insised upon by the USA (Christoff, 2008).

Smaller, more vulnerable developing countries like Least Developed Countries (LDCs) and Small Island Developing States (SIDS), however, increasingly did not support the kind of differentiation that precluded larger emerging economies, like India, from making mitigation commitments. However, in the absence of certainty about the responsibility of historical emissions (stocks) or clarity on what constituted a "fair" distribution of current emission space (for flows of GHGs), there seemed little likelihood of larger emerging economies voluntarily changing their stance and taking on commitments (IISD, 2006).

Thus at the Bali COP, the idea of differentiation remained a contentious one. The mandate going into the COP was to ensure further implementation of the Convention with a specific focus on the institutional arrangements to be made for the post-2012 years when the first commitment period (2008-2012) of the KP would end (Christoff, 2008). The text on mitigation proved especially difficult to achieve consensus on, highlighting the tension between contending collective ideas. There were two points of contention. The first was between the USA and the EU in relation to the preambular paragraph. The EU wanted an explicit reference to the minimum reduction targets outlined in the IPCC's 4th Assessment Report (AR4); in contrast, the USA would not countenance reference to any numbers. Eventually a compromise was struck, with reference to the IPCC's finding inserted in a footnote (Clémençon, 2008); this compromise, however, weakened the Bali Action Plan's (BAP) ability to provide firm parameters for and guidance on the negotiations surrounding the post-2012 architecture (Christoff, 2008).

[22] A full discussion of the institutional changes follows in the 'International institutional arrangements' sub-section below.

The second point of contention was between the USA, Canada and other developed country parties that wanted stronger language in relation to developing country action, on the one hand, and the G77/China group, on the other, which not only rejected this but sought to bring more attention to the weakness of the Annex I commitments language (IISD, 2007; Christoff, 2008). The contestation centred on Article 1(b)(ii) and the role of MRV in relation to any developing countries' actions. Talks were deadlocked until, on the day after the scheduled close of the conference, India proposed the language, "nationally appropriate mitigation actions by developing country parties in the context of sustainable development, supported by technology and enabled by finance and capacity building in a measurable, reportable and verifiable manner" (IISD, 2007: 15).

This changed order of words moved the focus of the intended MRV from the actions of developing countries to the support to be provided by the developed countries (Clémençon, 2008). The reformulation was intended to ensure that any mitigation actions by developing parties in a post-2012 regime was actually enabled by technological, financial and capacity-building support from developed countries (Ott, Sterk & Watanabe, 2008; Winkler, 2008) according to the dictates of differentiation and of Article 4.7 of the Convention.[23] The USA at first strongly opposed the change of emphasis in the Indian proposal. India's negotiators were trying to forestall any moves by developed countries that reduced or diminished their commitments and shifted the onus of mitigation onto developing countries (IISD, 2007: 20). This was a clear indication of India's firmly held belief in differentiation informing their position in relation to institutional operationalisation: a clear case of ideas informing the creation or shaping of the institution. The change in text was accepted by the EU, and after more negotiation (and following unprecedented booing in the plenary) the USA bowed to the consensus and agreed. The full text of the Bali Action Plan was finally agreed upon, which allowed the conference to close (IISD, 2007).

Up until 2007, India's interpretation of "equity" was unambiguously defined as burden sharing based on per capita emissions and historical responsibility as expressed in the concept of CBDR. This interpretation was predicated on the nationally-held intersubjective idea that India had not been instrumental in causing climate change and therefore need not be part of the solution thereto (Thaker & Leiserowitz, 2013). It prevailed as the intersubjectively held image of the world (certainly among key government decision makers) for nearly two decades – as the Indian "collective response by people to their conditions of existence" (Cox, 2000; Cox & Schechter, 2002). In this

[23] Article 4.7 states: "The extent to which developing country Parties will effectively implement their commitments under the Convention will depend on the effective implementation by developed country Parties of their commitments under the Convention related to financial resources and transfer of technology and will take fully into account that economic and social development and poverty eradication are the first and overriding priorities of the developing country Parties."

image of the world, dubbed that of "growth-first realists"[24] (Dubash, 2012b), climate negotiations were considered a "containment strategy" used by developed countries to undercut India's economic growth. Mitigation action demands on the economy – inducing reduced economic growth and development – were deemed both more costly and threatening than climate change impacts. Internationally India demanded equity in the form of an equal right to unrestrained development, but construed questions about domestic equity as attempts by developed countries to hamper its development (Dubash, 2012). The "growth-first realist" view was very prominent, for instance, in PM Singh's instructions to the Indian delegation heading for the Bali COP: they were not to accept any terms that would impact on the country's growth rate or ability to reduce poverty (Chauhan, 2007). Thus this world view circumscribed the priorities India delineated, the actions it thought it needed to take, as well as those it believed other countries should embark upon in order to address the impacts of climate change.

In the years from 2007 to 2010 the prevailing ideas espoused by the "growth-first realists" no longer formed a largely uncontested world view in Indian climate discourse (Sinha, 2011). It was at this time that two other possible views began to vie for prominence: that of the "sustainable development realists" (SD realists) and "sustainable development internationalists"[25] (SD internationalists). These two world views shared a belief in the negative impacts of climatic changes on India and in the fact that developed countries were using India's growth as an opportunity to delay their own emission reductions, effectively using India (and other large emerging economies) as an excuse for inaction (Dubash, 2009). SD realists interpreted this as a reason not to trust the international climate negotiation process, which was compounded by their inability to promote the equity agenda. Instead SD realists sought to promote action for domestic reasons (like energy security for example), which resulted in mitigation as a co-benefit, and not to link these with the international process. SD internationalists on the other hand saw the developed country inaction as an opportunity to try to align India's interests with a strong multilateral regime and so to gain the moral high ground (Dubash, 2009). In contrast to the "growth-first realist" view on equity, both SD positions viewed domestic equity as an important outcome of a shift towards more sustainable development through the "co-benefits" approach (Dubash, 2012b).

An added layer of complexity is that the "growth-first realist" position, while being dominant over time in the Government of India's positioning at the negotiations, was not necessarily the dominant world view in other sectors of Indian society (Dubash, 2012b). The cynicism regarding the motives of developed countries, combined with belief in the necessity to respond to climate change, has

[24] This group appeared as the "growth-first stonewallers" in earlier literature by Dubash (Dubash, 2009).
[25] These two groups have also been referred to as progressive realists and progressive internationalists in Dubash (2009).

been a key element of the "SD Realist" view espoused by many of the Indian environment and development NGOs since the early 1990s – the classic example being Anil Agarwal and Sunita Narain's reframing of the "North's" position on climate change as "environmental colonialism" in their 1991 treatise *Global Warming in an Unequal World* (Agarwal & Narain, 1991). Despite the passage of time, Agarwal and Narain's ideas on equity remained a sustained and important influence on the thinking of many in the Indian climate change field, though particularly those in the NGO community. This much was evident in several of the interviews with NGO members (Krishnaswamy, 2014; Powell, 2014; Raghunandan, 2014).

These three world views are tabulated in Table 3 below. Both Sustainable Development positions represent coherent and contending world views held by different groups of people: Cox's ideas formed by collective images of the world that diverge from the "common sense" of the intersubjective view of the world.

Table 3: Three Indian world views related to climate change
Source: Based on Table 14.2 in Dubash (2012b) with highlighted cells being additions by author

	Growth-First Realist	**Sustainable Development Realist**	**Sustainable Development Internationalist**
Political reading of climate change	Geopolitical threat	India as an excuse for inaction – fatalism	India as an excuse for inaction – cooperation
Stance on Science	Downplays science / sceptical	Impacts pose serious threat	Impacts pose serious threat
Foundational demand	Equity – external [globally]	Equity, globally and nationally	Equity, globally and nationally
Domestic agenda	Growth first [address climate later]	Co-benefits	Co-benefits
International strategy	Stonewall on commitments	Implement change at home, but de-link from global agenda	Implement change at home, AND link domestic and global
Motto	"It's our turn!"	"It's an unfair world."	"Seize the moment!"
Application of Cox's definitions of the force of ideas	Intersubjectively held 'common picture' predominantly uncontested until approximately 2007	Contending ideas formed by collective images of coherent patterns of thought. These collective-based ideas contest the growth-first realist image of the world, particularly between Bali and Copenhagen/Cancun COPs	

Between 2007 – the lead-up to Bali – and 2010 – the lead-up to Cancun – the contestation between these three world views was made very apparent in a series of public statements and counter-statements reported in the Indian media. Indeed, it is in the conflict between multiple and

contesting collective images that the potential for alternatives to the status quo may become apparent (Cox, 1981: 136). This might be depicted as in Figure 32 below.

In 2007 and 2008 there were multiple statements reiterating the "growth-first realist" world view: from the PM's exhortations to the Bali negotiators (mentioned above) (Chauhan, 2007) to Special Envoy Shyam Saran's statement in 2008 reaffiriming equal entitlement to atmostpheric space, the importance of historical responsibility and ultimately the need to move toward a per capita convergence of emissions (Saran, 2008). Shortly after being appointed in May 2009, the new Minister of Environment and Forests, Jairam Ramesh, was quoted as saying to US Secretary of State, Hilary Clinton, in July 2009 that "[t]here is simply no case for the pressure that we, who have been among the lowest emitters per capita, face to actually reduce emissions", while reiterating that continued economic growth for poverty eradication was essential for India (Times News Network, 2009a). These statements neatly encapsulated the contention that the change in India's domestic material circumstances should not be a factor in international institutional change.

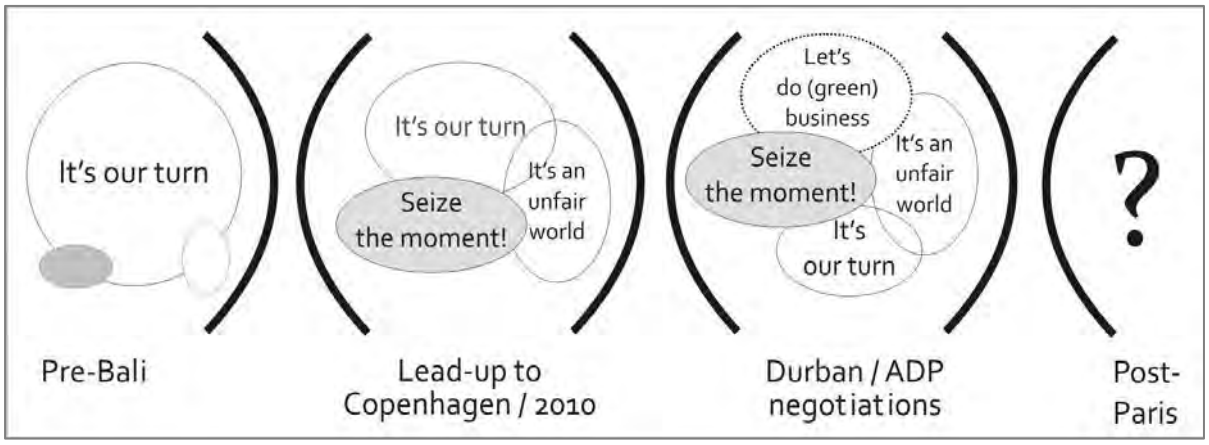


Figure 32: Contending world views over time

The contestation in India became much sharper and much more public during 2009 – the all-important year of the Copenhagen COP. Ramesh's comments and stance seemed to change, starting with a leaked confidential letter to the PM in October 2009 in which he suggested that India could discard "the Kyoto Protocol, delink itself from G77…and take on greenhouse gas emission reduction commitments under a new deal without any counter guarantee of finances and technology" (Sethi, 2009a). As the annexes and "firewall" between developed and developing countries of the KP were pivotal and institutionalised formulations of the concept of CBDR, suggesting that the KP be discarded was in effect a reversal of position on the importance of differentiation to the Indian negotiating position. To further suggest that India sever longstanding ties with the G77 in favour of a stronger alliance with the G20 went against the Indian view of itself as a moral leader of developing countries. The suggestion viewed as the most egregious was that

India take on GHG reduction without requiring financial or technical support – this was diametrically opposed to India's annually repeated assertions (as recently as at the Bali COP) of the need to make developing country actions contingent on developed country support, in line with the concept of CBDR and RC and Article 4.7 of the Convention. Ramesh was slated for these suggestions by both members of the bureaucracy and outspoken members of civil society (Indo-Asian News Service, 2009; Jayaraman, 2009). In response to the public condemnation Ramesh defended his leaked letter by saying he had been quoted out of context, but his last suggestion reappeared in more subtle form in the Lok Sabha debate in December 2009.

Below in Figure 33 is a brief timeline leading up to COP15 in Copenhagen in December 2009. It highlights critical statements and events, the reactions to which demonstrate the contestation between world views or ideas that will be discussed in more depth below.

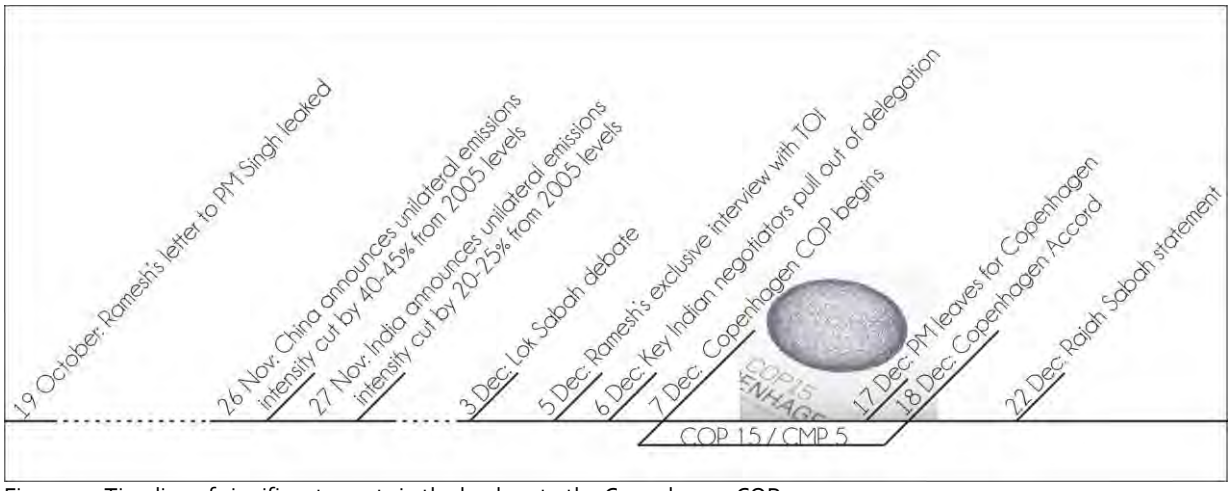


Figure 33: Timeline of significant events in the lead-up to the Copenhagen COP

In the lead-up to Copenhagen, Ramesh had been variously publicly cited as stating that India would go to the talks as a "deal maker, not a deal breaker" and be "proactive", "flexible" and "realistic" about reaching a deal (Dhar, 2009; Ghosh, 2009b; Hindustan Times, 2009). Much was made of these kinds of statements in the media and in the Lok Sabha debate on 3rd December 2009: of particular concern was whether being "flexible" meant rescinding long-held ideas about the "polluter pays" principle, differentiation as the basis of equity and international scrutiny of domestically funded mitigation actions (Ghosh, 2009b; Hindustan Times, 2009; Lok Sabha, 2009; Sethi, 2009a). While these "new" ideas garnered much negative attention for Ramesh within India, at the late 2009 MEF meeting (as seen in Figure 31 above) they were considered signs of positive progress by the UK and USA (De Sarkar, 2009) – international utterances that bolstered the domestically prevalent idea that developed countries would use India as an excuse for lack of action.

Further progress in this regard followed on from China's announcement of a voluntary emissions-intensity reduction target in November 2009. The following day, India announced its own unilateral emissions-intensity reduction target of 20%-25% on 2005 levels by 2020. During the Lok Sabha debate a few days later, Ramesh noted the findings of the mid-term appraisal of the eleventh Five Year Plan that India's emission intensity had declined by 17.06% between 1990 and 2005. Based on this finding the Planning Commission had also concluded that it would be possible to achieve a 20%-25% reduction in emission intensity between 2005 and 2020 (Lok Sabha, 2009: 243). The necessity of this reduction was a consequence of India's long-standing energy security concerns, but it also had the benefit of being a good emissions mitigation option. This was an example of the co-benefits approach promoted by both SD realists and SD internationalists (see Table 3 above), in sharp contrast to the prevailing "growth-first realist" position of much of the government and the bureaucracy.

Days before the Copenhagen COP, Ramesh outlined India's so-called "red-lines" at the negotiations during a speech to the Lok Sabha; these were the non-negotiables of the Indian negotiation strategy, or what Ramesh termed the "contours of the flexibility" (Lok Sabha, 2009: 238-9). The first two "non-negotiables" were that India would not agree to any legally binding emission-reduction targets or to stipulating a year in which emissions would peak. The third was that only mitigation actions that were supported by international finance or technology would be subject to MRV; domestically funded actions would be beyond international scrutiny (Lok Sabha, 2009). In addition Ramesh formally reiterated that India would reduce emissions intensity between 20% and 25% between 2005 and 2020. During the Lok Sabha debate, Ramesh also highlighted the interplay of India's improving material circumstances and the idea of India as an emergent power when he said, "We are a developing country. We have global aspirations. We want to be recognised as a world power. But having global aspirations and assuming global responsibilities are two sides of the same coin" (Lok Sabha, 2009: 238). Ramesh exhorted parliament that India must show leadership to its own people for its own sake – a statement which could be interpreted as being in keeping with SD realists' view that the global agenda and domestic action should be de-linked or with the SD Internationalists' view that India should engage proactively with the international negotiations (see Table 3 above).

The contestation of world views publicly came to a head on the eve of the Copenhagen COP, when two longstanding negotiators delayed their departure to Copenhagen citing concerns over Ramesh's public statements. Days after the Lok Sabha debate (see Figure 33 above), Ramesh had given an exclusive interview about the parliamentary debate and India's negotiating position to the

Times of India, one of India's most influential English-language daily newspapers. He claimed that he now had parliamentary support for some flexibility in the interpretation of the Indian strategy related to international scrutiny of unsupported domestic mitigation actions (Sethi, 2009b). He also reiterated his Lok Sabha argument that India's position at the negotiations was a weak one because it had relied for too long on the argument "Our per capita is very low; your per capita is very high; therefore we would not do anything", which was an "accident of history" (Lok Sabha, 2009: 234) linked to India's inability to control its population. This argument, in his words, had become "a sleeper of an argument" (Sethi, 2009b) because India could no longer "hide" behind the vast population that produced its low per capita emissions. Ramesh's statement to this effect had been highly contentious during the Lok Sabha debate and was read as an attack on the per capita convergence principle.

Ramesh's statements of the Indian position were construed by longstanding delegation member Chandrasekhar Dasgupta as unilateral concessions (the emissions-intensity reduction statement) and a "water[ing] down" of the PM's positions on "per capita approach, position on technology transfer and IPR [Intellectual Property Rights], and our rejection of international verification or review of our domestically funded mitigation actions" (Times News Network, 2009b). Another senior delegate, Prodipto Ghosh, also expressed concerns with the apparent change of substantive negotiating positions and strategy and (temporarily) withdrew from the Indian delegation on the eve of the COP (Times News Network, 2009b). It was only after last-minute reassurances from Ramesh – not made public – that these negotiators left for Copenhagen (Times News Network, 2009b).

This period shows the influence of the international institutional arrangements – in the form of looming COPs – on India's ideas, both nationally and internationally espoused. As discussed above, it was in the lead up to COP15 in particular that the domestic contestation between world views or ideas became prominent; it could be said that the looming COP catalysed debated and created some space for contending world views to come to the fore.

Even as India's idea of itself as an emerging international power is fed by its improving material circumstances – high GDP growth rates and increased international economic integrations – it remains a developing country with hobbling development deficits in terms of lack of housing, sanitation, access to energy and clean water, etc. So while some Indian politicians have acknowledged that global aspirations come with global responsibilities, the political elite have been largely ineffectual in their domestic responsibilities of addressing the internal distributional inequalities.

6.1.2 The science

2007 was a seminal year for climate politics, not only internationally but within India too. As shown in Figure 31 above, the IPCC released its Fourth Assessment Report (AR4), which was much less equivocal about the instrumental role played by humans in the changes being wrought on the climate: "Most of the observed increase in global average temperatures since the mid-20th century is very likely (meaning a greater than 90% probability) due to the observed increase in anthropogenic GHG concentrations" (IPCC, 2007b: 39, 2.4). This was also the year that the IPCC and former US Vice-President Al Gore shared the Nobel Peace Prize for their "efforts to build up and disseminate greater knowledge about man-made climate change and to lay the foundations for the measures that are needed to counteract such change" (Nobel Media AB, 2007).

The IPCC's Fourth Assessment Report (AR4) was published between February and November 2007 in three volumes and a synthesis report. It provided an update on the science since the publication of the Third AR in 2001 and more analysis of the state of the climate, and projected impacts of changes. In AR4 the working groups remained the same as those in the Third Assessment Report (TAR), but whereas WGIII in the TAR had assigned no confidence levels, this time the WGIII authors assessed uncertainty qualitatively as a sense of the amount and quality of evidence, for example as "high agreement, medium evidence" (IPCC, 2007b: 27). As in TAR, WG II assessed uncertainty quantitatively as a judgement of the underlying data, models or analysis in terms of confidence, but in addition it also attributed a certainty level to specific outcomes, for example extremely likely etc., which had up till then only been used by WGI authors (IPCC, 2007b: 27).

The headline finding was that "warming of the climate system is unequivocal, as is now evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice, and rising global average sea level" (IPCC, 2007b: 30, 1.1). Observed changes include rising global mean temperatures, increasingly severe weather events like storms and droughts, melting of snow and ice coverage, and rising sea levels. Between 1995 and 2006 eleven of the twelve warmest years on record since 1850 were recorded; this is in keeping with an increase in the linear trend from 0.6°C (between 1901 & 2000) (as per AR3) to 0.74°C (between 1906 & 2005) (IPCC, 2007b: 30, 1.1). Thus the synthesis concludes that there is "very high confidence" that the net effect of human activities in post-industrial (since 1750) times has been one of warming (IPCC, 2007a:37 point 2.2) and that it is "extremely unlikely" that the past 50 years of global warming can be "explained without external forcing and very likely that it is not due to known natural causes alone" (IPCC, 2007b: 39, 2.4). The report stated that "anthropogenic forcing", i.e. human-induced climate change, contributed to: sea-level rise (very likely); increase in areas stricken with drought or more

heavy precipitation (more likely than not); increases in extreme daily temperatures (likely) and increased heat waves (more likely than not) and changes in wind patterns (likely) (IPCC, 2007b: 40-41, 2.4).

The AR4 scenarios projected a continued increase in global emissions and a 0.2°C-per-decade increase in temperature. It also predicted that a continued rise in emissions would cause continued warming and could possibly induce changes in the 21st century that were very likely to be worse than changes noted to date in the 20th century (IPCC, 2007b: 45, 3.2). In addition, warming would create a feedback loop wherein the ability of the land and ocean to absorb carbon dioxide would be reduced, thereby increasing emissions in the atmosphere. Due to these types of feedback loops and the long-lived natured of atmospheric GHGs, warming and sea-level rise would continue for centuries, even if the concentrations of GHGs were stabilised immediately (IPCC, 2007b: 46, 3.2.3). However, mitigation could lead to a variety of these effects being reduced, deferred or avoided, provided emissions reductions were not delayed, as delay would "significantly constrain the opportunities to achieve lower stabilisation levels and increase the risk of more severe climate change impacts" (IPCC, 2007b: 73, 6.3). A major contribution to stabilisation would be the adoption of sustainable development pathways, which would have the benefit of reducing vulnerability to climate change impacts (IPCC, 2007b: 60, 5.8). That said, the report also asserts that "[u]nmitigated climate change would, in the long term, be likely to exceed the capacity of natural, managed and human systems to adapt" (IPCC, 2007b: 73, 6.3).

For India, Working Group II noted an observed "0.68°C increase per century, increasing trends in annual mean temperature, warming more pronounced during post monsoon and winter", while changes in precipitation had, in recent decades, taken the form of increased extreme rains in the north-west during the summer monsoon, but a lower number of rainy days along east coast (IPCC, 2007c: 475, Table 10.2). The projected impacts for India covered everything from crop yield, water availability to the spread of diseases. Rising temperatures of 0.5 to 1.5°C in winter would potentially decrease wheat and maize crop yields by between 2and 5% (IPCC, 2007c: 480) at the same time as increased urbanisation and population would result in increased demand for food and pressures on availability of cropland (IPCC, 2007c: 482). Rising sea levels as a result of climate change would increase the salinity of groundwater supplies, threatening crops and people (IPCC, 2007c: 483) – especially along coastal areas – well before inundating low-lying areas and highly populated deltas. A one-metre sea-level rise would potentially inundate 5,763 km^2 of India (IPCC, 2007c: 484), affecting millions of people living along the Indian coastline and potentially causing 0.37% GNP loss, as projected by the Stern Review (Rajamani, 2007).

Average mean-temperature increases of even a small magnitude could have a substantial effect on the Indian monsoon and therefore affect agricultural yield with negative effects for livlihoods based on subsistence farming (Challinor et al., 2005; Turner & Annamalai, 2012). When combined with the projected decrease of winter precipitation this would result in a state of water stress by 2025, with water availability estimated to fall below 1000m3 per capita annually. Even as water was projected to become scarcer, precipitation patterns were likely to change to include more intense rain spread over fewer days, thus increasing the risk of flooding and reducing the chances of groundwater being replenished (IPCC, 2007b: 484). In addition, there was no forecast reduction in the risks of climate change attributable malnutrition and diarrhoea, while the risks of contracting dengue fever and dying of heat stress would be very high (IPCC, 2007b: 487). The Stern Review projected that these impacts would potentially weaken India's economic growth and set progress in alleviating poverty back substantially, exacerbating extant poverty and underdevelopment (Challinor et al., 2005).

The IPCC at the time of the publication of AR4 was chaired by Rajendra K. Pachauri – an Indian academic and climate-thinker who trained in India and the USA. His national and international credentials enabled him to "[w]hip up – within domestic limits – enough emotions about it [AR4] and that is where also mass media, large newspapers and others, picked it up…mass media groups in English which cater to the urban Indians mainly" (Sethi, 2014). This coverage seemed to gain significant momentum, "so they picked it up and other mainstream papers picked it up. Over time, they also realised not only the environmental implications of the subject, but also…economic implications. So they ratcheted up the coverage a lot and consequently led to, I think, a breathing of air into the idea of climate change; at least in the middle classes" (Sethi, 2014). Although this kind of media coverage no doubt focused awareness within government too, it is important to keep in mind that the IPCC has little prominence in India beyond a relatively small English-speaking elite. While it is not possible to trace a causal link to government actions like the creation of the PM's Council on Climate Change (discussed below), the increased media attention would certainly have interacted with and reinforced government-level decisions and institution building, especially where these were seen as resulting from a reaction to international climate-regime-related events. An analysis of four major English dailies (*Times of India, The Hindu, Hindustan Times* and *Indian Express*) underscores the importance of COPs and the huge wave of publicity surrounding COP15 in particular: there were 691 stories in December 2009 (the month of COP15), compared with, for instance, 185 in December 2007 (around Bali's COP13) or 52 stories in December 2005 (COP 11) (Boykoff et al., 2016). Another regression analysis of India media coverage of climate change in the *Times of India* and *The Hindu* found that coverage was not increased in reaction to long-term temperature changes or even specific extreme weather events. Feedback and events at the level of

institutionalised politics, the actions of international environmental non-governmental organisations like Greenpeace and WWF, and the occurrence of events like the annual UNFCCC COPs, however, did increase coverage (Schäfer, Ivanova & Schmidt, 2014).

At the time of publication of AR4, the Working Group II report contained a statement that Himalayan glaciers were not only retreating faster than glaciers in other parts of the world, but that they would, given a continuation of current trends, likely all disappear by 2035 (paragraph 10.6.2 in the Working Group II report). The Himalayan glaciers are regionally crucial as seasonal runoff releases meltwater into tributaries of the Indus, Ganges and Brahmaputra rivers supporting the agricultural and economic activities of approximately 500 million people (Kehrwald et al., 2008). During the government review round of the AR4, the Indian government successfully argued against the inclusion of this point in the SPM but could not have the whole paragraph removed from the WGII report (Kutney, 2014). By 2009 this finding had been further questioned by glaciologists around the world and challenged by an Indian Ministry of Environment and Forests (MOEF) commissioned report on the state of the Himalayan glaciers, which posited that they did not show an abnormal rate of retreat (Raina, 2009). Ramesh went on to call the IPCC report "alarmist", which in turn provoked IPCC chair Pachauri to call the MOEF report "voodoo science" (Bagla, 2009). By early 2010, "glacier-gate" had resulted in an apology by the IPCC (Black, 2010) and a review of the IPCC's procedures (InterAcademy Council, 2010).

AR4 also contained the influential "Box 13.7" in the WGIII report (Gupta et al., 2007: 776), displayed in Figure 34 below. This box summarised the emerging scientific consensus that developing countries would need to contribute to emissions reductions in order for CO_2e concentrations to stay at levels, which would provide a 50:50 chance of the earth's temperature rise staying below the important threshold of 2 degrees Celsius. Under the KP, industrialised countries (Annex I) had committed to reduce GHGs 5% below 1990 levels in the (first) commitment period running between 2008–2012 (United Nations, 1998: article 3), but the developing countries were not committed to emissions reductions. The science in AR4, however, was highlighting that the KP reduction scenario of Annex I countries reducing between 0% and 25% from 1990 levels by 2020 combined with business as usual trajectory from NAI countries would put the globe on the path to concentrations of 650ppm CO_2e and potentially dangerous temperature increases. For a "safer" level of 450ppm CO_2e, Annex I countries would need to reduce emissions from 1990 levels by between 25% and 40% by 2020 *and* NAI countries would need to undertake "substantial deviation from baseline" (Gupta et al., 2007).

Box 13.7 The range of the difference between emissions in 1990 and emission allowances in 2020/2050 for various GHG concentration levels for Annex I and non-Annex I countries as a group[a]

Scenario category	Region	2020	2050
A-450 ppm CO_2-eq[b]	Annex I	–25% to –40%	–80% to –95%
	Non-Annex I	Substantial deviation from baseline in Latin America, Middle East, East Asia and Centrally-Planned Asia	Substantial deviation from baseline in all regions
B-550 ppm CO_2-eq	Annex I	-10% to -30%	-40% to -90%
	Non-Annex I	Deviation from baseline in Latin America and Middle East, East Asia	Deviation from baseline in most regions, especially in Latin America and Middle East
C-650 ppm CO_2-eq	Annex I	0% to -25%	-30% to -80%
	Non-Annex I	Baseline	Deviation from baseline in Latin America and Middle East, East Asia

Figure 34: IPCC AR4 WGIII, Box 13.7
Source: Gupta et al. (2007: 776)

An article published in 2008 by the authors of Box 13.7 provided some elaboration of the terms "substantial deviation from baseline". Thus they calculated that in order to maintain a 450ppm CO_2e level, Non-Annex I countries (as a group) would have to reduce their emissions by 15% to 30% from the baseline. The less ambitious stabilisation goal of 550ppm CO_2e would require a 0% to 20% reduction and the 650ppm CO_2e goal would allow for a range from a 10% increase to a 10% decrease from baseline (Den Elzen & Höhne, 2008). These reductions would need to be *in addition* to the reductions made by Annex I countries.

6.1.3 India as an emergent power

Historically India had inclined more towards the USSR during the Cold War, when it was not possible or prudent to maintain its stance of non-alignment. As discussed previously in phase two, however, around the fin de siècle the relationship between the USA and India began to warm, so much so that by 2005 it had yielded the conclusion of two important bilateral agreements. US President, George W. Bush, and Indian President, Manmohan Singh, signed a bilateral 10-year defence framework agreement in June 2005 to expand bilateral cooperation on security-related issues. This was followed up with a joint statement by the presidents to the effect that the two countries would increase cooperation on a range of issues, including energy, environment, development, technology and "full civilian nuclear energy cooperation" (Kronstadt, 2005b). Domestically these agreements and the realignment they entailed were framed as necessary for addressing energy-security concerns and attendant economic growth, rather than as the more politically difficult strategic realignment with the USA that it actually represented (Malone, 2011).

This international realignment was also sought by US presidents regardless of party political affiliation, as reflected in the similar bridge-building/partnership rhetoric deployed by Republican President George W. Bush in 2006 and Democratic President Barak Obama in 2010:

> *"India in the 21st century is a natural partner of the United States because we are brothers in the cause of human liberty…America and India are global leaders and we are good friends, and when we work together, there is no limit to what we can achieve" (Bush, 2006).*
>
> *"[I]t is my firm belief that the relationship between the United States and India – bound by our shared interests and our shared values – will be one of the defining partnerships of the 21st century. This is the partnership I've come here to build. This is the vision that our nations can realize together"* (Obama, 2010).

By 2008 the Indo-US nuclear cooperation agreements of 2005 (see Figure 31) had been internationally accepted, thereby ending the "partial international purdah" into which India had been relegated by its 1974 and 1998 nuclear tests (Malone, 2011). This smoothed the path to international recognition of India as an emerging power – as did its growing relations with the USA.The extent to which this thawing of US-India relations might have influenced India's positions at the UNFCCC negotiations was (and remains) contentious amongst Indian civil society commentators (Jayaraman, 2009; Raghunandan, 2014) but is difficult to prove conclusively.

As noted in chapter two (the theoretical framework), the definitional overlap of ideas and institutions can make it challenging to distinguish between them. Here India's interactions with the G8, G20 and BASIC are presented as expressions of the idea of India as an emergent power. Indeed India had long placed emphasis on multilateralism to offset its relative geopolitical weakness and strengthen its objective of "relative strategic autonomy" (Saran, 2013a), but the latter half of the first decade of the new century brought with it growing international stature and new opportunities to exercise its influence within multilateral groupings. These links are represented graphically in Figure 35 on page 124 below.

The G8 – a discussion forum for leading developed economies – had long been seen as an exclusive club from which developing countries were excluded, but by 2005, large developing countries were invited to attend the annual G8 summit in recognition of their emerging status on the international stage. Like Brazil, China, Mexico, and South Africa, India was invited as a "dialogue partner" creating what is referred to as the "G8 + 5". As dialogue partners, the emerging economies were not included in all discussions and retained a junior status in relation to the original G8 members (Malone, 2011). The G8+5 participated in the "Gleneagles Dialogue on Climate Change, Clean Energy and Sustainable Development" held on July 6–8, 2005 during the G8 Gleneagles Summit in Scotland. The Dialogue was designed to have annual meetings at regular G8 summits until 2008 in

order to provide a forum to supplement the UNFCCC (Peichert & Meyer-Ohlendorf, 2008). Inclusion in these dialogue meetings was not without disadvantages, however. On the one hand, it was recognition of India's growing international importance, but on the other hand it signalled that developed countries were also beginning to look to India (and other emerging economies) to be part of the broader solution. As one commentator phrased it, the developed countries were inviting these developing countries to also address the "common problems which we, the big boys, have to deal with… you are part of us now … we're all [in it] together … the whole world is looking up to us" (Raghunandan, 2014).

In recognition of this increased international engagement the India delegation to Gleneagles took the proactive step of submitting a Country Paper to the summit, in which India presented

> *"a proposal for a specific, voluntary partnership, within the scope of the present climate change regime, to enable participating countries [to] decarbonize their energy futures, while preserving their respective policy spaces to address their energy needs in light of their individual circumstances"* (Ministry of External Affairs, 2005b)

The proposal called for a new paradigm of decarbonising growth, requiring access to clean technologies, the provision of financial support for accessing critical technologies, the relaxation of Intellectual Property Rights (IPR) and the creation of a network of research and development institutions to promote development of new technologies (Ministry of External Affairs, 2005b). The proposal indicated that India still perceived of its domestic lack of material capabilities in these areas as hampering its engagement on the international level, and was taking the opportunity to underscore both its needs and the different capacities of countries to respond.

The 33rd G8 meeting took place in Heiligendamm, Germany, in the lead-up to COP13 in Bali in 2007. Unlike the preceding St Petersburg G8 meeting, which had merely restated the status quo regarding the UNFCCC process, the 33rd meeting emphasised a commitment to creating forward momentum by considering strong reduction targets, while also calling for constructive participation of all countries at COP13 (Peichert & Meyer-Ohlendorf, 2008). At Heiligendamm the incumbent Indian Prime Minister, Manmohan Singh, stated not only that had India recognised its responsibility as a developing country but also that the country was "determined that [its] per capita GHG emissions [were] not going to exceed those of developed countries even while pursuing policies of development and economic growth" (Singh, 2007) (as seen in Figure 31 above). This statement indicated a level of confidence in both India's policies for continued economic growth and the legitimacy of its negotiating stance (Sinha, 2011). This effectively put in place a carbon cap on India's emissions but still left room for a potential twelve-fold increase in per capita emissions in the second commitment period of the UNFCCC (Bowerman et al., 2008), because it was contingent

upon the levels of emission reduction by developed countries without taking into account historical emissions (Dasgupta, 2014).

The G8 summit in L'Aquila, in July 2009, took place in the midst of the ongoing global economic crisis and in the lead-up to COP15 in Copenhagen. The focus was on climate change, development and trade and for the first time discussions took place in a series of overlapping configurations of up to 40 countries (Gnath & Schmucker, 2011). On the second day of the summit, the newly-created "Major Economies Forum (MEF) on Energy and Climate Change"[26] issued a declaration stating that climate change should be limited to a two degree temperature increase above pre-industrial levels and that it would work toward identifying a goal for global emissions reduction by 2050 (The Major Economies Forum on Energy and Climate, 2009). The G8 leaders meanwhile committed their developed countries to reducing emissions by 80% or more by 2050 as part of a global goal of 50% reduction by 2050 (G8, 2009). No mid-term emission reduction targets were articulated, much to the disappointment of developing countries watching for signs of action, nor were explicit steps taken to provide finance for adaptation and mitigation schemes (Gnath & Schmucker, 2010). Evidently the involvement of developing countries was quite insufficient to promote their agenda.

The G20 was first established in 1999 as a forum for finance ministers, but the financial crisis of 2008/9 transmuted it into a forum of heads of states. The first leaders' G20 meeting was convened in response to the deepening international economic and financial crisis and was held in November 2008 in Washington. This recognition of the importance of G20 members set the tone for future discussions, thereby beginning the process of institutionalising the nascent changes in international governance (Gnath & Schmucker, 2010). Whereas "the G7[27] was narrowly homogeneous[,] the G20 is widely heterogeneous", resulting in a complex set of overlapping and contradicting expectations related to a common regulatory approach and rendering the achievement of a common set of rules somewhat elusive (Persaud, 2010). By 2008 the G20 meeting had begun to eclipse the importance of the G8 as an assemblage of significant countries. As a major emerging economy and one of the most populous countries within that grouping, India now played an equal, if not more important, role than some smaller G8 members in international affairs (Malone, 2011), marking an important step in India's evolution toward becoming a "rule-maker" instead of being a "rule-taker" in multilateral fora (Baru, 2013). This was very much in line with the idea India's elite had of India as a preeminent state – a state of huge population and strong economic growth and significance that

[26] The Major Economies Forum on Energy and Climate was launched by US President Barak Obama in March 2009. The 17 major economies participating in the MEF are: Australia, Brazil, Canada, China, the European Union, France, Germany, India, Indonesia, Italy, Japan, Korea, Mexico, Russia, South Africa, the UK, and the USA (Obama, 2009).
[27] The G7 predated the G8 and did not inlcude Russia

should be guaranteed a place at the "global high table of influence" (Malone, 2011). Despite the apparent international recognition of India's increasing importance, however, APEC maintained its moratorium on admitting new members and so left India out in the cold (Carmichael, 2014).

The latter part of this phase also witnessed the formation of the BASIC group of large developing countries in 2009. India played a pivotal role in the formation of the BASIC group - an ad-hoc, informal[28] assemblage of Brazil, South Africa, India and China. India first suggested joint action to China before COP15, and then brought Brazil and South Africa on board through their ties in the existing IBSA Dialogue Forum which had already established a "Working Group on Environment and Climate Change" (Masters, 2012). Collaboration among these countries already took place in several other fora in addition to IBSA – notably the G20 group active in the Doha Round of WTO negotiations and the BRICs[29] meetings of heads of states and other government ministries (Hallding et al., 2013; Kahler, 2013). The formation of the BASIC group stemmed from a recognition of the difference in priorities of these four emerging economies to those of the broader G77+China grouping of which they all remained members. Grouped together but singled out from other developing countries by the driving force of increased economic and geopolitical prominence, they acquiesced to the leitmotif of the times and agreed to work together in the climate change negotiations. The environmental ministers of each country have met quarterly since then to discuss their positioning within the UNFCCC, issuing "Joint Statements" after each meeting.

India sought to work with other large emerging economies in order to bolster its resistance to calls from developed countries that it lower its growing GHG emissions (Betz, 2012). Given their common history in the G77+China (see Figure 35 below) and the similarity of the pressures being applied, it should perhaps have been less of a surprise to others that India joined with Brazil, South Africa and China to create the BASIC group (Hallding et al., 2013) in order to form a counterpoint to western influence (Malone, 2011). The formation of BASIC demonstrates an India sufficiently confident in its new materially enhanced status to be proactively taking the lead once again (as it had under the NAM) in the creation of southern alliances. Despite its growing economic stature, however, India still recognised that its best chance of influencing the outcome of the negotiations emanated from being in an alliance; the change in its material circumstances meant that India now sought geopolitical/geo-economic alliances instead of the ethical and moral alliances of the past (Mukherjee & Malone, 2011; Smith, 2012).

[28] Informal in the sense that it is not recognised as a formal negotiating bloc by the UN

[29] South Africa - the capital "S" - was only invited to join in 2010, attending its first meeting in 2011 (South African Government, 2015)

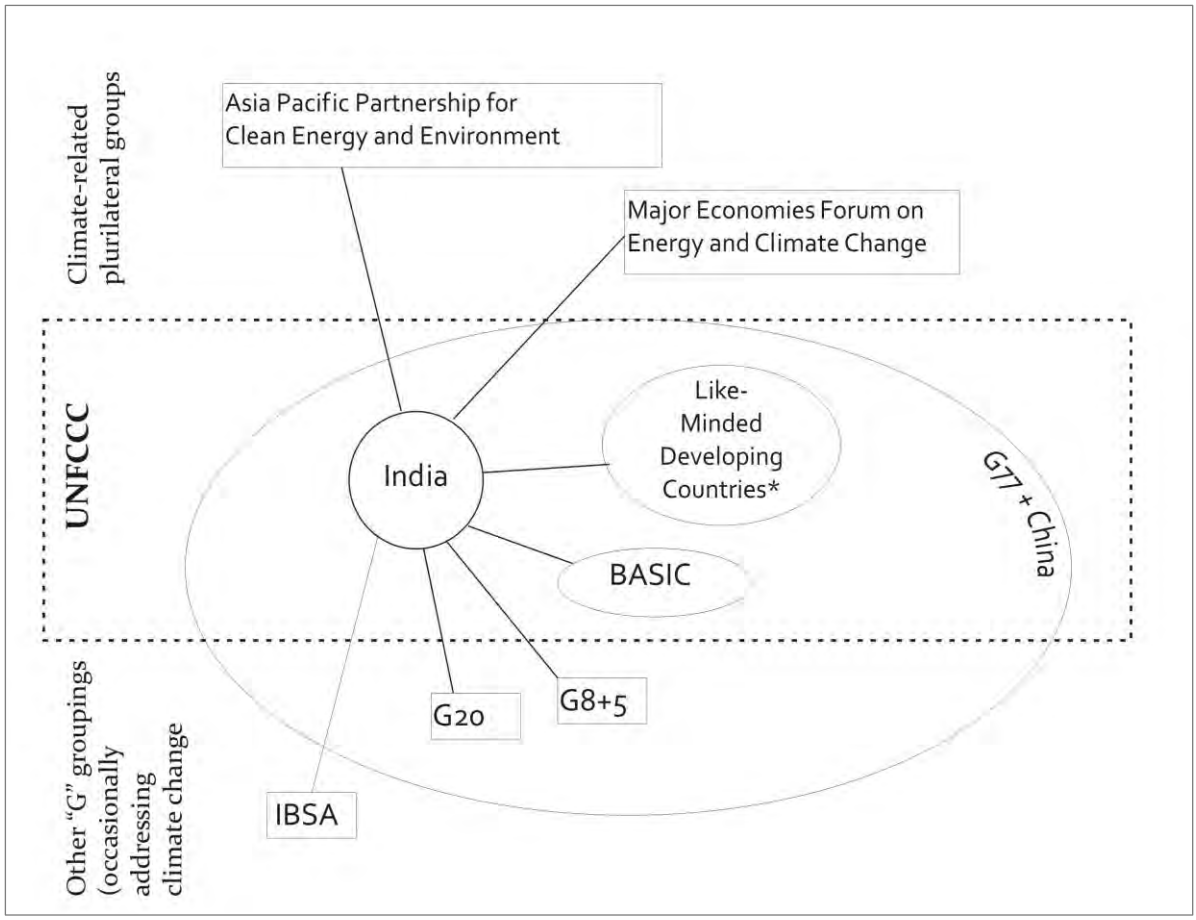


Figure 35: India's multilateral links related to energy and climate change
* The Like-Minded Developing Countries group emerged in 2012, but is shown here for the sake of comprehensiveness

The COP15 in Copenhagen was widely perceived as a failure as it did not result in the "agreed outcome" it was mandated to achieve by the Bali Roadmap. No less than US President Barak Obama stated that "people are justified in being disappointed about the outcome in Copenhagen" (Agence France-Presse, 2009), before claiming that the weak Copenhagen Accord was better than losing ground and "backsliding". Copenhagen marked a turning point in the regime in as much as the BASIC countries were part of the ostensible "solution" to the stalemate. The eleventh-hour agreement between the BASIC countries and the USA as encapsulated in the Copenhagen Accord underscored that "India was now an indispensable negotiating partner on key global challenges such as climate change" (Malone, 2011) instead of "just" another developing country. The COP at Copenhagen became notable not so much for providing a way forward toward the post-2012 climate regime but for the rise of the BASIC group and the influence exerted by the "global South" in the negotiations (Masters, 2012).

6.2 Material capabilities

6.2.1 Global recession and promises of Fast-start financing

The most salient event related to material capabilities in this phase was indubitably the economic and financial crisis of 2008 that led to a fully-fledged global recession. By the 14th COP in Poznan, Poland, the financial crisis that had its origins in the US housing market had spread to other countries, undermining business and consumer confidence and sparking fears of worldwide recession that would come to fruition the following year. Indeed, by the final quarter of 2008, growth of global production had decreased to 1.7% – just under half the growth of 3.5% in 2007, and the first such decline in world production since the 1930s. Given the interconnected nature of demand, supply and trade, WTO analysts forecasted a 9% decline in world trade volumes for 2009 – a contraction the size of which had not been seen since the Second World War (World Trade Organisation, 2009) – which actually became a 12% contraction (World Trade Organisation, 2010)

The graph in Figure 36 below shows the extent of the global recession between 2008 and 2009 in terms of the dramatic reduction in global GDP growth. The graph also shows that the global North, or "advanced economies" in IMF parlance, slowed down from lower GDP growth into greater recession than did the "emerging and developing economies", which bounced back faster and to greater levels of growth – this divergence became a feature of the so-called "two-speed recovery" (International Monetary Fund, 2011).

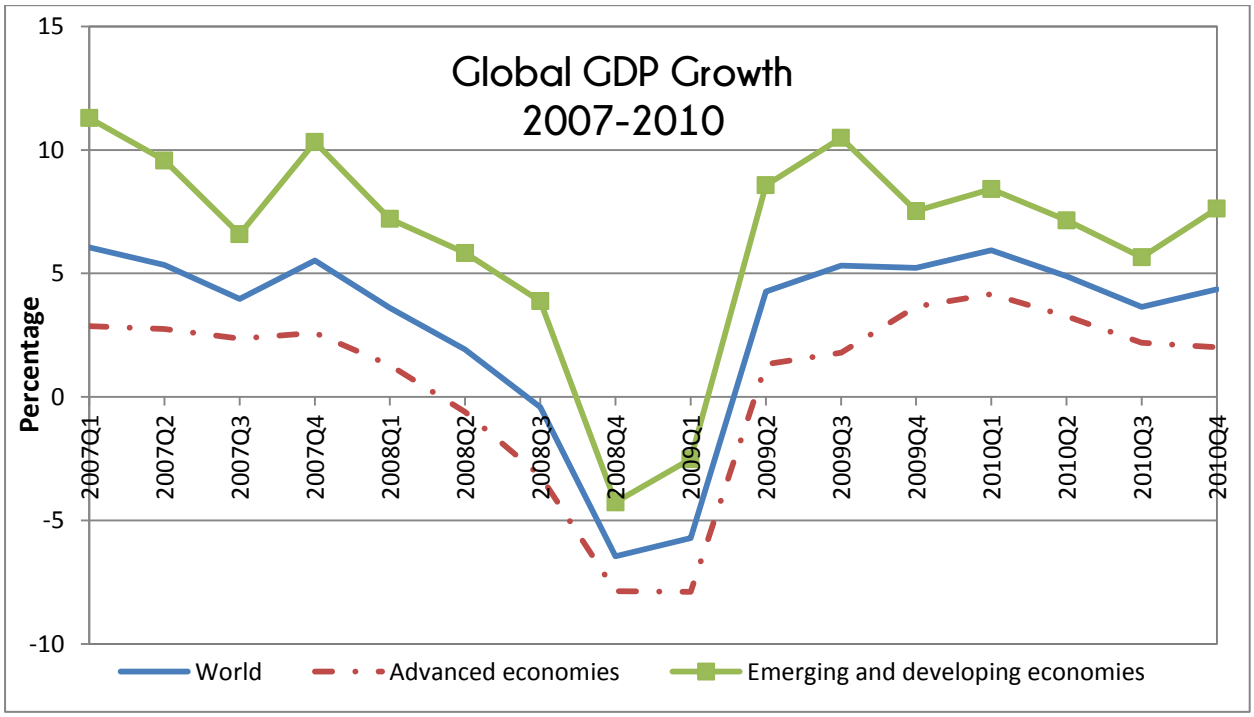


Figure 36: Global GDP growth (or lack thereof) between 2007 and 2010
Source: International Monetary Fund (2011)

In the view of senior Indian diplomat and climate envoy Shyam Saran, the effect of the economic and financial crisis on the global North "transformed the negotiations on climate change into fully fledged economic negotiations focused on trade and investment related issues, economic competitiveness, intellectual property and energy access" (Saran, 2013b). This was particularly problematic given that many of the developing countries – dealing with their own economic problems and frequent capacity constraints – were ill-equipped and unprepared for this change. Albeit subtle, this episode demonstrates the interaction of the prevailing state of material forces and the form of institutions.

The crisis and the North's swift and decisive reaction to it also raised the ire and evoked the scepticism of the Indians. India voiced the concern of many developing countries that the economic crisis would eclipse the climate talks on the North's political agenda. In addition Saran asked pointedly of the North, "So you [are] able to mobilise hundreds of billions of dollars to deal with an economic crisis but not able to mobilise part of that to meet a planetary crisis?" (Ramesh, 2008). Combined with the poor response of the developed countries to the commitments under the UNFCCC to transfer technology and financial resources (Ramesh, 2008), this served only to reinforce the "sustainable development realist" world view that the developed countries were not honest in their approach to negotiations, and that the negotiations would not render an equitable regime as an outcome. This is a clear example of international material capabilities (or a purported lack thereof) having an effect on ideas at national level.

The level of available financing did nothing to assuage these concerns. In the fourth replenishment period[30] (2006-2010) the GEF Trust Fund received donations of US$3.13 billion to cover all six operational areas (Streck & Chagas, 2011). Of that amount just over US$ 1 billion – as seen in Figure 37 below – was pledged specifically for the climate change focal area by 31 countries (Nakhooda, Watson & Schalatek, 2014). While a seemingly large amount, it paled in comparison to the estimates of required finance that had been provided by a variety of studies published in this phase. For instance, the UNDP's 2007/8 Human Development Report "Fighting Climate Change: Human Solidarity in a Divided World" suggested that developing countries would require an additional US$ 85 billion annually by 2015 in order to adapt to the effects of climate change (UNDP, 2007). The UK's Lord Nicholas Stern argued that in the context of climate change the potential extra cost of development would be at least US$ 80 billion per annum (Stern, 2008).

[30] The GEF is funded through voluntary donations in four year cycles known as 'replenishments'; the UNFCCC financial mechanism review cycles were aligned with these cycles.

Tasked to assess climate finance flows by COP13, the UNFCCC Secretariat's own report on financial flows estimated that the costs of responding would be 0.3& – 0.5% of global GDP and 1.1% – 1.7% of global investment flows (UNFCCC, 2007b, para. 5). In stark contrast, the Secretariat's updated technical paper in 2008 showed estimated funds for the Adaptation Fund (as of 31 October 2008) to be US$ 91.3 million, the SCCF (Adaptation) US$ 90.3 million and LDCF US$ 172 million (as at 7 November 2008) – Figure 37 below captures a full estimate of available funding. Summing up the climate-finance crisis, the UNFCCC Secretariat wrote: "If the funding available under the financial mechanism of the Convention remains at its current level and continues to rely mainly on voluntary contributions, it will not be sufficient to address the future financial flows estimated to be needed for mitigation and adaptation" (UNFCCC, 2007b, para. 11).

Table 28. Funding available under the Convention and its Kyoto Protocol
(millions of United States dollars)

Sources	Amount	Timeframe	Notes
Mitigation			
Funds			
Pilot phase	280.6	1991–1993	
GEF 1	507.0	1994–1998	
GEF 2	667.2	1998–2002	
GEF 3	881.8	2002–2006	
GEF 4	1 030.0	2006–2010	
Already committed under GEF 4	352.0		
SCCF (Technology)	16.2	As at 7 November 2008	Total, includes pledges
Special programmes under GEF 4: Sustainable forest management/ LULUCF	154		
Investments			
CDM	8 400.0	During 2007	Market value of the expected emission reductions by CDM projects during 2007
JI	400.0	During 2007	Market value of the expected emission reductions by JI projects during 2007
Adaptation			
Funds			
SPA	50.0	GEF 3–GEF 4	Resources have been allocated
SCCF (Adaptation)	90.3	As at 7 November 2008	Total, includes pledges
LDCF	172.0	As at 7 November 2008	Total, includes pledges
Adaptation Fund	400 to 1 500.0	2008–2012	Estimated total
	91.3	As at 31 October 2008	Estimated current funding

Figure 37: Funding available under the Convention and the Kyoto Protocol
Source: UNFCCC (2008b: 91)

As the operating entity of the UNFCCC's financial mechanism, the GEF had been subject to criticism for the slow disbursement of funds limited in scale and for being procedurally inefficient (Streck & Chagas, 2011). This had been compounded by the unwieldy governance relationship between the GEF Council, which also serves as the operating entity of other MEAs, and the UNFCCC COP, which

frequently failed to provide clear guidance or directives (Gomez-Echeverri & Müller, 2009). These shortcomings and the evolving institutional, economic and political milieu of the 21st century led to calls for negotiations toward the reform of the financial mechanism (Gomez-Echeverri & Müller, 2009; Streck & Chagas, 2011). These calls for reform also reflected the strains in the system in the lead-up to the all-important Copenhagen COP – the increasingly contentious status of CBDR, with its wider implications for the possibilities of developing country actions and financial support from developed countries. Climate finance was (and remains) the sticking point between developed countries' need to leverage the finance they could provide and show a good "investment return" to domestic audiences, on the one hand, and developing countries' need for sovereignty over their expenditure and compensation for damages caused and development opportunities lost, on the other (Ballesteros et al., 2010).

With this as the UNFCCC's funding context, the Copenhagen COP in 2009 – held in the midst of the ongoing global financial and economic crisis and amid high expectations – did not yield the legally binding agreement on further implementation of the Convention.[31] The resulting Copenhagen Accord did, however, produce *political* agreement on several financing elements. Indeed movement on financing appeared to be one of the few highlights of COP15, as the Copenhagen Accord contained reference to both short- and long-term financing. Paragraph 8 of the Accord began with a promise that "[s]called up, new and additional, predictable and adequate funding as well as improved access shall be provided to developing countries". Short-term finance "approaching US$ 30 billion for the period 2010–2012" would be provided and in the long term "developed countries commit[ted] to a goal of mobilizing jointly US$ 100 billion dollars a year by 2020 to address the needs of developing countries" (UNFCCC, 2010: 2/CP.15, para. 8).

Several issues were left loosely defined, presumably in an effort to reach consensus in the short timeframe of the high-level segment. Thus the short-term funding was not a commitment of public funds to a specific operating entity of the financial mechanism but to "provide new and additional resources, including forestry and investments through international institutions" (UNFCCC, 2010: 2/CP.15, para. 8). What constituted "new and additional" to existing Overseas Development Aid (ODA), how that would be measured, and whether private international finance would be included remained unclear and subjects of contention (Schalatek, Bird & Brown, 2010).

Several concerns were raised in relation to the long-term finance. Foremost was the concern that the amount of US$ 100 billion a year by 2020 was at the low end of the spectrum of the estimated

[31] More in-depth discussion of the events and institutional ramifications of the Copenhagen Accord follows under the sub-heading "International institutional arrangements"

costs of addressing climate change. For instance the UNFCCC Secretariat finance report mentioned above estimated that mitigating emissions in 2030 to bring them down to 2007 levels would require "global additional investment and financial flows of US$ 200 – 210 billion" and financial flows for adaptation costs (much more complicated to estimate) would be in the region of "several tens of billion United States dollars" (UNFCCC, 2007b, para. 13 & 25). The 2010 World Development Report estimated that mitigation costs in developing countries alone could cost between "US$140–US$175 billion a year by 2030 with associated financing needs of US$265–US$565 billion", while costs for adaptation could be between US$30–US$100 billion annually (World Bank, 2010: 22) as seen in Figure 38. When the pledged US$ 100 billion per year by 2020 was compared to these estimates, the scale of the shortfall in financing was immense. In addition, the long-term finance figure was not an explicit pledge, but rather more aspirational – developed countries committed only to "a goal of mobilizing jointly" (UNFCCC, 2010: 2/CP.15, para. 8) the funds, not to actually providing them.

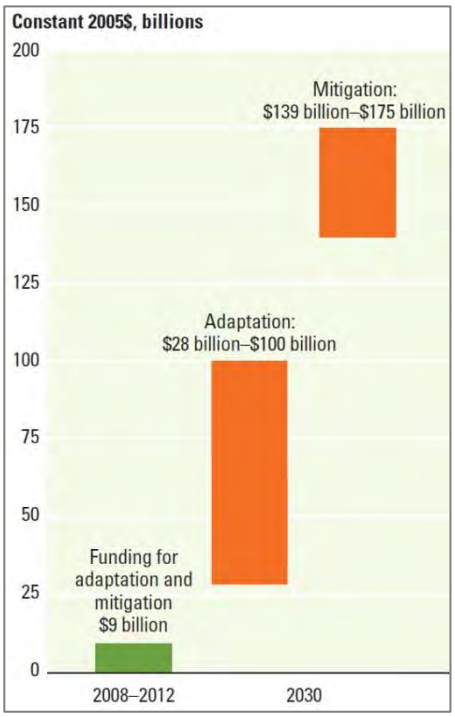


Figure 38: Estimated annual incremental climate costs required for a 2°C trajectory compared with current resources
Source: World Bank (2010: 23)

Another concern raised by the developing countries related to the apparent conditionality of the phrase "in the context of meaningful mitigation actions and transparency on implementation" (UNFCCC, 2010: 2/CP.15, para. 8). It was unclear whether this implied that finance would be contingent upon a particular level of mitigation ambition from developing countries and the monitoring and verification of any mitigation actions (Schalatek, Bird & Brown, 2010) – two points seemingly at odds with the differentiation between countries in terms of binding commitments and the MRV thereof, with its attendant concern of the sovereignty of nations as frequently expressed by India.

6.2.2 India rides out the global recession

India, notwithstanding its large internal markets, had relied on global trade integration to drive its growth rates in previous years, and thus could not remain isolated from world pressures for long. The precipitous dip in 2008 – seen in Figure 39 – was linked to the global economic recession brought on by the collapse of the sub-prime mortgage market in the USA. Despite initial expectations that China and India might act as global "shock absorbers" because their decoupled

economies were internally driven, these countries were not immune to the global meltdown (Ghosh & Chandrasekhar, 2009) and India's trade did indeed decline, although not as precipitously as that of western, developed countries.

Figure 39: India's GDP growth between 1987-2013 with 2005 – 2010 highlighted in white
Source: Own graph based on data from World Development Indicators, World Bank (2015)

Thus after impressive GDP growth – hovering around 9% for several years – the Indian economy experienced a decline in industrial growth, double-digit inflation, depreciation of the rupee and an expanding current-account deficit as the global crisis began to affect India's trade flows, exchange rates and financial markets (Ghosh & Chandrasekhar, 2009; Walia, 2012). In addition, a stream of non-resident Indians from hard-hit Persian Gulf states, many of whom worked as labourers and sent home remittances, had to return to India. In so doing they simultaneously reduced India's foreign income and swelled the numbers of the unemployed (Rahman, 2009; Raman, 2009). In India, all economic sectors were affected, but those most affected by the 2008 global recession were the electricity, gas and water supply, manufacturing and construction sectors (Walia, 2012). By late 2009, however, when much of the world was still struggling to regain its economic footing, several of these sectors were already showing signs of strong recovery. The Mining and Quarrying sector, for instance, had regained its 2006-07 growth levels of 8.7% by 2009-10, despite a precipitous slump in growth to 1.6% in 2008-9 (Walia, 2012). The Indian government had deployed approximately $80 billion in tax cuts and other benefits in the final quarter of 2008 and the first quarter of 2009, providing much-needed stimulus to the economy - the success of this move was borne out by India's relatively early resurgence in comparison to much of the developed world (Srivastava, 2009).

This resurgence notwithstanding, India's scoring on the global Multidimensional Poverty Index (MPI) - 0.283 - was higher than its relatively poorer eneighbours. The MPI replaced the UN's Human Poverty Index from 2010 and is an assessment of individual poverty (instead of the HDI's country aggregates) by "capturing how many people experience overlapping deprivations (incidence) and how many deprivations they face on average (intensity)" (Oxford Poverty & Human Development Initiative, 2015). Table 4 below is an extract of UNDP's MPI data and it shows an intriguing story: India, ostensibly by now economically better off than its contiguous neighbours (except China)[32], has the highest incidence of poverty and the second highest intensity of deprivation. The table also shows mixed fortunes in comparison to its neighbours, with India having lower overall living standards than Pakistan and a worse state of healthcare than poorer Bangladesh (UNDP, 2015c). There was, however, evidence that the government of Manmohan Singh was taking steps to address these inequalitites: for example, in 2005 a US$1.5 billion National Rural Health Mission was launched targeting approximately 300,000 villages and focusing initially on the poorest states in the north and north-east, like Rajasthan, Uttar Pradesh, Bihar and Madhya Pradesh (UNDP, 2005).

Table 4: Multidimensional Poverty Index – figures for India in comparison to contiguous countries
Source: UNDP (2015c)

					Population				Contribution to overall poverty of deprivation in		
		Specifications (2010)			near multidim-ensional poverty	in severe poverty	Population below income poverty line %		Education	Health	Living standards
	Year / Survey	MPI value	Head count	Intensity of deprivation			PPP $1.25 a day	National poverty line			
		Value	%	(%)	(%)	(%)	2002-2012		(%)	(%)	(%)
Bangladesh	2011	0.253	51.2	47.8	18.8	21.0	43.25	31.51	28.4	26.6	44.9
Bhutan	2010	0.119	27.2	43.7	18.0	8.8	1.66	12	40.3	26.3	33.4
China	2009	0.036	8.8	43.4	19.0	1.3	11.8	n/a	21.0	44.4	34.6
India	2005/2006	0.283	53.7	51.1	18.2	27.8	32.68	21.9	22.7	32.5	44.8
Nepal	2011	0.217	44.2	47.4	18.1	18.6	24.82	25.2	27.3	28.2	44.5
Pakistan	2012/2013	0.230	44.2	52.0	14.9	26.5	21.04	22.3	36.2	32.3	31.6

The story of large-scale, multidimensionsal poverty and underdevelopment told by the statistics in Table 4 underscores the legitimacy and necessity of India's ongoing insistence on poverty alleviation as a policy priority. A very clear indication of the lack of redistributional change is encapsulated in World Bank data on the share of income earnings by quintile of the population. At the beginning (2005) and end (2010) of this phase the income earned by the quintiles had hardly changed: in fact the income earned by the bottom 80% of earners had actually all slightly decreased, while that earned by the top 20% had slightly increased (World Bank, 2015). The

[32] Note that no MPI calculations are available for India's neighbours Sri Lanka and Myanmar.

percentage of people with access to improved sanitation had increased from 29.9% in 2005 to 34.2% in 2010 - finally creeping over 1/3 of the population (World Bank, 2015).

The preceding paragraphs have outlined the scale of India's continued development challenge despite the extraordinary growth of the Indian economy. Clearly the benefits of India's growing economy have yet to trickle down to the poorest people and lift them out of of poverty or ameliorate the intensity thereof. The following two graphs – Figure 40 and Figure 41 – show the extent of India's growing predicament. India's rapidly growing economy was driving increased demand for energy and for transport. For example, in the short space of five years, per capita electricity consumption increased nearly 40% as graphed in Figure 40, however, over half of the population (56%) still lacked access to electricity (TERI, 2009). Coal was (and remains) a central part in India's energy story as it was used in the generation of more than 60% of electricity and accounted for over half of the total commercial[33] energy supply (TERI, 2006: 18–19).

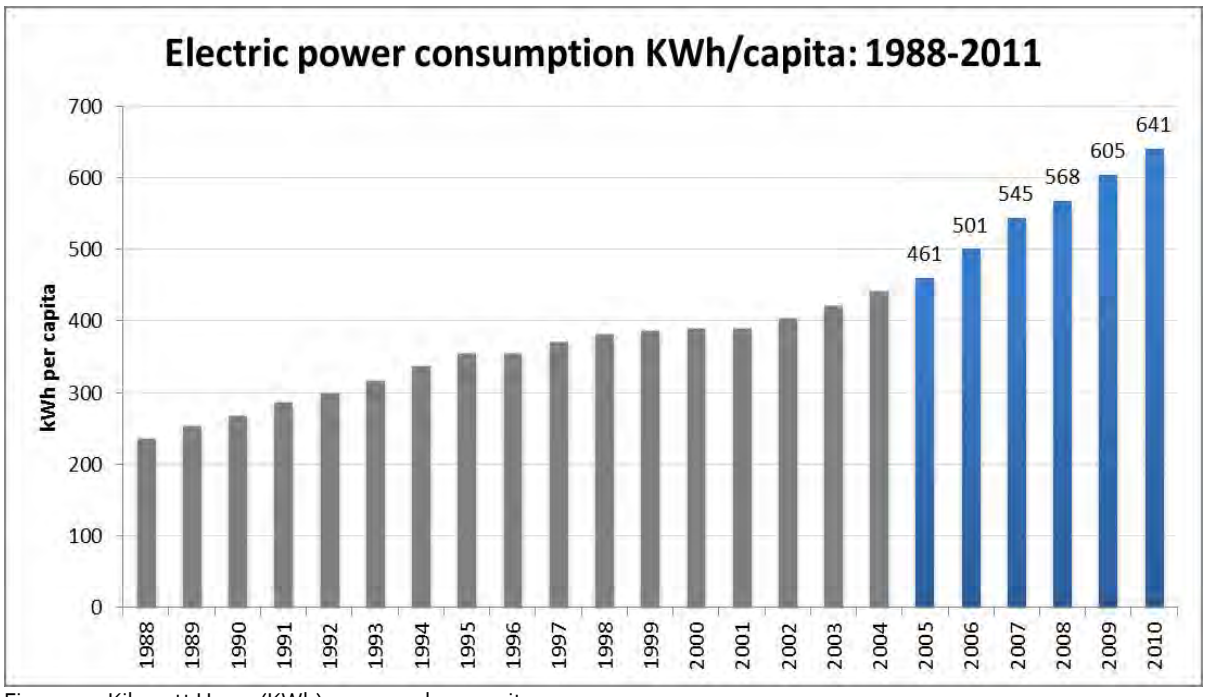


Figure 40: Kilowatt Hours (KWh) consumed per capita
Source: World Bank (2015)

Thus even though the increase in electricity consumption was from a low base rate of KWh per person, the rate of increase and the fossil-fueled nature of India's energy provision are cause for alarm in realtion to its GHG emission profile. Indeed despite its low per capita emissions (as seen in

[33] Commercial energy supply is energy that is bought and sold (as opposed to collected, for instance)

Figure 31 above on page 106) India's total GHG emissions had increased to the extent that it was ranked 7th in the world[34] in 2005 – up from 9th place in 1990 (World Resources Institute, 2015).

By 2007/8 coal and oil together accounted for 89% of the total primary energy supply, and renewables only 5% (TERI, 2010: 4). Net energy imports (energy use minus domestic production) accounted for 23.8% of all the energy used in India (International Energy Agency, 2014); import dependency in oil alone was 71% (TERI, 2007) as graphed in Figure 41 below . Of continued concern were Planning Commission projections that in order to continue to grow at 8% GDP annually until 2031/2, total primary commercial energy supply (TPCES) needed to increase by almost a factor of 4 from 2006/7levels, while electricity supply needed to increase by just over five and a half times (Planning Commission, 2006: 20). These numbers highlight the steadily growing tension between the dictates of energy security and the global atmospheric carbon constraint.

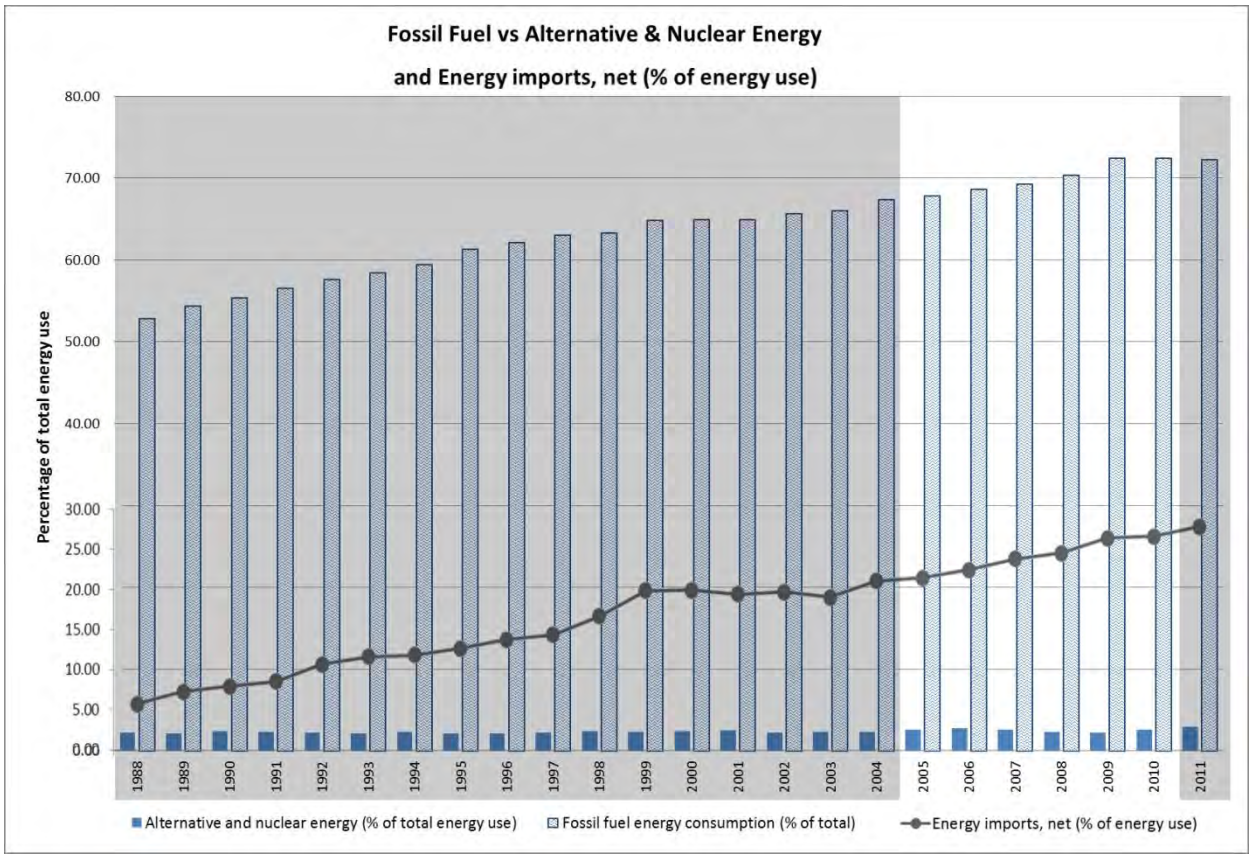


Figure 41: Type of energy used and net energy imports as percentage of energy use
Source: Own graph based on data from World Development Indicators, World Bank (2015); and International Energy Agency (2015)

[34] When GHG emissions are calculated including LULUCF & assuming EU28 is considered as a single entity

In addition to India's energy security concerns, Figure 40 and Figure 41 also point to the key elements of India's growing cumulative CO_2 emissions profile, as depicted in Figure 42 below. As stated above, India's electricity was (and remains) predominantly generated by coal-fired power plants. These were frequently inefficient, aging plants that used coal of a low calorific value and high ash content with losses of about a quarter of the generated electricity through transmission and distribution (Amjath-Babu & Kaechele, 2015). The other main driver of emissions – as outlined in Figure 42 – was India's growing use of fossil fuels, in particular petroleum for transport. These factors combined to make India particularly adamant that CBDR remain a guiding principle of the climate regime to prevent developing countries from having to take on mitigation targets.

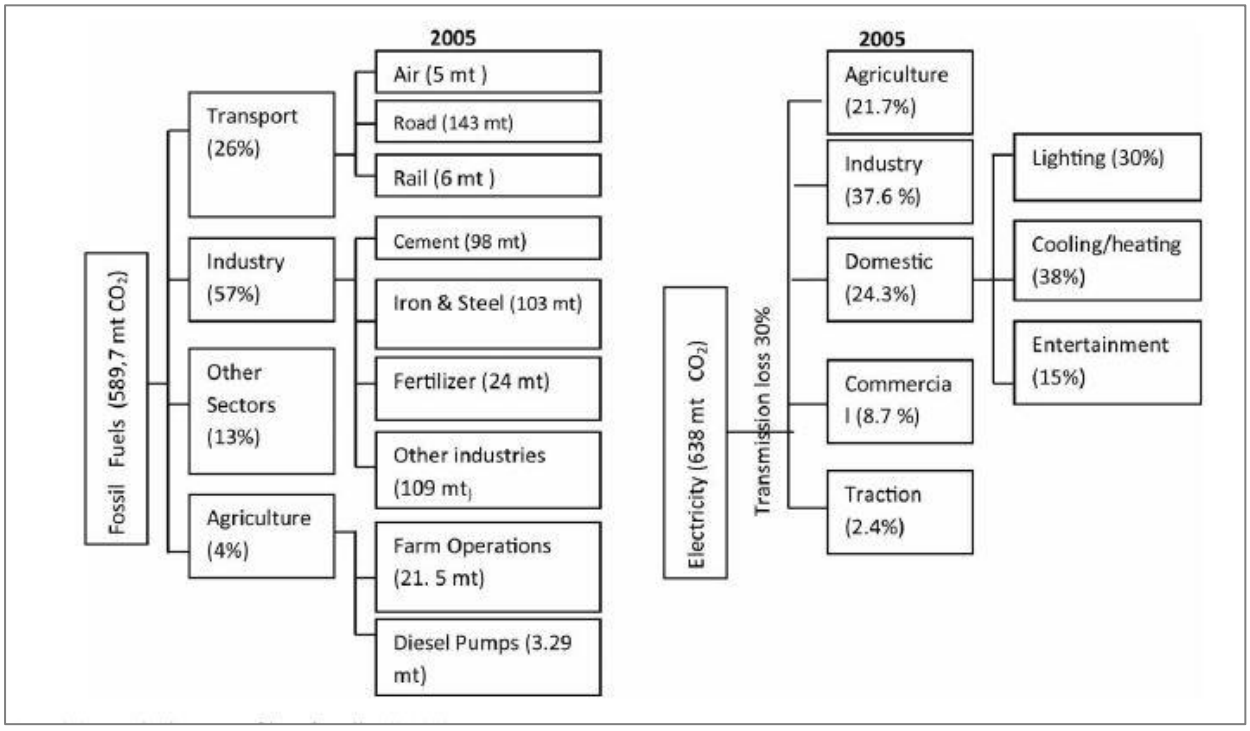


Figure 42: CO_2 emissions profile of India in 2005
Source: Amjath-Babu & Kaechele (2015)

The range of energy efficiency measures and policies the government had put in place over the years continued to pay dividends in terms of the improved emissions intensity of the economy. Whereas the economy was producing 484 tCO_2e / Million $ GDP in 2005 this had declined to 435 tCO_2e / Million $ GDPin 2010 (World Resources Institute, 2015).

These government measures included the Bachat Lamp Yojana (BLY), a nation-wide programme of exchanging incandescent bulbs for CFLs in households and the country's first CDM Programme of Activity (PoA) (Ministry of Environment and Forests, 2010), as well as the reformation of energy markets through the Tariff Policy of 2003, Electricity Act of 2005 and the Petroleum & Natural Gas Regulatory Board Act of 2006. Other measures were the promotion of the use of renewables

through the New and Renewables Energy Policy in 2005 as well as the Rural Electrification Policy of 2006 and the introduction of an Energy Conservation Building Code in 2006 applicable to new buildings over a specified floor space (Ghosh, 2009c; Prime Minister's Council on Climate Change, 2009).

All these indicators show a picture of a relatively robust emerging economy that is highly dependent on fossil fuels (despite the decreasing emissions intensity), and increasingly dependent on fossil fuel imports, but that has done little to address the internal disparities or eliminate poverty. A continued high level of dependence on fossil fuels as the driver of the economy would make India's insistence on not taking on emission reductions increasingly difficult to justify.

6.3 Institutional arrangements

In Cox's historical structures approach, institutions and practices are a "result of the collective responses to the challenges of the material (natural) environment" (Leysens, 2008: 44). The discussion below provides an overview of the major institutional developments in this phase in India and internationally in the climate regime, with a view to describing this phase's response to material environment.

6.3.1 International institutional arrangements

At the international level of climate change response, there are two crucial events in this third phase: the Bali Action Plan (BAP) in 2007 and the Copenhagen Accord in 2009. This section will describe and analyse how the institutions of climate change governance evolved in response to the challenges posed by the material environment.

6.3.1.1 Kyoto Protocol comes into force: CMP1 and onwards

The Kyoto Protocol formally came into effect ninety days after 55 parties to the Convention ratified it domestically, a number that included Annex I parties accounting for not less than 55% of CO_2 emissions in 1990 (United Nations, 1998). These countries are listed in Annex B of the Kyoto Protocol. The first Meeting of the Parties to the Kyoto Protocol (CMP1) took place in December 2005 in Montreal, Canada, concurrently with the Eleventh Conference of the Parties to the Framework Convention (COP11). Key agenda items at COP11 included capacity building, technology development and transfer, the effects of climate change on developing and least developed countries, and financing issues, specifically including Global Environment Facility (GEF) guidelines (IISD, 2005). A further and crucial order of business was the formal adoption of the

Marrakesh Accords by the COP in order to fully operationalise the Kyoto Protocol and thus provide a strong signal to the markets in favour of the Kyoto mechanisms (IISD, 2005).

Thereafter the focus in Montreal turned to the need for negotiations leading to a second round of commitments to begin after 2012 (the first commitment period running from 2008-2012) (Gupta, 2010). To this end, Annex B parties to the Protocol – those having QELRCs – began negotiating in a stream named the "Ad Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol", more frequently referred to as the AWG-KP (Bodansky & Rajamani, n.d.) (see Table 5 on page 140 below). The AWG-KP, while open-ended in its mandate, was specifically tasked with ensuring that there was no gap between the first and second commitment periods as dictated by Article 3(9) of the KP (UNFCCC, 2006a: 1/CMP.1). Furthermore a "Dialogue on long-term cooperative action to address climate change by enhancing implementation of the Convention" was established (UNFCCC, 2006b: 1/CP.11) to enable inclusive discussions about the future, as necessitated by the USA's withdrawal from the Kyoto Protocol. This Dialogue held four workshops in 2006 and 2007 (see Table 5 on page 140 below) and emphasised development goals, adaptation, technology and market mechanisms and covered action by all parties, but was intended to be only facilitative in nature, leading to neither binding agreements nor a new round of negotiations on further commitments (Bodansky & Rajamani, n.d.). The non-binding nature of the Dialogue enabled the participation of not only the USA, but developing countries as well (Rajamani, 2008). These two forward-looking processes were linked to the review of the Kyoto Protocol (IISD, 2005) which, according to Article 9(2) of the KP, was to take place the following year at CMP2.

6.3.1.2 The (Bali) road(map) to Copenhagen

The Dialogue on Long-Term Cooperative Action (LCA) came to an end two years later (see Table 5 on page 140 below) and COP13 took note of the report by the co-facilitators (UNFCCC, 2008c). At COP13 / CMP3, much of the focus was on the long-term future of the climate regime, particularly on the post-first commitment period. The report from the Dialogue began a process that eventually led to a draft text that was intensively negotiated and then adopted by the COP in this amended form as the Bali Action Plan (BAP). The BAP's first paragraph launched "a comprehensive process to enable the full, effective and sustained implementation of the Convention through long-term cooperative action, now, up to and beyond 2012, in order to reach an agreed outcome and adopt a decision at its fifteenth session…" (UNFCCC, 2008a: 1/CP.13). This initiated what became known as the "Bali Roadmap" negotiations.

In terms of the institutional arrangements necessary for negotiating text, the COP mandated a new subsidiary body under the Convention called the Ad Hoc Working Group on Long-term Cooperative

Action under the Convention (AWG-LCA – see Table 5 on page 140 below). This would form the second of 'two tracks' of negotiations in parallel with the existing AWG-KP (see 6.3.1.1 above). The AWG-LCA was mandated to conclude its work in 2009 and present a comprehensive text for the post-2012 period, for adoption by COP15 in Copenhagen (UNFCCC, 2008a: 1/CP.13 para. 2).To do so it would address the list of issues outlined in Figure 43 below: the paragraph 1 sub-elements would provide a "roadmap" for the negotiations over the subsequent two years.

Figure 43: Principal elements of the Bali Action Plan
Source: Own compilation based on UNFCCC (2008a: 1/CP.13) with author's emphasis

An important element of the BAP for developing countries was the explicit differentiation between the kind of mitigation expected of developed and developing countries. Paragraph 1(b)(i) refers to the "nationally appropriate mitigation commitments or actions, including quantified emission limitation and reduction objectives" of developed countries, which would be subject to MRV; Paragraph 1(b)(ii)[35] in turn specifies that developing countries would take nationally appropriate mitigation actions (no commitments) that would be supported by technology, finance and capacity building and this *support* would be subject to MRV. The distinction between mitigation commitments of developed countries and mitigation actions of developing countries constituted (and continued) what many developing countries termed the "firewall" between developed and developing countries (Winkler & Rajamani, 2014) although many in the NGO community criticised this as differentiation of a much weaker form (Raghunandan, 2014) .

[35] A more detailed description of the contestation over this sub-paragraph was provided above under the heading " equity and differentiation" in 6.1.1

In addition to the important BAP Decision, COP13 and CMP3 also produced a range of decisions, from approaches to stimulate reducing emissions from deforestation in developing countries to an extension of the capacity-building work programme and the mandate of the LDC expert group. Furthermore there were decisions on global observing systems for climate, technology transfer, the Protocol's flexible mechanisms, national communications as well as administrative, financial and methodological issues (UNFCCC, 2008a,d). Specifically the Technology Transfer Framework (TTF) – the institutional framework for future technology transfer – was elaborated upon. The TTF's fifth theme, Mechanisms for Technology Transfer, was expanded to include four sub-themes; Innovative Financing, International Cooperation, Endogenous Development of Technologies and Collaborative Research and Development (UNFCCC, 2015b). In addition there was agreement on "the development of performance indicators relating to the effectiveness of technology transfer" (Christoff, 2008). Uncertainty over a second commitment period of the KP cast uncertainty over the future of the CDM and therefore over the availability of the market for Certified Emission Reductions (CERs) beyond 2012 (Dutt & Gaioli, 2008), something particularly worrying to India as the second largest beneficiary after China (Betz, 2012).

Although the Adaptation Fund (AF) was established by the Marrakesh Accords in 2001, negotiations on governance and modalities delayed the full operationalisation of the Fund until 2009. The AF was designed differently to the LDCF and the SCCF and represented a notable shift toward giving developing countries/recipients a substantive say in the governance of the AF (Ballesteros et al., 2010). Decision 1/CMP3 in 2007 created the Adaptation Fund Board (AFB) that officially became the operating entity of the Fund (not the financial mechanism) to be entrusted with the governance of the AF, instead of bestowing this function on the GEF as was the case with the LDCF and the SCCF (Ballesteros et al., 2010). The Board would be accountable to the Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol (CMP). The Fund was also different in that it did not rely solely on voluntary contributions, but was financed by a 2% levy on the CERs produced by CDM projects. One further, and very important, distinction was that potential recipients could access the Fund Board directly (UNFCCC, 2008d: 1/CMP.3 para. 29) instead of through international intermediaries as was the procedure to access funds from the LDCF and the SCCF. This lowered the transaction costs for countries and made the fund more accessible and responsive to the recipients rather than the donors' agendas.

6.3.1.3 Copenhagen

The BAP had provided the mandate for negotiations on the long-term development of the climate change regime. To this end, the AWG-LCA had met regularly since its inception at COP13 in 2007. If

the UNFCCC negotiations had unfolded as intended, the BAP would have led to an agreed outcome being concluded at the COP in 2009 for implementation from 2012 after the end of the Kyoto Protocol's first commitment period. As COP15 loomed, so the pressure to reach an agreement increased; in response, the number of meetings between parties increased steadily from the single mid-year meeting in 2006 to five 'inter-sessional' meetings during 2009 in preparation for COP15. These are tabulated in Table 5 below.

Table 5: Meetings in the lead-up to Copenhagen's COP15

	DATES	COP	CMP	**CONVENTION** Dialogue on LCA	**KYOTO PROTOCOL** AWG-KP	SBs' SESSIONS
2005 **MONTREAL**	28 November – 10 December	11	1			23rd
2006 **NAIROBI**	15-26 May			1st workshop	1	24th
	6-17 November	12	2	2nd workshop	2	25th
2007 **BALI**	7-18 May			3rd workshop	3	26th
	Sept/Oct			4th workshop	4	
	3- 14 December	13	3	Report.		27th
				AWG-LCA		
2008	April			1	5	
	2-13 June			2	5 resumed	28th
	August			3	6	
POZNAN	1-12 December	14	4	4	6 resumed	29th
2009	30 March – 9 April			5	7	
	1-12 June			6	8	30th
	10-14 August			Informal intersessional consultations		
	28 September - 9 October 2009			7	9	
	2-6 November			7 resumed	9 resumed	
COPENHAGEN	7-18 December	15	5	8	10	31st

Positive progress was made on adaptation, reducing emissions from deforestation and forest degradation (REDD+) and technology at the meetings during 2009 (Table 5 above), but there was little change in the entrenched positions of countries in relation to finance and mitigation and even less movement on the questions of legal structure or the continuation of the KP beyond 2012 (IISD, 2009). Indeed this last point was of such concern to the Africa Group, LDCs and G77/China that they called for a suspension of negotiations under the AWG-LCA in order for the crucial issue of Annex I parties' post-2012 emission reductions (discussed under the AWG-KP) to be the focus of attention during high-level informal ministerial discussions. Developing countries saw agreement on extension of the Kyoto Protocol and new Annex I targets as the key outcome of COP15 (IISD, 2009).

Not only was the internal pressure to achieve an outcome mounting, beyond to the UNFCCC process the climate negotiations garnered much attention in 2009. As an indication of the tremendous interest in the COP, by December 2009, 40 000 people had applied for accreditation to attend (IISD, 2009) - well beyond the 15 000 people capacity of Europe's biggest convention centre. And in an extraordinary, unprecedented act, 56 newspapers, in 20 languages, in 45

Figure 44: Logos of the newspapers participating in the COP15 joint editorial. Source: The Guardian, (2009)

countries published a joint editorial calling for governments to take action in 2009 just prior to the Copenhagen COP (Katz, 2009; The Guardian, 2009).

Despite internal and external pressure in the two years leading to COP15, and the presence of 115 world leaders at the joint COP and COP/MOP high-level segment of the meeting, the AWG-LCA negotiations did not arrive at an "agreed outcome" that the COP would adopt as mandated by the BAP. Rather the BASIC group and the US were instrumental in formulating a "political agreement" in the form of the Copenhagen Accord, which the COP took note of, but could not adopt unanimously (as required) as a COP decision. COP15 was thus significant not only for the fact that it did not produce a legally binding agreement as was mandated, but for the leading role played by the rising powers of the South in shaping the eventual outcome of the negotiations (Masters, 2012).

The short text of the Copenhagen Accord contained two paragraphs on mitigation action. Annex I parties committed to implementing "quantified economy-wide emissions targets for 2020" to be recorded in Appendix I (UNFCCC, 2010: 2/CP.15 para. 4), while Non-Annex I parties committed to taking "mitigation actions (NAMAs)…consistent with Article 4.1 and Article 4.7 and in the context of sustainable development" to be recorded in Appendix II (UNFCCC, 2010: 2/CP.15 para. 5). Annex I parties would be subject to MRV in relation to their achievement of emissions reductions and provision of finance (UNFCCC, 2010: 2/CP.15 para. 4), whereas NAI parties' NAMAs that were supported by international finance, technology or capacity building would be subject to international measurement, reporting and verification (UNFCCC, 2010: 2/CP.15 para. 5). Thus the Accord appeared to maintain the differentiation between developed and developing countries, although many argued that the differentiation was much diminished (Werksman & Herbertson, 2010; Raghunandan, 2014).

Much was made of the financing promised under the Copenhagen Accord (as discussed at length under 6.2.1 above) – including the so-called fast-start financing, "approaching US$ 30 billion for the period 2010–2012", as well as the longer term "commit[ment] to a goal of mobilizing jointly US$ 100 billion dollars a year by 2020" (UNFCCC, 2010: 2/CP.15 para. 8) announced by developed countries. The Accord called for the establishment of the "Copenhagen Green Climate Fund" as an operating entity of the financial mechanism (UNFCCC, 2010: 2/CP.15 para. 10). But given the nature of the Accord as a political agreement and not a COP decision, the legal status of the GCF and the promised financing was unclear for much of 2010. Another institutional addition called for by the Copenhagen Accord was the establishment of a "technology mechanism" in order to "enhance action on development and transfer of technology" (UNFCCC, 2010: 2/CP.15 para. 11).

The agreement of the Copenhagen Accord by only 28 of 193 parties to the UNFCCC raised the spectre of WTO-type "Green Room" discussions (held exclusively among influential nations) and thus of a collapse of multilateral efforts to address climate change. It also raised difficult procedural questions, such as whether the text negotiated under the AWG-LCA and AWG-KP would be superseded as the basis for ongoing negotiations in favour of the text of the Accord (Schalatek, Bird & Brown, 2010). In the final analysis the COP15 had not only not reached an "agreed outcome" on the further implementation of the Convention, it had also left several critical, potentially crippling issues unaddressed. These included the issues of "the future (or lack thereof) of the Kyoto Protocol; the legal form and architecture of the future legal regime; and the nature and extent of differential treatment between developed and developing States" (Rajamani, 2010: 842).

6.3.1.4 Cancun

The 16th COP salvaged the credibility of the multilateral process by adopting many of the key elements of the Copenhagen Accord as part of the Cancun Agreements and thereby incorporating them into the formal negotiation process as COP decisions. Importantly it marked the first time a long-term goal was incorporated into the decision in the form of "substantially reducing global emissions by 2050" (UNFCCC, 2011: 1/CP.16 para. 5) and recognising that "deep cuts" were required "so as to hold the increase in global average temperature below 2°C above preindustrial levels" (UNFCCC, 2011: 1/CP.16 para. 4).

The Cancun Agreements anchored in formal decisions the economy-wide reduction pledges from developed countries which had been noted in Appendix I of the Copenhagen Accord and the mitigation actions from developing countries in Appendix II (UNFCCC, 2011: 1/CP.16 para. 36 & 49). Thus even though the Cancun Agreement contained separate appendices for developed and developing counties, functionally the Kyoto Protocol type of Annex I/ Non Annex I differentiation in which developing countries had no commitments was blurred, and replaced with an approach that allowed all countries the flexibility of simply selecting and listing their mitigation commitments and actions (Bodansky & Rajamani, n.d.; Aldy & Stavins, 2012). The Agreements also established separate processes of "international assessment of emissions and removals related to quantified economy-wide emission reduction targets" (UNFCCC, 2011, para. 44) for developed countries and "international consultations and analysis to increase transparency of mitigation actions" (UNFCCC, 2011, para. 63). In this manner the Cancun Agreements fully embraced the bottom-up approach proposed in the Copenhagen Accord, in which national sovereignty and circumstances were the true drivers of commitments and actions, thus leading to a range of "qualified and conditional pre-2020 GHG mitigation pledges of breath-taking diversity, dubious rigor and limited climate impact"

(Bodansky & Rajamani, n.d.). At least one analysis of the pledges suggested that countries were only likely to achieve the least ambitious of their pledges in the absence of an internationally binding agreement (top-down approach) and that then the "pledges could permit emission allowances to exceed our business- as-usual projections" (Rogelj et al., 2010). Even in the most optimistic scenario—in which countries met the ambitious end of their pledges, did not use surplus allowances[36] or land-use credits, engaged in a massive drive against deforestation and promoted low carbon growth in developing countries—the global emissions in 2020 still exceeded a realistically achievable 2°C emissions pathway (Rogelj et al., 2010).

The reforms of the finance mechanism continued with the establishment of the Green Climate Fund as an operating entity for the mechanism, accountable to, and under the guidance of, the COP (UNFCCC, 2011: 1/CP.16 para.102). The World Bank was appointed as interim trustee (UNFCCC, 2011: 1/CP.16 para.107), subject to a review after three years. The trustee in turn would be accountable to the 24-member Green Climate Fund Board (GCFB), which would be constituted of equal members from developed and developing countries (UNFCCC, 2011: 1/CP.16 para.103); the board would be supported by an independent secretariat. The GCFB would be designed by a transitional committee with 15 developed country party members and 25 developing country party members. This was intended to ensure that recipients (developing countries) had a strong voice in the design of the Board that would ultimately oversee the Fund's disbursement rules and regulations. The COP also established a Standing Committee on Finance to report to and assist the Conference of the Parties in "improving coherence and coordination in the delivery of climate change financing, rationalization of the financial mechanism, mobilization of financial resources and measurement, reporting and verification of support provided to developing countries" (UNFCCC, 2011: 1/CP.16 para.112). These were all moves designed to create accountability and responsibility for the Fund towards the COP, where every country had an equal voice.

The Cancun COP also finally established a Technology Mechanism in order to facilitate improved action on technology development and transfer that was determined by national needs and priorities and spanning the entire technology cycle (UNFCCC, 2011: 1/CP.16 para.113-5). The Mechanism was to be composed of a Technology Executive Committee (TEC) and a Climate Technology Centre and Network (CTCN) (UNFCCC, 2011: 1/CP.16 para.117). The TEC would oversee the activities of the CTCN, which would have the primary function of facilitating "a network of national, regional, sectoral and international technology networks, organizations and initiatives" (UNFCCC, 2011: 1/CP.16 para.123). The TEC would be composed of 20 experts, nominated by

[36] If a country reduces emissions in the first commitment period below their KP targets the credits thus 'earned' can be rolled over to be sold to other countries – this is colloquially referred to as "hot air".

Parties, but serving in their own capacity and elected by the COP; nine members would be nominated by Annex I parties and eleven members from non-Annex 1 parties (UNFCCC, 2011: 1/CP.16 Appendix IV). This slight weighting in favour of NA1 countries was intended to ensure that concerns of developing countries were well represented.

By the end of this phase the institutional arrangements had extended beyond those arrangements facilitative of the viewpoints of developed countries and focused on mitigation, to include institutions crucial from the vantage point of developing countries – technology and finance. While that indicated progress, the material resources were still vastly inadequate to the task of supporting developing countries in their efforts to respond to climate change.

6.3.2 India steps up its institutional response

Manmohan Singh was appointed Prime Minister of India on 22nd May 2004 and he remained PM for over ten years until 26 May 2014 when the Indian National Congress was voted out of power and replaced by a BJP government. His government produced the National Environment Policy (NEP) in 2006 with the objective of mainstreaming environmental concerns into development activities in order to achieve sustainable development goals (Planning Commission, 2012a) and respect ecological constraints (Government of India, 2015a). As a policy it reflected the influence of international norms and standards in it explicitly recommended that future legislation be enacted that is in harmony with multilateral environmental regimes, through the incorporation of the ideas of social responsibility, environmental standard setting and striving for economic efficiency in order to moderate environmental impacts (Atteridge et al., 2012). Even so the institutional response in this early part of phase three was still limited, as is evident in Figure 45.

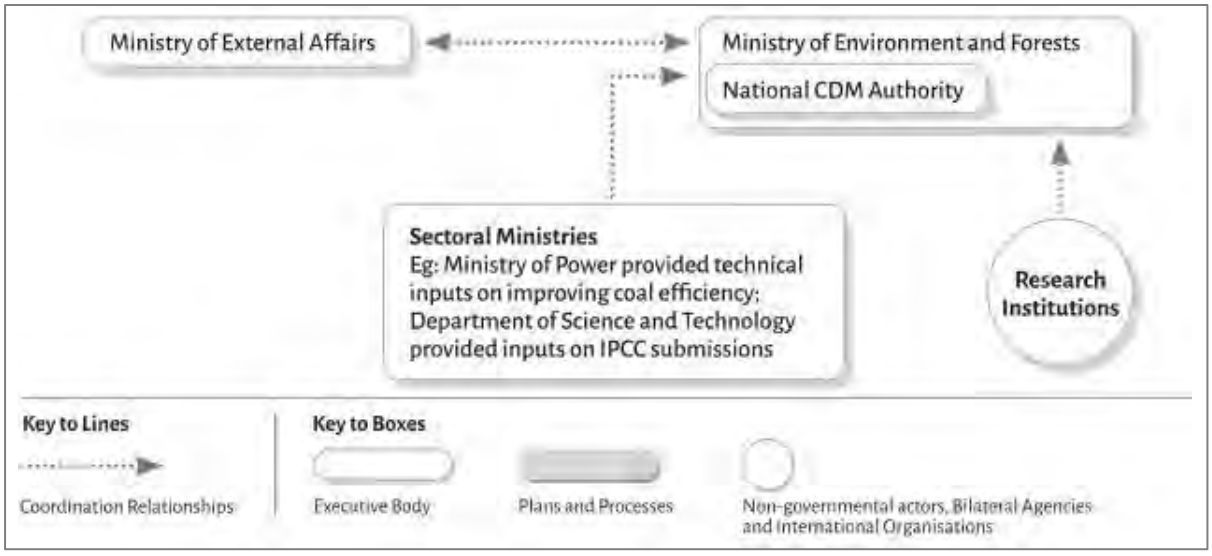


Figure 45: Institutions in India's domestic climate change governance pre-2007
Source: Dubash & Joseph (2015a)

In 2007 and 2008 (before and after the Bali COP), Prime Minister Manmohan Singh made a number of institutional decisions that ultimately had a bearing on the country's stance on climate change. In 2007 the incumbent Minister of Environment, A Raja, resigned, and instead of appointing another minister, the Prime Minister's Office took charge of the MoEF; Singh also created a high-level body called the PM's (Advisory) Council on Climate Change (PMCCC). After Bali, in January 2008, the PM appointed senior diplomat, Ambassador Shyam Saran, as his Special Envoy and Chief Negotiator on Climate Change in recognition of the need for high-level coordination and steering of the Indian response to climate change. These institutional changes are captured in Figure 46 below and show an obvious escalation of institutionalisation in comparison to Figure 45 above.

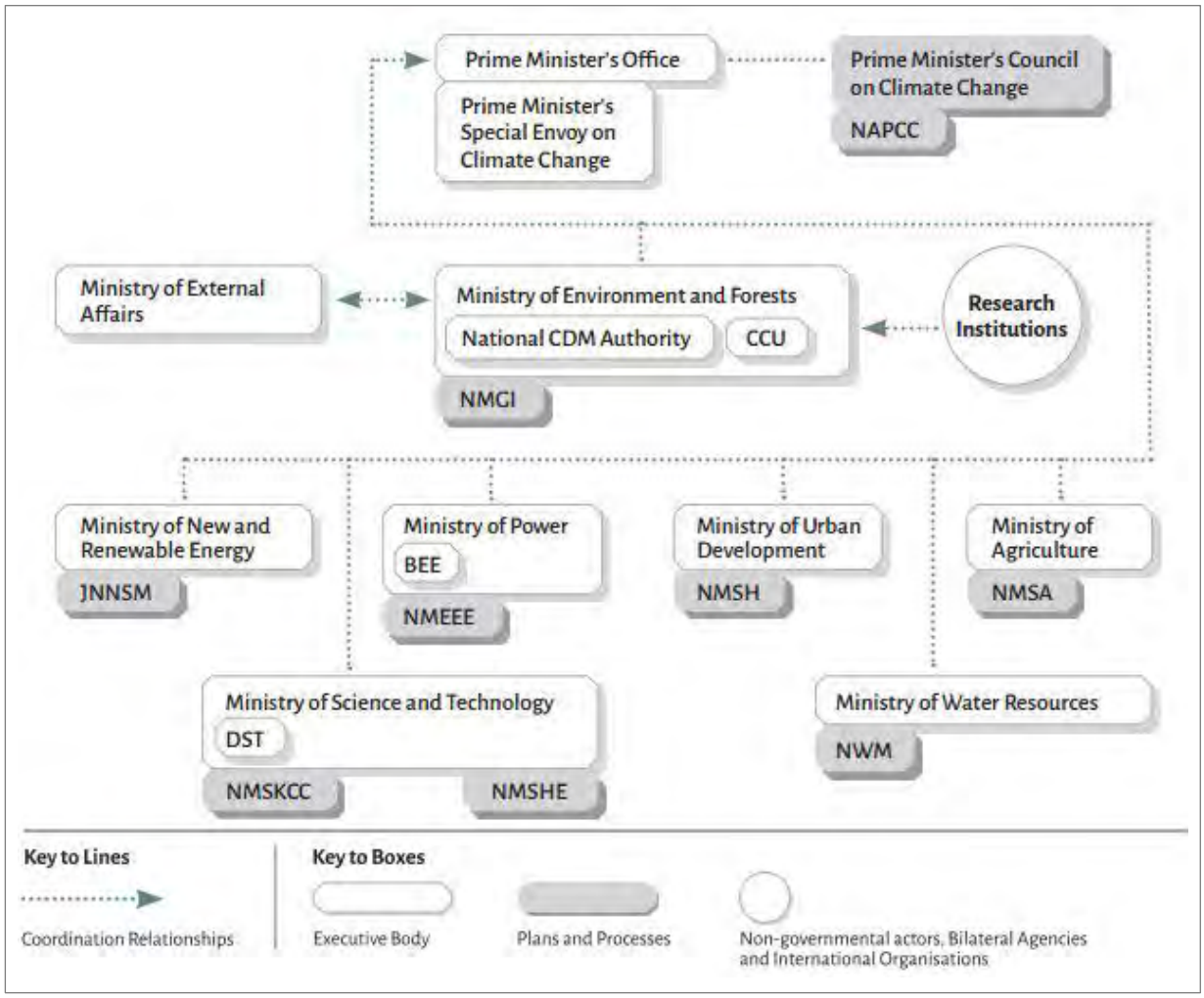


Figure 46: Institutions in India's domestic climate change governance 2007-2009[37]
Source: Dubash & Joseph (2015a)

While apparently important institutional responses due to their association with the PMO, neither the PMCCC nor the Office of the Special Envoy was assigned permanent staff, and had to rely instead on ad hoc assistance from the PMO and external experts, undermining their ability to play a

[37] Note that the Ministry of Non-Conventional Energy Sources (MNES) was renamed the Ministry of New and Renewable Energy (MNRE) in 2006 (Ministry of New and Renewable Energy, 2016).

long-term strategic role (Dubash & Joseph, 2015b). The Office of the Special Envoy was instrumental in helping to bring the NAPCC process to fruition; thus, by playing a role at both the national and international levels, it began to compete with the MEA and the MoEF for authority over the issue area, ultimately leading to the dissolution of the Office in 2010, when Minister Ramesh consolidated the authority of the MOEF over the issue (Dubash & Joseph, 2015b).

In addition to the PMCCC, and not shown on Figure 46, two other institutions (more broadly interpreted) were established by the Government of India in response to the challenges posed by climate change: the "Inter-Ministerial and Inter-agency Consultative Mechanism" and the "Expert Committee on Impacts of Climate Change" in 2007 (Ministry of Environment and Forests, 2012). As the nodal ministry for Climate Change, the MOEF organised the Inter-Ministerial and Inter-Agency Consultative Mechanism to assist them in the preparation and articulation of policies and strategies. Composed of nationally recognised experts, the consultative mechanism was divided into political, modelling and (later) forest sub-groups (Ministry of Environment and Forests, 2012). The Expert Committee on Impacts of Climate Change was tasked with studying the potential impacts of climate change on India and identifying measures with which to address India's assessed vulnerabilities. Experts were drawn from government departments and ministries, as well as from academia and various fields of science (Ministry of Environment and Forests, 2012). The inclusion of experts in advisory capacities signalled an acknowledgment that the science required expertise beyond that employed by government. Certainly the growing pressure at international level for developing countries to be involved in mitigating efforts, in combination with the increasing certainty of the impacts of climate change on India, was an important driver of these institutional responses by the Government of India.

The decision to compile a list of India's actions addressing climate change was taken at the first meeting of the PMCCC in July 2007. A list of existing adaptation and mitigation actions is found in section two of the technical document of the National Action Plan on Climate Change (NAPCC) (Prime Minister's Council on Climate Change, 2009: 17–20). The NAPCC also specified measures that promoted India's developmental objectives while simultaneously delivering climate change – related "co-benefits" in the form of adaptation and mitigation objectives (Prime Minister's Council on Climate Change, 2009: 13). The NAPCC was the Indian government's response to the material challenges – both developmental and climate related – that it faced.

The NAPCC was released in late June 2008 with an outline of India's planned approach to the challenges posed by climate change. The future objectives were formulated into the eight missions seen in Figure 47 below and outlined in the following paragraphs.

The Jawaharlal Nehru National Solar Mission (JNNSM) would be responsible for increasing Solar Thermal and Solar Photovoltaic generation as well as taking the lead in deploying solar technologies around the country. It was also tasked with the establishment of at least 1GW of Concentrating Solar Power (CSP) generation capacity before the end of the 12th Five Year Plan in 2017 (Prime Minister's Council on Climate Change, 2009). Fundamentally it was tasked with supporting and growing the nascent solar industry in order to increase the share of solar in the overall energy mix (Ministry of Environment and Forests, 2012).

The National Mission for Enhanced Energy Efficiency (NMEEE) was to build on the work already in progress under the Bureau of Energy Efficiency and the Ministry of Power (Ministry of Environment and Forests, 2010). Four new measures were to be instituted that would encourage energy consumption decreases in large energy-consuming industries. These were "(i) Perform, Achieve and Trade (PAT), (ii) Market Transformation, (iii) Energy Efficiency Financing Platform, and (iv) Framework For Energy Efficient Economic Development" (Ministry of Environment and Forests, 2012). In particular, PAT was designed to cover 700 energy intensive industrial sites and power stations that accounted for more than 50% of the fossil fuel used in India. It set energy efficiency targets and created tradable Energy Savings Certificates for those units exceeding their efficiency target to sell on other units not in compliance. It was hoped that PAT would help reduce CO_2 emissions by 25 million tons per year by 2014-15 (Ministry of Environment and Forests, 2010).

On the agenda of the National Mission on Sustainable Habitat (NMSH) was the promotion of energy efficiency in residential and commercial

Figure 47: The 8 National Missions of the NAPCC
Source: Own compilation based on Prime Minister's Council on Climate Change (2009).

buildings, improved urban planning, solid-waste management and recycling and the promotion of the use of public transport in the urban areas (Ministry of Environment and Forests, 2010). The National Water Mission was mandated to produce a 20% improvement in water-use efficiency through the creation of regulatory and pricing mechanisms (Prime Minister's Council on Climate Change, 2009). A related mission was the National Mission for Sustaining the Himalayan Ecosystem, which was tasked with managing the glacier and mountain eco-systems – an important source of water for Gangetic India (Prime Minister's Council on Climate Change, 2009). The Green India Mission (GIM) was tasked with increasing the country's carbon sinks by doubling the afforested areas within ten years to 20 million hectares, thereby potentially producing a carbon-sequestration effect of 43 million tons CO2I annually (Ministry of Environment and Forests, 2010). In addition the GIM was to improve the resilience of forests and ecosystems while actively attempting to secure participation of local forest communities (Prime Minister's Council on Climate Change, 2009). By June 2010 the GIM had still not been launched (Ministry of Environment and Forests, 2010).

The aim of the National Mission for Sustainable Agriculture (NMSA) was to identify or develop strategies to make Indian agriculture more resilient to the vagaries brought about by climate changes. Essentially an adaptation mission, it encouraged the integration of traditional bodies of knowledge and cutting-edge technologies and advances (Prime Minister's Council on Climate Change, 2009). Related to this ethos of learning and sharing, the National Mission on Strategic Knowledge for Climate Change was tasked with leveraging the best research and researchers available in support of making information available about the challenges and responses to climate change. To this end it would fund strategic socio-economic research, including research in the impacts of climate change on health, demographics, migration and livelihoods (Prime Minister's Council on Climate Change, 2009).

In the lead-up to the Copenhagen COP in 2009, the Indian Network for Climate Change Assessment (INCCA) was established. This was a network of 127 research institutions (and 228 scientists) distributed countrywide and tasked with researching the science of climate change. Crucial tasks included, first, producing biennial assessments of GHG emissions (inventories) and of the variable impacts on the different sectors in the country and, second, building capacity in the management of risks and opportunities derived from climate change (Indian Network for Climate Change Assessment, 2007). The first of the GHG inventories produced by the INCCA was for the year 2007 (prior to that only 1994 figures were available) and was released in 2010 (Ministry of Environment and Forests, 2010). By increasing the capacity of Indian science "in terms of the "3 Ms" –

Measurement, Modelling, and Monitoring" – the network would potentially be able to fulfil its task of providing support to decision makers (Ministry of Environment and Forests, 2012).

In January 2010, PM Manmohan Singh established an ad hoc 26-member panel to devise a low-carbon strategy for India, called the "Expert Group on Low Carbon Strategies for Inclusive Growth" (LCEG). The recommendations of this Group were intended as inputs to the 12th FYP (2012-2017). The Group produced an interim report in 2011 and a final report in 2014 – these will therefore be discussed in next chapter covering the fourth phase (2011-2015). The 2010 budget introduced a Clean Energy Cess (tax) of Rs50 (+/- US$1) per tonne on raw coal, raw lignite or raw peat extracted from domestic coal mines, or on any form (raw or washed) of imported coal (Ministry of Finance, 2010a). This cess came into effect on the 1st of July 2010 with a penalty of up to (Indian Rupees) INR10 000 for any contravention (Ministry of Finance, 2010b). It was anticipated that the tax would raise approximately US$ 500 million in the 2010-2011 financial year, which would be used to endow a National Clean Energy Fund that would support research and innovative projects in clean-energy technologies as well as environmental-remediation programmes (Ministry of Environment and Forests, 2010). By 2011, the Ministry of Finance had created a "Climate Change Finance Unit" (CCFU). This Unit was intended to focus on representing India in discussions establishing the GCF, and in international finance negotiations more generally (Dubash & Joseph, 2015b): an indication of a national-level institutional response to potential material resources being provided at the international level and to the creation of institutions (GCF) at international level.

What is apparent in the formulation of the NAPCC's National Missions is that it gives effect to the priorities of a developing country still addressing a range of serious developmental deficits, from the consequences of rapid urbanisation and waste disposal, to water, food and energy access. These deficits were real constraining factors affecting India's vision of itself as an emerging power, as they told a different story to the popular one of India's tremendous growth. What is also apparent is that the statement of intent in the form of the publication of the NAPCC's missions was not always followed by expeditious implementation. As apparent in Table 6 below, while all but one mission was approved by the PMCCC in this phase, only two were approved by Cabinet and of those two only the National Solar Mission was officially launched before the end of this phase. Significantly, the PM's Special Envoy on Climate Change played a pivotal role in the promotion and support of three of the missions: the National Solar Mission, the National Mission on Enhanced Energy Efficiency and the National Himalayan Mission (Dubash & Joseph, 2015b). Another factor that likely contributed to the more accelerated implementation of the NSM and the NMEEE was the nature of their primary objective, namely, the creation of new policy environments: the NSM to

encourage solar energy investment and the NMEEE to create a mechanism for tradable Energy Savings Certificates (Dubash & Joseph, 2015b). Critiques levelled at the NAPCC included that many of the missions lacked clear focus in the absence of a long-term frame, that there was little integration between the missions and that it was unclear whether the Plan prioritised domestic or international objectives (Byravan & Rajan, 2012). Furthermore civil society criticised the government for not consulting broadly, for failing to wrestle with many of the most important sources of emissions and for placing overdue emphasis on growth at the expense of the natural environment on which a majority of predominantly poor people depended for existence (Thakkar, 2009).

Table 6: Key information of the NAPCC's missions
Source: Targets information from Prime Minister's Council on Climate Change, (2009) (column "A"); Information in columns "B" & "C" from Dubash & Joseph, (2015b). Budgetary information in column "D" from Ministry of Environment Forests and Climate Change, (2014). A * indicates an assessed, but not approved/allocated, amount.

	A	B	C	D
Mission	Main Target/Aim	Approved by PMCCC	Approved by Cabinet	Budgetary allocation for the 12th Five Year Plan (2012-2017)
Jawaharlal Nehru National Solar Mission	20,000 MW of solar power by 2020	08/2009	19/11/2009	INR 8,795 crore (US$ 1.4 billion)
National Mission for Enhanced Energy Efficiency	10, 000 MW by 2012	24/08/2009	24/06/2010	INR 190 crore* (US$ 31 million)
National Mission on Strategic Knowledge for Climate Change	Fund research into climate change impacts & response	13/10/2009		INR 2,500 crore* (US$ 403 million)
National Mission for Sustaining the Himalayan Ecosystem	Observation & monitoring network	26/10/2009	28/02/2014	INR 500 crore (US$ 81 million)
National Water Mission	20% improvement in water use efficiency	28/05/2010	6/04/2011	INR 196 crore (US$ 31.6 million)
National Mission on Sustainable Habitat	Energy efficiency in buildings, waste management, modal shift in transport	18/06/2010		INR 950 crore* (US$ 153 million)
National Mission for Sustainable Agriculture	Mainstream adaptation and mitigation strategies	23/09/2010		INR 13,034 crore (US$ 2.1 billion)
Green India Mission	Expand India' forest cover from 23% - 33%	22/02/ 2011	20/02/2014	INR13,000 crore (US$ 2.1 billion)

6.4 Configuration of forces and influences in phase three

By COP13 in Bali in 2007, differentiation was still evident, though in a weakened state, in the difference between the projected mitigation requirements for developed and developing countries (see line "A" in Figure 48 below). Developed countries were called upon to enhance mitigation efforts through commitments or actions (including setting QELROs or QERTs) subject to MRV; by contrast, developing counties were called upon to take (voluntary) nationally appropriate mitigation actions only (NAMAs) and the MRV would apply to the provision of technological, financial and capacity-building support, not of the action. By the Copenhagen pledges of 2009/2010, the differentiation was further diluted (all Copenhagen Accord signatories offered voluntary pledges), even though there were promises of Fast-start funding for developing countries in the Copenhagen Accord (lines "G" and "H").

The combination of the changing domestic material circumstances and the challenge to differentiation at international level also opened up the space at domestic level for a slightly more nuanced discussion of India's role. This could be seen in Manmohan Singh's 2007 declaration at Heiligendamm and the later calls for a more proactive stance and flexibility in the Indian position by Jairam Ramesh in 2009. This is also seen in the challenge to the "growth-first" world view (which had been almost unopposed before 2007) by the "sustainable development realist" and "sustainable development internationalist" positions (lines "E" and "F"). These different world views represent contesting collective images of India's position in the negotiations.

One of the strongest interactions in this phase is seen in the influence of ideas and institutions at the international level on the national level of institution building. Almost all the Indian institutional responses to climate change were established in the period from the Bali COP in 2007 to just after the Copenhagen COP in 2009. There were two important drivers at international level: the science (line "B") and the changing institutional arrangements (line "C"). The projection from the IPCC's AR4 that developing countries' emissions would need to deviate below baseline, in addition to the 25-40% reduction required of Annex I parties, in order for GHG concentrations to stay below 450ppm CO_2e (as per box 13.7 in the WGIII report) added weight to developed countries' calls for developing countries to reduce emissions. In response, in the Bali Action Plan "nationally appropriate mitigation actions" for developing countries were created (UNFCCC, 2008a: 1/CP.13 para.1(b)ii). In addition, the severity of the projected impacts of climate change for India in AR4 made a compelling case for creating domestic institutions like the Expert Committee on Impacts of Climate Change tasked with identifying possible measures with which to address India's vulnerabilities (line "D"). Given these drivers, and the wish to be seen as a responsible global citizen,

the creation of the PMCCC, the Special Envoy and Chief Negotiator on Climate Change and the NAPCC can all be construed as India's national-level institutional response to the evolution of the international regime and the growing certainty of the science. To varying degrees India also included the eight national missions of the NAPCC in its budgeting procedures for the 12th Five Year Plan, as seen in Table 6 above (line "K"); even so, the implementation of these missions has been subject to domestic criticism.

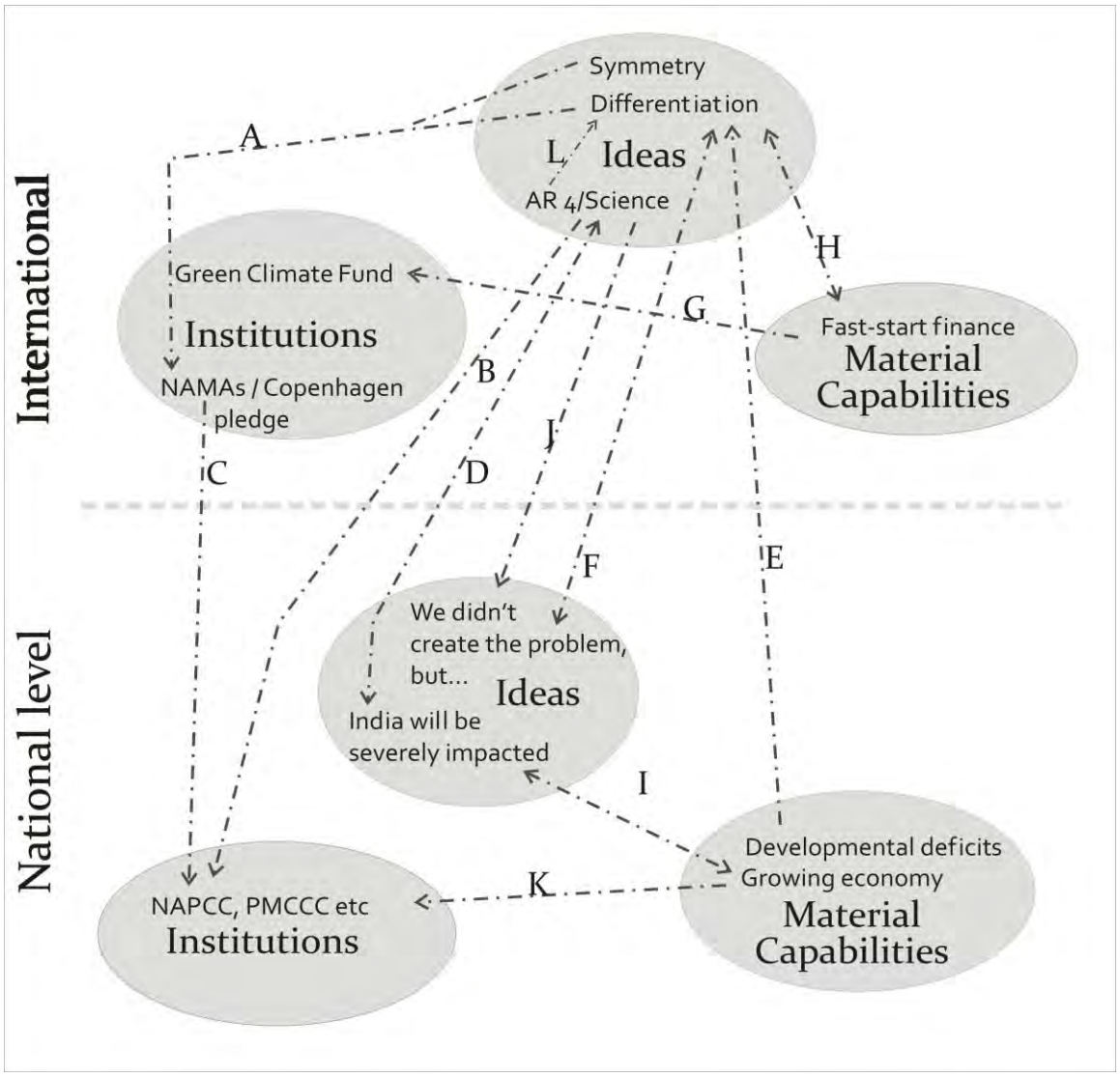


Figure 48: Visual representation of configuration of forces in phase 3.
Note: line indicates influence, arrow indicates directionality.

India's continued emphasis on the need for differentiation and the concomitant avoidance of enforceable mitigation targets for developing countries put it at odds with the prevailing assessment of the science in IPCC's AR4 (line "J"). In effect this could be seen as the contestation between an intersubjectively held idea (at international level) of addressing anthropogenic climate change and image of an appropriate response - an equitable response - held by a collective, in other words by India. The growing global necessity of making large-scale emission reductions as

encapsulated by the AR4 (in particular Box 13.7 produced by the IPCC's WGIII), had begun to undermine the argument in favour of differentiation – particularly as applied to larger emerging economies like India (line "L").

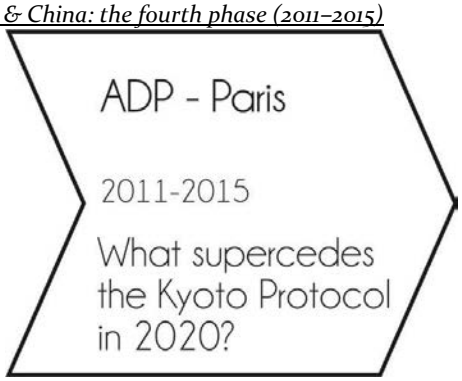
In this phase, material resources at international level in general became scarcer owing to the global economic crisis that began in 2008. While in India national GDP did decline, the effect of the crisis was not as pronounced as it was in the developed countries. Thus India continued to become a relatively more powerful economic player at the international level, which in turn led to more concerted calls for India to take on mitigation commitments and play a role in the provision of the "global good" of curbing climate change: in effect its growing economic prowess was a double-edged sword (see line "E" in

Figure 48 above). While this enhanced international status was welcome in some respects, in relation to the climate change regime it worked to undermine India's insistence that it continue to be subject to differentiated responsibilities in the name of equity and CBDR & RC. In effect its growing economic prowess was a double-edged sword (see line "E" in Figure 48 above) ostensibly allowing it to create a better life for its citizens, but also imposing the constraints of an international role upon it. Despite its increased international leverage India was apparently still unable to further the differentiation agenda in its favour, and has been cast instead as a reactive player (Desai, 2014) as it holds steadfastly to the principles of CBDR and RC.

Its growing economy, pivotal in Delhi's drive to be taken seriously as a major player, however, was not distributing benefits evenly and doing little to address the internal inequalities wrought by poverty and underdevelopment. In addition, the growing economy demanded increased energy inputs, outstripping demand and leading to increased dependence on imports of fossil fuel. Thus its changing material circumstances did not counter India's longstanding intersubjective idea that it was not the cause of the problem (line "F") and should be allowed space to develop to bring its people out of poverty. When combined with the observation that material resources from the regime or international level were slow in coming (despite the long-standing promises finance and technology transfer), India's defence of the continued salience of equity and CBDR and determination to stave off taking quantified mitigation targets (a move toward symmetry) seem all the more warranted. In the latter part of this phase, however, India did ameliorate its stance somewhat, possibly in an attempt to be seen as proactive (under Ramesh) or in acknowledgement that the science was robust and therefore that acting – providing material resources – to curb climate change was inherently in its own domestic interests anyway (line "I").

As the international institutional arrangements moved ever more in the direction of legal symmetry between developed and developing countries, so India countered with an offer of a voluntary

emissions-intensity goal, which would be subject to "international consultation and analysis" but not formal verification or review. This enabled India to be seen as part of the solution to the problem (line "F"). However, in their drive to have India redefined as an international player, Delhi's decision makers created "a tension and a degree of unpredictability on India's likely positions" going forward (Malone, 2011: 271–2). Positioning itself seemingly against its own existing self-identification as a developing country, India was criticised for abandoning other smaller developing countries (Rajamani, 2013; Krishnaswamy, 2014) in favour of the BASIC alliance and possible future alignment with the USA. India's identity crisis was well underway.



7 India vying to occupy centre stage with the USA & China: the fourth phase (2011–2015)

This phase includes the period of the evolution of the climate regime from the establishment of an Ad Hoc Working Group on the Durban Platform for Enhanced Action (ADP) in 2011 to the conclusion of "a protocol, another legal instrument or an agreed outcome with legal force under the Convention applicable to all Parties" in Paris in 2015, as mandated by COP17. Figure 49 is a timeline of the phase, which includes all the most important milestones that will be discussed below in this chapter. As in previous timeline figures, international events are depicted above the date line and Indian events and data below it.

7.1 Ideas

7.1.1 CBDR – more common than differentiated?

In this phase the contestation between the ideas of legal differentiation and symmetry that was apparent at Copenhagen and Cancun became anchored in the institutional configuration of the climate regime. It was expressed in particular in the first two COP decisions of 2011.

The 17th COP made two important decisions in relation to differentiation and symmetry: it decided that the mandate of the LCA would be extended by a year in order to reach an agreed outcome pursuant to the Bali Action Plan (UNFCCC, 2012a: decision1/CP.17 para.1); and it established a subsidiary body under the Convention called the Ad Hoc Working Group on the Durban Platform for Enhanced Action (ADP) (UNFCCC, 2012a: decision1/CP.17 para.2). The continuation of the LCA's mandate was particularly important to developing countries as it was anticipated that the outcomes might still be in line with the so-called Bali "firewall", i.e. continued differentiation between developed and developing countries. However, given that the nationally determined Copenhagen Accord pledges had been incorporated into the LCA process by the Cancun Agreements, the idea of differentiation was already significantly watered down and in practise rendered increasingly irrelevant (Rajamani, 2012; Raghunandan, 2014). Even so, this diluted differentiation was still unpalatable to the many developed countries, such that they argued for the LCA to be terminated by 2012 and a new negotiation process leading to an undifferentiated agreement to be initiated. This, then, was the ADP: a process to negotiate "a protocol, another legal instrument or an agreed outcome with legal force under the Convention *applicable to all parties*" (author's emphasis) (UNFCCC, 2012a: decision1/CP.17 para.2).

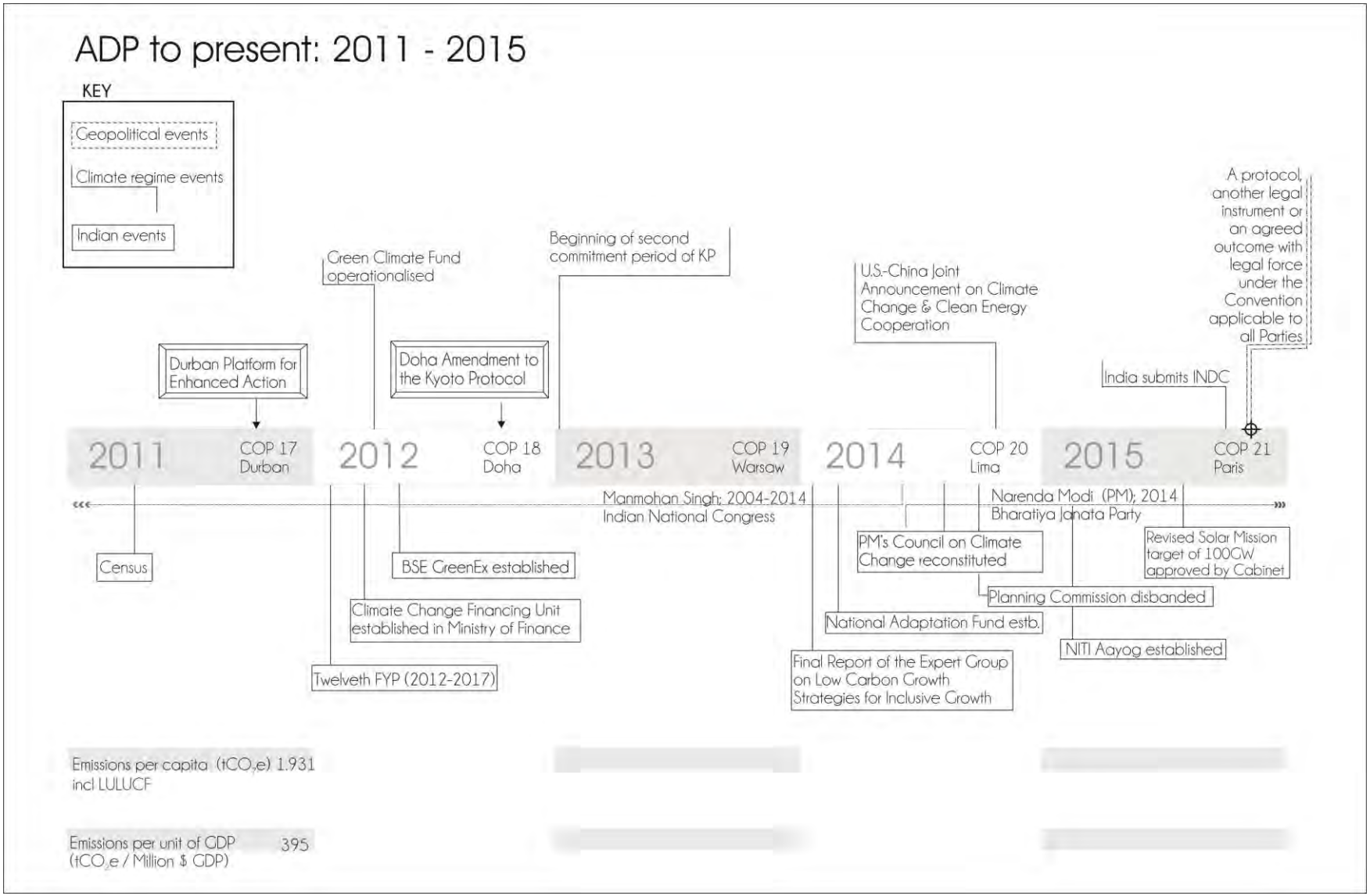


Figure 49: Fourth phase – negotiating the post-2020 agreement

There is no mention in the ADP text of Annexes, CBDR, equity or historical responsibility - unlike in the Copenhagen Accord and Cancún Agreements texts - omissions that further underline the move toward legal symmetry (Aldy & Stavins, 2012; Hurrell & Sengupta, 2012; Raghunandan, 2013) supported by the USA and the Umbrella Group of countries. India's negotiating style and the political manoeuvring of other players led to its being regarded as reactive and becoming increasingly isolated during the Durban COP (Death, 2012; Sengupta, 2012b), but as one commentator asserted "India is reactive because it is trying to defend what it sees as the gains it made in the formulations of the Framework Convention; and the key point there is that the Framework Convention does not call for obligations on developing countries which are comparable to those that are required by the Annex 1 countries" (Desai, 2014). Thus it is not surprising that despite the absence of the words "equity" or CBDR etc. developing countries, India foremost among them, have been emphatic that as the ADP outcome would still be "under the Convention" it was still subject to the objectives and principles therein, implicitly therefore still including CBDR & RC.

The COP17 in 2011 was also notable for the apparent "fragility of emerging power coalitions" in the face of a trio of pressures - from the developed countries, from smaller developing countries and from internal differences (Hurrell & Sengupta, 2012). The BASIC countries came under sustained and relatively unified pressure from developed countries as their 'emerging power' status undermined their calls for continued differentiation and created space for developed countries to argue that differentiation be "reinterpreted in the light of 'contemporary economic realities'" (Hurrell & Sengupta, 2012). The US in particular took a firm stance that it would only countenance a mandate to negotiate a legally binding treaty if that mandate was "symmetrical" i.e. that it applied to both developed and developing country Parties (Bodansky, 2012). The much-debated phrase "applicable to all" anticipated greater symmetry of commitments and potentially also a "more nuanced model of differentiation" (Winkler & Rajamani, 2014) In addition, smaller developing countries - especially through the ad-hoc AOSIS, LDC alliance and the vocal SIDS - began to apply pressure on the emerging powers to take on more responsibility for the emissions caused by their development (Banerjee, 2012). This was most pithily encapsulated in one SIDS delegate's exclaimation that "while they [India] develop, we die" (Black, 2011). This disjuncture between India and small developing countries was particularly troubling given that despite India's growing material capabilities, its continuing developmental challenges meant it had at least as much in common with LDCs as with the emerging powers of the BASIC group.

Lastly, the coherence of BASIC was challenged by the differences of the countries. Whilst Brazil, China and South Africa were eventually willing to compromise on their initial positions in relation to

a legal binding treaty applicable to developing countries, India was not willing to countenance legally binding reductions for developing countries (Masters, 2012) and was thus isolated from BASIC (Banerjee, 2012; Hurrell & Sengupta, 2012). It is given this isolated and ultimately untenable position that India came to agree to the inclusion of the formulation "agreed outcome with legal force applicable to all" (UNFCCC, 2012a: decision 1/CP.17 para.2) which allowed the decision to be adopted and the COP to close, but simply delayed the debate over differentiation to the next COP and the ADP negotiations.

Despite what might be construed as a weakend position in relation to differentiation after the Durban decision, India very clearly still cleaved to the continued importance of CBDR & RC in its ADP submissions (discussed at length under 7.1.3 below) and in its intended nationally determined contribution (INDC), submitted pursuant to the ADP negotiations (discussed below under 7.3.1.2). The INDC makes a strong statement of protest at the "tepid and inadequate response" of the developed countries that are historically responsible for the GHG accumulation causing climate change, even in light of the UNFCCC's "delineation of obligations and responsibilities". Notwithstanding its belief in the origins of the problem, the INDC seeks to position India as "an active and constructive participant in the search for solutions" (Government of India, 2015a: 2) and while this might be read as a weakening of its stance on CBDR & RC, it is an echo of earlier statements at the UN regarding the continued applicability of CBDR as an organising principle of cooperative endeavour. One such statement held that CBDR's main focus was actually on "common responsibility", but that these must still "be differentiated due to our different starting points, historical footprints, and development levels" and that uniformity of applicability did not automatically follow from the universality of relevance (Government of India, 2015b). In September 2015, PM Modi stated succinctly that "the principle of common but differentiated responsibilities is the bedrock of our collective enterprise" (Prime Minister's Office, 2015a), thereby quashing any doubt about India's continued support for, and belief in the importance of, CBDR & RC.

Article two of the Paris Agreement includes the long-term temperature goal and the overall objectives of the Agreement (UNFCCC, 2016: Article 2.1) and goes on to state that it will be "implemented to reflect equity and the principle of common but differentiated responsibilities and respective capabilities, in the light of different national circumstances" (UNFCCC, 2016: Article 2.2). Whilst the inclusion of the reference to CBDR might have allayed some developing countries' fears, the appending of the COP20 qualifier - "in light of national circumstances" - arguably alters the nature of the differentiation. Unlike the FCCC and Kyoto Protocol, the PA operationalises differentiation according to subject areas, not Parties. Thus differentiation has itself become

become differentiated - modified in relation to the specificities of mitigation, adaptation, finance, technology, capacity- building and transparency (Rajamani, 2016).

In relation to finance, differentiation most closely resembles the pre-Paris dispensation. Whereas developed countries are called upon to provide finance ("shall provide"), developing countries merely are "encouraged" to do so (UNFCCC, 2016: Article 9.1 & 9.2). In relation to mitigation, however, some commentators argued that differentiation is dead, and symmetry has been achieved (Narain, 2015). This is one reading of the Article 3 text that "*all Parties* are to undertake and communicate ambitious efforts" in the form of NDCs (UNFCCC, 2016: Article 3). A more nuanced reading of the PA, however, suggests that some gradation of differentiation remains in relation to mitigation efforts as developed countries "should continue" undertaking "economy-wide absolute emission reduction targets", whereas developing countries "should continue enhancing their mitigation efforts". However, given that developing countries are "encouraged to move towards economy-wide emission reduction or limitation targets" (UNFCCC, 2016: Article 4.4) it is apparent that the way is clear for symmetry between efforts to become more pronounced over time.

7.1.2 The science in the Fifth Assessment Report

The Fifth Assessment Report was published in 2014 and began with an assessment of observed changes. It confirms AR4's conclusion that human influence on the climate is not only clear and exerting widespread influence on the natural system, but that the climate is warming unequivocally: "the atmosphere and ocean have warmed, the amounts of snow and ice have diminished, and sea level has risen" (IPCC, 2014: 2, SPM 1.1). With concentrations above any levels seen within the last 800 000 years, the influence of GHG emission increases are all-pervasive, and extremely likely (95% –100%) to be the cause of warming observed since the middle of the 20th century (IPCC, 2014: 4, SPM 1.2).

Looking to the future, the report predicts that continued emission of GHGs will cause additional warming and long-term changes in the climate system as "cumulative emissions of CO_2 largely determine global mean surface warming by the late 21st century and beyond" (IPCC, 2014: 8, SPM 2.1). Under all the emission scenarios modelled and assessed in the AR, surface temperature continues to rise, making heat waves more frequent and longer lasting (most likely), hot temperature and fewer cold temperature extremes more frequent (virtually certain), and raising global mean sea-levels faster than in the period 1971 to 2010 (very likely) (IPCC, 2014: 10, SPM 2.2). In addition, existing risks will be amplified by climate change while it also creates new ones and, importantly, "risks are unevenly distributed and are generally greater for disadvantaged people and

communities in countries at all levels of development" (IPCC, 2014: 13, SPM 2.3). The changes would continue even after the stabilisation of GHG concentrations had been achieved as biomes, soil, ice sheets and the ocean all adapt at varying timescales thereby stretching systemic change from hundreds, even thousands, of years (IPCC, 2014: 16, SPM 2.4).

The author teams asserted that both mitigation and adaptation efforts were necessary for responding to the risks imposed by climate change, and that these were complimentary, mutually reinforcing and constitutive of sustainable development pathways (IPCC, 2014: 17, SPM 3). The AR stated with a high level of confidence that a lack of additional mitigation efforts (beyond current levels) would lead to a high risk of extensive, severe and irreversible global impacts, adaptation notwithstanding (IPCC, 2014: 17, SPM 3.2), and that adaptation had a limited efficacy in dealing with these risks (IPCC, 2014: 19, SPM 3.3).

Attempts to keep warming below 2°C (relative to pre-industrial temperatures) would be likely be possible under several of the modelled mitigation pathways, but these would require precipitous reductions in emissions in the next few decades leading to net-zero emissions of long-lived GHGs by the century's end. This kind of response would impose enormous challenges to the existing global technological, economic and social institutional infrastructure (IPCC, 2014: 20, SPM 3.4). Not only would adaptation and mitigation responses need to be integrated, but so too would multiple actions and actors across local, national, regional and international scales. The authors asserted with high confidence that opportunities existed to link mitigation and adaptation responses to preferred societal outcomes but only medium confidence that implementation would be dependent upon tools, structures and enhancing the capacity of people to respond to climate changes (IPCC, 2014: 20, SPM 3.4).

The UNEP has published the "Emissions Gap Report" since 2010 in which it considered the science in relation to the political ambition. Given the international agreement at Cancun to keep warming to below 2°C and the updated IPCC report, in 2014 the UNEP Gap Report took a carbon budget approach to estimate what level of emissions would make it possible to keep to the 2°C temperature goal. The report;s findings were that the world would have to become carbon neutral between 2050 and 2070 and all GHGs would need to reach zero levels between 2080 and 2100. Lower emissions in the short term would allow more flexibility in the longer term, but the world would still need to be 10% under 2010 emissions by 2030 at least. The report estimated in 2014 that the gap between the median estimates of emissions in 2030 calculated from pledges (52–54 Gt CO_2e) and the level of emissions consistent with 2°C target (44 Gt CO_2e) was between 8–10 Gt

CO_2e (UNEP, 2014). The outcomes of this carbon budget approach could be politically interpreted as suggesting both that developed and developing countries had to do more to reduce emissions.

7.1.3 India steps forward, and then back

In the fourth phase India maintained a firm stance on the necessity and applicability of the ideas of equity and differentiation in line with CBDR. This can be traced through the government's submissions to the ADP process during 2012 and 2013 and its INDC submission of October 2015. Significantly, the government relied upon various modelling studies conducted by civil society thnk-tanks, Integrated Research and Action for Development (IRADe) and The Energy and Resources Institute (TERI), in the process of developing the INDC (Parikh & Parikh, 2016). Whilst this indicates at least some influence of civil society on GoI thinking it should be noted that several senior members of the Indian bureaucracy have retired to positions in these institutions cenceivably taking with them the "baggage [that] is their exposure to the Indian policy directives and political thinking" (Ghosh, 2014).

Indeed in the opening statement of its first submission to the ADP process India noted that the outcome of the ADP process was to be reached "under the Convention" and therefore both the process and the outcome would be in accordance with "all principles and provisions of the Convention", in particular with the "principle of equity and the principle of Common But Differentiated Responsibilities of the Parties" (Government of India, 2012a: 2). These sentiments would be reiterated in *every* Indian submission to the ADP. By insisting that CBDR be applied to the efforts to increase the level of ambition (of emissions reductions), India could aver that pre-2020 obligations to mitigate only applied to Annex 1 Parties.

The question of ambition in the 2012-2020 period, India averred, was inextricably linked to the actions of the Annex I countries, which had "an obligation to take deep and ambitious emission reduction targets consistent with science and the principles of equity and CBDR" (Government of India, 2012a: 10). Given that the available science in the short term was AR4 (AR5 only being released in 2013-2014), Annex I reduction pledges should be increased to at least be in line with the 25%-40% range of emissions reductions contained in AR4 (Government of India, 2012a: 13).

In their ADP submission in February 2012, India noted that developing countries, including itself, were already contributing to mitigation efforts as they had submitted their NAMAs as required by the Cancun Agreements and that these would be implemented if developed countries contributed finance, technology transfer and capacity building as per Articles 4.4 and 4.7 of the Convention (Government of India, 2012a: 3–5). In accordance with CBDR, developing countries shouldn't be

asked to do more in the pre-2020 period and therefore the ADP work plan on enhancing the mitigation ambition of countries in order to close the ambition gap (paragraph 7) applied to the post-2020 period (Government of India, 2012a: 8). The ambition gap related not just to action on mitigation, but also applied to "the shortfall relating to enablement and support regarding finance, technology and capacity building", suggested India. Only with ambition understood in this "expansive and holistic fashion" would developing countries be enabled to enact ambitious mitigation efforts themselves (Government of India, 2012b: 16–17).

India sought to influence the interpretation of the words "applicable to all" in the ADP decision text. In its April 2012 ADP submission it pointed out that both the Convention and the KP were applicable to all parties, but that this did not preclude the application of the principles of equity and CBDR in the implementation thereof. As part of its argument to ensure that equity and CBDR were maintained as cornerstones of the ADP outcome, it summed the situation up thus: "Universality of application does not translate into uniformity of application" (Government of India, 2012b: 12–13). Ensuring that the "current schema of the Convention" was maintained was crucial to ensuring that the developing countries' goals of socio-economic development and poverty eradication were not compromised (Government of India, 2012b: 14).

India argued for the continuation of a Kyoto Protocol-type differentiation arrangement to characterise the post-2020 outcome. This would maintain the distinction between developed countries with binding absolute emission-reduction commitments, subject to a rigorous compliance regime, and developing countries with voluntary targets not subject to punitive measures for failure (Government of India, 2012b: 23–25). Additionally India believed that the distinction between the mitigation commitments of Annex I and non-Annex I parties as contained in the Convention should be maintained to avoid re-interpretation of the Convention (Government of India, 2012b: 29). This particular argument was a rallying point at Doha when several developing countries, including India, emphasised that the ADP was not a vehicle to "renegotiate, rewrite, or reinterpret" the Convention principles (IISD, 2012). The work done under the AWG-LCA, the AWG-KP and other subsidiary bodies should be incorporated into the ADP, as the ADP should not work in isolation, India asserted. Any outstanding, unresolved issues from these working groups should be referred to the ADP in the first instance (Government of India, 2012b: 39–43). By linking the previous AWG processes and their respective outcomes, India intended to have the BAP differentiation incorporated into the ADP outcome and to link further work on the ADP to fulfilment of the promise of a second commitment period under the Kyoto Protocol (Government of India, 2012b: 46).

After the AWG-LCA outcome was accepted at the Doha COP (UNFCCC, 2013a: decision 1/CP.18), India's submissions continued to promote an ADP outcome reflecting the Bali roadmap elements of "mitigation, adaptation, finance, technology development and transfer…and capacity-building", with the additional element of "transparency of action and support" (Government of India, 2013a: 5.13-5.21). India also insisted that these elements be used as measures of the progress of enhanced action and that developed countries take the lead in enhanced mitigation efforts under the ADP (Government of India, 2013a: 5.27). It firmly linked broader participation in achieving enhanced mitigation efforts to "how comprehensively the new arrangement embraces all aspects of climate change including mitigation, adaptation, finance and technology transfer" and specifically to the actions of developing countries in relation to their own commitments under the Convention (Government of India, 2013a: 5.31) to enabling developing country action. In particular India highlighted the importance of achieving the goal of mobilising US$ 100 billion per year by 2020 and pointed to the lack of either a clear plan to do so or a mechanism to increase the provision of finance as especially concerning (Government of India, 2013b: 5.9-5.10). Another persistent concern related to the lack of progress in addressing obstacles to technology transfer like intellectual property rights (Government of India, 2013c).

These submissions indicate that in the early years of this fourth phase India resolutely maintained a belief in the need for equity and CBDR to be the foundations of the climate regime as it was being developed in the ADP process. This belief is an integral component of all three of the world views described in Table 7 below. It is harder to see other clear indicators of world view inherent in the submissions, as they contain elements of both a growth-first realist world view and the sustainable development internationalist view. The former is evident in their insistence that India not be subject to more than voluntary actions in the pre-2020 period, which could be construed as a "stonewalling" on commitments. The latter is evident in their insistence that enhanced action on domestic mitigation actions by developing countries be enabled by developed countries' provision of finance, technology transfer, capacity building as per the Convention and the explicit link between the transparency of action and support.

The sustainable development internationalist world view was also in evidence in the mandate for and as a driver of the Expert Group on Low Carbon Strategies for Inclusive Growth.[38] India's political elite appeared to have accepted that India was particularly vulnerable to the impacts of climate change (Ministry of Environment Forests and Climate Change, 2014) and should therefore act domestically to address this while also attempting to promote an international agreement to

[38] The interim and final reports will be discussed below in the section on institutional arrangements in India.

address the anthropogenic causes of climate change (Planning Commission, 2011). As formulated by the Expert Group's chair, Dr Kirit Parikh, "[We are interested in] whatever measures we can take that can stimulate and nudge the global community into a global agreement, [that] are also in our interests. This leads us to examine the options, the costs, the alternatives, and the multiple benefits of moving to a low-carbon development pathway" (da Costa, 2013). In light of the disbanding of the Planning Commission in 2014, however, it is not apparent to what extent these sentiments will be incorporated into India's future long-term planning.

In contrast to this world view, an analysis of governmental pronouncements on climate change since Narendra Modi became Prime Minister indicates a nascent fourth world view. This world view combines elements of all three of the other world views – the corresponding cells of which are highlighted in Table 7 below – but is differentiated by its political reading of climate change.

Modi's growth-first realist type stance is inferred from statements that the priority of government is to create jobs in order to eliminate poverty and therefore that "first and foremost we should aim at a high rate of growth" (Prime Minister's Office, 2015b). Environment Minister Prakash Javadekar made a similar point in 2014 when he echoed Indira Gandhi's famous sentiments[39] by saying that "poverty is an environmental disaster…unless we tackle poverty, unless we eradicate poverty, we cannot really address the climate change"; in so doing he vigorously defended India's "right to grow" (Mohan, 2014).

Modi in particular is well versed in the dangers of climate change for India, having been personally briefed during his time as Chief Minister of Gujarat by the erstwhile head of the IPCC Dr Pachauri (Antholis, 2014) – thus his world view on this issue reflects that of SD realists and SD internationalists rather than of the climate sceptical growth-first realists. Modi also emphasises internal equity – at least at the level of states "advancing in tandem" in the spirit of "Sabka Saath, Sabka Vikas"[40] (Prime Minister's Office, 2015b), which suggests more of a sustainable development (either realist or internationalist) world view at work. Javadekar evoked concerns over international equity when he told the Petersburg Climate Dialogue in May 2015, "Instead of making the polluters to [sic] pay, we should not end up with a formula where we make the poor pay" (Ministry of Environment Forests and Climate Change, 2015).

[39] In 1972 Indira Gandhi asked of the UN Conference on Environment and Development plenary: "[a]re not poverty and need the greatest polluters?" and boldly stated that "[t]he environment cannot be improved in conditions of poverty. Nor can poverty be eradicated without the use of science and technology" (Alam et al., 2015).

[40] This means 'Together with all, Development for all' – election slogan used by Narendra Modi.

The point at which the new government seems to diverge most from the three world views reflected in Table 7 is in its political reading of climate change as a potential geopolitical and economic opportunity. Several statements indicate that climate change is seen as an opportunity to both grow the market for renewable energy and exercise global leadership. Modi has emphasised that the "focus should shift on what we have done for clean energy generation, energy conservation and energy efficiency, and what more can be done" (Prime Minister's Office, 2015c) while the government has begun implementing measures to position India as a "solar manufacturing hub" in line with the "Make in India" programme (Ministry of New and Renewable Energy, 2015a). At the inaugural meeting of the reconvened PMCCC in January 2015, the PM called for nations with great solar-energy potential to join with India to create a "global consortium…for innovation and cutting-edge research that would reduce the cost of solar energy", thereby beginning to position India at the forefront of such moves (Prime Minister's Office, 2015c). Modi also posits the view that India could be a leader in the climate change regime – one of the clearest statements of this came in Delhi in April 2015 when he said, "The world guides us on climate change and we follow them? The world sets the parameters and we follow them? It is not like that…We can lead the world" (Reuters, 2015). A short while later Modi reiterated this position in Berlin, saying, "India will set the agenda for the upcoming conference of parties", referring to the important COP21 in Paris in December 2015 (LiveMint, 2015).

Table 7: Three Indian world views related to climate change
Source: based on Table 14.2 Dubash (2012b) with "*"being additions by author to the original table

	Growth First Realist	**Sustainable Development Realist**	**Sustainable Development Internationalist**
Political reading of climate change	Geopolitical threat	India as an excuse for inaction – fatalism	India as an excuse for inaction – cooperation
*Stance on Science**	Downplays science / sceptical	Impacts pose serious threat	Impacts pose serious threat
Foundational demand	Equity – external [globally]	Equity, globally and nationally	Equity, globally and nationally
Domestic agenda	Growth first [address climate later]	Co-benefits	Co-benefits
International strategy	Stonewall on commitments	Implement change at home, but de-link from global agenda	Implement change at home, AND link domestic to global
Motto	"It's our turn to develop!"	"It's an unfair world."	"Seize the moment!"

This potential fourth world view – highlighted by the shaded cells in Table 7 and summarised in Table 8 – combines elements of the other world views. At first glance these elements seem

contradictory, and therefore whether it manages to maintain sufficient internal coherence to be a viable contender for primacy above the other world views can only be assessed over time. Given the relatively short period of time that the new BJP government has been in power (see Figure 49 above), the litmus test of this world view will be the material and institutional resources aligned in support of it in the coming years and months; however, indication of the BJP government's world view is found in the details of the intended nationally determined contribution (INDC) submitted to the UNFCCC on October 1st 2015.

Table 8: Elements of a possible nascent fourth world view / idea held by a collective

Political reading of climate change	Geopolitical opportunity: climate change as an opportunity to grow market for renewable energy and show global leadership
Stance on Science	Impacts pose serious threat
Foundational demand	Equity, globally and nationally
Domestic agenda:	Growth first
International strategy	Implement change at home… AND link domestic to global
Motto	Let's do (green) business, but on our terms

The measurable aspects of India's INDC take the form of three targets: a target to reduce the emissions intensity of its GDP by 33 to 35% from 2005 levels by 2030 and a target to increase non-fossil-based power generation capacity to 40% of installed electric power capacity by 2030 – subject to technology transfer and the provision of low-cost international finance including from the Green Climate Fund (GCF) (Government of India, 2015a). The emissions intensity target is approximately in line with its Cancun pledge and very dependent on the achievement of the sectoral goals outlined (Centre for Policy Research, 2015). The third target found in the INDC is the pledge to create an additional (cumulative) sink through afforestation of 2.5 to 3 billion tonnes of CO_2 equivalent (Government of India, 2015a).

The INDC builds on a detailed list of domestic mitigation projects and initiatives – from clean energy and energy efficiency promotion, to the creation of resilient urban centres and a green transport network, through to waste management and afforestation – that exist or were already planned. The NAPCCs eight missions would be revised – following on from work undertaken under the 12th Five Year Plan – to include new missions or programmes on wind energy, health, waste to energy, and coastal areas.

One of the key distinguishing elements of this proposed nascent world view is the interpretation of climate change as an opportunity for India to position itself as a major player in the renewables industry. This it did notably by forming around itself the International Agency for Solar Policy and Application (InSPA), a consortium of countries located between the Tropic of Cancer and the Tropic

of Capricorn, thus having great solar-energy potential (Government of India, 2015a; Prime Minister's Office, 2015c). As outlined in the INDC, India sought to build "Green Energy Corridors" to distribute the anticipated 175GW of renewable energy it intended to produce by 2022 and also secured EUR2 billion from Germany to do so (Basu, 2015).

In furthering their argument for international equity, the government continued to maintain that implementation of the INDC would be contingent upon "an ambitious global agreement including additional means of implementation to be provided by developed country parties" thereby evoking Articles 3.1 and 4.7 of the Convention (Government of India, 2015a). India framed international cooperation as a "critical enabler" of its plans, citing an estimate of US$ 2.5 trillion (at 2014-15 prices) required to fund its climate change response between 2015 and 2030 (Government of India, 2015a). It framed the continuation of development nationally as the panacea for poverty.

The seriousness with which this world view considers the impact of climate change is found in the breadth of adaptation plans, which address agriculture, water, rural livelihoods, and the protection of biodiversity and the all-important Himalayan ecosystem (Government of India, 2015a).

To date the domestic contestation between ideas/world views has continued in this phase, such that the pre-Bali primacy of the "growth-first realist" idea has not been re-established; in other words, it has not regained its position as an intersubjectively held idea. India, however, continued to view equity and CBDR as the "bedrock" of a global collective response to climate change (Prime Minister's Office, 2015a) in spite of the indications that the winds of the climate change regime were blowing in the direction of legal symmetry.

7.2 Material capabilities

7.2.1 Material capabilities internationally

Beyond the climate regime, this phase was dominated by the ongoing story of the "two-speed recovery". As Figure 50 below shows, in the first few years of the 2010s the recovery in developed economies continued to be slower than the recovery in emerging-market and developing economies, which maintained positive overall growth rates during the worldwide recession. A strong showing in 2010 – supported largely by Western government bailouts of large investment firms – was followed by contraction in developed countries and concerns over the survival of the Euro and the threat of the so-called "fiscal cliff" in the USA.

From 2012 onwards GDP growth in developed economies began to improve steadily, though not dramatically, while there were signs of a slow-down in Chinese growth, which brought down the overall GDP growth of emerging market and developing economies, as seen below. India's GDP growth, although slower in the 2013-2015 period, showed a steady improvement in contrast to this trend (IMF, 2012).

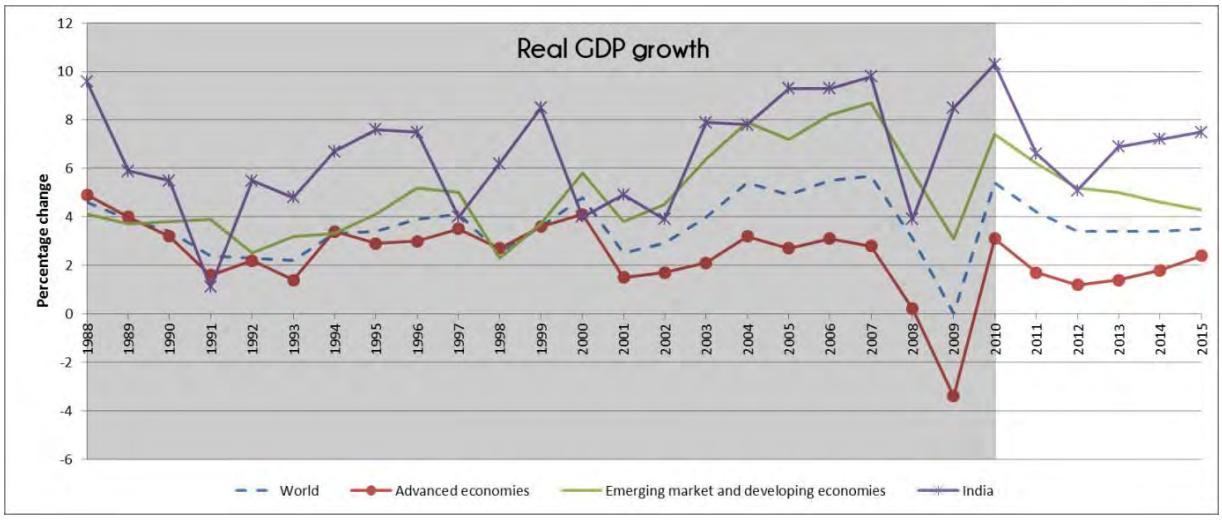


Figure 50: Real GDP Growth – annual percentage change
Source: April 2015 World Economic Outlook (IMF, 2015a)

By the second half of 2013 world trade and global financial activity had picked up; however, the recovery was still slow and uneven, with advanced economies still lingering in the shadow cast by the 2008/9 crisis, and emerging economies adjusting to lower rates of medium-term growth (IMF, 2014). While the projected global GDP growth for 2015 was slightly lower than the growth in 2014, the IMF forecasted a gradual acceleration in advanced economies based on improving fundamental economy drivers but a continued slowing of growth in the emerging economies (IMF, 2015b)

This phase includes the first few years of the Fast-start Finance (FSF) period. In the Copenhagen Accord developed countries pledged US$10 billion FSF a year from 2010 to 2012, to be allocated evenly between mitigation and adaptation (UNFCCC, 2010 decision 2/CP15, para. 8). By the end of 2012, developed countries were reported to have exceeded this target but the US$33 billion raised included grants, export credit and development finance, it was predominantly allocated to mitigation: the extent to which it was "new and additional" funding was unclear (Brown, Stadelmann & Hörnlein, 2011; Fransen & Nakhooda, 2012). Part of the problem of making precise calculations rests on the lack of clarity on what financial flows are included under the rubric of "climate finance": public and private investments, public framework expenditures, policy-induced revenues (e.g. generated by feed-in tariffs or carbon credits). This issue was even one of the key findings of the SCF's first biennial assessment (BA) and overview of climate-finance flows report in

2014. Given this uncertainty the BA estimated a range of financial flows from developed to developing countries of US$40-US$175 billion per year between 2010 and 2012 from public and private sources (UNFCCC Standing Committee on Finance, 2014). See appendix 9.7 for a useful illustration of climate finance included in the SCF's report.

Analysis by the Overseas Development Institute and the Heinrich Böll Stiftung places India among the top five recipients of multilateral FSF with US$ 588,6 million in pledges by 2015 (Overseas Development Institute & Heinrich Böll Stiftung, 2015). However, despite the call for even allocation, funding has been predominantly targeted at mitigation, as shown in Figure 51. In addition, Figure 52 indicates that the majority of the funding was actually in the form of concessional loans (Overseas Development Institute, 2014) and not direct resource transfers.

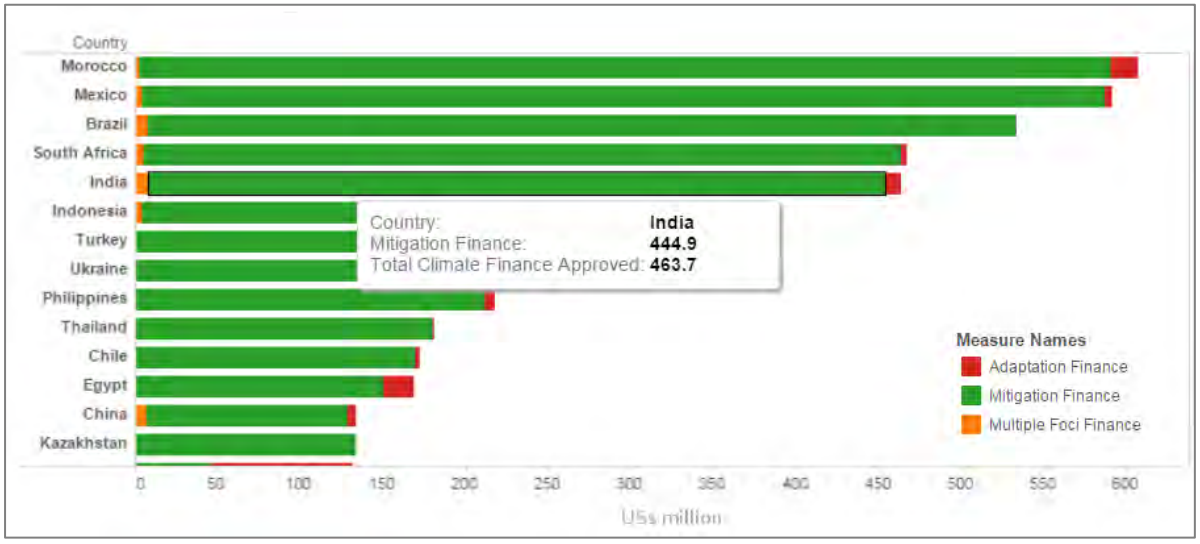


Figure 51: Fast-start Finance by aim (mitigation or adaptation)
Source: Overseas Development Institute (2014)

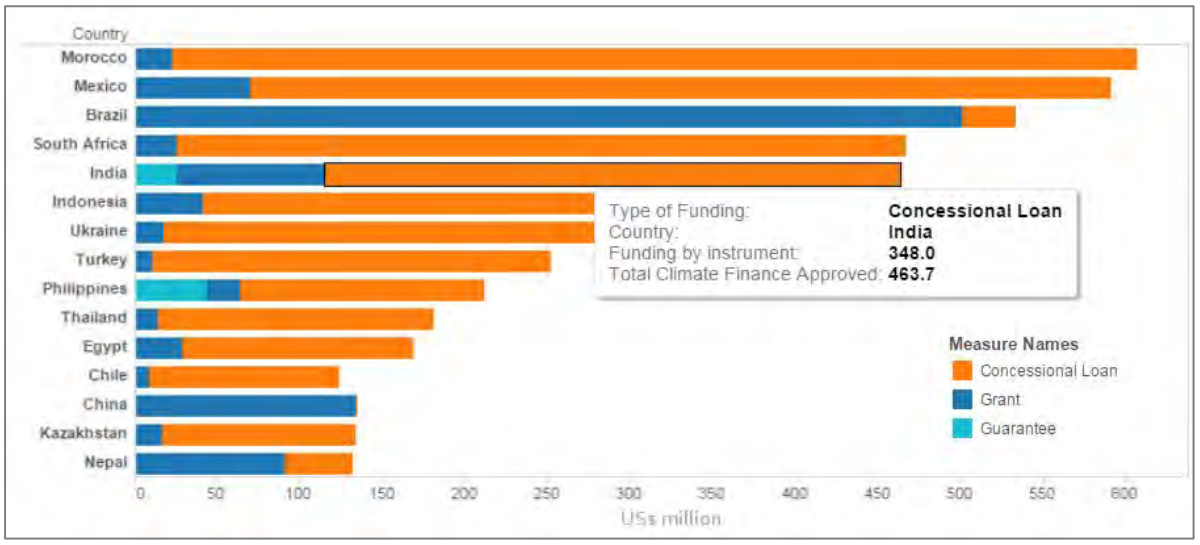


Figure 52: Fast-start Finance by disbursement type
Source: Overseas Development Institute (2014)

Of the US$34,688 pledged to 25 multilateral funds by the end of June 2015, only US$ 16, 809 million had been deposited and only US$2,586 million had actually been disbursed (Overseas Development Institute & Heinrich Böll Stiftung, 2015). A breakdown of these funds is in appendix 0.

In addition to raising FSF, developed countries committed to "a goal of mobilizing jointly US$ 100 billion dollars a year by 2020 to address the needs of developing countries" (UNFCCC, 2010 decision 2/CP15, para. 8). FSF can be thought of as a litmus test of the developed countries' commitment to sharing the burden by raising the long term finance needed by developing countries to respond to climate change. While the focus in the first part of this phase was necessarily on the FSF, since 2013 there has been increasing concern on the part of developing countries at the lack of progress in mobilising the longer-term finance. With the agreement of the second commitment period at Doha in 2012, the continuation of the CDM was assured until 2020. The CDM has been an important source of climate-related finance for India as it ranks second only to China in terms of Certified Emission Reductions (CERs) issued – 12.8% of total – and therefore revenue generated (Fenhann, 2015) through the mechanism. This revenue was especially important in light of the slowing of the Indian economy which is discussed next.

7.2.2 Material capabilities in India

The graph below in Figure 53 shows the after-effects of the global recession on the Indian economy. While GDP growth had recovered to pre-recession highs in 2009 and 2010, the next two years saw a slowing of Indian GDP growth down to the near recession level of 4.7% in 2012 with a slight improvement the following year. These slow years certainly contributed to the failure of the Congress Party to win over the population in the 2014 election.

Figure 53: India's GDP growth 2011-2013
Source: Own graph based on data from World Development Indicators, World Bank (2015)

The Planning Commission attributed some of the continued "sluggishness" in the Indian economy to the general slow-down of the world economy since the 2008 financial crisis and prevailing global economic uncertainty. In addition it pointed to domestic-level issues of "coalition politics, lack of consensus, and poor coordination" as contributing to the slower growth rates (Planning Commission, 2012b). Despite the GDP fluctuations, India's performance on the Human Development Index continued to close the gap with the regional average – by 2013 India's HDI score of 0.586 was almost equivalent to the low South Asia regional average of 0.588.

At a day-to-day level the material circumstances of Indians were improving, albeit at a slow but steady pace. While the 2011 census indicated an increase in the percentage of Indians with access to sanitation facilities, even so only 36% of Indians had access to a "water closet" and over half the population had no latrine access at all. In addition nearly half the population in 2011 still lived without any drainage facilities whatsoever (Ministry of Home Affairs, 2001). 2011 census data also indicated that although nearly 47% of Indians had access to water within their homes, the remaining 53% of people having access to water either near the premises or at some distance from it. This figure of 47% was an improvement on the 39% with on-premises access reported in the 2001 census, but was likely an indication of a decrease in the number of people with access near the premises rather than a decrease in the number of people having to travel some distance in order to get water. It should, however, be noted that given India's vast population, small changes in percentages actually indicate improvements to the lives of millions of people; for instance, the 6.3% increase between 2001 and 2011 meant that borewell access was provided to approximately 35 million people (Ministry of Home Affairs, 2001, 2011). Between 2001 and 2011 almost 12% more people gained access to electricity in their homes (from 55.8% 67.2%). Most of this increase was in the rural areas, in the form of electrification. Solar energy, for instance, increased nearly three-fold in the rural areas in the period, but even so accounted for only 0.4% of the total by 2011 (Ministry of Home Affairs, 2001, 2011) despite India's good potential for wind and solar.

India has considerable coal resources which are found predominantly in the North-East of the country. Even so domestic demand has outstripped domestic supply since at least 2008 and shows no sign of declining. Domestic demand for coal during the 12th FYP (2012-2017) is projected to outweigh domestic supply by approximately 20% (Garg, Naswa & Shukla, 2014) - the difference is met by imports which puts India increasingly at odds with China on the international commodities markets. Notwithstanding India's Solar Mission targets and potential for wind energy, coal remains a cheap, relatively abundant and accessible source of energy with which to power the growth that

would propel millions of Indians who are on the "cusp of prosperity" out of poverty (Saran & Jones, 2015).

In addition to international demands on coal resources as a possible source of tension, India has no oil or gas reserves and thus India's reliance on external oil continued to grow (IEA, 2015; World Bank, 2015). By 2015 over 80% of India's oil demand was being met by imports underlining India's energy security concerns. Even future energy demand modelled using the constraints of deep decarbonisation measures showed continued increases in imports of oil and gas, thus India's energy security concerns are unlikely to abate in the near or long term (Shukla et al., 2015: 32).

Fossil fuels continued to dominate the overall energy mix at over 70% whereas renewable and nuclear energy remained below 5% of the total. To unpack this last figure a little, the Finance Ministry's 2014-2015 Economic Survey reported that as of 31 December 2014 India's total installed capacity of renewable power had reached 33.8 GW. The majority of this capacity – 66% – was in wind power (despite the absence of a Wind Mission under the NAPCC of 2008) followed by biomass, small hydro power, and solar power, which in 2013-2014 had an estimated installed capacity of 2647 MW (Finance Ministry, 2015, para. 8.15). India is thus following a well worn fossil-fueled path from poverty, via industrialisation, to a rise in per capita incomes and better standard of living (Saran & Jones, 2015).

Toward the end of the third phase (2010) the Indian government had created an institutional requirement by levying a cess on coal. In the 2014-2015 budget the cess was doubled from Rs50 to Rs100 per tonne and used to capitalise the National Clean Energy Fund (NCEF). In total (up to the 2014-15 budget preparation) the cess had collected a (budget estimated) amount of Rs17,084.45 crore used to provide funding for 46 clean energy projects worth Rs16,511.43 crore in the period from 2011 up to September 2014 (Finance Ministry, 2015, para. 8.15). The steady increase in the number of projects under the National Clean Energy Fund indicated the success of this particular combination of institutional arrangement and material resources. Despite India's continued reliance on fossil fuels, the emissions intensity of India's GDP continued to decrease (improve), showing that energy efficiency measures were paying dividends (World Resources Institute, 2015).

Under Modi, material resources for climate change and environmental projects have suffered mixed fortunes. In the first budget in 2014 the new BJP government set up a National Adaptation Fund (NAF) – ostensibly because, according to Finance Minister Arun Jaitley, "[c]limate change is a reality which all of us have to face together. Agriculture as an activity is most prone to the vagaries of climate change" (Yeo, 2014). The establishment of the NAF therefore acknowledges both the

science of climate change impacts on India (as per AR4, AR5 and the INCCA's 4x4 assessment among others) and the continued importance of agriculture to the Indian economy. This budget also announced funding to establish "ultra mega solar power projects" in Rajasthan, Gujarat, Tamil Nadu and Laddakh. However, the finance minister also announced measures to enhance coal production and exploit old petroleum and natural gas wells – unsurprising given the 12th FYP projections in relation to domestic energy demand (Planning Commission, 2012a; Yeo, 2014).

The 2015/6 budget struck slightly discordant notes. While environmentalists called it "destruction-oriented" after Jaitley reduced the MOEFCC's budget allocation from Rs 2,043 crore (US$ 378 million) in 2014-15 to Rs 1,681 crore ($300m), the coal cess was doubled to Rs 200 per metric tonne in order to fund India's ambitious green-energy plans, including plans to generate 100 GW of solar, 60,000 MW wind, 10,000 MW biomass and 5000 MW small hydro by 2022 (Pandey, 2015).

7.3 Institutional arrangements

According to Cox, institutions are an amalgam of ideas and material power (Cox, 1981); thus in India we see the idea of low carbon growth being "fleshed out" through the work of the Expert Group on Low Carbon Strategies for Inclusive Growth and also in the 12th five-year plan. In the climate regime there is some movement on the key elements of finance and technology.

7.3.1 Institutional arrangements internationally

After the failure to fulfil the Bali Mandate in 2009 at Copenhagen and with the end of the Kyoto Protocol's first commitment period looming in 2012, there was immense pressure to reach an agreement in 2011 when the Conference of the Parties convened in Durban, South Africa. The ensuing compromises resulted in institutions that continue to reflect the erosion of the idea of differentiation.

7.3.1.1 Kyoto Protocol – second commitment period

In Durban the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol (CMP) decided to extend the KP to a second commitment period beginning on 1 January 2013 and ending either on 31 December 2017 or 31 December 2020 (subject to further negotiation) (UNFCCC, 2012b: decision 1/CMP.7 para. 1). Despite this, Canada, Japan and Russia stated that they would not take on further Kyoto targets and the Canadian government gave written notice of Canada's withdrawal from the Kyoto Protocol (UNFCCC, 2012c). From the point of view of developing countries, the continuation of the KP – the only legally binding agreement on emissions – was

essential to defending their interests and increasing the level of ambition of emissions pledges of developed countries. Another key concern related to the lack of clarity surrounding the continuation of the KP's flexible mechanisms: CDM and JI after 2012 (IISD, 2011). This extension was formalised at Doha when the necessary amendments to the Kyoto Protocol were agreed upon, thus enabling the second commitment period to officially operate between 1 January 2013 and 31 December 2020 (UNFCCC, 2013b: decision 1/CMP.8 para.4) and also allowing the flexible mechanisms to continue operating uninterrupted for those countries that took on targets in the second commitment period (UNFCCC, 2013b: decision 1/CMP.8 section IV). While the extension of the KP was politically important, it was – as one commentator put it – a pyrrhic victory (Ryan, 2012) given that countries with reduction targets in the second commitment period together emitted less than 25% of the global total of GHG emissions.

In Doha the work of the AWG-KP was concluded (UNFCCC, 2013b: decision 1/CMP.8 para.30) as was the work of the AWG-LCA (UNFCCC, 2012a: decision 1/CP.17 para.1). This meant that from 2013 onward all efforts could be focused on the ongoing ADP negotiations toward "a protocol, another legal instrument or an agreed outcome with legal force" that would be "applicable to all" (UNFCCC, 2012a: decision 1/CP.17 para.2).

7.3.1.2 ADP negotiations - the road to the Paris Agreement

The Durban Platform negotiations heralded an increasing move toward symmetry of obligations and responses between developed and developing countries by calling for "the widest possible cooperation by all countries" (decision 1/CP.17,) and by stipulating that the outcome of the negotiations would be "applicable to all parties" (decision 1/CP.17, para. 2) (Bodansky, 2012).

In May 2012 the ADP had convened for its first session and decided to initiate two workstreams to facilitate the negotiations. Workstream 1 would address matters related to the 2015 agreement (UNFCCC, 2012a: decision 1/CP.17 paras.2-6) and workstream 2 would address those related to increasing emissions-reduction ambition in the pre-2020 period (UNFCCC, 2012a: decision 1/CP.17 paras.7-8). During 2012 and 2013, governments were invited to submit their positions on both workstreams as mandated in paragraphs 5 and 7 of the ADP decision (UNFCCC, 2012a: decision 1/CP.17). The Doha decision on advancing the Durban Platform encouraged the ADP to consider draft text proposals submitted by COP20 (2014) in order to make the draft negotiating text available before May 2015 (UNFCCC, 2013a: decision 2/CP.18 para.9). Much like the lead-up to the Copenhagen COP, the lead-up to COP21 in Paris has seen an increase in the number of meetings convened, signalling the importance of this next step in the evolution of the regime (see Table 10 in Appendix 9.5).

7.3.1.3 Evolution of the Financial Mechanism

The COP at Durban also formally launched the Green Climate Fund, officially designating it as an operating entity of the financial mechanism (UNFCCC, 2012a: decision 3/CP.17), with further arrangements regarding its operationalisation to be undertaken and concluded at COP18 (IISD, 2011). At this point the financial mechanism could be depicted as in Figure 54.

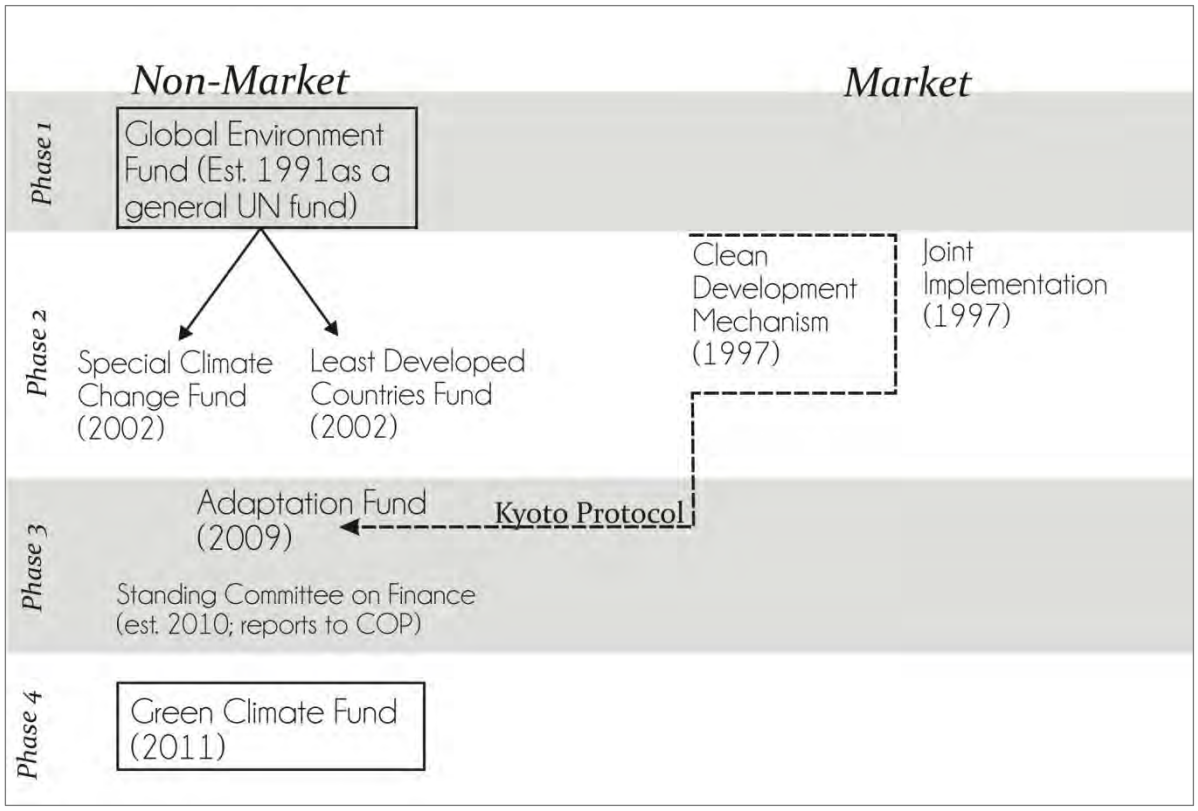


Figure 54: Overview of the UNFCCC finance mechanism and the Kyoto Protocol flexible mechanisms

Two years after the finance pledges made at Copenhagen it was deemed necessary to establish a "work programme on long-term finance" to make progress toward mobilising climate finance from a wide variety of sources after 2012 (UNFCCC, 2012a: decision 1/CP.17 paras.127, 130). In Doha in 2012 the COP endorsed the selection of Sondgo, South Korea as the host city for the GCF with the anticipation that activities would thus begin in 2013. The problem was that Copenhagen's promised Fast-start financing was only for the years 2010-2012. Thus the COP encouraged developed country parties to make efforts to at least match that level of financing in the 2013-2015 period (UNFCCC, 2013a: decision 1/CP.18, para.68) while also providing (by COP19) information regarding their plans to help mobilise finance of US$ 100 billion per year by 2020 (UNFCCC, 2013a: decision 1/CP.18, para.67). Talks on long-term finance at COP19 in Warsaw, however, failed to provide clarity or certainty, but did expose the trust deficit developing countries felt towards developed countries. In the context of a 7.1% *decrease* in "climate finance pledged through multilateral funds" in the preceding year and the paltry capitalisation of the GCF at the time (only US$6.9 million donated by

ten countries), many developing countries seemed justifiably sceptical of the promises of the mobilisation of US$100 billion a year by 2020 (IISD, 2013). In the end the Warsaw COP only produced a commitment to continue talks on financing under the Long Term Finance Work Programme established at COP17.

During the second week of the Lima COP, contributions to the Green Climate Fund passed the US$10 billion mark, providing much-needed assurance to developing countries that funds would be made available and enabling the GCF to begin committing resources (Morgan et al., 2014). At the negotiation table, however, discussions under the the Long Term Finance Work Programme were not extended, leaving only text urging developed countries to provide finance in the Lima Call For Action (UNFCCC, 2015c: decision 1/CP.20, para. 4). In addition, no institutional structures were put in place to guide how developed countries might achieve the Copenhagen goal of mobilising US$100 billion by 2020, beyond requiring these countries to "enhance the available quantitative and qualitative elements of a pathway" in their biennial submissions on scaling up climate finance (UNFCCC, 2015d: decision 5/CP.20, para. 10).

Despite intense lobbying by developing countries for more specificity in relation to finance, the final text of the Paris Agreement only stipulates that "developed country Parties should continue to take the lead in mobilizing climate finance" and that these efforts "should represent a progression beyond previous efforts" (UNFCCC, 2016: Article 9.3). During the negotiations specifics were moved from the Agreement to the accompanying COP decision text (Rajamani, 2016). This prompted some critics to point to the lack of detail in the Agreement in relation to finance as a bad trade-off for developing countries. Reporting from Paris, India's CSE staff blog captured this sense of unfairness succinctly: "Developing countries have got "words" and promise of money while developed countries have finally got rid of their historical responsibility of causing climate change. They have no legally binding targets on finance or emissions cuts" (Down to Earth, 2015).

Notably the PA does not grapple with the long-vexing issue of defining what constitutes climate finance - rather the COP decision calls for development of modalities for accounting and reporting climate finance for consideration (not adoption) in November 2018 (UNFCCC, 2016: decision 1/CP.21, para.57) Nor does the PA include the words "new and additional" in relation to finance despite the long-held (see Article 11 of the Kyoto Protocol) concerns amongst developing countries that existing ODA funds might be re-labelled as climate funds (Roberts, 2015). In a move toward more symmetry in relation to provision of finance, all countries agreed to contribute to financing: developed countries "shall" provide whereas "other Parites" (presumably developing countries) were "encouraged" to voluntarily contribute (UNFCCC, 2016: Article 9.1 & 9.2). In addition both

developing and developed countries are to provide indicative information related to finance - although this is mandatory for developed countries and merely recommended for developing countries (UNFCCC, 2016: Article 9.5). Whilst the PA has explicitly expanded the pool of potential donors to include developing countries, overall the finance provisions tack relatively closely to the differentiation of the FCCC (Rajamani, 2016).

7.3.1.4 Technology triumphs and troubles

The Technology Mechanism – consisting of a Technology Executive Committee (TEC) and a Climate Technology Centre and Network (CTCN) – had been established at the Cancun COP in 2010 in order to enhance action on technology development and technology transfer. During 2011 the TEC had developed modalities and rules of procedure that were then adopted by the Durban COP (IISD, 2011). More progress was made during 2012 such that by the Doha COP a UNEP-led consortium could be confirmed as the host of the Climate Technology Center (CTC) for an initial five-year period (UNFCCC, 2013c: decision 14/CP.18 para.1-2) and an advisory board established (UNFCCC, 2013c: decision 14/CP.18 para.5) – a graphical representation of the Technology Mechanism is in

Figure 55 below.

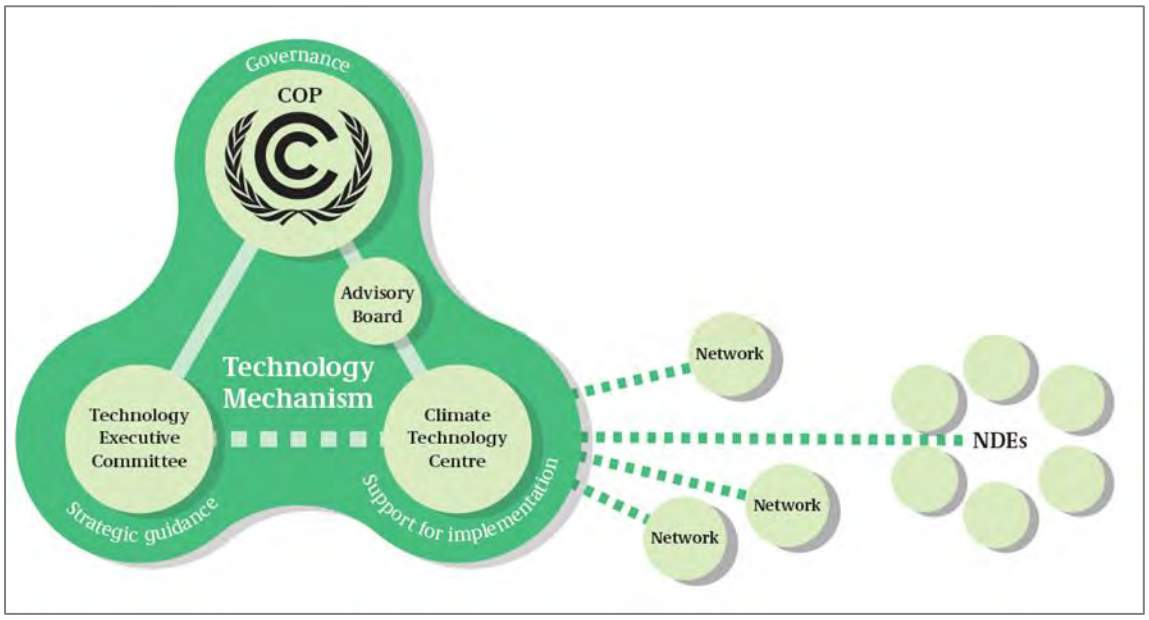


Figure 55: The Technology Mechanism of the UNFCCC
Source: UNFCCC (2015b)

Discussions at the Durban COP concerned the nature of the link between the TEC and CTCN, the Technology Mechanism and the Financial Mechanism and, crucially, the TEC's consideration of matters related to IPRs – a topic favoured by developing countries, but not developed countries (IISD, 2012). Little progress was made on technology-related issues at Warsaw as the joint session of the SBI and SBSTA could not reach consensus on the joint annual report of the TEC and CTCN

and therefore did not forward any decisions to the COP (IISD, 2013). In Lima there was no progress on the important issue of the link between the Technology Mechanism and the Financial Mechanism and thus this was forwarded to COP21 for decision instead (IISD, 2014). Thus the promising progress of the Technology Mechanism in the beginning of this phase slowed significantly as the 2015 agreement deadline loomed.

The 2015 Paris Agreement adopted the Tech Mechanism established under the FCCC (UNFCCC, 2016: Article 10.3) and stipulated that assessment of efforts related to technology development and transfer would form part of the global stocktake (UNFCCC, 2016: Article 10.6). Furthermore, a technology framework was established by th e Paris Agreement to "provide overarching guidance to the work of the Technology Mechanism" (UNFCCC, 2016: Article 10.4) .

7.3.1.5 The Global Stocktake in the Paris Agreement

One of the key features of the Paris Agreement is the global stocktake to "assess the collective progress towards achieving the purpose of this Agreement and its long-term goals" (UNFCCC, 2016: Article 14). This was deemed necessary given the acknowledged inadequacy of the INDCs in lowering emissions in line with what 2 degrees requires[41] (UNFCCC, 2015e). The global stocktake process is intended to provide information to Parties in order to update and and enhance both nationally determined actions and provision of support (UNFCCC, 2016: Article 14.3).

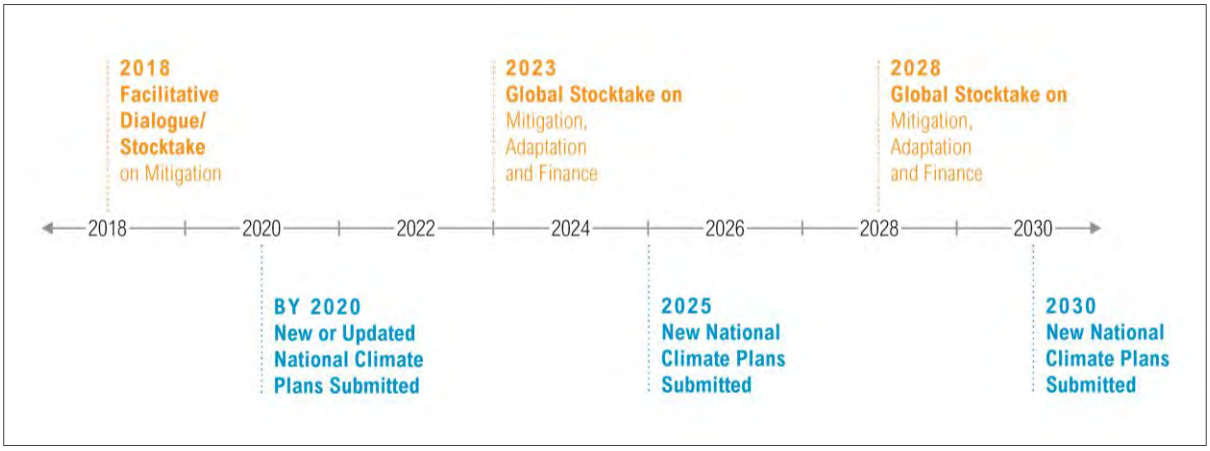


Figure 56: Timeline of global stocktaking in the Paris Agreement
Source: World Resources Institute in Northrop (2015)

The hype surrounding the agreement of a so-called 'ambition mechanism' (Northrop, 2015) notwithstanding, the first serious review of the adequacy of the cumulative mitigation commitments is only scheduled for the global stocktake in 2023 (Figure 56) see - far too late to make meaningful corrections (Jayaraman & Kanitkar, 2016). In relation to mitigation, all parties are bound to pursue their NDCs "with the aim of achieving the objectives of such contributions" (UNFCCC, 2016: Article 4.2), but in order to assuage the concerns of the USA in relation to

[41] "The estimated aggregate annual global emission levels resulting from the implementation of the INDCs do not fall within least-cost 2 °C scenarios by 2025 and 2030." (UNFCCC, 2015e, para. 39)

undertaking 'commitments', the obligation is to the effort or the pursuit, not the achievement of the goal (Raman, 2016). This, and the lapse of time, is highly problematic in the context of an Agreement that effectively "ignores the imperatives of climate science" in relation to limiting cumulative emissions (Jayaraman & Kanitkar, 2016). Institutional arrangements in India

For the majority of this fourth phase the government was led by PM Manmohan Singh, but in May 2014 the Indian Congress Party was soundly voted out and Narendra Modi was swept into office as the leader of the BJP-led National Democratic Alliance (NDA) of 29 Parties. The BJP itself won a majority seats in the Lok Sabha, but remained part of the NDA (NDTV, 2014).

The institutional arrangements within India are an indication of how India sought to address climate change domestically in this phase. In 2011 the Planning Commission established the Expert Group on Low Carbon Strategies for Inclusive Growth with a mandate to "suggest low carbon pathways consistent with inclusive growth" (Planning Commission, 2014). The work of the Expert Group on Low Carbon Strategies for Inclusive Growth (LCEG) was intended to add a necessary level of specificity to the NAPCC's long-term plans (da Costa, 2013). The group's recommendations were envisioned as inputs to the 12th Five-year Plan (Ministry of Environment and Forests, 2010) published in April 2012, but this proved to be overambitious as only the interim report – published in May 2011 – had been concluded in time; the Expert Group did, however, contribute to the Sustainable Development chapter of the 12th FYP (Planning Commission, 2014). The 12th FYP was published between the two LCEG reports and incorporated the emissions-intensity reduction announced before the Copenhagen COP into the planning process, as well as addressing targets for the NAPCC Missions (in particular the Solar and Energy Efficiency Missions).

Sectors examined in the interim report were the power, transport, industry, buildings (residential and commercial) and forestry sectors, as these were assessed to be India's most GHG intensive (Planning Commission, 2011). The interim report projected a range of GHG emission-intensity reductions for 2020 using 8 % and 9 % real GDP growth. The range incorporated two emissions reduction scenarios: the "Determined Effort" scenario, in which already planned policies were effectively implemented, and the "Aggressive Effort" scenario, in which new policies would be required (in addition to implementation of existing) that necessitated "significant deployment of new technologies, large amounts of additional finance and considerable innovation effort" (Planning Commission, 2011: 104). The caveats applied to the "Aggressive Effort" scenario echoed and emphasised India's stance at the climate regime level that developing country action would need to be supported by financial and technological support from developed countries.

Figure 57 below, however, shows that with "Determined Effort" (i.e. current policies) in circumstances of 8% real GDP growth, India would achieve the upper end of the 20%-25% emission-intensity reduction it had voluntarily pledged in the Copenhagen Accord.

Sl.	Growth Scenarios	2005 Emissions	2020 with 8% GDP Growth		2020 with 9% GDP Growth	
	Higher and Lower Ends of the Range		Determined Effort	Aggressive Effort	Determined Effort	Aggressive Effort
1	Emissions at 2005 Levels (MT CO_2-eq)	1,433	4,571	4,571	5,248	5,248
2	Actual and Projected Emissions (MT CO_2-eq.)	1,433	3,537	3,071	4,016	3,521
3	Emission Intensity (grams CO_2-eq/Rs. GDP)	56.21	42.47	36.87	42.79	37.51
4	Percentage Reduction in Emission Intensity	–	24.44%	34.40%	23.88%	33.27%

Figure 57: Projected emission intensity reduction over 2005 levels
Source: Table 4.2. in the Interim Report of The Expert Group On Low Carbon Strategies For Inclusive Growth (Planning Commission, 2011: 109)

International ideas pertaining to the need to address the problem of climate change had clearly become woven into the national level response, first as an idea (announced without modelling in the lead-up to Copenhagen) and then as a modelled scenario by a group of experts tasked by the Planning Commission.

India's 12th FYP was launched in April 2012 with the first volume (of three) focused on "Faster, More Inclusive and Sustainable Growth". As a fundamental tenet of sustainable development, a low-carbon strategy was framed as a way to achieve "inclusive growth in order to improve the sustainability of its growth process, while carbon mitigation will be an important co-benefit" (Planning Commission, 2012c: 117, 4.30). Indeed low carbon growth was identified as a "key pillar" in the 12th FYP timeframe and beyond (Ministry of Environment and Forests, 2012) indicating that the need for change had been embraced at the highest levels.

In relation to climate change, the 12th FYP is firmly grounded in the SD realist world view. It underlines the need for a global compact on burden sharing that recognises the historic responsibility of the developed nations and their greater capacity to pay for mitigation and adaptation (Planning Commission, 2012c, 1.42 & 7.78) while emphasising that India – given its vulnerability – could not afford to delay domestic action while waiting for an international agreement to be concluded (Planning Commission, 2012c:9, 1.43). It does, however, go one step further by stating that "India's voluntary actions will hopefully lead other nations to reduce their emissions, and to arrive at an effective and just global agreement" (Planning Commission, 2012c:

223, 7.79). The following paragraphs highlight a selection of climate-related issues addressed in the Five-Year Plan: restructuring the NAPCC, financing, a carbon-price signal, as well as demand and supply-side energy initiatives.

The 12th FYP contains a section on climate change in the "Environment, Forestry and Wildlife" chapter, in addition to weaving the various climate-related initiatives throughout the plan. An important emphasis of this section is a vulnerability and adaptation assessment in the agriculture, coastal areas, forests, health, infrastructure, industry, water sectors (Planning Commission, 2012c, 7.84-7.102). Despite the fact that several of the NAPCC's missions were not yet operational, the 12th FYP suggested some reorganisation of the missions to reflect updated priorities - creating a National Wind Energy Mission for example (Planning Commission, 2012b: 229) and set out objectives that were fundamentally cross-sectoral "policy thrust areas" monitored by the PM's Council on Climate Change (Planning Commission, 2012c, 7.112-7.114).

A key focus of the climate change section is on the need for financing both adaptation and mitigation; while some domestic funding would be filtered through work programmes of the ministries, the availability thereof for mitigation co-benefits would be circumscribed by the overall availability of resources (Planning Commission, 2012c: 231, 7.125). Other sources of domestic funding alluded to were the National Clean Energy Fund (NECF) and extra-budgetary resources of public enterprises (like the Railways). Reiterating a point made in the interim report of the Expert Group on Low Carbon Strategies, the plan pointed to the unavoidable necessity of sourcing international support in the form of financial and technological assistance for aggressive mitigation initiatives (Planning Commission, 2012c: 232, 7.129).

In the 12th plan, the 20%-25% energy intensity reduction had become one of the "monitorable targets" (Planning Commission, 2012c: 209, box 7.3) signalling serious intent. As part of its efforts to reduce energy intensity, India was experimenting with both a cap-and-trade scheme and a carbon tax. Both these mechanisms create a carbon-price signal: the first by limiting the aggregate amount of emissions and allowing the price of CO_2 emissions to adjust accordingly; the second by setting a price on carbon and allowing the market to respond by adjusting the level of emissions to the level it can afford given the price (Planning Commission, 2012c: 127, 4.80). The first three-year cycle of the energy intensity cap-and-trade scheme under the NMEEE's PAT scheme would run from 2012 to 2015 and cover industries accounting for 54% of the total commercial energy consumed in the country (Planning Commission, 2012c: 125, 4.73-78). The carbon tax was in the form of the coal cess of Rs 50 per tonne (at the time of the 12th FYP's publication), which funded the National Clean Energy Fund (NCEF).

A focus of the 12th FYP was on increasing access to cleaner forms of energy at household level (Planning Commission, 2012a: 130, 14.3); this was to be expected in light of the 2011 census figures, which revealed that two-thirds of the population (67.3%) still used either fire-wood or crop residue for cooking purposes despite the well documented health-risks (Ministry of Home Affairs, 2011) and the more recent estimate that 75% of households were electrified as at 31 March 2012. The intermittent and irregular supply of electricity particularly affected rural areas where per capita electricity consumption was reported to be as low as 8 units per month in contrast the 24 units per month reported in urban areas (Planning Commission, 2012a: 131, 14.7).

Two major considerations informed the push on renewable energy for domestic energy production. Primarily this was driven by the need to reduce import dependence and make India's energy security position more robust. The 12th FYP projected that imported crude oil would make up 78% of the supply by 2017 and that coal imports would have increased from 18.8% in 2011 to 22.4% by 2017 despite increases in local production (Planning Commission, 2012a: 133, 14.14). Only of secondary consideration was the need to move away from the high reliance on fossil fuel based energy sources in view of climate change (Planning Commission, 2012a: 182, 14.185). The NAPCC had envisaged more than doubling the installed capacity of renewable energy in the 12th plan period from 25 000 MW to 52 000 MW or 12% of the energy mix by 2016-17 (Planning Commission, 2012a: 187, 14.198), of which 15 000 MW was envisaged to come from wind, 10 000 MW from solar and 5 000 MW from other renewable sources (Planning Commission, 2012a: 187, 14.200). Despite this impressive push, however, the actual picture of India's energy supply (and therefore possible consumption) continued to be dominated by fossil fuel sources as clearly seen in Figure 58 below.

(in percentage)

	2000–01 Actual	2006–07 Actual	2011–12 (Provisional)	2016–17 (Projected)	2021–22 (Projected)
Share in Commercial Energy Production					
Coal and Lignite	66.38	70.65	68.53	67.52	66.82
Crude Oil	16.18	12.91	11.55	8.87	6.70
Natural Gas	12.14	10.52	12.60	15.80	16.04
Hydro Power	3.10	3.71	3.30	2.68	2.65
Nuclear Power	2.14	1.86	2.48	3.52	4.67
Renewable Energy	0.06	0.33	1.55	2.23	3.12
Share in Total Commercial Energy Supply					
Coal and Lignite	50.36	53.22	53.45	55.41	56.90
Crude Oil	37.45	33.41	31.51	26.04	23.29
Natural Gas	8.49	6.99	10.32	13.46	13.17
Hydro Power	2.17	2.53	2.17	1.79	1.73
Nuclear Power	1.49	1.24	1.57	2.26	2.95
Renewable Energy	0.04	0.22	0.98	1.43	1.97

Figure 58: Share of each fuel in total energy production and consumption
Source: Table 14.5, 12th Five Year Plan, Vol. II. Economic sectors (Planning Commission, 2012a: 134).

The 12th FYP noted that there was little change in the volume of coal and lignite produced domestically as a percentage of commercial energy between 2000/2001 and the figure projected for 2021/22. In fact the consumption of coal and lignite was projected to actually increase from 50% to 57% as a percentage of total commercial energy consumed in the same period (Planning Commission, 2012a: 132, 14.12). Evidently, when starting from an extremely low base, even a doubling of renewable energy capacity (as indicated by the plan) would be insufficient to produce a significant change in India's energy mix.

The National Mission for Enhanced Energy Efficiency (NMEEE) envisaged four types of schemes. The Perform Achieve and Trade (PAT) scheme – a market based energy efficiency mechanism – anticipated an energy saving of 3.5 million tons of oil equivalent (mtoe) in the seven industrial sectors covered and 3.1 million tons of oil equivalents in thermal power stations by 2014–15. The 12th plan did not provide operational detail on the other schemes (Planning Commission, 2012a: 157, 14.95). The PAT scheme was launched with 478 participating industrial units in July 2012 (Ministry of Power, 2012).

Much as the NMEEE had built on the work of the Bureau of Energy Efficiency as mandated by the Energy Conservation Act of 2001, the National Mission for a Green India (also known as the Greening India Mission/GIM) was to build on the work of the National Afforestation Programme (NAP) when it became operational in 2012/2013. The objective of the GIM would likely be to double the existing reforestation and afforestation efforts to 2 million ha of forest and tree cover annually (Planning Commission, 2012c: 138, 4.128). GIM was designed to enhance carbon sequestration and storage as well as other vital ecosystem services like water retention and biodiversity, and the provision of fuel, fodder and timber for rural communities (Planning Commission, 2012c: 220, 7.73).

The final report of the Expert Group on Low Carbon Inclusive Growth was published in April 2014 and makes a strong case for the culpability of Annex I or developing countries in the creation of anthropogenic climate change by pointing to India's still-low per capita CO_2 emissions (1.41 MT CO_2 / capita in 2010) and the 70% contribution of cumulative emissions by the Annex I countries between 1850 and 2010 (Planning Commission, 2014). Evidently the ideas surrounding differentiation were still salient and alive within the Indian hierarchy.

In May 2014, as mentioned above and show on Figure 49 above, Narendra Modi of the BJP became PM. A few months later, in August 2014, during his inaugural Independence Day speech in New Delhi, he announced that the 64-year-old Planning Commission would be disbanded and replaced

with another body undetermined at that point (Reuters, 2014). The Planning Commission was created by India's first PM, Jawaharlal Nehru, in 1950 – imitating a key cog of the centrally planned economy of the then-USSR – as an institution to plan the development of the largely agrarian Indian economy (Reuters, 2014). Over time, however, the Planning Commission had been accused of becoming bloated and increasingly out of touch with the realities of a growing, liberalised Indian economy (Press Trust of India, 2012; Chattopadhyay, 2014; Reuters, 2014).

On the 1st of January 2015 the Indian Cabinet endorsed the formation of the National Institution for Transforming India (NITI) Aayog, an "institution [that] will serve as [the] 'Think Tank' of the Government – a directional and policy dynamo" (Cabinet of India, 2015a). It was designed to be more state-focused and inclusive than the Policy Commission had become by including all Chief Ministers (of States) and Lieutenant-Governors (of Union Territories) as members of the governing council (Cabinet of India, 2015a). The first meeting of the governing council was held in February 2015 (Prime Minister's Office, 2015b). Despite reports that the 12th Five-year Plan would be abandoned and its projects discontinued (Reuters, 2014), and given that the plan period had already begun when the Planning Commission was disbanded, the Modi government announced that the plan would go ahead and that the newly established Niti Aayog would undertake the usual mid-term appraisal instead (Kumar, 2015; Press Information Bureau, 2015).

Other institutional changes wrought by the new government included the reconstitution of the Prime Minister's Council on Climate Change (PMCCC) in November 2014 (Prime Minister's Office, 2015c) only a few weeks before COP20 in Lima, Peru. The PMCCC, which was originally formed under the Congress government of Manmohan Singh, had not met in over three years. This 18-member panel met for the first time in January 2015 and included the ministers for external affairs, finance, environment, forests and climate change, water resources, agriculture, urban development, science and technology, as well as the ministers of state (junior ministers) for power, coal and new and renewable energy. Notable omissions were the ministers responsible for rural development and industry, and the previous panel's only industry representative (Economic Times Bureau, 2014), raising questions regarding the role industry in particular might play in India's future climate change response planning.

The PMCCC was tasked with developing a coordinated response to climate change related issues, providing oversight of the action plans and periodically monitoring key policies (Ministry of Environment and Forests, 2014). The need for high level oversight to reinvigorate the Missions was underlined by Minister of State for Environment, Forests and Climate Change Javedakar's admission to the Lok Sabha in March 2014 that progress on the Missions had been slower than

anticipated. In the four years since 2011 (when budgeting for the Missions began), just over 12% of the budget allocation had actually been spent (Press Trust of India, 2015). In addition the PMCCC was also mandated to explore the possibility of creating new missions deemed necessary in the light of updated (since the NAPCC in 2008) technological and economic data, the scientific findings of the IPCC's AR5 published in 2014 and the sluggish performance of many of the missions, indicating the influence of international ideas (the science) and national level capabilities on national level institutional arrangements. The mooted new missions included ones on wind energy (echoing the suggestion in the 12th FYP), health, waste-to-energy and India's vast coastal areas, as well as revisiting the design of the National Water Mission and National Mission on Sustainable Agriculture (Finance Ministry, 2015, para. 8.13). These changes have not yet come to fruition (as of September 2015), and, given the slow roll-out and implementation of the existing NAPCC missions, it seems unlikely that these changes would suddenly bring about accelerated implementation or drastically affect India's stance either domestically and internationally in relation to climate change.

One of the more successful of the NPCCC missions was the National Solar Mission: by the end of June 2015, the cumulative installed solar-power generation capacity was 4061.64 MW (Ministry of New and Renewable Energy, 2015b). In November 2014, PM Narendra Modi announced that India would increase the installed capacity of solar power to 100GW as part of the scale up of cumulative renewable energy to 170GW by 2022[42] (Finance Ministry, 2015, para. 8.15). This ambitious target has been reiterated at international events and in the 2015-2016 budget as part of the story of India's commitment to renewable energy (Finance Ministry, 2015; Ministry of New and Renewable Energy, 2015a), but as of March 2015 press reports indicated that the necessary inter-departmental arrangements to facilitate the increase had not been implemented. Of more concern, however, was that the 2015-2016 budgetary allocation to the Ministry of New and Renewable Energy (MNRE) was less than half of the amount the ministry had projected it would need to roll out the ambitious plan (Upadhyay, 2015) that was finally approved by the Union Cabinet in June 2015 (Cabinet of India, 2015b). The lack of material capabilities and resources indicates that the idea of a ramped-up solar rollout was out of step with the forces of material capability and institutional arrangements. This was especially apparent given the projections of a doubling in coal production to 1 billion (100 crore) tons by 2020 amid the Government's promise to provide "24 x 7 power to all households by 2019" (Ministry of Power, 2015).

[42] Some reports have this as 2020, in line with the start of the successor to the Kyoto Protocol currently being negotiated under the ADP; 2022, however, would have been the end of the 13th Five Year Plan period.

7.4 Configuration of forces and influences in phase four

This sub-section discusses how the forces in this phase are configured - how they interact and are aligned - in order to create an enabling or constraining environment for India.

The evolving international institutional arrangements look ever more to be redefining the ideas of equity and CBDR long cleaved to by India. Lines "B" in Figure 59 below indicate the competition between the contending collective ideas favouring symmetry and differentiation as these are expressed in the ADP process and the Paris Agreement. Whilst it is too soon to declare differentiation dead, it is certainly differently articulated and could be interpreted as muted by the Lima caveat of "in light of different national circumstances" (Rajamani, 2016). The Paris Agreement's application of differentiation is arguably a "distinct rather than derivative version of the principle" (Rajamani, 2016) which will demand of India a different way of engaging with the climate negotiations once the PA comes into force.

So far, in the pre-Paris context India seems to have retreated to its historic positions by forwarding formulaic definitions of differentiation and equity without proposing alternative conceptions (line "A"). While there has been some return to the rhetoric of the "growth-first realist" world view most prevalent before the Bali COP in 2007, there have also been signs of a new kind of business-like attitude towards energy efficiency and renewable energy that has also been reflected in the country's INDC and in recent efforts increase the solar energy production.

The Green Climate Fund was launched in this phase as a means to channel both Fast-start Finance and eventually the mobilised long-term finance of US$ 100 billion up to 2020 (line "C"). As discussed above the capitalisation of the GCF only passed US$10 billion during the Lima COP in 2014, well after the end of the FSF period. Lack of clarity persists in the delineation of climate finance in this phase, which results in a wide range – US$40 to US$175 billion – being estimated as the combined flows of public and private flows between 2010 and 2012. Nevertheless, this amount is dwarfed by both World Bank and IEA projections of requirements and by India's own projection of $2.5 trillion (at 2014-15 prices) required to fund its INDC up till 2030 (Government of India, 2015a).

In this phase India became one of the largest recipients of Fast-start Finance (2010-2012); however, most of this was in the form of concessional loans for mitigation, rather than support for the adaptation of which India had long been a campaigner (line "E"). The CDM was also assured of continuation after the Doha amendment in 2012, so India could continue to benefit from selling CERs up to 2020. Nevertheless, the revenues generated by these funds fell far short of requirements – especially in terms of adaptation – and thus India could be well justified in its continued calls for

differentiation in relation to the provision of finance, and its claims that the developed countries were not following through on the Copenhagen finance pledges (lines "D" and "E").

As clearly outlined above, India's domestic material capabilities still – more than 2 decades after the introduction of liberalisation – present a mixed and contradictory picture. The undeniable fact that it is an emerging economy with high GDP growth, and that its annual emissions since 2011 consistently place it third in the world after the China and the USA , should be weighed against the fact that it continues to face severe poverty, developmental challenges and high rates of internal inequality. While the Indian political elite under Congress seemed to grow comfortable with the cachet the "emerging power" status bestowed, the domestic constituency displayed its unhappiness with the lack of progress at the national level by voting in Narendra Modi and the BJP on a platform of "Sabka Saath, Sabka Vikas" or "Together with all, Development for all". This indicates the continued difficulty India has of "reconciling international expectations and domestic developmental priorities" amid often competing concerns and agendas (Raghunandan, 2012). The interplay of these factors is indicated by line "F" in Figure 59 below.

While the NAPCC is consistently touted as India's domestic institutional response to climate change, the missions have varied tremendously in both implementation and efficacy. Despite its growing economy India's continued developmental deficits have retarded the progress of some of the Missions (line "G"), while governance deficits have hampered others, leading to calls for changes to the Missions in 2014. The idea of low carbon growth gained traction in this period and led to the creation of the Expert Group on Low Carbon Strategies for Inclusive Growth (LCEG); it was also considered a key pillar in the 12th FYP (line "H"). Under Narendra Modi, there has been a renewed high-level institutional response in the form of the reconstituted PMCCC as India strives to be seen as a responsible global power (line "I") and the emphasis on low carbon growth seems to have shifted in the direction of the promotion of green technologies, although it is still too early to confirm this as a definite trend.

Both AR5 and the annual UNEP Gap Reports highlighted the escalating urgency of a concerted global emission reduction effort. In AR5 scientists concluded with high confidence that the emissions levels produced by the Cancún Pledges by 2020 were at least as likely as not to produce global mitigation trajectories inconsistent with limiting warming to below 2°C relative to pre-industrial levels (IPCC, 2014: 20, SPM 3.4). This could be interpreted in two ways - either as undermining the case for differentiation as applied to large developing countries, or as highlighting the need for developed countries to escalate their Cancun pledges in line with historical

responsibility and capability. The latter was an interpretation favoured by many in Indian civil society in particular and more broadly in developing countries. (line "J").

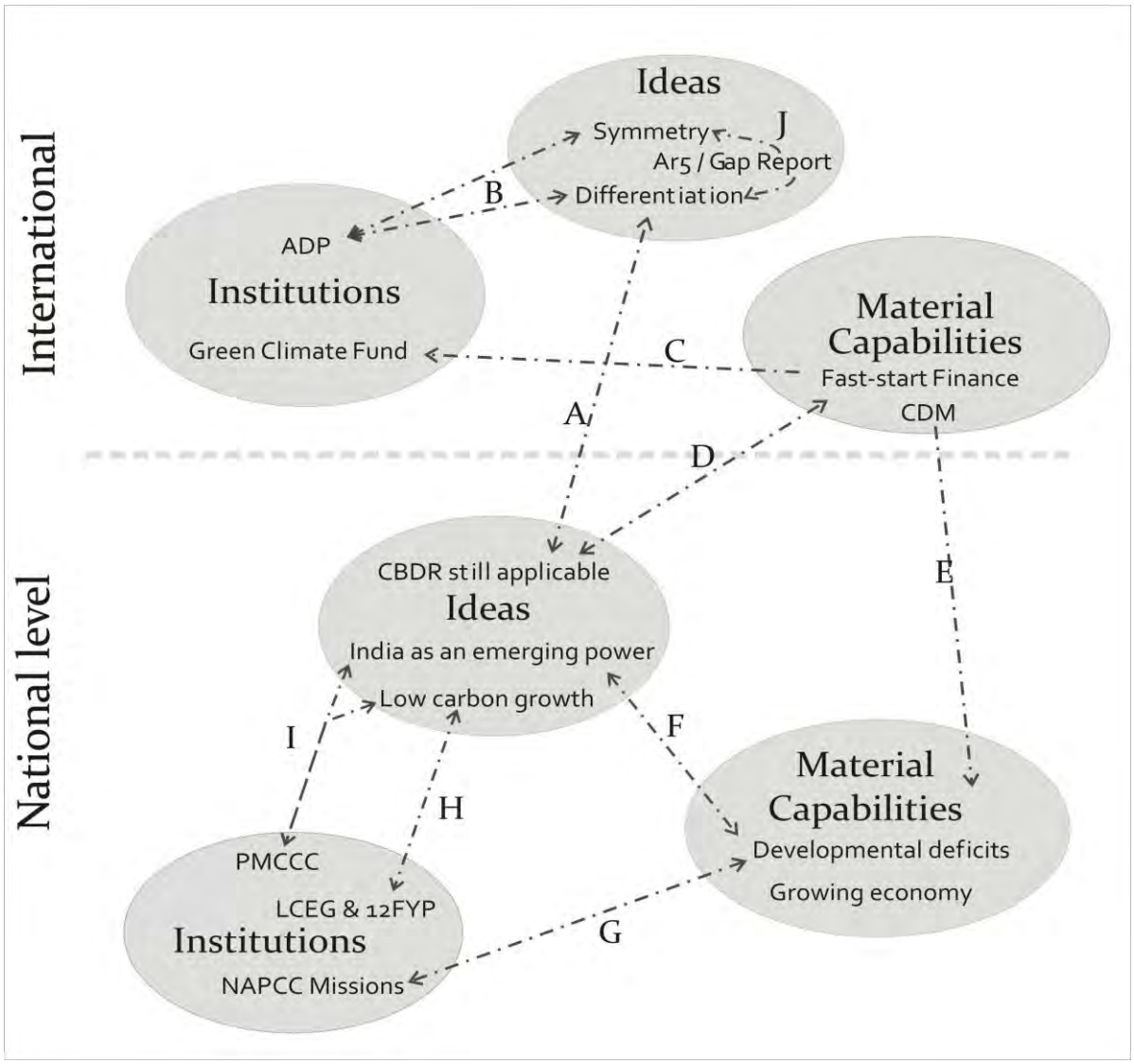


Figure 59: Visual representation of configuration of forces in phase 4.
Note: line indicates influence, arrow indicates directionality.

8 Conclusion

This dissertation set out to understand India's role in the climate change negotiations under the UNFCCC using the Critical International Relations Theory of Robert W. Cox. It explores the research question through a detailed qualitative case study informed by primary documentary data, interviews and participant observation. This concluding chapter begins with a brief summary of the findings of chapters four to seven, highlighting the dominant forces in the trilectic at work in each. Thereafter, in the section on differentiation, symmetry and hegemony, this chapter discusses the answers to the research question that have emerged during the research. It will conclude by outlining the contribution to the field of knowledge and identifying possible future research.

8.1 India in the audience: Pre-INC to FCCC (1988-1994)

During this first phase at the international level, the necessity of taking steps to address climate change shifted from being an idea held by a group of non-governmental scientists (group-specific idea held as a collective image) becoming instead an idea broadly shared by sovereign states, though still ill-defined. This led to the creation of both the Intergovernmental Panel on Climate Change and the Intergovernmental Negotiating Committee that negotiated the text of the UNFCCC. In as much as countries signalled their agreement by ratifying and thus becoming Parties to the Convention, the idea that climate change posed a threat to all could be construed as an intersubjective idea. As is often the case, however, the devil is in the details: the exact methods – the "how" – needed to operationalise the Convention's agreed objective were not specified in the INC negotiations and thus later became contending ideas of collective groups.

The overarching objective of the Convention was expressed as being "stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system" (United Nations, 1992: Article 2). As such it would appear that the objectives and concepts contained therein could be construed as intersubjective ideas – enduring and shared images of the way in which to respond to the climate change challenge (as seen in Figure 60 below). In as much as the Convention was ratified by 195 countries, the differentiation it contained appeared to have the widespread acceptance of an intersubjective idea. Despite contestation during the process of negotiating the FCCC, agreement on and the inclusion of concepts like differentiation in the form of CBDR & RC was reached to the extent that these concepts remained relatively undefined and for as long as they did not require operationalisation.

It is the contention of this dissertation that once the negotiations moved from the general to the specific, the intersubjective idea that "something must be done" was superseded by competing collective ideas of *how* this should be achieved. A fundamental disagreement emerged, which can be described as the difference between regimes organised to give expression to legal differentiation versus symmetry. This process is depicted in Figure 6o.

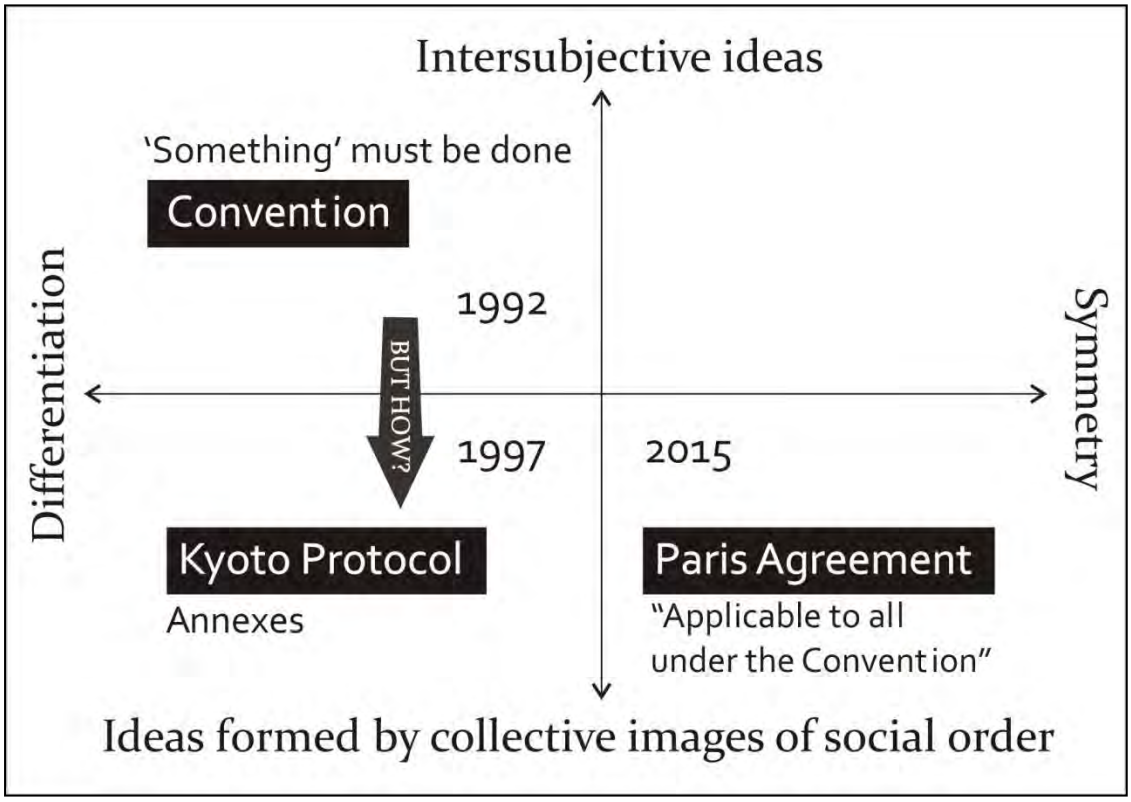


Figure 6o: Competing collective image ideas of implementation

Differentiation is the idea that is encapsulated by the concepts of common but differentiated responsibilities and respective capabilities (CBDR & RC). Proponents of CBDR & RC claim that differentiation among countries in terms of their responsibility to share the burden of addressing climate change is the basis of an equitable approach, with less emphasis placed on capability. Proponents of legal symmetry, on the other hand, propose that an equitable solution to burden-sharing is one in which all countries – regardless of stage of development – have commitments to reduce emissions.

India has been a vocal advocate of CBDR & RC since championing the idea during the INC negotiations of the Framework Convention. This stance stemmed from India's intersubjectively held belief at the national level that it should not be called upon to solve a problem it had not contributed to causing and did not have the available material capabilities to address. The combined influence of a lack of material resources and intersubjective ideas shaped its international position in favour of a differentiated regime. From the outset of the climate

negotiations, the Indian government has been a staunch supporter of the idea that developed countries – owing to their role in the creation of the problem and their greater capacity to divert resources to deal with it – should take the lead by reducing emissions and transferring financial and technological resources to developing countries so as to increase their capacity to deal with the effects of climate change. These sentiments are encoded in articles 4.2- 4.7 of the Convention (United Nations, 1992).

8.2 India in the wings: Berlin Mandate to Marrakech Accords (1995-2004)

Materially, the developmental challenge in India remained huge in this phase. Despite the more-or-less steadily increasing GDP and the efforts India was making to liberalise its economy, the low levels of development – as reflected in the 2001 census – meant that improvement started from a very low baseline. Furthermore the combination of poverty and rising urbanisation meant that much of the environmental focus in India at the time was on domestic issues like clean water and local air pollution. When combined with the intersubjective ideas that India was not a cause of the problem, this lack of material capabilities at the national level continued to have a constraining effect on India's ability and willingness to engage at the international level beyond calls for continued equity and differentiation and the transfer of technology, finance and capacity-building support to developing countries.

The Convention's primary objective of stabilizing GHG concentrations was to be operationalised through the legally binding, time-bound, quantified emission reduction targets of the Kyoto Protocol. The Protocol institutionalised differentiation through the use of the Annexes that ascribed roles and responsibilities to Parties; the list of Annex 1 countries largely overlapped with OECD membership at the time (in 1997). It made sense that India, as a still relatively poor developing country (albeit with a growing economy) and with a view that it had not contributed to the problem historically, would be firmly in favour of differentiation. This embedding of the differentiation through the Annexes of the Protocol was highly contentious – indeed the only extended COP session (COP6 bis[43]) was a result of Parties' inability to resolve differences related to the creation of detailed, specific rules with which to operationalise the Kyoto Protocol with its intrinsic differentiation. When it became clear that differentiation would be institutionalised and perpetuated in this manner, the USA, as the foremost proponent of symmetry between developed and developing country obligations, refused to ratify the

[43] Resumed sixth COP held in mid-2001.

Protocol or take on emission-reduction targets in the absence of targets for larger developing countries.

The nascent nature of the regime also meant that little by way of material capabilities was provided and institutionalisation was still minimal – allowing for little alignment of the forces within the historical structure. The institution-building that did take place at the international level focused on mitigation-related issues such as the creation of flexible mechanisms. These were not of as much interest to India as the intersubjective idea persisted within India that climate change was a creation of developed countries and therefore did not warrant a large-scale institutional response domestically. That said, at the behest of industry stakeholders within India, the advent of the flexible mechanisms did lead to a limited institutional response at the national level with the formation of the CDM Designated National Authority (DNA). By the 10th five-year plan (2002-2007) the Indian Government was actively positioning India to take advantage of perceived potential material benefits of the CDM. The establishment of the CDM DNA in India could be interpreted as an indication of the joint influences of the international institution and the potential for material resources therefrom on the creation of a national-level institution. It also signalled a slight shift in engagement with the international regime on the part of the Indian state although it was in keeping with its insistence that developing country action was contingent on developed country support as encapsulated in Article 4.7 of the Convention.

To the extent that it had remained unspecified in the Convention in the first phase, the idea of differentiation could be conceived of as having intersubjective meaning at international level. Once the Berlin Mandate started the process of specifying how emission reductions were to actually be achieved, i.e. *how* the differentiation in the FCCC was to be operationalised, the prominence of the initial intersubjective idea was lost and differentiation as the ordering concept of the regime was more actively contested by proponents of legal symmetry (a collective idea of a group). In this second phase, even though the institutional forces (in the form of the annexes of the KP) largely aligned with the idea of differentiation, the material capabilities at international regime level did not; thus the requisite alignment of all three social forces was absent and a differentiation-based hegemonic structure did not exist. In this instance the FCCC, far from being an "expression of hegemony" and therefore a means by which conflict could be regulated, became instead a site of conflict between proponents of contesting collective images of the way in which the regime should be ordered (Cox, 1981: 137).

Table 9 below outlines the forces aligned in favour of the concepts of differentiation and symmetry across the four phases.

Table 9: Alignment of forces throughout the phases
Note that "MC" is an abbreviation of "material capabilities".

		Forces aligned in favour of...	
		Differentiation	Symmetry
Phase 1 ('88-'94)	International level	▪ Intersubjective idea: some countries are both more responsible than others and more able to address climate change (CBDR & RC) ▪ Intersubjective idea: all should respond according to capacity (FCCC Art. 4.1)	▪ Intersubjective idea: climate change poses a threat to all and we need stabilization of greenhouse gas concentrations (FCCC Art. 2)
	National level (India)	▪ Intersubjective idea: we didn't create problem ▪ Intersubjective idea: developed countries should be first movers and resource providers ▪ MC: too poor to divert funds	
Phase 2 ('95-'04)	Inter-national level	▪ Institutions (KP's Annexes)	▪ Idea of a collective: US refusal to ratify KP
	National level (India)	▪ MC: development focus continues ▪ Intersubjective idea: we didn't create problem ▪ Intersubjective idea: developed countries should be first movers and resource providers	
Phase 3 ('05-'10)	Inter-national level	▪ MC: (insufficient) transfer of technology and finance despite Copenhagen finance pledges	▪ Idea of a collective: NAMAs and Copenhagen Accord pledges
	National level (India)	▪ Institutions: we create them because in own interest (NAPCC) ▪ Ideas of collectives: growth-first; SD realists and SD internationalists	▪ Copenhagen Accord pledge
Phase 4 ('11-'15)	International level	▪ MC: (insufficient) transfer of technology and finance despite Copenhagen finance pledges	▪ Institutions: ADP outcome (Paris Agreement) – "applicable to all" under the FCCC ▪ MC: Developing countries "encouraged" to *provide* finance (PA) ▪ Intersubjective idea: Nationally Determined Contributions (NDCs) submitted by all Parties
	National level (India)	▪ Institutions: we create them as it's in own interest (eg NAF) ▪ Intersubjective idea: we didn't create problem (historical responsibility) ▪ Ideas of collectives: growth-first; SD realists and SD internationalists	▪ Nationally Determined Contribution

8.3 India in the chorus: Kyoto to Cancun (2005-2010)

In the third phase (2005-2010), ideas proved to be particularly influential forces. In this phase, India could be considered firmly "emerging", given its economic progress, and this, combined with the more confidently asserted science (ideas) of the IPCC's fourth assessment report and the unprecedented public attention garnered by climate change, drove the creation of institutions both nationally and internationally. India's improved economic growth facilitated more domestic expenditure on responses to climate change enabling for example, the establishment of the NAPCC's 8 Missions. Almost all the Indian institutional responses to climate change were established in the period from the lead-up to the Bali COP in 2007 to just after the Copenhagen COP in 2009. At the national level, climate change, and addressing it domestically, became a more seriously considered topic – reaching as high as the PM's office – ensuring that these newly created institutions received both political and material support.

In the years before the Bali COP in 2007 the "not our problem to fix" idea was an intersubjective idea; the natural corollary thereof being the "growth first" world view espoused both implicitly and explicitly at government level. The combination of the improving domestic material circumstances, public scrutiny (albeit a small English-speaking elite public relative to India's population) and the ongoing challenge to KP-style differentiation at international level (from developed and small developing countries), however, also opened up the space at domestic level for a slightly more nuanced discussion of India's negotiating position. Whereas before 2007 the "growth-first" world view had been virtually unopposed, in pre-Bali-post-Copenhagen period it was increasingly challenged by other world views (like the "sustainable development realist" and "sustainable development internationalist") which arose as contesting collective images of India's position in the negotiations. This represented an important shift in the force of ideas at national level. As challengers to the intersubjective idea of India's lack of culpability the contestation of collective ideas allowed for the possibility of a more nuanced engagement on issues of differentiation at international level, but also weakened the prospect of the emergence of a hegemonic historic structure in favour of differentiation (more on this in 0).

Although India's material circumstances were not as seriously impacted by the 2008/9 financial crisis as those of more developed countries, it was not unscathed. The effect of the international economic slowdown on the climate regime was to retard the provision of resource transfers from developed to developing countries – notwithstanding the pledges of fast-start and long-term finance emanating from the Copenhagen Accord in 2009 and the establishment

of the Green Climate Fund. All of these factors – combined with India's continued (if more muted), longstanding stance that it did not cause the problem and the persistence of domestic inequalities given the limited redistributional effects of its economic growth – ensured India remained determined to defend the continued salience of differentiation in the climate regime.

India's defence of differentiation, however, occurred in the context of an increasing scientific consensus (expressed in AR4) that larger developing countries would also need to reduce their emissions in order for there to be a 50% chance of keeping global mean temperature rise below the important threshold of 2 degrees Celsius above pre-industrial temperatures. When combined with India's impressive economic growth, and increasing demonstration of its influence in multilateral fora, this scientific consensus made it increasingly difficult for India to defend its claim that it should continue to be subject to the differentiation encoded in the Kyoto Protocol. In addition, improved climate modelling techniques showed that the socio-economic and bio-physical impacts for India would be particularly severe and therefore it was in India's own interests to respond. India responded by creating, for instance, the NAPCC, the eight Missions and including planning and budget for the response in the 11th Five Year Plan. The mix of Missions and elements of the FYP reflected the ongoing domestic debate over whether it would be better for India to employ mitigation measures or improve its adaptive capacity by growing its economy.

8.4 India vying to occupy centre stage with the USA & China (2011–2015)

In this fourth phase, more material resources (technology and finances) have been forthcoming internationally to support developing countries; however, the amount is still far below that which is necessary to help developing countries respond to climate change. In addition, it is only in this fourth phase that adaptation – a much-neglected concern particularly crucial to developing countries – has actually begun to be operationalised (albeit that the creation of the Adaptation Fund was agreed in phase 3). Notwithstanding this increased international focus on adaptation, India has been moved to create its own National Adaptation Fund to address its pressing adaptation concerns - perhaps recognising that creating such an institution is in its own interest and acknowledging that the material resources provided by the international level are unlikely to meet its needs.

At the international level much of the tension in this phase could be distilled down to the contestation over whether the material capabilities provided and the institutions created would continue to align with and embody differentiation or not. The advent of the Durban Platform

(ADP) negotiations to produce "a protocol, another legal instrument or an agreed outcome with legal force under the Convention applicable to all Parties" (UNFCCC, 2012a: decision 1/CP.17, para. 2) signalled that KP-style differentiation as advocated by India is increasingly untenable and unlikely to be perpetuated. Whilst the Paris Agreement has not brought about complete legal symmetry, it has blurred the lines between the responsibilities of developed and developing countries to a significant degree. The PA has ushered in a more complex gradation of differentiation centred on issues rather than on the capacity of Parties; but has cemented the trend of developing countries now having to contribute to the mitigation efforts (in the form of NDCs) that was initiated by the Copenhagen Accord in 2009.

India's insistence on the continuation of differentiation in this phase puts it significantly at odds with the apparent evolution of the regime in the direction of legal symmetry. This is a very different state of affairs to phase one and two, in which India's stance on differentiation was reflected in both the Convention and its operationalising Protocol. The ADP outcome (the Paris Agreement) is still "under the Convention" (UNFCCC, 2012a: decision 1/CP.17, para. 2), but India, caught fighting an apparently losing battle, and in the absence of clear alternative propositions, initially reprised its "growth first, climate later" discourse of earlier phases.

While India has begun to play an increasingly important (though frequently reactive) role in the negotiations, it has been unable to leverage its emerging power status or improved material circumstances to sustain the dominance of its preferred collective idea (differentiation), or to rally enough support behind differentiation for it to be reinstated as the intersubjectively shared idea underpinning the regime. As a 'new' (as opposed to a historical) and future emitter it has been unable to forestall the subtle shift in the negotiations away from an considerations of historical responsibility for climate change toward an emphasis on equitable effort in reducing future emissions (Sanwal, 2016). India has been unable to bring the other forces into alignment with the idea of differentiation to create a hegemonic structure in favour of differentiation as an equitable approach to addressing the climate challenge.

India's lack of success in promoting differentiation may be at least partially attributed to a lack of strategic planning at national government level combined with an inability to engage with changing dynamics at the international level. In part this in turn may be ascribed to a difficult balancing act India must strike between being both an emerging economy on the one hand and still a poor developing country on the other – the poorest of the BASIC countries. This has been compounded by an apparent reluctance to relinquish the "North-South" divide argument and the flow of responsibility and resources this ostensibly entails. India's material capabilities have

grown, but it remains significantly underdeveloped, making the opportunity cost of implementing mitigation measures very high, even in comparison to other larger developing countries.

From 2011 the Indian economy appeared more sluggish than in the previous phase, but was nonetheless still outperforming many developed countries in GDP terms. In 2014 voters brought about a change of political leadership from the Congress Party to the BJP. The BJP took the positive step of reconstituting the defunct PMCCC, and signalled early indications of a mix of old-school "growth-before-climate" ideas and a more business-like attitude towards energy efficiency and renewable energy (as seen in Table 8 on page 166 above). However, the relatively early days of the Modi government make it difficult to assess whether the seemingly discordant nascent world view will be able cohere and thus continue in the long term. India's Intended Nationally Determined Contribution (INDC) – submitted in October 2015 – does maintain a strong emphasis on the continued need for equity, CBDR and an insistence that developed countries assist in enabling its transition to a low carbon development path.

8.5 Final thoughts on differentiation vs symmetry, and the importance of hegemony

Cox posited that a hegemonic historical structure was one in which the power structure faded into the background, and in which the forces of ideas, institutions and material capabilities were in alignment. Whilst he does not explicitly state that a hegemonic historical structure can only exist in the presence of an intersubjective idea: this is implied, as logically, alignment would be impossible in the presence of several competing ideas of collectives – with which of the competing collective ideas would the forces of material capabilities and institutions align? Given this working understanding of hegemony, it is the contention of this dissertation that there has been (and remains) no hegemonic structure (in this Coxian sense) within the limited totality that is the climate change negotiations under the UNFCCC during the four phases of the climate regime.

Despite the apparent alignment of the institutions of the UNFCCC with the idea of differentiation in the early phases, India has been unable to forestall the shift from differentiation towards symmetry as the historical structure supporting differentiation has not been a hegemonic structure. However, India has been able to ensure that questions of differentiation and equity stay on the negotiating table. Despite this vested interest it has showed little willingness to reimagine its stance by taking into account other developing

countries' proposals on equity[44] or providing alternative suggestions for operationalising the concept. Somewhat anachronistically therefore India has continued to challenge the collective idea of legal symmetry based on its conception of equity even as it appeared to be fighting a losing battle in the lead-up to the 2015 Paris Agreement.

In a subtle shift, India's role at the UNFCCC negotiations has changed from championing and then defending differentiation to challenging symmetry: the institution of the UNFCCC has become a site of contestation as the competing collective ideas vie for the dominance and pervasiveness that would see them transformed into intersubjectively shared ideas. Dominance being necessary but insufficient to create hegemony, the UNFCCC has actually been characterised by being a battleground of contesting ideas all along. In other words, neither differentiation nor symmetry has ever had the upper hand as neither has had sufficient alignment or "fit" with the other types of forces in order to create a hegemonic historical structure. Perhaps this alludes to a "sweet spot" between hegemony as a driver of social processes through a combination of consensus and coercion, and the (potential) chaos of contending collective ideas that have yet to achieve hegemonic status: too much hegemony stifles change, but too little also impedes it.

8.6 The import of this research: contribution to knowledge

This dissertation set out to understand the factors that influence India's position and thus the role it has played (and still plays) in the climate negotiations as the country has risen in international stature amid changing material circumstances. As India has begun to assert itself internationally and take its place on the international stage alongside other larger emerging economies and developed countries, it is worth pondering the effect this might have on the slow pace of the international climate negotiations. Analysing the trilectic of forces at work at both national and international level has provided an illuminating answer to this question.

In addition, this dissertation has sought to begin to address a lacuna in the International Relations theory literature. As a discipline IR has not grappled extensively with climate change at a theoretical level (Javeline, 2014; Keohane in Goldstein, 2015), despite the international nature of the issue. This qualitative case study has employed Cox's Critical International Relations theory as a heuristic device to explore and understand the factors that influence India's position at the climate change negotiations. As such it contributes to broadening the IR

[44] India rejected the Africa Group's proposed "Equity Reference Framework" at the Warsaw COP in 2013

theory literature's engagement with issues of climate change and also to deepening the climate policy literature's use of theory to promote understanding.

International Relations has frequently – and justifiably – been criticised as being a "Western" or US-centric discipline dominated by theorists in the West, and sometimes overly concerned with theorising about powerful states of the West to the exclusion of other countries (Smith, 2000; Tickner, 2003; Halperin, 2006; Acharya & Buzan, 2009; Creutzfeldt, 2014). Cognisant of these criticisms, the researcher used a theory emanating from the West (Canada) and applied it to the interactions of a "non-Western" country acting in an international forum to assess whether Cox's critical, historicist approach is useful as a theoretical, analytical tool for a non-Western country. Doing so follows in the footsteps of, for instance, an earlier Coxian analysis of Sub-Saharan Africa (Leysens, 2002).

8.7 Looking forward

Given the diverse range of drivers of climate change and the fact that it will have far-reaching consequences for how life is lived, it was my considered opinion that Cox's theory affords a useful blend of analytical approaches: political economy's emphasis on the interaction between people, politics and economics, and constructivism's emphasis on the pivotal role of humans and ideas in constructing their own worlds. Inspired by the critical stance embodied by Coxian Critical International Relations theory, I would like to pursue an enquiry into the links between developing countries, their growing international trade footprint (production and consumption of goods) and greenhouse-gas emissions. Further work on India and China's interaction at the international climate change talks would uncover the stressors and synergies between these two growing giants and point to ways in which the issues of poverty and development might become more central to the climate change discussion.

It would also be interesting to investigate the point at which collective ideas might be said to have become intersubjective ideas. Cox's theory also does not elaborate on the tension that may arise between his two interpretations of ideas and their utilisation: namely, intersubjective ideas and collectively held group ideas. In less abstract terms, an idea that has intersubjective meaning at national level (for instance, differentiation as an operationalisation of equity for India) may very well transmute at international level into a "collective image of social order" (Cox, 1981: 136) held by a group (India), which may then be subject to contestation by another state's (or group's) collectively held idea. In other words, there is the possibility that multiple hegemonic structures at national level could foreclose the possibility of a hegemonic structure

occurring at international level: the tensions between these would be worth exploring to illuminate ways in which global governance might evolve.

The ADP process under workstream 1 negotiated the Paris Agreement (UNFCCC, 2016) - a "protocol, legal instrument or agreed outcome with legal force applicable to all" (UNFCCC, 2012a: decision 1/CP.17) for implementation from 2020. Given that differentiation has survived, albeit in a markedly different form, the pressing need for India is to reconceptualise its interpretation of, and approach to, differentiation in light of its still pressing developmental needs and the range of responsibilities (voluntary and mandatory) it now faces in the future.

9 Appendices

9.1 Interview guide

Background Questions – to establish a rapport

- What is your position/title?
- How long have you been in this position? (what was previous position?)?
- How are you involved in environment/climate change/energy/economy/civil society?
- Have you moved between sectors?
- Delegates: what does your delegation status mean to you?
- What criteria are used to select delegates?

Key themes: ideas; institutions; material capabilities

IDEAS
>> Consist of intersubjective meanings i.e. shared notions which perpetuate behaviour; historically construed and commonly held.

- Do you consider India to still be a developing country?
- If not, how do you view it and why?
- If yes, what does this mean for its role in the negotiations?

>> Collective images (of social order as held by different groups)

- What role do you think India plays in the climate change negotiations?
- How do you think the Indian Government (their own sector; other sectors too) views its role in the negotiations?
- Have you noticed any changes in the role India plays in negotiations?
- Have you seen differences in the way India portrays its role?
- Is this similar to a national audience and an international audience?
- To what would you attribute these changes?

INSTITUTIONS

"Institutions are a particular amalgam of ideas and material power which in turn influence the development of ideas and material capabilities" They reflect and perpetuate (at least initially) the prevailing power distribution.

- Have you seen any effects on environmental policy-making of India's shift towards market-liberalism?

MATERIAL CAPABILITIES

- Do you think India's growing economic role has influenced its role in the climate change negotiations?
- If yes, how? If no, what has influenced its positions in the negotiations?
- In 2009 India joined the USA, China, Japan and Germany as one of the top 5 importers of oil. What, if any, effect do you think this growing reliance on energy imports is having/will have on India's stance in the negotiations? Please elaborate.

9.2 List of semi-structured interviews

Interviewee & position	Organisation	Date	Location	Sector
Samir Saran Snr. Fellow & Vice President samirsaran@orfonline.org	Observer Research Foundation (ORF) 20, Rouse Avenue New Delhi	18 February 2013	ORF Office	Think Tank
Lavanya Rajamani Professor lrajamani@gmail.com	Centre for Policy Research (CPR) Dharma Marg, Chanakyapuri, New Delhi	02 December 2013	CPR Offices	Academia
Sanjay Vashist Director sanjay@cansouthasia.net	Climate Action Network South Asia	29 November 2013	WWF offices, Lodhi Gardens	NGO
Raman Metha Senior Climate Change Advisor, Energy Climate and Growth Unit, ramanmehta@gmail.com	British High Commission/Department for International Development (DFID) B-28 Tara Crescent, Qutub Institutional Area, New Delhi – 110016	03 December 2013	DFID Offices	Foreign Aid
Nitin Sethi Senior Assistant Editor moruoak00@gmail.com	The Hindu Newspaper	21 Feb 2014	Café Turtle, Khan Market, New Delhi	Media
Lydia Powell Head, Centre for Resources Management lydia@orfonline.org	Observer Research Foundation 20, Rouse Avenue New Delhi	25 Feb 2014	Observer Research Foundation tea-room, then library	Think Tank

Interviewee & position	Organisation	Date	Location	Sector
Rita Roy Choudhury Senior Director and Head, Environment, Climate Change & Renewable Energy rita.roychoudhury@ficci.com	Federation of Indian Chamber of Commerce and Industry Federation House Tansen Marg, New Delhi 110001	25 Feb 2014 /	Federation House	Business & Industry
D. Raghunandan Secretary raghunandan.d@gmail.com	Delhi Science Foundation D-158 Lower Ground Floor, Saket	26 Feb 2014	DSF Office	NGO
Jayatri Srivastava Associate Professor jayatis@jnu.ac.in	Room no 42, Centre for International Politics, Organisation and Disarmament School of International Studies Jawaharlal Nehru University 110067	11 Feb 2014	JNU office	Academia
Srinivas Krishnaswamy CEO and Founder srinivas@vasudhaindia.org	Vasudha Foundation CISRS House, 14 Jungpura B Mathura Road, New Delhi-110 014	12 March 2014	Vasthuda Foundation offices	NGO
Kartikeya Singh Visiting Fellow at Shakti Sustainable Energy Foundation [co-founder & former Executive Director of the Indian Youth Climate Network] kartikeya.singh@tufts.edu	Capital Court, 104 B/2, 4th Floor Munirka Phase –III New Delhi 110067	26 Feb 2014 > Speaking in own capacity	Shakti Foundation offices	NGO (Youth)
Dr P. Saxena Adviser psaxena@nic.in	Ministry of New and Renewable Energy, Block No.14, CGO Complex, Lodi Road, New Delhi-110003.	12 March 2014	MNRE offices	Government
Shawahiq Siddiqui Advocate, Partner IELO shawahiq.ielo@gmail.com	Indian Environment Law Offices (IELO) B-59, South Extension-II New Delhi-110049	10 March 2014	IELO offices	Civil Society (legal)

Interviewee & position	Organisation	Date	Location	Sector
Nitin Desai [UN Under-Secretary General for Economic and Social Affairs] desaind@gmail.com	B 63 Defence Colony, First Floor.	12 March 2014	Mr Desai's home	Civil Society (retired UN)
Chandrashekhar Dasgupta Distinguished Fellow [Ambassador || Prime Minister's Council on Climate Change;] dasgupta@teri.res.in	The Energy and Resources Institute (TERI), IHC Complex, Lodhi Road New Delhi 110003,	10 March 2014	TERI office	Think Tank (ex civil service)
Prodipto Ghosh Distinguished Fellow & Director Earth Science and Climate Change Division	The Energy and Resources Institute (TERI), IHC Complex, Lodhi Road, New Delhi 110003	11 March 2014	TERI office	Think Tank (ex civil service)
Kirit Shantilal Parikh Chairman, IRADE kparikh@irade.org	Integrated Research and Action for Development (IRADe) C 80 Shivalik, Malviya Nagar, New Delhi 110017	13 March 2014	IRADE offices	NGO (on NPC)
Leela Raina [IYCN Director of Policy & 'Adopt a Negotiator Project' member] leelaraina@gmail.com	Currently: Assistant Director at Strategic Asia based in Jakarta, Indonesia	01 May 2014	Via Skype	NGO (Youth)
Seema Arora Executive Director, CII-ITC Centre of Excellence for Sustainable Development v.vijayasudha@cii.in (assistant)	Confederation of Indian Industry The Mantosh Sondhi Centre 23, Institutional Area, Lodi Road, New Delhi 110 003	11 August 2014	Via Skype	Industry

9.3 Consent form

ERC
ENERGY RESEARCH CENTRE
University of Cape Town

CONSENT FORM

I, _____, have been given the time to read the letter of introduction and consent form. I understand the information provided about this study. Questions I have asked about the study have been answered to my satisfaction. ***My signature above confirms that I am willing to participate in this study by being interviewed.***

Please clearly tick the appropriate boxes below.

- ☐ I give my consent for my name to be identified in relation to any information provided during the interview
- ☐ I give my consent for my institutional affiliation to be identified
- ☐ I do not consent to the disclosure of my identity with regard to the information discussed in the interview; I give my permission only for my interview to be cited or referenced anonymously
- ☐ I consent to my interview being audio recorded
- ☐ I would like a copy of the thesis emailed to me after it is examined

Email address for receipt of this e-copy _____

_____ _____
Participant's signature *Date*

_____ _____
Signature of researcher (Kim Coetzee) *Date*

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Educating for life and addressing the challenges facing our society."

9.4 Conferences and meetings attended

Conference/meeting	Date	Place
COP 15	7-18 December 2009	Copenhagen, Denmark
BASIC Ministerial Meeting on Climate Change	28 & 29 May 2011	Durban, South Africa
COP 17	28 November – 09 December 2011	Durban, South Africa
BASIC Ministerial Meeting on Climate Change	12 & 13 July, 2012	Johannesburg, South Africa
BASIC Ministerial Meeting on Climate Change	19 & 20 November 2012	Beijing, China
COP 18	26 November - 8 December 2012	Doha, Qatar
BASIC Ministerial Meeting on Climate Change	15 & 16 February 2013	Chennai, India
Tata Institute for Social Sciences Workshop	22 & 23 February 2013	Mumbai, India
International Dialogue Forum on Low Carbon Development and Poverty Reduction	21 & 22 February 2013	New Delhi, India
BASIC Ministerial Meeting on Climate Change	26-28 June 2013	Cape Town, South Africa
COP19	11 - 23 November 2013	Warsaw, Poland
SACAN NGO COP19 report-back meeting	29 November 2013	New Delhi, India
Building the Hinge: Reinforcing National and Global Climate Governance Mechanisms Workshop	5-7 December, 2013	Neemrana, Rajasthan, India
Anil Agarwal Dialogue 2014	27 & 28 February 2014	New Delhi, India
BASIC Ministerial Meeting on Climate Change	9 & 10 October 2014	Sun City, South Africa
'New Research for Effective Action at Paris and Beyond'. Workshop hosted by Climate Strategies	30 April & 01 May 2015	New Delhi, India

9.5 Schedule of ADP meetings held 2012-2015

Table 10: Schedule of ADP meetings held 2012-2015
Source: http://unfccc.int/meetings/items/6237.php?filtbody=296

Session Date	Location	Session
19 – 23 Oct 2015	Bonn, Germany	ADP 2-11
31 Aug – 4 Sep 2015	Bonn, Germany	ADP 2-10
1 – 11 Jun 2015	Bonn, Germany	ADP 2-9
8 – 13 Feb 2015	Geneva, Switzerland	ADP 2-8
2 – 11 Dec 2014	Lima, Peru	ADP 2-7
20 – 25 Oct 2014	Bonn, Germany	ADP 2-6
4 – 14 Jun 2014	Bonn, Germany	ADP 2-5
10 – 14 Mar 2014	Bonn, Germany	ADP 2-4
12 – 21 Nov 2013	Warsaw, Poland	ADP 2-3
4 – 13 Jun 2013	Bonn, Germany	ADP 2-2
29 Apr – 3 May 2013	Bonn, Germany	ADP 2
27 Nov – 7 Dec 2012	Doha, Qatar	ADP 1-2
30 Aug – 5 Sep 2012	Bangkok, Thailand	ADP 1 – informal
17 – 24 May 2012	Bonn, Germany	ADP 1

9.6 Detail of multilateral funds

Fund	Fund Type	Fund focus	Pledge (USD mn)	Deposit (USD mn)	Approval (USD mn)	Disbursement (USD mn)
Adaptation for Smallholder Agriculture Program (ASAP)	Multilateral	Adaptation	358	318	219	8
Adaptation Fund	Multilateral	Adaptation	484	472	318	113
Amazon Fund	Multi Donor National	REDD+	1,034	901	510	180
Australia's International Forest Carbon Initiative	Bilateral	REDD+	216	67	159	
Clean Technology Fund (CTF)	Multilateral	Mitigation - General	5,267	5,080	4,152	429
Congo Basin Forest Fund (CBFF)	Multi Donor Regional	REDD+	186	165	82	52
Forest Carbon Partnership Facility	Multilateral	REDD+	385	343	92	21
Forest Investment Program (FIP)	Multilateral	REDD+	639	517	292	4
GEF Trust Fund (GEF 4)	Multilateral	Multiple Foci	1,083	1,083	953	953
GEF Trust Fund (GEF 5)	Multilateral	Mitigation - General	1,244	697	865	544
GEF Trust Fund (GEF 6)	Multilateral	Multiple Foci	1,101	1,034	93	18
Germany's International Climate Initiative	Bilateral	Multiple Foci	1,082	1,082	1,347	
Global Climate Change Alliance (GCCA)	Multilateral	Multiple Foci	326	326	347	
Global Energy Efficiency and Renewable Energy Fund (GE..	Multilateral	Mitigation - General	170	164	89	
Green Climate Fund	Multilateral	Multiple Foci	10,200			
Indonesia Climate Change Trust Fund (ICCTF)	Multi Donor National	Multiple Foci	21	11	10	
Least Developed Countries Fund (LDCF)	Multilateral	Adaptation	934	929	963	
MDG Achievement Fund	Multilateral	Adaptation	90	90	90	
Norway's International Climate and Forest Initiative	Bilateral	REDD+	1,608		305	
Pilot Program for Climate Resilience (PPCR)	Multilateral	Adaptation	1,117	1,117	841	36
Scaling Up Renewable Energy Program (SREP)	Multilateral	Mitigation - General	525	520	165	3
Special Climate Change Fund (SCCF)	Multilateral	Adaptation	349	341	278	
UK's International Climate Fund	Bilateral	Multiple Foci	6,002	1,318	850	
UN-REDD	Multilateral	REDD+	268	235	241	227
Grand Total			34,688	16,809	13,259	2,586

Figure 61: Multilateral climate funds
Source: ODI & Heinrich Böll Stiftung (2015)

9.7 Climate finance flows (US$ billion & annualised)

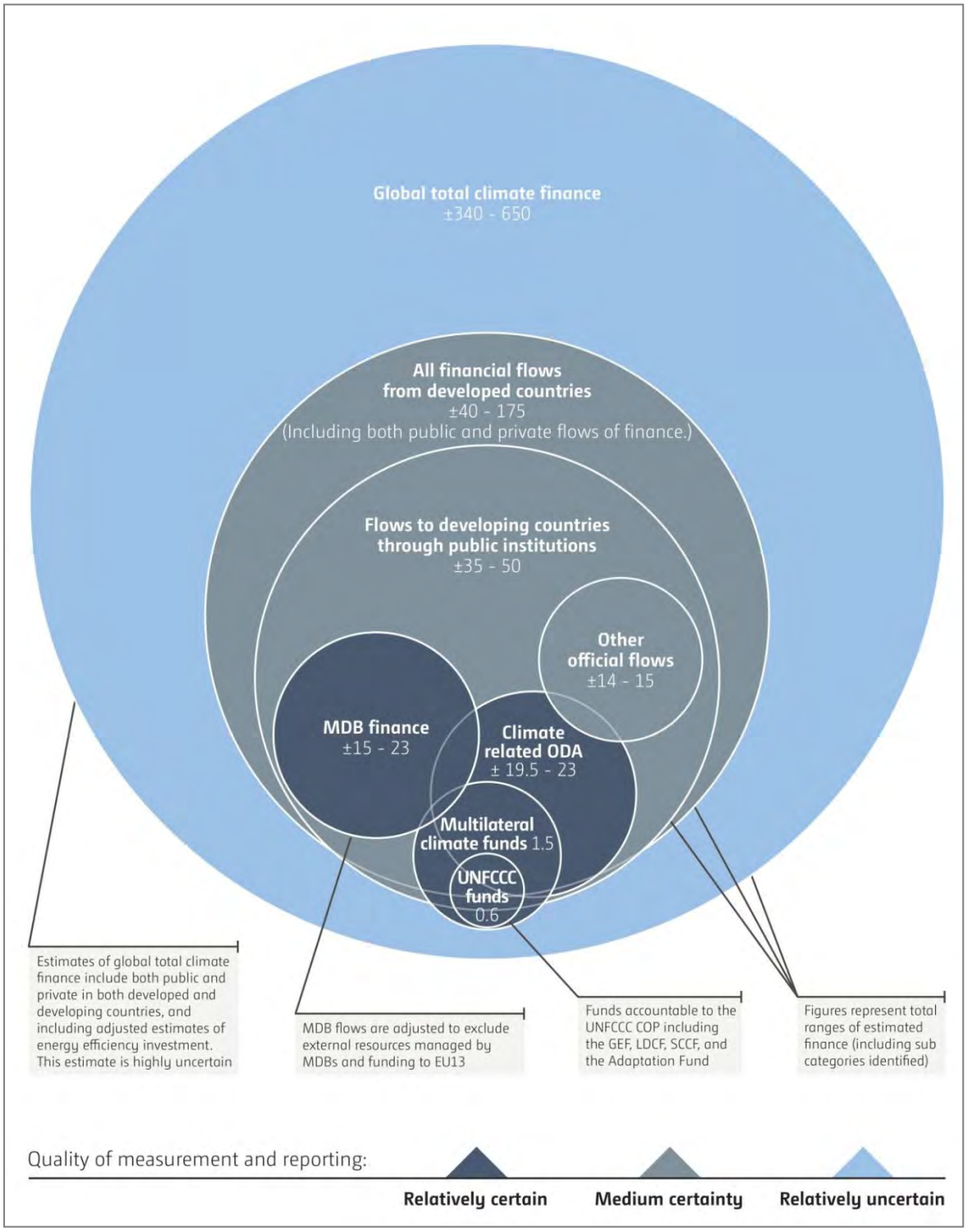

Figure 62: Estimated climate finance flows
Source: UNFCCC Standing Committee on Finance (2014: 6)

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