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Climate change, development and development cooperation

JOYEETA GUPTA AND NICOLIEN VAN DER GRIJP

1.1 Introduction

Climate change, development and development cooperation are three complex issues. The political arenas that deal with these issues partially overlap but are not integrated. In recent years, however, there has been a growing trend towards incorporating climate change concerns into the fields of development and development cooperation. Evidently, this is a challenging process. The nature of the challenge is three-fold. Theoretically, the links among the three issues are vast and cover practically all human activities and endeavours. Politically, the nature of North–South relations in all three fields is highly sensitive. Practically, there are limited resources available for global cooperation and it makes sense to use these resources wisely to improve the results for all three fields. But does this practical argument compensate adequately for the other challenges?

This book tackles these issues by combining theoretical, political and practical perspectives. While it focuses on the relationship between climate change and development cooperation, this is undertaken against the broader background of the fundamental links between climate change and development. This book is part of the research project ‘Adaptation and Mitigation Strategies (ADAM): supporting European climate policy’, the aims of which are to assess the extent to which EU mitigation and adaptation policies can achieve a transition to a world in which the global mean temperature does not rise beyond 2 °C above pre-industrial levels, and to develop strategic policy options to help the EU achieve these goals. This book has emerged from a sub-project intended to ‘provide strategic options to the EU and its member countries for mainstreaming and restructuring development assistance, such that it promotes climate mitigation and adaptation in ways that are acceptable to the donor and recipient communities’.

This chapter discusses climate change science and the nature of climate change as a North–South issue to provide the context for this book (see Section 1.2), discusses

Table 1.1 *Glossary of critical terms*

Term	Explanation
Adaptation	Coping with the physical impacts of climate change.
Climate change	A change of climate attributed directly or indirectly to human activity that alters the composition of the global atmosphere and that is in addition to natural climate variability observed over comparable time periods (FCCC, 1992).
Climate change cooperation	Covers financial assistance, technology transfer and market mechanisms between rich and poor on climate change. See Chapter 5.
Climate change regime	Covers the norms, principles, responsibilities and instruments developed in international climate policy. See Chapter 5.
Developed, industrialized, rich, North	These terms are used synonymously to refer to the 40 or so countries listed in Annex I of the Climate Convention 1992. Differentiation between Northern countries is discussed in Chapter 10.
Developing, poor, South	These terms are used synonymously to refer to the 150 or so countries that do not belong to Annex I of the Climate Convention 1992. Differentiation between Southern countries is discussed in Chapter 10.
Development	Development challenges both in rich and in poor countries.
Development cooperation/aid regime	Assistance to developing countries. Covers the activities of donor countries within the OECD in the area of official development assistance and relevant policy decisions and declarations within the UN system. See Chapter 4.
Development regime	Covers the activities of UN agencies, banks, trade institutions and the OECD in relation to promoting development. See Chapter 4.
Incorporation	A loose term to include all kinds of approaches to including climate change perspectives in development and/or development cooperation. See Chapter 3.
Integration	Integration of climate change into development policy implies (a) that existing development and/or development cooperation policies and projects take climate change mitigation aspects into account; (b) possibly that this is done through the use of methods and instruments like check-lists and climate proofing; and (c) that hence the climate change component is more or less an add-on component. See Chapter 3.
International cooperation	Covers both climate change cooperation and development cooperation.
Mainstreaming	Mainstreaming of climate change into development and/or development cooperation is the process by which development policies, programmes and projects are (re)designed, (re)organized, and evaluated from the perspective of climate change mitigation and adaptation. Mainstreaming implies involving all social actors – governments, civil society, industry and local communities – in the process. Mainstreaming calls for changes in policy as far upstream as possible. See Chapter 3.

Table 1.1 (cont.)

Term	Explanation
Mitigation	Reducing the emissions of greenhouse gases and enhancing sinks.
Official aid	Assistance provided to recipients as listed in Part II of the DAC list.
Official climate assistance	Refers to official government assistance by industrialized countries to developing countries on climate change.
Official development assistance	Assistance to promote development at concessionary financial terms by the official sector. See Chapter 4.

the evolving political framing of the problem (see Section 1.3), and elaborates on the substantive links between climate change and (sustainable) development and on climate change cooperation (see Section 1.4). It introduces the issue of development cooperation (see Section 1.5), and points to the current political trends towards mainstreaming climate change into development cooperation (see Section 1.6). Finally, it discusses the aims and structure of this book (see Section 1.7). Although issues are defined where they are explored in detail, Table 1.1 provides a preview of the crucial terms used in this book, since it uses terminology that may be unfamiliar to readers.

1.2 Climate change: a serious North–South issue

1.2.1 A brief history

Human influence on the global climate was first signalled at the end of the nineteenth century (Fleming, 2005). In 1979, the first World Climate Conference was convened to discuss its scientific dimensions (WCC, 1979). In 1988, scientists and politicians agreed that this problem had major political ramifications (Toronto Declaration, 1988). In 1989, global heads of state met to put this issue on the top of their agendas (Hague Declaration, 1989); this meeting was followed rapidly by a meeting of environmental ministers (Noordwijk Declaration, 1989). A formalized intergovernmental scientific programme, the Intergovernmental Panel on Climate Change (IPCC), was launched in 1988 to prepare five-yearly reports on climate science, following closely in the footsteps of the Advisory Group on Greenhouse Gases established in 1986. In 1989, the UN established a negotiation process that led to the adoption of the United Nations Framework Convention on Climate Change in 1992 (FCCC, 1992), a follow-up Kyoto Protocol in 1997 (KP, 1997) and annual meetings of the Conference of the Parties. This section elaborates on the

current state of climate science and argues that climate change is a typical North–South issue.

1.2.2 The state of the art of climate science

Drawing on the work of the IPCC as reflecting a global scientific consensus, the observed trends of global climate change show unequivocally that the Earth is warming (IPCC-1, 2007). The last decade (1995–2006) has been the warmest since 1850. In fact, the 100-year trend of 0.74 °C is higher than the 0.6 °C indicated by the previous IPCC report (IPCC-1, 2001). Observations reveal that the sea level has been rising since 1993 at an average rate of 3.1 mm per year. Glaciers are melting and snow cover is declining. Precipitation has increased in the northern hemisphere, but has declined in most of Africa, where increasing areas are suffering from drought. Although data on extreme events are less clear, there appears to be an increase in intense tropical weather events. Hydrological systems are influenced by higher and earlier run-off from snow cover, and ecosystems are being affected. Oceans are becoming acidic as carbon dioxide concentrations increase.

IPCC-1 (2007) and the IPCC Synthesis Report (2007) argue that many of these changes are consistent with model predictions and are ‘very likely’ to be due to increased concentrations of greenhouse gases, since anthropogenic emissions have increased by 70% in the last three and a half decades (1970–2004). The annual emissions of carbon dioxide increased by 80% during the same period, and its concentrations, as well as those of methane, are higher than those calculated for the last 650 000 years. Methane and nitrous oxide emissions have also increased similarly and are mostly from agricultural and fossil-fuel use. Although there has been some periodic cooling as a result of solar and volcanic forcings, this has not compensated for the rise in greenhouse gas emissions.

The IPCC Synthesis Report (2007) expects that these emissions will grow by 25%–90% (CO₂-equivalent) between 2000 and 2030, and will mostly be emitted by fossil-fuel use. This may lead to greater global warming, and these changes may be larger than those experienced in the last century. This could imply a warming of 0.2 °C per decade in the coming two decades, although studies since IPCC-1 (2007) have shown that the increase in temperature might not be so high because of the internal natural variability in the system.

Although serious climate change impacts are expected in the industrialized countries (ICs), these impacts will further exacerbate the existing problems for most developing countries (DCs). Many of the world’s poor are already living in circumstances that can be referred to as ‘dangerous’ (UNDP, 2007: 7). Regional impacts from climate change are expected to vary. While the impacts will be severe in all countries, the IPCC (2007) predicts that in Africa between 75 and 250 million people will be affected by climate-change-related water stress by 2020. In the same

period, agricultural produce from rain-fed land could decrease by 50% and the rising sea level will affect coastal regions, leading to a possible adaptation cost of about 5%–10% of GDP. Declining availability of fresh water will affect agriculture in Asia, and rising sea levels will affect densely populated coastal deltas. Temperature rises in Latin America may lead to gradual replacement of tropical forests by grasslands and, hence, species extinction and lower agricultural productivity.

The IPCC Synthesis Report (2007: 13) submits that ‘Many of these changes could lead to some impacts that are abrupt or irreversible, depending on the rate and magnitude of the climate change.’ The Climate Convention (FCCC, 1992: Art. 2) calls on countries to prevent ‘dangerous anthropogenic interference with the climate system’. While many see this as calling for ‘value’ judgements, others are arguing that atmospheric concentrations of greenhouse gases need to be stabilized (Gupta and van Asselt, 2006). Current concentrations are at 380 ppm CO₂, whereas concentration levels were at 280 ppm prior to the industrial revolution. If the global community wishes to have a fair chance of keeping the temperature rise below 2 °C (compared with pre-industrial levels), emissions need to peak by 2015 or soon thereafter and then rapidly decline. This means that ICs and DCs need to take action. However, this 2° level is disputed. The USA announced finally at the G8 summit in 2009 that it would accept this level; for others (e.g. the Maldives) the target might not be stringent enough.

1.2.3 Climate change as a structural North–South issue

Climate change is a typical North–South issue. The North refers to the approximately 40 rich ICs listed in Annex I of the Climate Convention.¹ The South refers to the remaining 150 or so countries. There are clear problems with this classification (Gupta, 2007); see Chapter 10. However, there are also clear differences between the average rich and the average poor country.

Although in recent years there has been an effort to divert attention and focus on the emissions of China and India, their carbon footprint per capita is 1/5th to 1/15th that of the USA (UNDP, 2007: 7). The ICs have primarily emitted the greenhouse gases of the past. In historic and cumulative terms, British or American emissions are at 1100 tonnes compared with 66 for China and 23 for India. Although China and India are amongst the top gross emitters of CO₂, most emissions are from the ICs, and most DCs are making a very low contribution to the problem. However,

¹ Technically speaking, 36 countries are listed in Annex I; but some countries have split up since then (Czech Republic and Slovakia), and new countries have joined in Annex B of the Kyoto Protocol, hence the number of approximately 40.

if the climate change problem is to be kept within ‘safe’ limits, all countries will have to contribute to emission reductions, and fairly rapidly.²

While climate change affects all people, ‘the world’s poorest people are on the front line’ (UNDP, 2007: 27). The countries of the South will be seriously affected by the impacts: they are geographically located where the impacts will be severest; and they are already facing serious development challenges, which will be exacerbated by the climate change problem, implying that their coping capacity is low. Past emissions are more important than future emissions since they determine current warming impacts and they limit the scope for other countries to increase their emissions if the global community collectively wants to stabilize greenhouse gas concentrations (UNDP, 2007: 41). The inertia of the climate system is such that, even if the global community takes serious action to reduce its emissions now, the global impacts will be felt at least for the next 50 years and will seriously affect the world’s poor (UNDP, 2007: 4). Furthermore, should the world community wish to attain a ‘safe’ concentration level, the world budget of energy-related carbon emissions for the twenty-first century is likely to be exhausted as early as in 2032 (UNDP, 2007: 7), meaning that there is little room for Southern emissions to grow.

Politically, the climate issue is a classic North–South issue. The climate change negotiations are designed along Annex I (ICs) and non-Annex I (DCs) lines. The debate typically focuses on the role of the rich versus that of the poor. Although the rich countries created this role division in the 1990s, the poor stick to this configuration, because there is power in numbers. This distinction is increasingly harder to maintain, since some so-called poor countries are quite rich; and there are rich people in poor countries (see Chapter 10). The preamble (namely with reference to the need to develop), the principles (including the recognition of the common but differentiated responsibilities and respective capabilities of countries) and elements (provisions on technology transfer and assistance) of the Climate Convention (FCCC, 1992) build on these differences (see Chapter 5).

1.3 Climate change: the paradigm shift from a technocratic to a development issue

1.3.1 The paradigm shift

This section argues that the political framing of the climate change problem has changed over time (Gupta, 2009). In the 1990s, it was seen as an abstract, global, technological and economic challenge. By the decade’s end, the problem had been reframed as a development problem. This paradigm shift has led to the political

² This does not, of course, mean that DCs should not take action to reduce their emissions (see Gupta, 2008). Box 10.1 discusses this.

discourse on the need to mainstream climate change into development and development cooperation (see Section 1.6).

1.3.2 Climate change: an abstract, technocratic, sectoral, mitigation issue

Climate change was initially defined as an abstract, global, future problem with a technocratic nature. The discourse was framed as a global issue in the academic documentation (e.g. IPCC-3, 1990) and the political declarations (e.g. the Noordwijk Declaration, 1989). The Climate Convention (FCCC, 1992) also qualifies the issue of climate change as a global issue several times, but scarcely uses the term ‘local’.

Climate measures were to be ‘cost-effective so as to ensure global benefits at the lowest possible costs’ (FCCC, 1992: Art. 3(e)). The operating entity for the Convention’s financial mechanism is the Global Environment Facility that aims to finance incremental costs or the costs of achieving only the global benefits, not the local benefits. The ICs appeared willing to pay for global benefits. Moreover, the discourses emphasized the present and the future in such a way that climate change was often seen more in terms of its long-term effects rather than as an urgent and current issue. This made the problem appear abstract in terms of the daily priorities of countries and peoples (Gupta, 1997; Gupta and Hisschemöller, 1997). The ICs initially did not link climate change with other development issues – that would imply that other development priorities would have to be addressed before the challenge of climate change could be addressed – and they avoided incorporating the local priorities of DCs, including adaptation (Bodansky, 1993) and desertification.

Furthermore, the problem was broken down into sectoral causes and impacts. The solution was presented in terms of technologies, technology transfer and cost-effective approaches that would encourage the use of such technologies. This technocratic framing possibly resulted from the dominant role of natural scientists in framing the issue; the assumption that environmental aspects can be internalized into existing processes; the need to avoid politicizing the issue and framing it in terms of polluters and liability; and the need to keep the problem focused and small so that it could be addressed effectively, without necessarily bringing in the whole range of development challenges. Hence, DCs saw the climate problem as a ‘Western’ problem, and one that was caused primarily by the ICs. They felt that the ICs should compensate them for the ‘disproportionate or abnormal burden’ on them (FCCC, 1992: Art. 3).

1.3.3 Climate change: an urgent, development, political, adaptation issue

However, there has been a subsequent shift in problem framing to focus on development issues. This has happened because different actors (including social scientists and development specialists) are increasingly joining the climate discussions;

scientific emphasis has shifted from the proximate causes (sectors and gases) of emissions to a more systemic analysis; the political consensus has moved towards the achievement of the Millennium Development Goals adopted by the UN in 2000 (see Table 4.1); the potential impacts and the related harm are beginning to manifest themselves (IPCC-1, 2007; Stern, 2007; Parry *et al.*, 2008: 1); and the geopolitics of the contemporary world is also now radically different from 20 years ago.

This shift in problem framing is evident in the recent literature (e.g. IPCC-3, 2007; Halsnæs *et al.*, 2008; Metz and Kok, 2008; Kok *et al.*, 2008) and political rhetoric (see Chapters 4 and 6), and is manifested by legal instruments emphasizing this (e.g. the Clean Development Mechanism, FCCC, 1992: Art. 12; Barera and Schwarze, 2004; Sutter and Parreño, 2007).

The ICs increasingly accept the need to internalize environmental costs into production processes and incorporate climate change into the development process (see e.g. Chapter 6). However, the internalization of such costs, i.e. the implementation of the ‘polluter pays’ principle, often makes related products and services less competitive internationally. By 2000, diverse driving forces (see Section 3.2) had, nevertheless, led the ICs to revisit their own position on climate change and international cooperation, leading to the mainstreaming discussion at international level (see Section 1.6).

This paradigm shift occurred in response to the DCs’ claim that their top priority is development (Gupta, 1997) and has also influenced the DCs that now explicitly link climate change and development (e.g. GOC, 2007). ‘Moreover, when one considers that three-quarters of the world’s poorest citizens, those living on less than \$2 per day, are dependent on the environment for a significant part of their daily livelihoods, climate change presents a serious multifaceted development challenge’ (US AID, 2008: 1). ‘The poorest countries and communities are likely to suffer the most because of their geographical location, low incomes, and low institutional capacity, as well as their greater reliance on climate-sensitive sectors like agriculture’ (Mani *et al.*, 2008: ix). As the UNDP (2007: 1) sums it up: ‘Climate change is the defining development issue of our generation.’

1.4 Climate change: the linkage with sustainable development

1.4.1 Introduction

Climate change ‘involves complex interactions between climatic, environmental, economic, political, institutional, social, and technological processes’ (IPCC-3, 2001: 78) and is thus closely linked to development and sustainable development. Development refers to the process by which society enhances its social, economic and natural resource capital and the development challenges refer to issues ranging

from meeting the basic necessities of people to enhancing their national income. Sustainable development redefines development so that it meets the needs of the present without compromising the ability of future generations to meet their own needs (WCED 1987); see Chapters 2 and 4.

Greenhouse gas emissions are generally associated with the process of development in the energy, transport, agriculture, household and other sectors. The use of fossil fuels in industry and transport is a critical source of emissions. Agriculture and land use sectors use inputs produced through the use of energy and also emit greenhouse gases (e.g. wet rice production emits methane and deforestation emits carbon dioxide). Sectoral uses are embedded in the structures of society.

This section elaborates on how the legal agreements link climate change and sustainable development, the theory of the environmental Kuznets curve and the implications for technology-transfer discussions, the substantive links between climate change mitigation and sustainable development, and those between adaptation to climate change and sustainable development.

1.4.2 The Climate Convention: climate change and sustainable development

The relationship between climate change and development is ambiguous in the Climate Convention (Arts and Gupta, 2004). It refers to sustainable development as both a right and a goal (FCCC, 1992: Art. 3(4)). Sometimes, economic development is seen as a pre-condition to taking mitigation and adaptation measures for all countries (FCCC, 1992: Preamble para. 22; FCCC, 1992: Arts. 4(2)(a), 3(4) and 3(5)). However, the ultimate objective of the Convention calls for the problem of climate change to be addressed within a time-frame that allows, *inter alia*, economic development to proceed in a sustainable manner (FCCC, 1992: Art. 2). This implies that sustainable development can also lead to sustained economic growth.

The Kyoto Protocol is less ambiguous. It calls on all countries to promote sustainable development in their climate-relevant policies (KP, 1997: Art. 2). The article establishing the Clean Development Mechanism – an instrument of cooperation between rich and poor countries – calls on countries to ensure that related projects meet the criteria of sustainable development (KP, 1997: Art. 12); see Chapter 5. At the Conference of the Parties in 2001 at Marrakesh, the Ministerial Declaration (Marrakesh Accords, 2001: Dec. 1/CP7) emphasized the link between climate change and sustainable development, including the developmental issues of poverty, land degradation, access to water and food, and human health. It stated that sustainable development should be included in the reports to the Convention

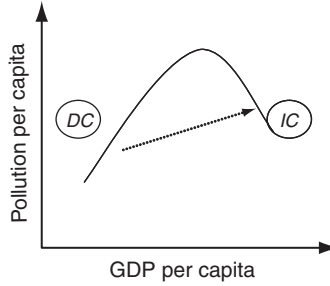


Figure 1.1 The environmental Kuznets curve.

secretariat, including the National Communications³ and the National Adaptation Programmes of Action (NAPA).⁴

1.4.3 The environmental Kuznets curve

The above confusion about whether countries need to develop first before they can invest in sustainable development is not easily resolved. The environmental Kuznets curve⁵ showed, on the basis of empirical evidence, that as societies become richer on a per capita basis they pollute more, see e.g. Malenbaum (1978) and Jänicke *et al.* (1989), for material use, and Grossman (1995) and Selden and Song (1996), for pollutants. Subsequently, as they continue to become richer they can invest more in pollution-control technology and this leads to less pollution per capita (see Figure 1.1). This implied that DCs would first have to invest in becoming richer and only then could they invest in pollution control. It also implied that ICs could more easily decouple their pollution from their economic growth. This was a fairly dominant assumption in the early 1990s.

This implies that investing in pollution control is unlikely in the DCs until they have passed a certain threshold. To address this impasse that DCs would have to develop first before they could invest in climate-friendly technology, the concept of technology transfer and capacity building was adopted (see Section 1.4.4).

This idea was adopted in the Climate Convention (FCCC, 1992: Art. 4(5)) and it referred to the need to develop of the DCs (FCCC, 1992: Preamble paras. 3, 21 and

³ Reports to be provided by all parties to the Convention secretariat demonstrating activities undertaken to fulfil the obligations under the Convention (FCCC, 1992: Art. 12).

⁴ Reports on adaptation to be prepared by the least-developed countries using financial support made available under the Convention process (Decision 28/CP.7, para. 7).

⁵ The term environmental Kuznets curve is based on its similarity to the time-series pattern of income inequality described by the development economist Simon Kuznets in 1955. A 1992 World Bank Development Report made the notion of an environmental Kuznets curve popular by suggesting that environmental degradation can be slowed down by policies that protect the environment and promote economic development.