Justice in Funding Adaptation under the International Climate Change Regime

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Chapter 1
Introduction

Abstract This introductory Chapter first outlines the role of justice in climate change and then explains the ethical approach to international climate adaptation funding adopted by the book. It is an approach which can be framed within the liberal accounts of justice that authoritatively underpin many of the ethical issues raised by climate change because it posits that, in order to alleviate injustice, the more powerful responsible subjects should support and assist the weaker vulnerable ones. The Chapter then specifies the book's main aims, namely to develop a framework of justice for the funding of adaptation to climate change within the United Nations Framework Convention on Climate Change regime, and to evaluate its funding architecture against the ethical framework developed. The Chapter closes with an outline of the book's contents.

Keywords Adaptation funding · Climate change · Justice · Liberalism

Shortwave radiation from the sun heats up the Earth's surface, which then re-emits the energy as long-wave infra-red radiation. Some naturally occurring gases and particles in the Earth's atmosphere absorb part of the outgoing energy and return it to the Earth. This phenomenon, known as the natural greenhouse effect, creates the conditions for life as it exists on Earth. Water vapour is the most important of the greenhouse gases (GHG), followed by carbon dioxide and, to a lesser extent, methane, nitrous oxide, and other minor GHG resulting solely from human activities.

Geological records show dramatic fluctuations in atmospheric GHG concentration. The relationship between GHG and the climate system is, however, a highly complex one because it is determined by a variety of physical processes. Nonetheless, there are two undisputed scientific findings: GHG are rapidly accumulating in the atmosphere, and air and sea temperatures are rising. For instance, the average global temperature has increased by 0.76°C since 1850, and large part of the rise has occurred in the last few decades. Furthermore, according to the International Panel on Climate Change (IPCC), if GHG emissions are not tackled, the average global surface temperature is likely to rise by a further 1.8–4.0°C by the end of this century (IPCC 2007). At the same time, scientists believe that a temperature

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increase of between 2 and 3°C is a point of no return that may determine irreversible and disastrous changes in natural and social systems.

The scientific community largely agrees that the changes observed are related to alteration of the carbon cycle and to the consequent augmented concentration of GHG – especially carbon dioxide – in the atmosphere, but there is still considerable uncertainty as to how much of the changes that have occurred are due to anthropogenic GHG emissions, which increased by 70% between 1970 and 2004. However, the most recent evidence strongly suggests that the effect of human activity on the atmosphere is almost undoubtedly a net positive forcing: '[t]here is *very high confidence* that the net effect of human activities since 1750 has been one of warming' (IPCC 2007, p. 5, emphasis in the original). Basically, the combustion of fossil fuel and long-term deforestation have significantly increased the atmospheric concentration of carbon dioxide and other GHG since the advent of the industrial revolution, thickening the GHG layer around the globe, altering the carbon cycle and, ultimately, changing climatic patterns. These variations are expected to generate an array of impacts on the planet, and especially on poorer countries (IPCC 2007, Stern 2007), which are made more vulnerable, besides physical and geographic reasons, by their closer dependence on agriculture, lack of financial resources, technological and institutional backwardness, and low knowledge and research capacities. Poverty-related climate effects include reduced crop yields, which give rise to food insecurity, lower incomes, scant economic growth, the displacement of people from coastal areas, exposure to new health risks, and an increase in the frequency and severity of extreme climatic events. Moreover, in most cases, developing countries make the least contribution to the generation of such impacts, and furthermore, they are the least able to make their voices heard and their interests count in the international arena. This produces an exceedingly unbalanced distribution of negative impacts and of bargaining power which will widen the gap between the North and the South even further, thereby confirming the view that climate change is essentially an ethical question.

1.1 Justice and Climate Change

Justice concerns play a role in every kind of international negotiation at all levels. For instance, if dilemmas related to the provision of global public goods, or the conservation of common resources such as those associated with environmental assets, are to be solved, it is necessary for the parties involved to cooperate voluntarily. Since there are no supranational authorities able to enforce cooperative behaviours, justice is fundamental in fostering collaboration among states in international environmental negotiations for a number of reasons. In fact, issues such as allocation of the costs of environmental protection or the exploitation and preservation of finite and scarce resources raise controversial questions of justice regarding the consumption of, and access to, environmental assets. This requires, in turn, the fair involvement of all the parties concerned, as well as the equitable distribution of the

relative benefits and burdens. These are issues which should be resolved on ethical grounds so that an international agreement can be made more feasible.

The ethical approach to international climate adaptation funding embraced by this book can be framed within liberal accounts of justice. In fact, the liberal perspective authoritatively underpins many of the ethical issues raised by climate change insofar as it posits that if injustice is to be remedied, the stronger responsible subjects should support and assist the weaker vulnerable ones. As made clear in what follows, these are the main assumptions of distributive justice in international adaptation funding, and they underpin the ethical argument of this book. Liberal theories of justice are, in fact, centred on shared ethical responsibility, and they are predicated on equality, needs, opportunities, freedom, and redistribution. They give equal or impartial consideration to the interests of all, and they display a general concern for the least well-off subjects, who should be given sufficient means, and whose improvement becomes the most ethically important objective: a conception which constitutes the core of liberalism.

It is widely acknowledged that ethical considerations should perform a central role in climate change. The focus to date has been mainly on mitigation, but unless considerations on justice in adaptation are expressly taken into account, international climate policy will produce ethically-dubious outcomes which will very likely be disregarded by states that believe that policies are unjust and/or that they have been treated unfairly. Consequently, I assume that climate change is a matter of international justice, and not one of applied lifeboat ethics (Hardin, 1974) in which each country is concerned to prevent harms to its citizens or, at most, engaged in bilateral negotiations with other countries. Global problems such as climate change require global solutions and hence the broadest possible consensus. Ethical considerations should accordingly play a major role as unifying principles that facilitate collective actions against climate change: the more international climate negotiations are informed by principles of justice, the more numerous the participants will be, and the more a manageable international solution can in principle be achieved.

The fundamental ethical issues in climate change concern the distribution of the burdens and benefits of addressing it, as well as fair participation in the processes of distributing them. Climate burdens are of two kinds: related to mitigation and related to adaptation. Mitigation burdens derive from the cost of cutting GHG emissions or, in a different perspective, from the opportunity costs that actors incur by not engaging in activities that contribute to climate change (they forgo benefits that they could have obtained if they were unconcerned about emitting GHG). Adaptation burdens originate from the adoption of measures to cope with climate impacts and to compensate for residual damages.

Each country in the international arena pursues different interests and objectives, and has different perspectives on climate change strategy. In the policy domain, ethical considerations are not, in fact, the main drivers or goals of international agreements. The parties concerned, especially when a global public good like climate stability is at issue, pursue their own interests and priorities in order to minimize their contribution (or to free-ride). Nonetheless, I believe that ethical issues

represent, protect and promote the needs and concerns of parties, and it has almost always been necessary to take them into account to achieve acceptable agreements.

In fact, the United Nations Framework Convention on Climate Change (UNFCCC) requires that national egoism must not hinder collective actions against climate change. Although both rich and poor states are in principle willing to act cooperatively against climate change, the voluntary consent implied by the Westphalian principle, to the effect that obligations may be imposed on a sovereign state only with its consent, suggests that no international institution can, unilaterally and legitimately, adopt a climate treaty and bind states to comply with it: such a treaty can only depend on voluntary agreements. Moreover, appeals to global economic efficiency are not sufficient on their own to mobilize countries, given the wide welfare disparities due to different mitigation capacities and vulnerability levels, and the diversified costs of adapting to climate impacts. Therefore, since there is no intergovernmental institution enforcing an international climate agreement, the latter should be self-enforcing. And a self-enforcing commitment is, in general, more likely to arise when the risk is clear and present, when the stakes are relatively low, and when the incentives for free-riding are negligible. Regrettably, this is not the case of climate change. Consequently, any climate agreement should be widely shared: a situation which is certainly more likely when the agreement is informed by principles of justice, shaped by equity criteria, and perceived to be fair in its processes. Justice, in fact, implies greater legitimacy and can persuade parties with conflicting interests to cooperate more closely on collective actions.

In the climate debate, moreover, justice concerns are rooted in fundamental differences in the balance of power and the perception of climatic issues between the developed and developing countries. Power results from natural and historical processes, and it is unevenly distributed in favour of rich countries, which can in principle use their greater influence to define international positions convenient to them. Widespread in the industrialized North is an ecological view of the effects of climate change, which is consequently seen as essentially a threat to the environment. Accordingly, environmental effectiveness is a key criterion in assessment of the appropriate measures. In the South, by contrast, climate change is perceived as an issue that most affects human well-being: the harm is caused to humans, who must suffer the physical impacts generated primarily by others, namely the rich countries of the North. Hence, the North's usual conception of justice as the sharing of mitigation costs is at least incomplete. It must be supplemented with the South's conception, more closely centred on the right to use the atmosphere's capacity and on the disproportion between the contributions, and efforts of adapting, to climate impacts, as well as on its recognition and participation in negotiations on the basis of a balanced distribution of power.

The dimensions of justice in the climate context are, as mentioned above, the procedural and the distributive ones. Procedural (or formal, or abstract) justice concerns the fairness of the process by which any possible agreement, be it on mitigation, on adaptation, or on both, is attainable and relates to the level of participation and recognition of all the actors involved in decision processes, as well as on the distribution of power among them. A viable climate treaty should grant all parties

equal access, and ensure that issues raised by subjects who believe that they have interests at stake are dealt with fairly. Another, more problematic, aspect of procedural justice is the effective ability of parties, even through the support of the stronger ones, to participate in the negotiation processes. Climate negotiations are extremely complex, with the consequence that it is usually only richer countries that can afford platoons of skilled negotiators, while poor parties can field only a handful of negotiators, if not just one. The climate change debate is mostly conducted by institutions, scholars and activists from the richest industrialized countries, whereas procedural justice requires that all the parties involved must have equal opportunities to protect and pursue their objectives.

Distributive justice regards the allocation among the parties involved of the costs and benefits both of mitigation efforts to reduce carbon emissions, and of adaptation attempts to prevent the harmful effects of climate change and to compensate for residual non-adapted impacts. Regrettably, despite the logically equal importance of these two domains of justice that springs from the complementarity of mitigation and adaptation strategies to cope with climate change, climate justice has been viewed mainly, if not solely, as a problem of mitigation. Mitigation, however, is only one side of the justice issue. Adaptation and the compensation of residual damages constitute the other.

The first issue concerns the minimization of global mitigation costs by equalizing the marginal cost of abatement, and the use of (that is, the possibility of releasing GHG into) a common resource like the atmosphere. The second issue concerns the distribution of adaptation actions in terms of prevention measures, adaptation activities and compensation for residual damages. More specifically, adaptation initiatives are highly differentiated because they cover a great number of individual and collective choices in the context of local economies and societies, whose fragmented actors are less prone to incorporate adaptation into decision-making because of uncertainty, free-riding and other concerns. This implies that adaptation is not dealt with solely at the international or the individual levels: it also involves national and local governments and non-governmental organizations. Accordingly, adaptation decision-making entails four main issues of justice (Paavola & Adger, 2006) relevant at different spatial levels and for different actors:

- the planning of, and decisions about, adaptation, which implies both issues of international procedural justice and ethical dilemmas between state and non-state actors;
- the extent of the responsibility of developed countries for their GHG emissions, which is relevant in terms of international distributive justice as well as of justice between states and vulnerable communities;
- the amount of aid that developed countries should make available to developing countries, which chiefly involves considerations of international distributive justice;
- the distribution of assistance between developing countries and adaptive measures, which entails both issues of international distributive justice and of justice among states and non-state actors.

In sum, adaptation initiatives concern elements of procedural and distributive justice at the international level, between the international and the sub-national levels, and at the sub-national one, and they involve both state and non-state actors. This book focuses on procedural and distributive international justice between state actors and the relevant international institutions that represent them, for it is centred on the definition of a set of ethical principles and criteria which can be used to construe the international processes of adaptation funding, and on the evaluation of its architecture against them.

International climate justice can ultimately be framed within the following domains,[1] which refer to both procedural (the first domain) and distributive issues related to mitigation and adaptation strategies:

- a distribution of resources and power which allows a fair international negotiating process;
- a just initial allocation of endowments;
- a just exchange of endowments;
- a just allocation of the costs of adapting to climate impacts (Table 1.1);
- a just allocation of the benefits (that is, resources) for adapting to climate impacts.

Table 1.1 Strategies, domains and dimensions of justice in climate change

Strategy	Domains of justice	Dimensions of justice
Mitigation and adaptation	1) A distribution of resources and power which allows a fair international negotiating process	Procedural justice
Mitigation	2) Initial allocation of endowments	Distributive justice
	3) Exchange of endowments	Distributive justice
Adaptation	4) Allocation of costs of adapting to climate impacts	Distributive justice
	5) Allocation of the benefits (that is, resources) for adapting to climate impacts	Distributive justice

The first (limited to adaptation strategy), fourth and fifth domains of the above taxonomy constitute the focal areas of the analysis conducted by this book and the three pillars of the ethical framework in international adaptation funding that it puts forward.

[1]This taxonomy is similar, and indeed inspired by, the one put forward by Shue (1993), who identifies four domains of distributive justice: the allocation of GHG emissions; the allocation of wealth that would allow fair bargaining on GHG emission quotas; the allocation of the costs of preventing avoidable changes; the allocation of the costs of coping with unavoidable changes.

1.2 Aims of the Book

The book has two main objectives: (i) to develop a framework of justice specifically tailored to the funding of adaptation within the UNFCCC regime; (ii) to evaluate the current UNFCCC adaptation funding architecture and its evolution against the ethical framework developed. The book therefore has a twofold nature which derives from the objectives just stated. On the one hand it is a theoretical analysis of the ethical foundations and implications of international adaptation funding that culminates in definition of ethical benchmarks for its empirical assessment. On the other hand, it is an interpretative analysis of the ethical dimensions of the existing UNFCCC architecture on adaptation funding, and to some extent also of its future developments, conducted by applying the framework of justice proposed to different areas of empirical investigation.

As regard the first objective, the book conducts ethical analysis of both procedural and distributive justice in international adaptation funding. On the procedural side, justice concerns are necessary to underpin the legitimacy of the entire international adaptation funding regime, for they allow all countries, and especially the weaker ones, to protect and promote their interests in international negotiations. On the distributive side, the developing countries vocally demand that the developed ones recognize their responsibility for climate impacts. Although responsibility is almost unanimously acknowledged as being a sound theoretical basis for a just distribution of climate burdens among those who have produced them, it is not yet acceptable in the current climate realpolitik. Understandably, the developing countries demand more support for adaptation, especially since the need for larger scale funding is becoming urgent as climate impacts make the necessity of adaptation more widespread, particularly in the most vulnerable countries. On the allocative side, moreover, ethical considerations demand that more vulnerable countries be given privileged access to adaptation resources because of their lesser economic, institutional and social capacities to cope with climate change.

The book thus critically examines the three following assumptions in the current literature which, I argue, should be taken into account when defining a just approach to adaptation funding at the international level:

1. the processes of raising and allocating funds should ensure the fair involvement of all parties;
2. the raising of adaptation funds should be carried out according to the responsibility for climate impacts;
3. the allocation of funds raised should put the most vulnerable first.

The discussion of these issues in Chapter 3 leads to the development, in Chapter 4, of a framework of justice intended to be both a critical synthesis of the theoretical investigation and a normative reference in terms of the fairness and equity criteria put forward, which also serve as benchmarks against which to evaluate the procedural and distributive justness of the international adaptation funding regime.

The use of the ethical framework in this latter role constitutes, as said, the second major objective of the book, and it is applied in Chapters 6, 7 and 8 and in Appendices B and C. This empirical part of the work is interpretative in nature in so far as it examines UNFCCC official documents, governance systems, formal meetings, and the envisaged structures and procedures of some of the multilateral proposals advanced for the post-Kyoto period to identify the emergence of the fairness and equity criteria comprised in the ethical framework of Chapter 4, and determines what their occurrence entails in context.

In sum, the goal of the book is to develop a theoretical reference framework for the analysis of the ethical dimensions of international adaptation funding.

1.3 Outline of the Book

Chapter 2 focuses on adaptation. However, before analyzing the challenges raised by adaptation's multifaceted nature, it describes the reasons for the prominence, to date, of mitigation within the climate debate. It then clarifies the complex notion of adaptation, since this is still ambiguous in the climate change literature, given that any adaptive strategy is a combination of different actions carried out by diverse subjects interacting with each other and motivated by various factors. Furthermore, this Chapter spells out the notion of social vulnerability to climate change, which is one of the ethical cornerstones of the book. It then scrutinizes adaptive capacity because this notion helps specify social vulnerability more precisely. Finally, this Chapter analyzes adaptation in the UNFCCC regime and examines some relevant adaptation policies externally to it.

Chapter 3 explores, from a liberal standpoint, the ethical bases of the international-level funding of adaptation to climate change. The Chapter begins with an overview of theories of justice which organizes and explains the complex concept of justice. It then focuses on aspects of liberal justice so as to provide a framework for the subsequent ethical analysis of international adaptation funding. First, it makes some specifications to clarify the relevant dimensions of distributive justice. Second, it spells out the rationale for the approach taken to international justice. Third, it justifies on ethical grounds the state-centred (or statist) focus of the book within a liberal account of justice. This Chapter concludes with analysis of the extensions needed to apply liberal theories of justice to international adaptation funding.

Chapter 4 develops a framework of justice for international adaptation funding. It opens with investigation of justice in international adaptation funding, whose main dimensions are explored in light of the broad definition of it adopted. The Chapter then develops a framework for both procedural and distributive justice in funding adaptation at the international level, furnishing fairness and equity criteria based on two significant liberal theories of justice: John Rawls's theory of justice as fairness (RTJF), and Amartya Sen's capability approach (SCA). Specifically, procedural justice is based on principles of Recognition, Participation, and Distribution of power

that can be operationalized through fairness criteria of Inclusion of all countries, Possibilities to specify the terms of participation, and Commitment to assistance from richer to poorer. Distributive justice is intended, as far as the raising of adaptation resources is concerned, in terms of principles of Equality and Difference, which give rise to the equity criterion of Differentiated historical responsibility, and on the allocation side, in terms of the principle of Basic capability equality operationalized by the equity criterion of Lack of human security.

Chapter 5 analyzes the main international governance body concerned with the funding of adaptation to climate change, the UNFCCC, an international agreement which gave rise to the Kyoto Protocol; the UNFCCC's financial mechanism, the Global Environmental Facility (GEF); and the funds specifically created to finance adaptation. First it investigates the rationale and the different objectives and options for funding adaptation. Then the attention turns to the instruments governing adaptation funding under the UNFCCC regime: the GEF Trust Fund, the GEF Strategy and Priority on Adaptation (SPA), the Special Climate Change Fund (SCCF), the Least Developed Countries Fund (LDCF), and the Adaptation Fund (AF). Finally, the Chapter also outlines financing options alternative to the UNFCCC regime.

Chapters 6 and 7, respectively, employ the fairness and equity criteria put forward by the framework of justice described in Chapter 4 to evaluate the current international regime for funding adaptation under the UNFCCC. Chapter 6 adopts three different perspectives to assess procedural justice in international adaptation funding in light of the emergence and meaning of the fairness criteria. First, it uses the textual analysis approach to evaluate the relevant documents of the UNFCCC architecture. These documents belong to seven categories grouped into two families: that of Principal Documents and that of Non-Principal Documents. The former comprises the Convention, the Kyoto Protocol and other general UNFCCC and GEF documents, such as declarations. The latter family consists of five categories of more specific texts grouped according the UNFCCC classification for documents related to the financial mechanism. The second perspective focuses directly on the governance structures, procedures and practices of the institutions of the climate change regime governing adaptation funding. It evaluates the elements of Recognition, Participation and Balance of power in terms of compliance with fairness criteria within these institutions' governance systems. The third perspective involves observation of significant selected formal negotiations and is centred on meetings concerning the AF – which is the most controversial, yet promising, financial instrument – and points out the effective level of procedural fairness involved. Chapter 7 carries out a similar analysis, related to the evaluation of distributive justice in terms of the equity criteria of Chapter 4. Obviously, this assessment is performed only on the seven categories of documents, and on the Subsidiary Body for Implementation (SBI) and COP/MOP (Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol) formal meetings on the governance of the AF. Finally, the Chapter conducts critical analysis of the role of the fairness and equity criteria and of the broader aspects of justice within the international adaptation funding regime.

The concluding Chapter 8 extends the application of the fairness and equity criteria of the framework of justice put forward in Chapter 4 to evaluation of the structures and procedures of some of the multilateral climate adaptation funding proposals for the post-Kyoto period. It concludes by summarizing the book's main contributions, and by putting forward some policy ideas prompted by the analysis conducted.

Appendix A lists Non-Principal documents examined in the book; Appendices B and C conduct textual analysis on the five, Non-Principal, categories of documents set out in Appendix A in order to highlight the emergence, respectively, of the fairness and equity criteria proposed.

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Chapter 2
Adaptation to Climate Change

Abstract This Chapter focuses on adaptation to climate change. Before analyzing the challenges raised by adaptation's multifaceted nature, it describes the reasons for the prominence, to date, of mitigation within the climate debate. It then clarifies the complex notion of adaptation, since this is still ambiguous in the climate change literature. Furthermore, the Chapter spells out the notion of social vulnerability to climate change, which is one of the ethical cornerstones of this book. It then scrutinizes adaptive capacity because this concept helps give better specification to social vulnerability. Finally, the Chapter analyzes adaptation in the UNFCCC regime and some relevant adaptation policies externally to it.

Keywords Adaptation · Adaptive capacity · Mitigation · Social vulnerability · Vulnerability

Mitigation and adaptation are both responses to climate change, even though the scientific and policy debate has tended to consider them separately. Mitigation is defined as an intervention to reduce the emissions of greenhouse gases, or to augment their sinks, the purpose being to diminish their concentration in the atmosphere. Adaptation consists in adjustment by human systems to actual or expected physical effects of climate change, variability, and extreme conditions. In a broad perspective, mitigation seeks to protect natural systems against human systems, whereas adaptation aims to protect the latter against nature. The persisting artificial dichotomy drawn between mitigation and adaptation has most probably been caused by the endeavour of the heaviest emitters, the richest and most powerful countries, to avoid liability for past emissions. These two main strategies against climate change should conversely be carried forward together, since they are mutually reinforcing.

2.1 The Prominent Role of Mitigation

The composite characteristics of climate change raise extraordinarily complex international policy issues. And this is especially so because the entire world economy seems still locked into patterns of energy-intensive productions and lifestyles which

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determine a growing fossil fuel consumption which once characterized only the developed countries. Prospects for achieving a viable way to reduce carbon emissions should rely on sound policy action which is both simple and able rapidly to trigger the changes desired. As said, by mitigation is generally meant the set of measures designed to prevent, reduce or delay climate impacts by limiting emissions of gases that are of human origin or within human control, or by augmenting the capacity to sequester them. These measures cover diverse aspects (scientific, technological, environmental, economic and social), and their type, magnitude, timing and cost depend on national and local circumstances, socio-economic and technological development paths, and the desired level of GHG concentration stabilization in the atmosphere. Mitigation policies produce extensive benefits, of which the most prominent are the following: the promotion of sustainable development; the reduction of health problems; increased employment; reduced negative environmental impacts; the protection of wildlife; the promotion and diffusion of technological change. At the same time, however, these same characteristics make mitigation a global public good which offers extensive opportunities for free-riding.

Why has mitigation gained such a prominent role in the climate debate that it has somewhat marginalized adaptation issues? On general grounds, the reductionism of the dominant natural-science approach to climate change, mainly based on the understanding of physical processes, has inevitably led to separation between the concepts of mitigation and adaptation. On this view, mitigation has mainly to do with energy issues, which seemingly offer a more straightforward solution to climate change, according to the ultimate objective of the UNFCCC (article 2) to stabilize GHG in the atmosphere at a non-dangerous level, and are more tractable than the multiple issues entailed by adaptation policies and practices, which, furthermore, can on the contrary be perceived simply as strategies to coexist with climate change. As a consequence, the debate on climate change has centred almost entirely on energy policy and emission control. This focus, in its turn, has made the abatement of the potentially harmful GHG emissions the priority for the climate community, a circumstance that has given rise to the well-known dilemma of the allocation of rights to emit GHG. Moreover, the bias against adaptation may also depend on a misdefinition of the term climate change. Under the UNFCCC, in fact, climate change depends only on anthropogenic emissions, whilst the IPCC uses different notions, including a broader one which also takes account of natural variability. The UNFCCC's narrower definition implies that adaptation can only have costs, these being incurred because of the climatic impacts produced by GHG emissions, and no other benefits. The IPCC Second Assessment Report (IPCC 1996) used the UNFCCC definition to frame climate policy in a benefit-cost perspective. It thus disregarded the ancillary benefits of adaptation while considering those of mitigation, thereby making mitigation seem more efficient.

However, there are other reasons for the scarce attention generally paid to adaptation. They concern the differences and potential conflicts between the two approaches and the intrinsic difficulties of adaptation. These have given rise to distinct schools of thought on climate change that by and large downplay the role of adaptation.

Mitigation and adaptation differ for important reasons (Klein et al., 2003). The first relates to the temporal and spatial scale. The benefits of mitigation will be experienced several decades after the implementation of cutbacks in GHG, given the long persistence of the latter in the atmosphere, whilst the benefits of adaptation are generally experienced immediately, or at least in the near future, although in some cases they also have a long-term span. The second reason for the difference between mitigation and adaptation resides in the comparison and aggregation of costs and benefits. Those pertaining to mitigation are homogeneous because they all derive from the abatement of GHG and are expressed in CO2-equivalents. Adaptation is more difficult to quantify, because it has costs and, mostly, benefits that cannot be expressed in a single metric and thus cannot be easily compared because of the considerable differences and uncertainties of avoided impacts. Moreover, the players and policies involved in mitigation and adaptation are rather dissimilar. Mitigation concerns a limited number of sectors – basically energy, crucial industries (such as construction, cement production, paper manufacture), transport and agriculture – whose generally well-organized actors play an important role in policy-making, although the contributions of individuals should not be underestimated. Conversely, adaptation initiatives cover a large number of different sectors in local economies and societies, whose fragmented actors are less prone to incorporate adaptation into their decision-making because of uncertainty, free-riding and other concerns.

2.2 Integrating Mitigation and Adaptation

The above-outlined considerations on the one hand explain, and on the other reflect, the scarcity of knowledge about adaptation compared to knowledge about mitigation, even though a rapidly growing literature, epitomized by Adger et al.'s (2006) book – which deals with certain critical aspects of adaptation, such as its ethical characteristics – has recently emerged. In general, however, Kates (1997) maintains that the limited attention paid to adaptation by the scientific community depends, besides its intrinsic difficulties, on the existence of two different schools of thought on climate change, both of which tend to underestimate adaptation. According to Kates, the preventionist school attributes a pivotal role to a strong reduction of emissions in order to avert the potentially catastrophic impacts of climate change. In this discourse, adaptation weakens the willingness to control GHG and thus ultimately crowds out mitigation initiatives. In short, adaptation is an anti-environmental and fatalistic approach, and only mitigation can achieve the UNFCCC's ultimate goal of stabilizing 'greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system' (UNFCCC article 2). The adaptionist school instead claims that natural and human systems are able to adapt naturally to external stimuli, so that both mitigation and (planned) adaptation initiatives are only costly and ineffective interferences.

A certain, non-negligible, level of climate impacts will nonetheless be suffered, owing to the long persistence of GHG in the atmosphere and the considerable inertia

of the climate system. The related risks of damage can be reduced by both mitigation and adaptation; but given the scarcity of political and financial resources, the two strategies need to be understood as complementary elements in a larger adaptive process of social change whereby societies respond to changing conditions. The IPCC itself, in its fourth and last Report, acknowledged the close relationship and complementarity between mitigation and adaptation: '[t]here is high confidence that neither adaptation nor mitigation alone can avoid all climate change impacts. ... Adaptation and mitigation can complement each other and together can significantly reduce the risks of climate change.' (IPCC 2007, p. 43).

A crucial element discriminating between mitigation and adaptation is uncertainty. Since mitigation is about taking action now, and adaptation is about taking action when changes happen, the greater the uncertainty, the greater the role of adaptation relative to mitigation. Therefore, despite the differences, the conflicts and, more generally, the trade-off between mitigation and adaptation, they are inevitably correlated, and integrating them in decision-making processes is very useful, for they can produce ancillary benefits and win-win solutions, doing so outside the realm of climate policy as well. For instance, new strategies of urban planning more attentive to green areas can both reduce the danger of, and therefore the necessity to adapt to, heatwaves, and increase the capacities of carbon sequestration, which ultimately diminishes the need to cut carbon emissions. This is also acknowledged by the UNFCCC, which at article 4.1(b) deems both options essential.

It is therefore important to strike the appropriate balance between mitigation and adaptation. On some views, there is no single optimal mix of the two strategies owing to the different characteristics, interests, values and preferences within and between societies. A more useful approach should rely on robustness rather than on optimisation, and hence on determination of a balance between mitigations and adaptations which is environmentally, socially and economically justifiable. It would be necessary to explore an integrated analytical framework that encompasses both top-down and bottom-up approaches. On the other hand, it is assumed that mitigation and adaptation should be kept largely separate, owing to their intrinsic differences pointed out above, which make trade-offs between them impossible.

From an efficiency perspective, climate change can be regarded as an endogenous risk, and a change in climate risk affects the mix of mitigation and adaptation. The response of the mix depends directly on the impacts of risk on the marginal productivity of the two strategies, and indirectly on their degree of complementarity and substitutability. The public choice approach shows that the optimal balance between mitigation and adaptation depends on the relative slope of the marginal cost curve of each strategy. Furthermore, it is arguable that climate policies which consider both trade-offs and synergies between mitigation and adaptation yield major benefits for developing countries, because the actions pertaining to one strategy reinforce those of the other and vice versa. Moreover, a mainstreaming approach aimed at integrating mitigation and adaptation policies into national development plans is now emerging in the international climate debate.

To conclude: '[w]ithout global action to mitigate climate change, both the impacts and adaptation costs will be much larger, and so will be the need for richer

countries to help the poorer and most exposed countries.' (Stern, 2007, p. 430). More mitigation means fewer impacts to adapt to and less risk to cope with and, at the same time, the greater the degree of adaptation, the lesser the impacts for any given degree of climate change. Therefore any region, with different mixes, should pursue both strategies, but adaptation remains the only strategy for coping with climate impacts in the short term.

In sum, it is indeed true that adaptation and mitigation should complement and reinforce each other. However, those most vulnerable to climate impacts are now demanding international responses that increase their climate-resilience, regardless of direct efforts to mitigate emissions. Therefore, the ethical approach to international adaptation funding that this book envisions is an attempt to meet the demand for greater attention to adaptation and its funding that the most endangered subjects (in general, the developing countries and their inhabitants) are making to the international climate change regime.

2.3 The Importance of Adaptation

Whether or not future climate negotiations consider adaptation more closely, all countries will inevitably have to adapt to climate impacts and incorporate adaptation into their regular policies and plans.

Nor is the official climate vocabulary able to provide an univocal definition of adaptation. This is basically due to the above-mentioned different understandings of climate change, which have favoured a bias against adaptation. The UNFCCC's provisions, in fact, apply only to adaptation in response to GHG emissions, and thus leave little room for efforts to adapt to non-anthropogenic climate impacts. The IPCC, with its more extensive definition of climate change, puts forward a broader notion of adaptation focused on both natural variability and anthropogenic interference. The UNFCCC's ultimate goal of stabilizing GHG concentrations expressly envisages ecosystems as adapting naturally to climate change. But if in unmanaged ecosystems adaptation is reactive and by and large autonomous, adaptation actions can, and indeed should, be consciously undertaken by humans to lessen climate impacts on economic, social and managed natural systems, as asserted by article 4.1(b) of the UNFCCC. This commitment is complemented by article 3.3, which calls upon Parties to take precautionary measures to deal with adaptation, thus endorsing the precautionary principle. Probably the greatest challenge is identifying the threshold of dangerousness mentioned in article 2 of the UNFCCC, since it depends both on the magnitude of climate impacts and on the capacity of the systems affected to adapt. Impact assessments of ecosystems and socio-economic systems – whose main goal is to understand adaptations – are the basis for understanding the extent to which climate impacts can be reduced by adaptation. Studies of this kind are essentially at the service of mitigation policies, and their crucial purpose is to contribute to the definition of trade-offs between mitigation and adaptation. They have given rise to a large body of adaptation studies termed 'adaptation

research for mitigation policy' (Burton et al., 2002, p. 147). Conversely, the capacity to adapt of impacted systems centres specifically on vulnerability and on the development of adaptation responses, and it has generated the strand of analysis termed 'adaptation research for adaptation policy' (Burton et al., 2002, p. 147).

Yet disregarding adaptation – which despite the provisions of the UNFCCC has long attracted insufficient attention – is both dangerous and unwise. Nonetheless, the initial negotiations under the UNFCCC focused essentially on reducing potential climate impacts through cutbacks in GHG emissions because at the time of negotiations on the Kyoto Protocol – which in fact is almost entirely devoted to mitigation – the understanding was that the likely impacts of climate change would be avoidable if emissions were adequately controlled. But recent evidence, as said, has made it clear that some climate impacts are occurring in any case, or are likely to occur very soon. Fortunately, since the Montreal COP (Conference of the Parties) to the UNFCCC (COP 11, 2005), the issue of adaptation has assumed a significant role in the debate, as confirmed by COP 13 in Bali (2007) and COP 14 in Poznan (2008), where adaptation definitively moved onto the international agenda, as further testified by its role within the Ad Hoc Working Group on Long-Term Cooperative Action under the Convention (AWG-LCA) established by the Bali Action Plan (decision 1/CP.13). Before Bali, both the Marrakech Accords at COP 7 in Marrakech (2001), and the Delhi Declaration at COP 8 in Delhi (2002), highlighted, for instance, the importance of adaptation for developing countries, owing to their greater sensitivity and their inadequate capacity to adapt, whilst COP 10 (Buenos Aires, 2004) issued the Buenos Aires Programme of Work on Adaptation and Response Measures (decision 1/CP.10). These initiatives also testify to a growing interest in adaptation strategies, and they call in concrete for development of the capacity to deal with actual and prospective climate hazards.

In synthesis, adaptation is assuming an important role in the climate change discourse – as made clear for instance by the Synthesis Report of the Fourth IPCC assessment (IPCC 2007) which addresses adaptation in two out of six topics (topics 4 and 5) – for two main reasons, as pointed out. First, it can modify climate impacts, so that it is crucial to estimate the costs and risks of the latter. Second, it is an important policy response able to reinforce and/or integrate mitigation options.

2.4 The Notion of Adaptation

The climate change literature has put forward many definitions of adaptation. Common to all of them is a focus on the adjustment of systems triggered by climate impacts; but they differ in breadth, interpretation and scope.

To circumscribe the range of the notion of adaptation, it is useful to refer to the framework drawn up by the IPCC (Smit & Pilifosova, 2001). Three questions characterize this approach: (i) Adaptation to what?; (ii) Who or what adapts?; (iii) How does adaptation occur?. They ultimately specify the more general question: What is adaptation?. A satisfactory analysis of the notion of adaptation, in

fact, should spell out the climate impacts considered, the systems that are supposed to adapt, and the processes and forms of adaptation. Furthermore, a fourth question (How good is the adaptation?) implies the evaluation – which may be based on different principles – of adaptation strategies.

The climate-related phenomena which generate adaptive responses are not solely global changes projected on mean temperatures and precipitations. They also include variability of the frequency and/or probability distribution of climate variables over different time spans, as well as variability produced by climatic anomalies like the El Niño – Southern Oscillation (ENSO), sun spots, volcanic eruptions, and isolated extreme events such as droughts, floods, and cyclones. These climate stimuli are not mutually independent. Rather, climatic extremes are part of variability, which in turn is strictly connected to climate change. Nonetheless, it seems useful to acknowledge this distinction among climate phenomena, because the forms of adaptation may differ according to the specificity of the triggering category of climate impacts. The temporal dimension (for example the speed of change, the duration of a condition) of climate impacts plays a crucial role as well. Natural and social systems can handle slowly changing mean conditions, but they are more vulnerable to faster change and to the cumulative effects of conditions beyond some sort of 'coping range' (Smit & Pilifosova, 2001, p. 883), be it a 'critical value', a 'vulnerability threshold', a 'band of tolerance' or a 'damage threshold' (Smit et al., 2000, p. 231). Moreover, climate phenomena have different influences on adaptation according to their spatial characteristics, and especially according to whether they are experienced locally or on a wider scale. Finally, adaptation policies are also influenced by non-climatic conditions, such as different economic and institutional arrangements.

Any systematic analysis of adaptation demands definition of the subject or object involved, variously called 'system of interest', 'unit of analysis', 'exposure unit', 'activity of interest', or 'sensitive system' (Smit & Pilifosova, 2001, p. 883). The definition of the system relates mainly to scale: adaptation at the household level may involve, say, installing air conditioning, at the local level the development of new green areas, and at the national or supranational level a shift to renewable sources of energy.

The potential success of adaptation initiatives and evaluation of their merits, as well as the priority of adaptation options, depend on properly-defined characteristics of systems called determinants of adaptation. The most significant of these, and which suffice to synthesize the entire range, are sensitivity, vulnerability, and adaptive capacity. Sensitivity is a system's biophysical negative and positive responsiveness to climate impacts: it is 'the degree to which a system is affected, either adversely or beneficially, by climate-related stimuli' (IPCC 2001, p. 6). The notion of vulnerability is more controversial because it entails at least two definitions: one biophysical, where the vulnerability of a system depends on its physical exposure to climate impacts and its capacity to adapt to them, and the other social, where what matters is the ability of individuals and of groups to deal with climate hazards. Similarly, adaptive capacity, which can be generally understood as potential adaptation, entails controversial temporal scales which are analyzed, together with the complex specifications of vulnerability, in what follows.

A system's adaptation refers both to the process by which it adapts and to the resulting form of adaptation, which in its turn is influenced by the system's definition and characteristics (Who or what adapts?) and by the climate-related impacts (Adaptation to what?). Several types of processes and forms of adaptation are treated in the literature: a useful synthesis is provided by Smit and Pilifosova (2001) and Smit et al. (2000), who group the most important typologies of adaptation on the basis of common attributes:

- according to the intent or purposefulness with respect to a climate stimulus, autonomous or spontaneous adaptation can be distinguished from consciously planned or deliberate intentional adaptive responses to a stimulus (actual or anticipated);
- according to the timing of the action relative to the climate stimulus, adaptations may be reactive (or responsive or ex post), concurrent (during), or anticipatory (or proactive or ex ante);
- according to the temporal scope, adaptations can be short-term or longer-term;
- according to their spatial scope or institutional extent, adaptations can be localized or widespread. Depending on their intent, adaptations may decrease vulnerability or modify effects. Based on the form they take, adaptations can be distinguished according to whether they are primarily technological, behavioural, financial, institutional or informational.

Other perspectives, after acknowledging that the fundamental distinctions in regard to types of adaptations are those between reactive and anticipatory and between autonomous and planned, stress the importance in grasping their interrelations in the distinction between measures that are reciprocal substitutes and complements. When the two types of adaptation are complementary, that is, when anticipatory initiatives increase the marginal benefit of reactive ones and vice versa, one set of actions can leverage the other. When, instead, the two types of adaptation are substitutes they crowd each other out, so that one can be used to compensate for the absence of the other. Nonetheless, reactive adaptation has greater potential drawbacks due to the possible irreversibility of climate impacts and their high cost even after adaptations, and to the failure of short-term approaches to anticipate larger changes in the future.

However, the distinction between autonomous and planned adaptation may be blurred in practice. As far as reactive, autonomous adaptation is concerned, there are many possible adaptation actions based on experience, observation and speculation. They cover a wide range of types, take various forms, and are essential components of climate change impact models. Planned anticipatory adaptation is achievable through an array of mechanisms, such as knowledge and learning, risk and disaster management and response, infrastructure planning and development, institutional design and reform, increased flexibility of sensitive managed and unmanaged systems, avoidance of poor adaptation, and technological innovation. These mechanisms are usually influenced or governed by public action, which thus assumes an active role in promoting and sustaining planned adaptation strategies.

Another useful categorization of planned, anticipatory adaptation is the one that, depending on the number of beneficiaries, distinguishes between private and joint adaptation: private adaptation is the behavioural response of individuals or corporations, and it is driven by a self-interest which often results in efficient initiatives. On the other hand, joint adaptation, which implies numerous beneficiaries, can only be efficient through government action because of the externalities that it involves.

Moreover, it is possible to point out a broad distinction between actions for building adaptive capacity and actions that implement adaptations, the latter being influenced by the framework created by the former.

The evaluation of adaptations can be framed within two broad categories, with distinct applications. One strand of analysis focuses on estimating the costs of autonomous, primarily reactive, private adaptations. A common practice in this area of research, which is very useful for impact assessments and as a reference scenario for evaluation of policy initiatives, is to sum adaptation costs and residual damage costs in order to determine the total impact costs. In general, these studies, carried out in different sectors and regions, evidence a high human capacity to adapt to long-term climate conditions, and lower degrees of success in adapting to short-term variations and extremes. They suggest that although autonomous adaptation is very important, it is constrained by numerous elements and thus should be supported by planned anticipatory adaptations. The second family of evaluations of adaptations comprises planned, primarily anticipatory, adaptations undertaken or promoted by the public sector. The aim of these analyses is to gauge the goodness of policy measures or strategies of planned adaptation.

A promising framework in which to evaluate successful planned adaptation has been proposed by Adger et al. (2005), who first classify adaptations, which can occur at any – international, national, local – spatial and temporal scale according to their ultimate objectives: reducing the sensitivity of the impacted system, altering a system's exposure to the impacts, and increasing the resilience of natural and social systems. However, defining success only in terms of effectiveness in meeting objectives is not sufficient, for the achievement of one objective may impose negative externalities on different agents or at different temporal or spatial scales. Hence, the success of adaptations should be assessed through the simultaneous promotion of equitable, effective, efficient and legitimate action. These criteria emerge from a social process of consent, they are context-specific, and their relative importance varies among countries, sectors and the actors involved.

Effectiveness is the capacity of a system to adapt so as to achieve its objectives, be these the reduction of impacts, exposure or risks, the avoidance of danger, or the promotion of security. Effectiveness is difficult to quantify, owing to the high level of uncertainty, the influence of other agents, the evolution of the impacted system, and the potential distortionary effects on other systems. The efficiency criterion considers the distribution of costs and benefits, including non-market values, and the timing of adaptations. Furthermore, the success of an adaptation strategy also depends on its equity and fairness. Greater cooperation, as said, is more likely if adaptation initiatives are equitable and fair, and if they pay attention to the well-being of all parties.

Successful adaptations thus balance these four criteria, but this equilibrium is not easy to accomplish: the achievement of success on one criterion may lead to neglect of another (or the others) and the trade-offs between them are still substantially unknown.

2.5 Vulnerability

The need for a more policy-related notion of adaptation like the one espoused by the second generation of adaptation studies has made vulnerability into a crucial issue. In fact, the focus of this strand of studies is on vulnerability and on the consequent adaptation responses, rather than on climate impacts. This vulnerability-driven approach to adaptation is primarily bottom-up and involves assessment of past and current climate vulnerability, as well as understanding of the role performed by adaptive capacity in impacted countries.

It is therefore important to spell out the notion of vulnerability adopted, since it varies significantly according to the diverse fields of interest in which it is employed. The far-reaching use of vulnerability in the natural and social sciences implies at least three different perspectives. None of the approaches, of course, can in general be considered more or less appropriate, nor more suitable for the climate debate. It is the purpose of the research that determines which is the most suitable alternative. The perspective based on natural hazard, epidemiology and food insecurity focuses on the exposure to shocks, perturbations and stresses, and on the capacity to cope with and to recover from these. It is an integrated framework that combines external stressors with characteristics of vulnerable social units. On this view, which has also been adopted by some climate studies, vulnerability is the focal point of the analysis. The poverty and development literature, on the other hand, draws chiefly on political economy. It centres vulnerability on social, economic and political conditions, relating it to social units, to different stresses (not just biophysical) and to the entire range of human capacities. This starting point notion of vulnerability provides a policy-relevant referent focused on the capacity of people to respond to stress. The IPCC Third Assessment Report (IPCC 2001) gives another definition of vulnerability which considers it to be a function of exposure, sensitivity and adaptive capacity. In the IPCC perspective, vulnerability integrates hazards, exposure, consequences and adaptive capacity; and it is the end point of a sequence of analyses that begin with emission trends, the related impacts and the consequent adaptive options. Vulnerability is what remains after the adaptation process has taken place, and it ultimately corresponds to the net climate impact. It should be pointed out, however, that, notwithstanding this clear-cut definition, the IPCC Reports use vulnerability in all the above meanings. For instance, Chapter 18 of the IPCC Third Assessment Report offers a definition of vulnerability which comes close to that proper to the social sciences.

However, global climate change differs significantly from the other areas in which vulnerability assessments have been carried out. It is generally agreed that

there are two different interpretations in the climate discourse: on the one hand vulnerability is the net impact of climate change and is therefore seen as an end point; on the other, it is a starting point, a state of a system produced by social and environmental processes and triggered by climate impacts. The end point interpretation assumes that adaptation initiatives determine vulnerability, so that present adaptive capacity refers to future adaptations and vulnerability. In this biophysical perspective, climate impacts are the main determinants, and the reduction of carbon emissions and of the sensitivity of social, environmental and economic systems to climate impacts are the primary solutions. Furthermore, the end point interpretation also relies on good knowledge of future climate patterns and thus on the central role of science both in identifying and explaining climate hazards and in formulating solutions to them. This view shaped the first generation of adaptation studies, which were in fact oriented towards mitigation policies. This biophysical notion of vulnerability does not seem particularly useful for the objectives of this book, which include the definition of a just scheme for allocating adaptation funds which privileges the subjects that, as made clear later, suffer the most from climate impacts because of their insufficient social, economic and institutional capacities. In fact, the system used to analyse biophysical vulnerability – a crucial dimension in description of a vulnerable situation – excludes any considerations on socio-economic aspects, and therefore fails to address the core element that characterizes this book's ethical imperative in regard to the allocation of adaptation funds: that is, the need to prioritize the subjects with the least means and possibilities to adapt.

On the contrary, the book adopts the starting point notion of vulnerability, which for social systems is also termed social vulnerability (Kelly & Adger, 2000) in order to underline the centrality of the human dimension. This interpretation is rooted in a social constructivist framework and integrates the various social science perspectives, especially those of political economy in the poverty and development literature, as noted. Social constructivism refers, in fact, to individuals and group of individuals, and posits that social vulnerability depends also on a number of socially-created stressors. Therefore, this perspective can provide information useful for both proper adaptation policies and adaptation funding thanks to its capacity to highlight the social determinants of climate vulnerability.

In other words, the focus is on prior conditions and not on future stresses, as excellently synthesized in the image of the 'wounded soldier' (Kelly & Adger, 2000, p. 328). According to this apt metaphor, the vulnerability of individuals or groups to climate hazards is principally determined by their capacity to respond to them. Hence the causal relation operates in the reverse direction, in that it is ultimately vulnerability which determines adaptive capacity and adaptations. Put slightly differently, social vulnerability is 'the ability or inability of individuals and social groupings to respond to, in the sense of cope with, recover from or adapt to any external stress placed on their livelihoods and well-being' (Kelly & Adger, 2000, p. 328). This definition highlights the social dimension of vulnerability, broadly understood as a state of well-being pertaining directly to individuals and social groups, and whose causes are related to social, institutional, and economic factors, as well as to climate impacts, in so far as social vulnerability is indeed not separate

from exposure, and necessarily linked to specific climate impacts. This definition of social vulnerability highlights elements such as wealth, race, ethnicity, gender, and allows for diachronic consideration of the different states of well-being experienced by different populations living in different social, economic and environmental conditions.

In sum, the perspective of social vulnerability to climate change is better able to grasp the processes of social adaptation to climate impacts and orient the consequent policy recommendations and funding disbursement schemes because it is focused on the socio-economic, institutional and political context determining the capacity to cope with climate impacts.

2.6 Adaptive Capacity

Adaptive capacity, like vulnerability, has assumed different and somewhat controversial meanings in the climate change literature. The IPCC Third Assessment Report defines adaptive capacity as: '[t]he ability of a system to adjust to climate change (including climate variability and extremes) to moderate potential damages, to take advantage of opportunities, or to cope with the consequences.' (IPCC 2001, p. 6). Smit and Pilifosova (2001, p. 895–897) review the literature to point out the main socio-economic characteristics of systems that mutually determine their capacity to adapt. In their analysis, the wealth of nations, reinforced by stability, institutions, infrastructures, information, technology, capital markets, is a strong determinant of adaptive capacity. In general, developed countries are supposed to have greater adaptive capacity. More specifically, adaptive capacity increases when the country is rich and stable; there is widespread access to technology; the responsibility for adaptations is clear; climate information is accessible; and resources are equitably allocated. The Stern Review (Stern, 2007) similarly argues that developed countries' adaptive capacity is higher because they have more resources, more flexible economies and more efficient financial markets. Besides, since many adaptive strategies rely on technology and technological advances, there is a close relationship between technology and adaptive capacity, and in fact the determinants of adaptive capacity include the technological options for adaptation; the availability and distribution of resources; institutional efficiency; human and social capital; access to risk-spreading processes; the ability to treat information; and perception of the source of stress. Consequently, the more information and skills are widespread within a society, the greater is the latter's capacity to cope with climate change and variability. Smit and Pilifosova (2001) also stress that countries with proper institutional structures – in general, the developed countries – are by and large supposed to have greater adaptive capacity than countries with weaker institutions – in general, the developing ones – since institutions facilitate the management of current and future climate risk, and they also emphasise that an equitable distribution of power and access to resources increases adaptive capacity. Conversely, poverty makes countries, and disadvantaged groups within them, more vulnerable to climate change and variability.

Adaptive capacity can be given two interpretations that are closely intertwined with the end point and starting point understandings of vulnerability. On the end-point interpretation, adaptive capacity is a measure of the success of technological climate change adaptations and relates to future adaptations and vulnerability; whereas on the starting point interpretation adaptive capacity is the actual ability to deal with climate stress, and thus relates to present-day vulnerability. These different interpretations in their turn determine the different understandings given to adaptation by the first-generation and second-generation adaptation studies. Specifically, the first generation of adaptation studies related adaptive capacity to the ability to cope with future climate impacts and future vulnerability. The second generation of researches has centred adaptive capacity on present vulnerability to a number of environmental, social, political and economic factors. This latter interpretation, which is favoured by this book, envisions adaptive capacity as the set of resources available for adaptation, as well as the capacity to use these resources for effective adaptations. In short, adaptive capacity represents potential adaptation. The main components of adaptive capacity have been identified by Brooks and Adger (2005) as information about the nature and evolution of climate impacts and about socio-economic systems; financial, social, human and natural resources; good governance processes; acknowledgement of the risk associated with climate change and of the ensuing responsibilities for adaptation. It is worth stressing that, among the components that shape adaptive capacity, biophysical vulnerability cannot be neglected. For instance, developed countries in geographically critical areas, such as the Netherlands, have a lower level of adaptive capacity than similar countries in safer areas, such as Belgium. Therefore such countries should integrate their lower adaptive capacity determined by biophysical vulnerability through stronger institutional, social and economic efforts: in short through the socio-economic facets of adaptive capacity considered here. Furthermore, even though adaptation has mostly localised outcomes, it is ultimately a process that takes place at different scales. Therefore the view of adaptive capacity as merely intrinsic to the system which adapts may be misleading because it forgets the larger-scale processes in which the analyzed system is embedded.

In light of these considerations it is therefore possible to argue that adaptive capacity is included in, and concurs with vulnerability to, the determination of social vulnerability, the ethical imperative, in this book, for the allocation of raised adaptation funds.

2.7 Adaptation in Practice

The UNFCCC and the Kyoto Protocol do not give definitions of adaptation, nor, as said, univocal accounts of its major determinants, vulnerability and adaptive capacity. Nonetheless, from the outset the UNFCCC has recognised the need to adapt to climate change and to assist the countries least able to do so. It has thus implicitly accepted some degree of climate change, and, in fact, it has provided an international framework for adaptation initiatives and their funding.

Adaptation is part of the ultimate objective of the UNFCCC as stated in the second sentence of article 2: '[s]uch a level should be achieved within a time-frame sufficient to allow ecosystems to adapt naturally to climate change...', since the stabilization of GHG concentrations at a non-dangerous level, as demanded by the first sentence of this article, is unlikely. However, adaptation within the UNFCCC framework is both difficult to define – for it is widespread in numerous COP decisions – and confusing – because which articles form its basis is a matter of controversy.

Article 4.1(b) – which is pivotal within the UNFCCC for undertaking adaptation and enhancing adaptive capacity – states that parties must '[f]ormulate, implement, publish and regularly update national and, where appropriate, regional programmes containing measures to mitigate climate change by addressing anthropogenic emissions by sources and removals by sinks of all greenhouse gases not controlled by the Montreal Protocol, and measures to facilitate adequate adaptation to climate change'. This article implies the clear and substantive obligation on all parties to undertake planned, anticipatory adaptation measures, and it is reinforced by article 10(b) of the Kyoto Protocol. The provisions of these two articles require each Party to produce sound national programmes integrated with the more general programming activity.

Nonetheless, article 4.1(b) comprises some problematic issues as well. It is in fact not clear what constitutes an 'adequate adaptation'. No specific definition is provided: the adequacy of adaptation may include the degree of economic efficiency, environmental sustainability, technical feasibility, administrative/legal admissibility and social acceptability of adaptation measures. Similarly, it is not clarified what is meant by 'facilitate' adaptation. This should not be restricted to adaptive actions alone; in fact it also concerns the process: that is, the improvement of adaptive capacity. In addition, the provisions of article 4.1(b) apply only to adaptation to anthropogenic climate change, and they address only adaptations carried out by public institutions, thereby ignoring the complementary contribution of the private sector.

Article 4.1(b) is complemented by article 3.3, which calls upon parties to 'take precautionary measures to anticipate, prevent or minimize the causes of climate change and mitigate its adverse effects', thus endorsing a precautionary and preventive approach. The principles of article 3, furthermore, assert the obligation to help poorer countries. Article 3.1, in fact, states that developed countries must take the lead in 'combating climate change and the adverse effects thereof', whereas article 3.2 maintains that 'the specific needs and special circumstances of developing country Parties, especially those that are particularly vulnerable to the adverse effects of climate change', should be fully taken into account. These provisions are made effective by articles 4.3 and 4.4, which urge Annex II Parties to assist developing countries in dealing with climate impacts, and are supplemented by articles 4.8 and 4.9, which pay special attention to funding adaptation and technology transfer in developing countries. Particular emphasis is given, in article 4.8, to the most vulnerable developing country Parties. Among such assistance initiatives, article 4.1(c) UNFCCC, as reviewed by the COP in different sessions, and

article 10(c) of the Kyoto Protocol include the promotion, diffusion and transfer of adaptation technologies. Moreover, article 4.1(e) requires the cooperation of all Parties in preparing for adaptation to climate impacts and stresses the importance of such international collaboration in a number of sensitive fields (for example coastal zone management, water resources and agriculture, protection and rehabilitation of areas affected by droughts desertification and floods), whereas article 4.1(f) focuses on the careful crafting of adaptation policies and practices in order to prevent adverse effects.

The partial implementation of article 4.1(b) and the greater emphasis of National Communications on emission inventories, rather than on vulnerability and adaptation, combined with the particular adaptation needs of the Least Developed Countries (LDCs – a group of fifty countries with roughly 11% of the world's population) owing to their low human, technological and financial capacities, induced COP 7 (Marrakech, 2001), as part of the negotiations of articles 4.8 and 4.9 of the UNFCCC, to adopt National Adaptation Programmes of Action (NAPAs). NAPAs, prepared with the institutional support of the LDC Expert Group (LEG) and financed by a dedicated fund – the LDCF – communicate the urgent adaptation needs of the LDCs. The NAPAs are the only documents within the UNFCCC framework which deal solely with adaptation. The core of the NAPA process is a list of priority activities to address adaptation, whose definition requires the involvement of local communities and other stakeholders. The so-called Marrakech Accords (COP 7, 2001), besides their primary focus on the funding of adaptation (see Chapter 5), broadened the number of eligible funding activities. Another important achievement is, as mentioned, the adoption at COP 10 (Buenos Aires, 2004) of the Buenos Aires Programme of Work on Adaptation and Response Measures, whose objective and scope have been further specified at COP 11/COP-MOP 1 (Montreal, 2005), and finally the exigency put forward at COP 13 (Bali, 2007) by the Bali Roadmap of fostering alliances between the North and the South to promote adaptation in the developing world.

Other significant ongoing activities in the field of adaptation within the UNFCCC realm are the Adaptation Policy Framework (APF) set up by the United Nations Development Programme (UNDP), the principal aim of which is to incorporate adaptation into countries' national development strategies; and the Assessment of Impacts and Adaptation to Climate Change (AICCC), a GEF-funded initiative implemented by the UNEP to carry out regional investigations of adaptations and vulnerability in developing countries.

In brief, the UNFCCC focuses only on man-made climate change, and not on current (natural) climate change and variability. Consequently, it deals only with the incremental costs of impacts produced by human-induced climate change, and not with the general costs (and benefits) of adapting to normal climate. This circumstance implies that adaptation is largely envisaged in terms of specific measures, not of policies, so that the distinction between anthropogenic and non-anthropogenic climate change is blurred. Besides, owing to its emphasis on mitigation, the Convention privileges global environmental benefits, and thus gives little recognition to the spatially limited benefits deriving from adaptation.

Moreover, it takes a top-down approach to climate impacts and risks which may be unsuited to meeting the particular needs of specific areas and local communities.

Climate negotiations are, however, paralleled by growing activity outside the UNFCCC on adaptation to climate change and an endeavour to address the adaptation agenda more vigorously. A number of national initiatives, such as the United Kingdom's Climate Impact Program or Canada's Climate Change Impacts and Adaptation Program, concentrate specifically on adaptation issues at national and regional level. Donor agencies have realized that climate impacts will have major effects on the quality of life of poorer countries and are consequently supporting adaptation strategies in various ways. The 2003 report by the Vulnerability and Adaptation Research Group *Poverty and Climate Change* (AfDB et al., 2003) highlights, for example, the importance of integrating climate change into development programming. At the multilateral level, the Convention on Biological Diversity (CBD) is working on the identification of opportunities to adapt to climate impacts in a way that protects biodiversity. On a wider scale, environmental and conservation institutions around the world have increasingly turned their attention to adaptation to climate change as well. For instance, the World Wildlife Fund (WWF) and the World Conservation Union (IUCN) underscore the importance of effective eco-system management in heightening the adaptive capacity of vulnerable communities. International and local non-governmental development organizations stress the role of local communities and of local initiatives in reducing vulnerability. Humanitarian organizations as well, such as the Red Cross/Red Crescent, use their expertise in disaster management to develop strategies and practices to adapt to climate impacts.

More generally, it is recognized that effectively lessening climate impacts may be facilitated by mainstreaming adaptation, that is, by integrating it into strategies, plans, and policies at national and sub-national levels. As stressed by the *Poverty and Climate Change* Report, climate change is more a key issue for development than a mere environmental concern, especially for developing countries. As regards adaptation, the impacts of development projects on institutional, economic and environmental factors may influence the vulnerability of natural and social systems and affect (either augmenting or diminishing) the adaptive capacity of societies. These determinants of adaptation thus lie at the interfaces between the three main areas of development cooperation – humanitarian aid, poverty reduction and natural resources management – which consequently become the strategic entry points for pursuit of adaptation through development activities. These kinds of adaptation efforts are more fruitful when they are directly led by communities – identified as regions where people share a common climatic past and future – impacted upon by climate patterns. Indeed, communities should not to be treated as isolated social systems; rather, they need the support of national and international structures working on adaptation and producing scientific knowledge about it. There are several sound reasons for not forgetting the community level. Firstly, the social structures of communities incorporate the practical knowledge that can usually supplement scientific and technical expertise. Secondly, strengthening community bonds is necessary because most adaptations will be undertaken at the local level. Thirdly,

central levels of government are unlikely to protect the interests of the most vulnerable communities, although these are the ones that most deserve support. This circumstance highlights the importance of participation by affected communities – especially the weakest ones – in planning and decisions regarding their adaptive responses.

There are, in sum, two different and somewhat controversial perspectives on adaptation: the traditional one of the Convention, which ultimately provides the rules for funding adaptation initiatives; and the development-driven perspective focused on the inclusion of adaptation in the policy agenda. For instance, the identification of adaptation measures should always take account of the policy context, for it is unlikely to identify stand-alone measures effectively able to deal with climate impacts with their multiplicity of facets. Or again, concentration exclusively on anthropogenic climate change and the focus of funding practices only on the incremental cost of adaptations producing global benefits propounded by the GEF do not integrate with, nor favour, the potential of the development perspective on adaptation. It thus seems necessary to devise a coherent and unified regime for adaptation. Otherwise the emerging system, in which the notion of adaptation itself remains fragmented and unclear, will lead to the ineffective use of resources and, worse, to poor adaptation practices.

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Chapter 3
The Ethical Bases of International Adaptation Funding

Abstract This Chapter explores, from a liberal perspective, the ethical bases of the international-level funding of adaptation to climate change. It begins with an overview of theories of justice that organizes and explains the complex concept of justice. It then focuses on aspects of liberal justice which provide a basis for the subsequent ethical analysis of international adaptation funding. First, it clarifies the relevant dimensions of distributive justice. Second, it spells out the rationale for the approach to international justice. Third, it defends the ethical justification for the statist focus of the book within a liberal account of justice. The Chapter concludes with analysis of the extensions needed to apply liberal theories of justice to international adaptation funding.

Keywords Distributive justice · Equity · Fairness · Liberal theories of justice · Procedural justice

Justice has diverse meanings: it can be understood as the moral permissibility of a distribution of benefits and burdens; as the legitimacy of actions; as the possibility for individuals to obtain what they are due; as what we morally owe to each other. All these notions construe justice as a property pertaining to a state of affairs, an action, an institution, and they are juxtaposed with the view of justice as a virtue pertaining to a person, or a group of persons. The book espouses the first of these conceptions of justice, and therefore, in general terms, the view that it concerns the ethically right allocation of goods and bads – under David Hume's circumstances of justice[1] – as well as possibility to participate in the processes determining that allocation.

Four caveats are in order regarding the scope of justice as it is conceived in what follows. First, the ethical analysis of international adaptation funding draws upon the Western philosophical tradition, which is not of course monolithic but nonetheless has developed a common basis for advancing universal moral claims and arguments

[1] Hume (1957) argued that justice is applicable only in objective circumstances when the good to be distributed is neither hugely abundant nor extremely scarce, and in subjective circumstances of possible conflicts of interest.

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based on long-standing ethical systems. The main criticism that can be brought against this standpoint is that it is ethnocentric. A response to this charge is that this understanding of justice does not assert the superiority of Western political philosophy but simply argues that, matter-of-factly, its principles and criteria are widely acknowledged around the world. They have therefore served to guide international policy-making and may thus prove useful for the ethical argument put forward here. Furthermore, a moral tradition is an open-ended system, and any difference with respect to other moral traditions can be included within it.

Second, the perspective on justice adopted here is problem-specific: it deals only with ethical issues arising in the domain of international adaptation funding and does not take account of the repercussions all-things-considered: that is, other aspects of society.

Third, the focus is on practical justice: that is, on a notion of justice limited to the achievable set of options, and not on the unconstrained notion of ideal justice.[2] This is because the purpose of the following analysis is to apply ethical considerations to real-world things, with all the empirical constraints that this implies; for questions of justice are, in general, practical questions.

Fourth, climate justice needs to be methodologically addressed within a pluralistic ethical framework, so that the great variability of climatic outcomes and of countries' responsibilities and capacities to cope with mitigation and adaptation can be recognized and taken into account.

A final specification is in order. The term justice is often used, especially in the literature on climate change, interchangeably with equity and fairness. However, although these notions are indisputably interconnected and complementary, here they are kept distinct, notwithstanding the controversy that any such distinction may provoke. In fact, the approach taken here has a normative slant in that it ethically analyzes the international regime governing the funding of adaptation to climate change in terms of both the outcomes of this activity and the processes determining such outcomes. Conceptual clarity is thus necessary to construct an unambiguous ethical framework. I therefore assume that principles of justice – on their own or within composite theories of justice – exist independently before any process of judgement or interpersonal comparison has begun. In brief, justice is the unifying theoretical element for any ethical analysis. Equity instead refers to normative criteria used to orient the implementation of principle(s)/theory(s) of distributive

[2]The distinction between practical and ideal justice adopted is taken from Vallentyne (2007, p. 3, emphasis in the original), who specifies that: '[a] distinction can also be made between ideal and practical justice. *Ideal justice* is what full justice requires in the absence of any empirical constraints (such as limited resources), whereas *practical justice* focuses on what is (perhaps imperfectly) just relative to a given feasible set of options.' Consequently, neither adopted nor used in the book is Rawls's notion of ideal justice as deriving from well-ordered institutional arrangements, which in their turn require just institutions and the compliance of individuals with their requirements. Ideal justice, on this view, is juxtaposed to non-ideal justice which is caused by two circumstances: (i) background institutions are not just; (ii) individuals do not comply with their requirements.

justice. Criteria of fairness derive from the perception arising from a judgmental process which considers fairness as the correct application of the rules related to a procedure. Fairness suggests what is right and wrong in particular circumstances for specific parties on specific issues, and it relates mostly to the structure and the process of the negotiation: that is, to procedural justice.

3.1 From Justice to Theories of Justice

In general terms, justice is the justified solution adopted to reconcile different desires and interests that cannot all be completely satisfied. Seeking a univocal justified solution means reconciling people's infinite desires and interests. Hence a unique notion of justice is presumptuous and ultimately impossible to achieve. The concept of justice has, in fact, been debated since antiquity. Socrates, in his imaginary conversations with his fellow-Athenians, would pose the fundamental question of what is justice, and claimed that its essence was impossible to grasp. Plato argued that a proper definition of justice should result from the shared features of many different cases of justice, but it basically consisted in serving the polis to the best of one's ability. However, the approach to justice most influential on the development of modern Western philosophy has been that taken by Aristotle, who in the fifth book of his *Nicomachean Ethics* (Aristotle, 1998), after specifying that justice is not merely the sum of the virtues but also a set of positive laws and a system of rights, introduced fundamental distinctions among different kinds of justice. Aristotle differentiated between general justice, which required obedience to laws and the establishment of relations of virtue with others, and particular justice, which he placed among the virtues and was based on the principle that equals should be treated equally and unequals unequally in proportion to their differences (Aristotle, 1998, 1131a 1). Particular justice, moreover, is divided into two categories: rectificatory justice, which preserves an impartial social order through the regulation of dealings between individuals, and distributive justice, which is focused on the allocation of wealth, rights, honours, benefits, as well as duties among individuals, and whose most important quality is equity or fairness. In this regard, Aristotle's geometric equity states that 'this is what the just is – the proportional; the unjust is what violates the proportion' (Aristotle, 1998, 1131b 18), and that the distribution must be 'according to merit' (Aristotle, 1998, 1131a 10). The categories of particular justice have given rise to the generally accepted modern distinction between procedural (or abstract, or formal) and distributive justice.

In the spirit of the Aristotelian categorization of justice, Cicero, in his *De Officiis* (1987), drew a distinction between justice and beneficence that has been highly influential both on Christian philosophers such as Augustine and Thomas Aquinas and on secular thinkers such as Grotius, Smith and Kant. Aquinas acknowledged Aristotle's notion of distributive justice, and stated that distributive justice allocates goods in proportion to merit, whilst commutative justice should correct wrongs following strict equality criteria. Aquinas dominated Western philosophical thought

until the seventeenth century, when Grotius (2007) introduced a different distinction between expletive justice, which governs human laws according to legal rights, and attributive justice, which relates to virtues such as generosity and compassion. Smith, in the *Theory of Moral Sentiment* (1982), instead considered distributive justice as a means to alleviate the misery of the poor, whereas Kant (1991) derived from the value of freedom the universal principle of justice that an action is just if the greatest freedom of choice of every subject can coexist with the freedom of every other subject according to a universal law.

Stuart Mill was still seeking in the nineteenth century for an account which encompassed all the essential elements of justice. This endeavour was bound to fail, however, as made clear by twentieth-century political philosophers – who in fact preferred to organize, explain and justify the various elements of the concept of justice within composite theories of justice. Such theories should systemize the beliefs, values and activities related to the concept of justice, pointing out the most important ones and their mutual interrelationships. As Kolm writes (1996, p. 33): 'a theory of justice is a set of considerations whose conclusion is the judgement of justice in a category of problems of justice'.

A first set of considerations envisions justice as a rational agreement reached for mutual benefit.[3] Hobbes (1991), for instance, sees a proper legal system grounded in justice as the basis for resolving the anarchy of the state of nature. Neo-Hobbesian theories of justice consequently uphold a contractarian notion of justice which protects, on the basis of historical principles,[4] liberty, and property rights, and which is thus beneficial for all social actors. This view maintains that individuals are self-interested and that their rational attempts to maximize their interest will induce them to act morally, as long as moral norms are defined by the objective of maximizing the common interest. In the same vein, Nozick's libertarian theory of justice (Nozick, 1974) states that justice is concerned exclusively with the protection of the individual's right (or entitlement) to her/his property as defined by three principles: the principles of justice in acquisition, in transfer, and the principle of rectification, which is valid only when either of the first two principles has been violated. Locke (1988) put forward a dissimilar view which, although still grounded on the social contract, was based on the previously given obligation to honour agreements, considers life, liberty, and property to be natural rights pertaining to every individual.

[3]There are many possible classifications of theories of justice. For instance, Wolff (2005) considers the role that a theory of justice gives to institutions and then distinguishes among those backed by: libertarianism, natural and social contingencies, and broad egalitarianism. Vallentyne (2007) instead identifies theories of justice based on utilitarianism and consequentialism, contractarianism, libertarianism. The classification adopted here is, among those possible, the one apparently best suited to gaining a general and impartial view on theories of justice.

[4]Nozick (1974, pp. 153ff.) defines a historical principle as one which holds that the justice of a distribution depends on how it came about. Further, he specifies that an end-result principle denies this, and he states that patterned principles are those which specify 'that a distribution is to vary along with some natural dimension, weighted sum of natural dimensions, or lexicographic ordering of natural dimensions' (p. 156). Patterned principles can be both historical and end-results depending on their internalization of facts of the past for the establishment of present entitlements.

Lockean theories of justice claim that the mutual benefit is constrained by these ethical rights of individuals, and that a social system must respect the basic moral rights to life, liberty and property if it is to be just.

Another extensive family of theories of justice has the justness of a society depend on its capacity to give people what they deserve. The consequent notions of justice diverge, however, on the basis of the essence of deserts. The core distinction is between, on the one hand, positions which maintain that the just desert relies on something – goods, wealth, opportunities, rights, needs – which should be held equally by everybody, and, on the other, positions which claim that the basis of just deserts can be unequally distributed. The former standpoint gives rise to egalitarian theories of justice. These basically consider people equal in some important respect and thus claim, according to the Aristotelian principle of treating equals equally, that they be treated equally. Egalitarian theories of justice diverge, however, in the nature of equality. To borrow the title of a path-breaking lecture by Sen (1980), the question is: [e]quality of what? Different answers are possible: equal income, or wealth, or welfare, or opportunity, or opportunity for welfare may form one family, even though these equalisanda may be impracticable given the redistributions that they would require. Moreover, they raise problems in regard to the conception adopted of what is good and worthwhile in human life, and in regard to the exclusion of considerations of personal responsibility. Alternatively, it is possible to ensure that people have equal resources, as Dworkin (1981a, b) suggests when he claims that every subject is entitled to equal concern and respect in the definition of the social structure. But what happens when a person cannot properly use resources because of, for instance, her/his lesser personal abilities? Where would equality be found in this case? Sen's capability approach, which is considered more thoroughly in the next Chapter, focuses on an evaluative space of justice which looks for equality in terms of valuable capabilities, that is, beings and doings that form individuals' life-projects. Finally, Rawls, whose theory of justice as fairness is also analyzed in more depth in the following Chapter, instead considers justice to be 'the first virtue of social institutions' (Rawls, 1999a, p. 3), a form of fairness which originates from negotiation of the social contract under a veil of ignorance. This can be considered an egalitarian theory of justice in that it demands the equality of impersonal resources, which Rawls calls social primary goods, although he admits relevant, non-undeserved inequality. In a different perspective Rawls's theory is considered a modern contractualist construct which originates from the Kantian approach to the social contract based on the assumption that it is the acceptability to those who are the parties to a contract that determines the validity of a moral principle.

On the other hand, the view requiring the inequality of deserts produces families of theories of justice which envision that some individuals should have more than others. According to contribution-based theories, justice must respect the individual's contribution to the overall social good; in meritocratic theories, justice depends on consideration of an individual's merit; in needs-based theories a just society should satisfy the basic needs of individuals in a differentiated way, since every individual has different basic needs, which, moreover, are also non-measurable. Other schools of thought consider equality, just deserts, and fairness to be valuable

only if they maximize welfare: defined as just is what maximizes a specific welfare function. Most philosophical inquiry in this area has concentrated on the welfare function conceived by utilitarianism. Since Bentham and Stuart Mill, Hume and Smith, this doctrine has considered the sole possible axiom for morality to be the principle of utility (or the greatest happiness principle), which states that societies must pursue the greatest happiness, pleasure, or preference-satisfaction for the greatest number.

The theories of justice briefly surveyed thus far are grounded on a single and homogeneous set of principles. There are, however, other theories which are underpinned by several different principles. For example, Miller maintains that justice is rooted in three principles – right, desert and need – whose roles 'vary systematically from one social context to another' (Miller, 1976, p. 253).

As said, seeking to summarize the astonishing complexity of theories of justice is a pointless exercise. However, for the purposes of this book, it seems useful to highlight a group of theories of justice based on a different perspective[5] which overcomes both the dichotomy between egalitarian and non-egalitarian theories, and the one between single and multiple criteria theories. This category, which is generally defined as that comprising liberal theories of justice, aims to protect the least well-off subjects by enabling them to improve their condition. Therefore, liberal theories of justice may prove particularly useful for the analysis of a policy issue such as the international-level funding of adaptation to climate change. Indeed, '[m]ost of the many liberal theories of justice on offer have had a broadly egalitarian flavour, demanding at least the partial offsetting of the economic and social inequalities' (Miller, 1998). In brief, liberal theories of justice can be framed in broadly egalitarian terms,[6] and for this reason constitute a very useful approach to distributive and environmental justice in general, and to the funding of adaptation to climate change in particular, as further specified in the next Chapter.

In the context of the present analysis, Rawls's theory of justice as fairness (RTJF) and Sen's capability approach (SCA) are probably the most significant examples of contemporary liberal theories of justice, although, according to Sen himself, the capability approach simply entails the equalization across subjects of well-being

[5]Two other important philosophical clusters of theories of justice can be identified according to the same perspective. The first focuses on consequences and end-states, and it can be paradigmatically represented by utilitarianism and welfare economics. The second category is based on individual responsibility and proportionality: Nozick's entitlement theory epitomises this libertarian approach.

[6]By broad egalitarianism is meant a distributive pattern, similar to Arneson's generic egalitarian intuition (Arneson, 1999), which has a tendency to equality and aims to improve the lives of the badly off. More specifically: '[a] broadly egalitarian theory is one that holds that justice requires that institutions and individual actions should be arranged to improve, to some degree, the quality of life of those who are worse off than others or very badly off, or both' (Arneson, 2008, p. 1). Moreover, broad egalitarianism does not accept the historical principles that characterize libertarian theories of justice, but rather endorses patterned ones. From a different perspective, the broad egalitarian tradition can be seen as taking up Rawls's challenge of minimizing the effects of social and natural contingencies on individual life prospects.

levels measured in a multidimensional evaluative space (that of functionings and capabilities), and therefore cannot be considered a complete theory of justice. They constitute the focal ethical basis of the discussion, and their role in the context of adaptation funding, and main characteristics, are analyzed, as anticipated, in the next Chapter.

3.2 The Scope of Distributive Justice

Distributive justice concerns the distribution of benefits and burdens in society, these being broadly conceived as including non-monetary elements as well: goods, bads, power, education, shelter, social duties. I prefer not to further distinguish between distributive justice and corrective (commutative, rectificatory) justice, the former relating to the distribution of benefits and burdens in the absence of past wrongdoing, and the latter to the response to past wrongdoing in terms of punishment and compensation. In the climate debate, and especially in the context of adaptation funding, this distinction might in fact, in my view, blur the difference between responsibility, which is not solely a matter of wrongdoing but also of ignorance and of possibilities to act, and punishment. In fact, corrective justice should be more properly related to a strict notion of retrospective moral responsibility understood as the justification for blaming and punishing, which, as argued later, is not adopted in the book.

In order to circumscribe the scope of the analysis of distributive justice it is necessary to examine three general issues, and then situate them in the context of international adaptation funding. They are: (1) which are the subjects of justice?; (2) what kind of benefits and burdens are to be justly shared?; (3) which is the principle, or pattern, of distribution?.

The first issue requires specification of 'what sort of entities count as potential members of a scheme of distributive justice', and 'who are the rightful recipients of goods, and who is obligated to distribute these goods?' (Caney, 2005, p. 103). In turn this specification opens the way to a broader set of intertwined issues regarding to whom justice is owed.

A number of theorists argue that justice is owed to individuals. On the most restrictive view, justice is owed only to those individuals with whom one interacts in a mutually beneficial way. Other theorists conversely maintain that justice is owed to collective entities such as corporations or, in international affairs, to states or nations, which are the ultimate recipients of rights and duties.

Here, the institutions involved in international-level adaptation funding, be they states or the relevant international institutions – that is, those analyzed in Chapter 5 – are the subjects of distributive (and also procedural) justice. Such institutions possess, for the reasons detailed later, institutional moral agency, so that duties, obligations and rights can consequently be ascribed to them. This does not preclude the possibility of further allocations of responsibilities among individuals belonging to these institutions. However, analysis at this level would be beyond the scope of

the book. In what follows, the collectivist choice of considering justice as owed to institutions implies that the individualistic notions of the subjects of justice become pointless; non-human beings, also for the reasons made explicit later, are excluded from the subjects of justice.

On a different understanding, some authors argue that justice is owed only to those subjects with whom one interacts in a mutually beneficial way. According to a broader notion, known as interactionism, justice is owed to those rational agents with whom one simply interacts. A widely accepted form of interactionism considers only political interactions and thus confines the scope of justice within the boundary of only one state. On the other hand, according to the approach embraced in this book, the scope of justice should traverse national borders and encompass all the people in the world.

Another specification of the subjects of justice derives from the consideration of only the current generation, or includes those persons who at some point – past, present or future – exist in the world or may come into existence. The analysis here, as specified in what follows, takes the first option, although it acknowledges the importance of intergenerational considerations in distributive justice within the broader context of climate change.

The second issue concerns the nature of sharable benefits and burdens. Much has been written on this point: some of the main currencies are welfare, wellbeing (quality of life), initial opportunity for wellbeing, resources, primary goods, capabilities, and freedom. This issue, however, is dealt with straightforwardly here, given that it is centred solely on the financial resources needed to adapt to climate change.

More interesting in relation to the present analysis is consideration of the third question that characterizes distributive justice: what pattern of distribution should it adopt? Again, much discussion has been made on this point, but it can be summarized by stating that the main families of principles of distribution which, from a consequentialist perspective, underpin, also jointly, theories of justice are equality, priority, and sufficiency. Egalitarian principles require that justice be concerned with the equality of certain important distributable elements. Prioritarian principles assert the importance of distributing specific benefits to the least advantaged subjects. Sufficientarianism holds that every subject must have a sufficient, yet not equal, share of the specific currency of justice. Within the ethical framework constructed in Chapter 4, patterns of distributive justice in adaptation funding relate both to the raising of funds for adaptation activities and to the allocation of the resources raised. The first half of the issue regards, in general terms, the attribution of responsibility to those whose emissions have produced climate impacts by consuming atmospheric capacity and who have the means to remedy the harms caused by the consequent climate impacts. In order to underpin this circumstance ethically, the treatment in Chapter 4 relies on the two principles of distributive justice in the RTJF, namely the Egalitarian and the Difference ones. These two principles obviate the problems of radical equality in that they clearly allow for inequalities which favour the least advantaged responsible subjects. In fact, Parfit (1997) labelled the RTJF as a prioritarian one because it gives priority to the worst off. The resulting equity criterion of Differentiated historical responsibility (see Chapter 4) accordingly claims that the

worse off among responsible subjects should be given priority by being allowed to reduce the contributions owed in function of the level of social primary goods that they enjoy.

The allocation of raised funds is based ethically on human security, understood as a set of domains of well-being rooted in the SCA, which aims to achieve a situation of Equal basic capabilities for all subjects. The SCA can be seen as primarily a sufficientarian ideal, more than an egalitarian one, in so far as it requires that every person be brought to, or above, the threshold level of the capabilities necessary for a minimally good enough life. But the SCA is a truly broad egalitarian construct, because in order to avoid some of the problems of intrinsic egalitarianism, such as the levelling-down objection (Parfit, 1997), it accepts other distributive patterns adverse to inequality, like prioritarianism. In this regard, the SCA holds that capabilities should be increased, and hence deprivation reduced, wherever possible, and that it is more valuable to reduce greater deprivations. Prioritarianism is therefore a further feature of the SCA that complements its sufficientarian nature, and from this perspective the equity criterion of Lack of human security (see Chapter 4) gives priority access to adaptation funding to those countries that most deserve it.

3.3 The International Span of Justice

I assume that the issues of justice dealt with in this book operate mainly at the international level. In other words, it is indeed true that ethical analysis of adaptation funding should focus on different levels of governance – international, national, communitarian and individual – but, the scope of such treatment is only the first link in the chain: the international level. It is hoped that if ethical considerations are properly dealt with at the highest level of governance, lower levels can benefit in terms of justice, doing so by virtue of some sort of domino effect.

Yet this assumption implies that states are internally homogeneous; a belief that conceals, both within developed and developing countries, the great disparities among classes and communities which, moreover, may not be represented equally by governments. In the context of international adaptation funding, there is, for instance, a tension between state and sub-state scales of allocation of funds in developing countries. This is because different individuals and communities within one state can have very dissimilar degrees of social vulnerability, whereas the UNFCCC envisions only the state-level scale. Furthermore, the notion of distributive justice is specific to particular communities and individuals because it is determined by their objectives, interests and values. This implies that the allocation of funds at the sub-state level is problematic because the issues of distributive justice raised by individuals and communities, even within the same state, can be controversial and divergent. Therefore, as Paavola (2007) argues, it seems useful to seek legitimacy for sub-state allocations of funds in procedural justice, which, as pointed out in the following Chapter, can be articulated into a number of principles assuring that the

objectives of every party involved count in decision-making. In turn, whether individuals and communities can make their objectives really count depends on their empowerment, that is, on the creation of both knowledge and awareness of the issues at stake, and of concrete social and policy spaces in which to confront them.

Whilst acknowledging these problems of scale, however, the UNFCCC regime for adaptation funding is locked into an architecture that, as pointed out, is state-driven. Therefore, despite the tensions outlined, the state-centred approach, embraced also by this book, remains a cornerstone of the UNFCCC. And its rationale must be defended, after specification of the adopted notions of procedural and distributive international justice, by justifying on ethical grounds the statist focus of this book within the liberal paradigm of justice.

I believe that, in broad terms and for present purposes, it is possible to define international justice as the fair process, which involves all relevant parties, of raising adaptation funds according to the responsibility for climate impacts and of allocating raised funds by putting the most vulnerable first. The first of these elements refers to the procedural aspect of justice, the others to the distributive one.

As far as the former is concerned, it is generally acknowledged among scholars that international governance, especially in the environmental field, must be characterized by increased cooperation and inclusiveness. For instance, Fraser (2005, p. 5) rather radically holds that the 'most general meaning of justice is parity of participation' and that 'justice requires social arrangements that permit all to participate in social life'. Yet the procedural dimensions of international justice do not seem to be a main concern in the mainstream literature, where the focus of analyses is more on legal and efficiency aspects, such as, respectively, legitimacy and mutually beneficial bargaining. However, these perspectives appear insufficient for the aims pursued here. Needed instead is an over-arching interpretation of procedural justice characterized by moral reciprocity able to systemize the elements of fairness related to international adaptation funding.

In practice, the current international order is not just, from a procedural point of view, because the distribution of power and rights which makes it possible for people (or more specifically for their representatives) to enter decision-making processes whose outcomes affect their lives is still by and large biased in favour of more powerful and wealthier countries. The point is that, even if the international system were just in distributive terms, the ensuing international governance framework would not be just as long as it did not encompass the right of all parties, especially the weaker ones, to participation in decision-making. Furthermore, the global nature of climate change and of its impacts greatly enlarges the scope of sub-national or national activities: policies (for example adaptation ones) usually considered to be of solely national concern exert significant effects on other countries. Thus, peoples affected by decisions related to the distribution of burdens and benefits of climate change should have a voice in the process, independently of the justice of the outcomes in the case of their non-participation. Hence a normative stance on procedural justice such as the one adopted here should take account of all these elements in defining the justice principles and the fairness criteria that should inform international negotiations on adaptation funding. Otherwise they would be flawed, for they would

not extend the right of true informed participation and decision to all interested subjects.

In order to specify the meaning of international distributive justice, it is necessary to distinguish among the different and competing approaches taken to the notion in political philosophy. A useful taxonomy identifies a cosmopolitan approach to distributive justice which comprises many of the best-known conceptions of international justice. Cosmopolitanism, in general, argues that principles of distributive justice should be applied to the whole world, and duties of distributive justice to all human beings in the world. Three approaches instead regard the notion of international distributive justice as misleading. Nationalism stresses the moral importance of membership in a state and the special duties to fellow-citizens that it entails. The society of states approach maintains that the principles of international justice violate the independence of states and ultimately undermine their sovereignty. Realism argues that the only goal of states is the promotion of their national interest, so that any claim that international justice can exist is utopian.

International distributive justice is therefore a highly problematic issue. Hence, in regard to overcoming the spatial barriers of national boundaries so that the global characteristics of climate change can be accommodated, this book is quite naturally sympathetic to the cosmopolitan argument that principles of distributive justice should operate internationally. Recent decades, in fact, have seen a striking increase in the density and depth of economic, social and environmental interdependences, and of disparities among regions, which have dramatically broadened the compass of justice and augmented the importance of international distributive justice in international relations. Specifically, it is now evident in the climate change arena that the Northern model of development is harming the developing world, and that this raises profound international ethical concerns.

However, there exist many competing approaches to international distributive justice. It is thus necessary to highlight those arguments that can best serve the characteristics of international justice in climate change. To this end, it is helpful to start from Rawls's classic studies (Rawls, 1993, 1999a, b) that has had such profound impact on current understanding of international distributive justice, and on its diverse interpretations. Put bluntly, to the disappointment of many neo-Rawlsians, *The Law of Peoples* (1999b), because of the contractualist tradition in which is situated, evinces that Rawls's architecture does not comprise obligations of international distributive justice; nor does it envision an international application of the difference principle. Distributive justice applies only where there exists a scheme of social cooperation like that of states; it does not apply internationally. The only obligation is a sufficientarian one intended to assure a basic minimum for every subject: there exists, in fact, a duty to assist only burdened societies which adverse undeserved conditions have prevented from joining the community of well-ordered peoples. On the other hand, owing to the growing interdependence of states and to the larger role of international institutions, neo-Rawlsian cosmopolitanism as principally advocated by Beitz (1979, 1999) and Pogge (1989, 2002a) extends Rawls's conception of distributive justice to the international level and entails commitment to a global redistribution of resources to the weakest. Beitz (1979), for instance, proposes a

global difference principle with which to maximize the position of the globally least advantaged representative persons (or groups of persons). However, this position is not particularly illuminating for the purposes of this book, which focuses on a given international order – the UNFCCC regime on adaptation funding – and which therefore develops its practical ethical arguments within the limits of such an institutional architecture.

In order to substantiate the international dimension of climate justice, it is therefore necessary to take account of its motivational core. In this regard, the ethical foundations of cosmopolitanism generally assert that principles of distributive justice operate at the international level because all human beings belong to a common humanity. Linklater (1998) and Dobson (2006) define this obligation of cosmopolitanism as thin, for it rests on the universalism of Samaritanism. On a motivational view, however, ethical obligations are stronger if it is possible to identify a relationship between a past or present action and its effects on others. This retrospective (or backward-looking) notion of responsibility,[7] in fact, shifts the discourse from beneficence to justice, be it domestic or international, and thus produces a thick obligation (Dobson, 2006). This thick obligation provides particularly useful support for the ethical line of reasoning adopted by this book – which, as pointed out, eminently concerns the dimension of practical justice – because this notion of obligation was developed to turn intellectual commitment into a determination to act on the basis of its principles. Furthermore, thick obligations of justice are particularly helpful in addressing the ethical issues raised by climate change because these mainly derive from actions (or inactions) whose dynamics are globally intertwined and determined by subjects of climate justice, those entities to which pertain obligations, duties and rights in the context of climate change from all over the world. In other words, as Dobson (2006, p. 173) puts it: '[t]he idea that action-at-a-distance in a globalising world might be the source of hitherto unrecognised . . . obligations is a suggestive one'.

A thick approach to international distributive justice therefore entails that those responsible for climate impacts have prime facie a moral obligation towards those who suffer/ed, regardless of from where the former have undertaken the harming action/s, and from where the latter have suffered the consequent impacts, and that the two groups of subjects should interact internationally to obtain a just distribution of climate features. In other words, thick obligations, which this work espouses in regard to international distributive justice, justify the overcoming of national boundaries and provide a motivational basis for extending the ethical dimensions of climate change internationally.

[7]The notion of responsibility, especially in regard to climate change, should be approached with particular caution, since it is a controversial concept, defined in the context of international adaptation funding, as made clear in the following Chapter, with both retrospective and prospective (or forward-looking) connotations.

3.4 The State's Responsibility in the Liberal Perspective

On the one hand, in general, standard cosmopolitanism assumes that individual human beings are the ultimate subjects of justice, and that groups – communities, corporations, states, nations, international institutions – can become subjects of justice only indirectly. However, cosmopolitans have been purposely vague about the institutional implications of their approach: they have offered tentative thoughts expressed in the language of hope, or rather abstract visions of global multilevel democratic governance systems (for instance, Pogge, 1992). Realistically, in the context of climate change, individuals are not the only units that have produced climate impacts; and, moreover, in most cases they would be unable to sustain their burden. On the other hand, other schools of thought argue that justice pertains to collective entities, such as corporations, states, or international institutions.[8] The literature on climate justice more or less implicitly assumes that states are the subjects, or agents – even if some scholars uphold individualistic approaches – because of their primacy in climate negotiations. Nonetheless, the anthropomorphising of states may distort the complex reality of climate justice: for instance, in the context of adaptation funding, it may happen that (bad) governments use adaptation funds for selfish ends.

Matter-of-factly, however, states and the relevant international institutions are undeniably (the) actors of adaptation funding under the UNFCCC regime: that is, those entities among, and through, which the UNFCCC allocates responsibilities and rights, and that on their basis act or are acted upon. It would therefore be paradoxical to consider them as incapable of moral actions; or, more explicitly, not to regard them as subjects of distributive (and also procedural) justice in this context of analysis, despite the controversies that such an assumption entails, especially among those liberal thinkers exclusively concerned with individual responsibility.

It is therefore necessary, with regard to the context of the analysis, to justify the view of states as subjects of justice to which pertain obligations and rights in international adaptation funding within a liberal perspective, through specification of the notion of collective responsibility. I am implicitly assuming here that the ethical justification of states as subjects of justice in distributive terms and the consequent attribution to them of capacity for both moral deliberation and moral action, also substantiates their ethical significance and role in the sphere of procedural justice, owing to this very capacity to deliberate and act. It should be pointed out, however,

[8] It is worth noting that there is a different perspective on the subjects of justice in the case of global environmental issues. Some lines of reasoning claim that, in regard to climate change, a process-centred assignation of responsibility would be better than a subject (or agent)-centred assignation like the one delineated here. For instance, Conca (2000) argues that the loci of responsibility are global commodity-chains. This position, in my view, is not useful in the context of international adaptation funding for two reasons. First, it impedes the linkage between a subject of justice and an action or policy that can be attributed to it. Second, it cannot make clear the ethical significance of subjects of justice in terms of social vulnerability.

that liberal justice is almost exclusively concerned with distributive issues, and it does not devote particular attention to procedural aspects.

The construct of collective responsibility adds further elusiveness to the concept of responsibility, for it remains a controversial topic in political philosophy, which, in fact, usually understands responsibility in individualistic terms. Collective responsibility is attacked on various grounds by those who embrace methodological individualism: it would violate individual liberty; its group-based nature would allow only for matters of causal responsibility and not moral ones; and it would impede underscoring the responsibilities of individuals among groups for it implies only group fault. There are, however, different approaches that justify the collective responsibility of groups. The first of them assumes that only groups with well-ordered decision-making structures can be held collectively responsible, because this allows identification of a moral agent (for example, the government, or the governing board) that can take a group action, and because groups of this kind can take rational and self-conscious decisions. A second approach focuses on the sharing among the group's members of interests and needs, as happens in the case of clubs and political and social movements. The third approach requires that group members have deep-rooted shared attitudes that both have repercussions in society and involve acceptance by many individuals.

These apparently competing approaches have a feature in common: in French's (1984) terms, they all characterize conglomerate collectivities, which unlike aggregate collectivities, are organizations of individuals whose 'identity is not exhausted by the conjunction of the identities of the persons in the organization.' (French, 1984, p. 13). More specifically, conglomerate collectivities qualify as subjects of justice because they have the following features: (i) an identity larger than the sum of the identities of their members; (ii) decision-making structures that enable the inputs of member judgements to be translated into collective judgements as outputs; (iii) consistency over time; (iv) self-conception as a unit. I argue that sovereign states, those which possess the power to act and independence from other agents, and which, on practical grounds in this context of analysis, are responsible states, can be assimilated to Annex I countries to the Convention, and as such possess these attributes, respect all four requirements, and therefore be considered subjects of justice with collective responsibility. Similarly, also the international institutions governing adaptation funding under the UNFCCC, as well as all the UN institutions, fulfil the above mentioned criteria and thus qualify as subjects of justice. To be noted is that, according to some lines of reasoning (for instance, Green, 2002) collective responsibility, differently from the traditional restrictive conception of (individual) responsibility, is better suited to dealing with global issues such as those entailed by climate change.

However, the inclusion of statist moral agency in the liberal egalitarian approach of this book requires additional explanation and closer contextualization, for liberal egalitarians are by and large closely concerned with individual responsibility, and extremely sceptical about the attribution of burdens to individuals only on the basis of their belonging to a state. In short, it is useful first to refer, in regard to collective responsibility for climate impacts and for their reparation, to Miller's example of

the mob that vandalizes a neighbourhood (Miller, 2004, pp. 249–252). In this case, although the actions of the members of the mob have different levels of destructiveness, the mob itself is a like-minded group because 'each person took part with the same general attitude – 'teaching them a lesson', 'showing them that we mean business', and so forth – and each made some causal contribution to the final outcome, whether this involved engaging directly in destructive acts or merely in supporting and encouraging those who did.' (Miller, 2004, p. 249). Therefore, it is difficult to distinguish between individual responsibilities and to separate these from the collective responsibility of the mob. Miller further specifies that justice demands that responsibility be attributed in cases with unfavourable outcomes that require remedial measures, and that in the case of the angry mob it is impossible to assign specific shares of responsibility to its members because: '[w]e may not know what causal contribution each made to the final outcome, and even if we did, it might still be controversial how responsibility should be divided.' (Miller, 2004, p. 251). This is, by and large, the situation of climate change as envisaged in this book, where a state (the like-minded group) endangers through the actions of its members (individuals, corporations) one or more other states[9] (neighbourhoods). Therefore, the state that generated climate impacts can be held prima facie collectively responsible for such impacts, and it is ultimately a subject of climate justice.

But the complexity of the ethical aspects of climate change requires a further specification, which can be usefully clarified with Miller's second example of groups exhibiting cooperative practices (Miller, 2004, pp. 252–257). Some employees of a polluting firm, argues Miller, may oppose the polluting practices of their employer, for instance by voting against them. But this is not sufficient to exempt them from the responsibility deriving from the pollution produced by the firm, because 'participating in the practice and sharing in the benefit may be sufficient to create responsibility.' (Miller, 2004, p. 253). In other words, Miller observes that the more a group is open and democratic, the less each member of the group can escape her/his/its responsibility. In the context of international adaptation funding responsible states are, by and large, Annex I countries, as explained later which are generally supposed to be democratic and open: all members (individuals or conglomerate collectivities) can vote against, and/or dissent in other ways from, the carbon-intensive lifestyles and patterns of development of their country. This circumstance would favour the adoption of the individual perspective on responsibility, and it would very likely undermine the case for collective responsibility of states in international adaptation funding. How, then, can such states be held responsible for climate impacts and for their reparation? Like Miller, I believe that it is possible to solve this conundrum by arguing that policies adopted by democratic states, in which citizens have legitimated the government to act on their behalf in a free election, can be considered authentic expressions of their members' identity, public

[9]It is worth noting that international institutions are, as specified later, secondary subjects of justice that can achieve justice mostly by meeting the demands of the primary subject of justice (states). For this reason, their ethical role and justification derive from those of states, and therefore no further justification for them seems necessary at this level of analysis.

culture and self-determination, even if some members disagree with them. Climate change can thus be produced by a state's members actions, but (i) these actions largely reflect the public culture and the shared values fostered, or at least not hampered, by carbon-negligent governments, and (ii) such actions are allowed, and/or favoured, by government norms and policies shaped by this culture and these values, which are a product of the entire society and as such irreducible to individuals. In light of these arguments, it seems possible to argue that collective responsibility outweighs individual responsibility, and therefore, in practical terms, Annex I countries can, I believe, be held as collectively responsible subjects of justice in the context of international adaptation funding.

It is of interest that this kind of moral justification of collective responsibility of states is closely related to a line of thought in public international law that claims that a scheme of liability for climate impacts should target the largest discrete actors, namely states. In fact, if the emissions produced by individuals or corporations within a state over a period of time were sufficiently large to produce, and to have been expected to produce, dangerous climatic impacts, it is likely that the state acted wrongfully in encouraging, or failing to limit, those behaviours.

This statist position and the ensuing acknowledgment of collective responsibility in international adaptation funding do not, however, dispense with individual responsibility, which basically operates at a different analytical and practical level, not considered in this book. In other words, although Annex I countries are collectively responsible for climate impacts and for their reparation, their members (individuals and corporations, for instance) may have different carbon-threatening behaviours and possibilities to remedy the harmful effects produced. Hence some of them may be more responsible than others.

3.5 The State's Social Vulnerability in the Liberal Perspective

Clarification of the reasons for the (social) vulnerability of states[10] that make them into collective entities entitled to adaptation funding in liberal accounts of justice is fortunately more straightforward. On general grounds, liberal scholars believe that poor and more vulnerable countries have the right to be helped by wealthy states. For instance, Nussbaum (2006) argues that among the principles required to achieve social justice through the satisfaction of basic human needs there is an obligation of richer states to make substantial quotas of their GDP available. Furthermore, Pogge (1994, 2002b) has developed strong moral arguments in favour of a redistribution of resources from wealthier to poorer countries that culiminates in the proposal of a global resource dividend. This instrument envisages that 'states and their governments shall not have full libertarian property rights with respect to the natural resources in their territory, but can be required to share a small part of the value of

[10]International institutions are not considered here because they are not entitled to funding but are only (secondary) dispensers of them.

any resources they decide to use or sell.' (Pogge, 2002b, p. 196), and that the funds raised should be targeted on the most destitute in order to alleviate extreme poverty. This book embraces, broadly speaking, these positions; nonetheless, the social vulnerability of states needs more specific ethical defence if it is to be accepted into the liberal framework of analysis used. The notion of social vulnerability adopted is in fact operationalized, as more closely specified in the next Chapter, through human security understood as a limited notion of well-being constituting its vital core, and which seemingly pertains to individuals and not to states. In other words, when social vulnerability is understood, as it is here, in terms of human security, it apparently has no ethical relevance in regard to impersonal entities, to which, in fact, the concept of human security seems not to apply. Nevertheless, it is possible to claim that although states are impersonal entities, they can be deemed subjects of justice in the context of international adaptation funding in terms of their social vulnerability. States, in fact, can, and usually do, furnish a number of services to their citizens in order to lessen their social vulnerability and/or to improve their ability to cope with climate impacts. Thus ultimately ascribable to them is the protection of part of the human security of their citizens. Seen from this perspective, they represent, especially for the most socially vulnerable individual victims, who indeed remain subjects of justice at a different level, an insurer of last resort against climate change that should be funded by other responsible subjects of justice, in the present case Annex I states.

The argument put forward here therefore ultimately endorses the conception of international principles of justice as 'instituted in and through a system of states' (O'Neill, 2001, p. 181) supported by other secondary agents of justice. More specifically, as anticipated, it is argued that states are the primary subjects of justice endowed with means of coercion through which they control other agents, which can consequently be only secondary agents. The latter can thus achieve justice mostly by meeting the demands of the former: some of them are responsible for climate impacts because of their excessive, and thus unjust, use of the capacity to absorb GHG provided by the atmosphere and for their possibilities to remedy the harm caused by their behaviours; others are the rightful recipients of obligations of justice because of their greater social vulnerability. Further, the intrinsic transboundary nature of climate change implies that the international institutions involved are secondary agents of justice in so far as they contribute to justice by meeting the demands of primary agents, and that they are consequently able to address, on their behalf and on the basis of their guidance, international inequalities.

A final practical specification of the ethical role of states and international institutions can be made by using Dobson's (1998, pp. 64–69) distinction between the dispensers and recipients of justice, respectively those who are obligated to distribute resources, and those who are the rightful recipients of resources. According to this distinction, intergovernmental institutions governing adaptation funding are thus dispenser secondary agents of justice, acting on behalf of donor countries (dispenser primary agents of justice), whereas the weaker and more vulnerable countries are recipient agents of justice. To be noted is that, according to Beitz (1999), this international statist interpretation differs from genuine cosmopolitanism because his

cosmopolitan liberalism considers individuals as the sole subjects of justice, without taking states or international institutions into account. The statist interpretation, which Beitz calls social liberalism, instead maintains that international justice is owed to societies or peoples and that it descends from a moral conception of international relations originating in the modern natural law tradition. Its distinctiveness consists mainly in the conception that justice involves a division of labour between the domestic and the international levels, where states have primary responsibility for promoting justice within their boundaries, and international institutions have the task of creating the conditions under which this responsibility can be accomplished. Moreover, Beitz asserts that social liberalism can be seen as a generalized description of Rawls's conception of international relations as defined in the *Law of Peoples* (1999b), and that it is similar to Miller's (1995, 2007) view. Indeed, Beitz holds cosmopolitan liberalism to be superior, although he admits that the gap between the two is not as wide as appears. Thus, in Beitz's vocabulary, the approach adopted here would be that of social liberalism, because it raises no challenge against the idea of state autonomy and makes no attempt to define new global institutions.

3.6 Other Justifications of the Statist Perspective

On different grounds, public international law – that is, the law among states – offers a significant case for the statist view adopted. The general[11] arguments of public international law in support of the state-centred approach of this book emphasise the centrality of states, both as international law-makers and as bearers of obligations and rights; moreover, most international institutions are strictly related to them. In the context of this book the most relevant legal issue concerns the reason why developed countries have a general duty to compensate developing countries for climate impacts. Probably the most important requirement of public international law is that states should not damage, or violate the rights of, other states: in international environmental law this principle is acknowledged by the no harm rule (or principle), which has been formally accepted in international law since the 1941 Trail Smelter Arbitration that regulated the transboundary harm inflicted by a Canadian mining facility on US farmers, doing so by introducing the general principle that a state cannot use its land to cause harm to another state. The no harm rule was later included in the 1972 Stockholm Declaration at principle 21, and in the 1992 Rio Declaration at principle 2, and it is also the basis of the UNFCCC and of its Kyoto Protocol, as underlined in Chapter 5. Moreover, states that violate public international law can be held responsible and assigned an obligation to compensate directly or indirectly other states for the damages caused, as recognized by

[11] The particular provisions of the UNFCCC and of the Kyoto Protocol that make clear their statist perspective in regard to adaptation and its funding are, respectively, analyzed in Chapter 2, and in Chapter 5.

the International Law Commission – a UN body for the promotion and development of international law – in its codification of state responsibility.

Furthermore, it should be borne in mind that states qua states can be regarded as legally entitled recipients of funds in contexts such as those of international negotiations, where, in fact, only states are acknowledged. For instance, the UNFCCC regime explicitly recognizes that states endangered by climate impacts have the right to adaptation funding. This statist standpoint assumes that systems impacted by climate change pertain to the state with jurisdicion over it, as happens in the US scheme for compensating environmental damages (the Comprehensive Environmental Response, Compensation and Liability Act – CERCLA).

In the spirit of the above-mentioned principles of public international law, a closer definition of state responsibility and state-centred damage compensation should involve, at least, the following steps: (i) identification of the damaging activity that can be attributed to a state; (ii) definition of a link between the activity and the damage; (iii) determination of a violation of international law or of a duty of due diligence, (iv) owed to the damaged state (Tol & Verheyen, 2004).

These general steps in establishing state responsibility have been acknowledged, developed and implemented, to differing extents, by several international treaties, especially in the environmental field, such as the 1982 UN Convention on the Law of the Sea (UNCLOS), the 1985 Vienna Convention for the Protection of the Ozone Layer, and the 1992 Convention on Biological Diversity (CBD). The UNFCCC and the Kyoto Protocol, for instance, partially address the issue of state responsibility for damages, especially in regard to adaptation, as made clear in Chapter 5.

Finally, to shift the perspective to international affairs research, the international statist assumption belongs within a tradition of international relations which, despite the deterritorialised representation of global climate change, maintains that it is territorialized in statist terms, since it views international governance solutions as the outcomes of voluntary collective action among states, where ethical issues are mainly resolved among states themselves. States can therefore be considered effectively able to deal with global-scale problems on behalf of their citizens, and in this sense justice, although it ultimately refers to individuals and communities, can be synthesized, regulated and eventually analysed at the state level.

3.7 The Extension of Liberal Theories of Justice to Adaptation Funding

I ascribe justice in international adaptation funding to primary, generally valid ethical principles, such as those put forward by liberal theories of justice, as the next Chapter will show in more detail. I thus implicitly assume that it is inappropriate to postulate a moral system for international adaptation funding based on a new and autonomous set of ethical principles. The ethical principles underpinning moral systems should have universal validity if they are to affirm the strength, and increase the acceptability, of the morals they justify. Yet in order to apply the latter to the

current area of research, it is necessary to include the novel and specific problems that it raises. In other words, liberal theories of justice must include the specificity of international adaptation funding, in accordance with Rawls's claim that enlarging the perspectives of justice to broader and new contexts entails problems of extension (Table 3.1).

Table 3.1 Extensions adopted

	Liberal theories of justice	Justice in international adaptation funding
Benefits and burdens to be distributed	Income and wealth	Financial resources to deal with climate impacts
Scope of justice	One country (domestic)	All countries participating in the UNFCCC (international); international institutions involved

Firstly, liberal analyses of distributive justice by and large deal with the distribution of wealth and income within one country. In this book, they deal with the distribution of costs and benefits of adaptation to climate change among countries. Hence, on theoretical grounds, the first methodological problem is how to justify the change in the focus of justice from income and wealth to the distribution of financial resources necessitated by adaptation. In this regard, the consideration of such resources by liberal theories of justice seems, as said, unproblematic, owing to the equal monetary metric of income and wealth and of financial resources for adaptation.

The second extension is the enlargement of ethical considerations to the international level. International adaptation funding processes are a matter of international justice. Hence it is advisable to determine whether the principles of justice and the fairness and equity criteria which apply at the domestic level can be usefully translated to the international one. As specified above, adopted here, within the framework of justice, is a state-centred perspective whereby the subjects of justice are states and international institutions. More specifically, from the distributive standpoint, and as far as the raising of adaptation funds is concerned, the treatment here relies on the RTJF, so that the possibility of including international justice is grounded in justification of the extension of Rawls's construct to the international context given in the next Chapter. Turning to the allocative side of distributive justice, the reference framework is the SCA, which has been extensively used at the international level. It is thus possible to extend also the scope of the SCA to the analysis of international distributive justice. It is worth considering briefly the possibility of extending the chosen procedural justice approach to the international level, although it does not pertain to the analysis of the extension of liberal theories of justice, since these theories, as underlined, are almost exclusively focused on the distributive side. In the ethical framework of analysis described hereafter,

the principles of justice and criteria of fairness selected in the domain of procedural justice aim at recognition of the distinctive perspectives and objectives of the different subjects. The pure procedural perspective of the analysis here allows for a very unrestricted model of justice, since it simply focuses on just procedures, irrespectively of the level where they take place and independently of the features of the outcomes. Therefore the level of analysis, be it international or communitarian, is not substantively relevant and the extension of the pure procedural justice stance to the international level does not cause any problems.

There are two other possible extensions of justice: one to non-humans, the other to future generations. These, however, are not considered here for the reasons given below (Table 3.2).

Table 3.2 Extensions not adopted

Extensions not adopted	Reasons
Non-human beings	Would add little to the acknowledgment that humans must protect the environment
	Society owes duties of compassion and humanity towards non-human beings
	The justness of the statist approach should be evaluated according to a socially oriented perspective
Future generations	Non-knowledge of (social) vulnerability of future generations

The analysis which follows, in line with the tradition of liberal justice, is matter-of-factly anthropocentric: it goes no further than the level of human beings and intra-human relationships, and all moral considerations are framed in anthropocentric terms. As a result, other moral systems that encompass non-human beings, such as ecocentrism, biocentrism, zoocentrism, have been omitted. These intentional omissions do not imply any disregard for the above-mentioned perspectives. I acknowledge the risk of human supremacism, which considers nature as merely a resource to be used indiscriminately and which, in that it treats non-humans as inferior and replaceable, is intrinsically unjust and potentially destructive. There are, however, diverse reasons for the anthropocentric perspective chosen. The inclusion of other species adds little to the acknowledgment that humanity must do much more to limit its dangerous interferences with the climate system. On more philosophical terrain, this book endorses a rational and considerate human-centred ethical approach which holds that the ethical duties of humankind towards the natural world ultimately originate from the duties that we owe each other as human beings. In fact, the respect and promotion of human well-being requires us to pay attention to, and impose constraints on, our treatment of the natural world, whose conservation is of fundamental importance for humanity. The book also subscribes to Rawls's position that non-human beings should not be considered moral agents since they lack the capacity for a sense of justice; rather, society has duties of compassion and humanity towards them. However, probably the soundest reason for the anthropocentric stance of this book stems from its objectives. In fact, its ultimate aim is

to set out a morally acceptable referent for the evaluation of an institutional order, because adaptation funding is primarily an institutional effort whose justness should be evaluated according to a socially-oriented perspective. Hence, it is assumed that, despite the ethical controversies that anthropocentrism implies in funding adaptation to climate change, neither a new nature-centred notion of justice, as required by eco-centrism, nor an enlargement of anthropocentric moral paradigms to nature-centred morality, as required by biocentrism, or zoocentrism, are necessary. When adaptation funding is at issue, in fact, anthropocentrism is more acceptable and justifiable at the theoretical level, and more viable and applicable at the practical one.

Moreover, the book does not deal with intergenerational justice – that is, with the ethical implications of the impact of present actions on future generations – because its focus is intra-generational and hence is only concerned with the present generation. Admittedly, the UNFCCC considers intergenerational justice to be a guiding principle and a prime reason for taking action in the context of climate change, and the current literature ascribes growing importance to it, despite the difficult challenges that it raises.

Among the dilemmas raised by intergenerational justice, one seems particularly important in regard to adaptation funding: the non-identity problem. This relates to the question authoritatively addressed by Parfit (1984, pp. 351–380) concerning the non-fixed identity of future individuals. On this view, issues of justice do not pertain to future generations because present acts that might be considered harmful or beneficial to them are at the same time necessary, yet remote, conditions for their coming into existence. In other words, since the intergenerational significance of justice is blurred by countless choices and actions that determine future lives, future generations cannot claim that their interests or rights have been violated by past actions, since, in the absence of those actions, they would never have been born. For instance, following Parfit, it is possible to identify a policy of depletion (in our terms a policy that fails to reduce GHG emissions and thus depletes the atmosphere's capacity for absorption – the bad climate policy), and a policy of conservation (in this context, conversely, a policy that seeks to curb emissions and thus safeguards the atmosphere's absorptive capacity – the good climate policy). The inhabitants of the future world resulting from the bad and the good climate policies will be completely different. More specifically, the inhabitants of the future depleted world will indeed experience climate impacts due to our bad climate policy, but it is impossible to argue that such a policy endangers any particular individuals, because: 'if we had chosen Conservation, this would not have benefited these people (that is, the inhabitants of the future world determined by bad climate policies), since they would never have existed.' (Parfit, 1984, p. 366).

One possible strategy with which to avoid the impossibility that the present generation has obligations towards future ones is to abandon the methodological individualism of Parfit's ethical argument in favour of future collective subjects of justice, be they simply future generations as a whole or collective entities, such as states and nations, representing communal relationships of future generations. However, in the specific context of the book, this perspective raises a fundamental problem. In fact, the collectivist approach makes it possible to attribute to the

present generation, as represented in the statist perspective of the book by current institutions, a negative duty not to harm future subjects of justice: that is, an obligation to limit GHG emissions in order not to compromise climate stability. But, at the same time, it seems difficult to assign to present-day states a positive duty to assist future subjects of justice, for the very reason that we, the current generation, know virtually nothing about them: neither their existence, let alone their numerousness, nor, their adaptive capacity and, most importantly in regard to the ethical assumptions of the book, their social vulnerability.[12] Hence even the establishment of a trust fund – financed in the same way as current instruments for funding the present generation's adaptation needs – for the benefit of future subjects of justice would respond to the logic of beneficence rather than to a more stringent logic of justice that, according to the book's approach, would need to know the (unknowable) social vulnerability of recipients of funds for it to be ethically justified.

However, it is worth emphasizing that the choice of excluding intergenerational justice from the present analysis is ultimately highly context-dependent, ascribable to the characteristics of adaptation funding, and, specifically, to the ethical imperative of social vulnerability that, according to the normative assumptions of the book, should characterize recipients of funds. In other words, not endorsed here is the position taken by some environmental justice scholars that the future is beyond the reach of ethical analyses because future individuals cannot have rights. On the contrary, I maintain that, in the broader realm of climate justice, when the issues at stake are not solely those involved in international adaptation funding, the intergenerational dimension of justice must be included, as the mainstream literature suggests.

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[12]To be noted is that the inclusion of future generations would also undermine the requirements of procedural justice as intended in this book, because if the principles of Recognition, Participation and Distribution of power are to be applied, they require the coexistence of subjects of justice (See next Chapter).

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Chapter 4
The Framework of Justice

Abstract This Chapter presents a framework of justice for international adaptation funding. It opens with investigation of justice in international adaptation funding, whose main dimensions are explored in light of the broad definition of it adopted. The Chapter then develops a framework for both procedural and distributive justice in funding adaptation at the international level by defining fairness and equity criteria based on two significant liberal theories of justice: John Rawls's theory of justice as fairness, and Amartya Sen's capability approach. Specifically, procedural justice can be operationalized through the fairness criteria of Inclusion of all countries, Possibilities to specify the terms of participation, and Commitment to assistance from richer to poorer. Distributive justice is operationalized on the burden-sharing side by the equity criterion of Differentiated historical responsibility, and on the allocation side by that of Lack of human security.

Keywords Equity criteria · Fairness criteria · Rawls's theory of justice as fairness · Sen's capability approach

Justice in funding adaptation at the international level can be defined as the fair process, which involves all relevant parties, of raising adaptation funds according to the responsibility for climate impacts and of allocating them by putting the most vulnerable first. Therefore, the components of this definition, which echo the normative claims advanced in the Introduction, are the following: the fairness of the process in terms of involvement of all parties; responsibility for climate impacts as the basis for raising funds; and social vulnerability to climate impacts as the benchmark for allocating such funds. Again, the first element refers to the procedural aspect of justice, whilst the others refer to the distributive one.

4.1 Fair Process Involving All Relevant Parties

Procedural justice may assume many forms, and by and large it concerns the conditions and constraints under which negotiations develop and negotiators operate in terms of agenda-setting, parties and rules. Moreover, its importance is growing because of the uncertainties due to the demise of the Keynesian-Westphalian order.

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If an international negotiating process on the funding of adaptation is to be fair and to involve all relevant parties, it must require that both those who have produced climate impacts and can remedy them, and those affected by them, be involved in decisional processes regarding the attribution of responsibility, and regarding the arrangements with which resources against climate impacts are to be distributed among impacted countries. This is particularly important, because decisions on international climate policy are usually made by the same subjects that have mainly caused anthropogenic climate change and benefited from fossil-fuel based development: that is, the rich countries. In practice, the ethical framework proposed hereafter seeks to establish how countries, in spite of their different levels of social, economic and institutional development, should enter into negotiations over adaptation funding on grounds of fairness. To this end, the approach envisaged should be rooted in procedural justice, which, in fact, is closely intertwined with the powerful idea that a just process is the prerequisite of any legitimate authority. The point, therefore, is this: what makes a process just, or, more specifically, what are the requirements that normative constructs should possess to be procedurally just in the context of international adaptation funding? Procedural justice cannot be reduced either to the psychological perception of parties of having been treated fairly, or to the welfare implications of a given process, because this would dissolve procedural justice into utility. Rather, proper normative approaches to procedural justice are of two types: process-based and outcome-based. The former evaluates the justness of a procedure according to how it treats parties in the process independently of the outcome; the latter does so on the basis of the quality of the outcomes that it generates.

A notion of procedural justice that does not take account of the outcomes of the process seems particularly important in international negotiations on adaptation funding. In fact, it implies an ex ante argument which holds that a 'a procedure is fair to a party if a rational person in the position of the party would have agreed to the procedure before the dispute arose' (Bone, 2003, p. 496). In the framework of justice, this ex ante stance of procedural justice, which, as later made clear, is inspired by Rawls's pure proceduralism, is the one that best serves this book's purposes, because it uses an integrated approach and hence assigns evaluation of the justness of outcomes to principles and criteria of distributive justice. In other words, this standpoint on procedural justice, where outcomes are not relevant, has been chosen for the sake of clarity, in order not to overlap the fields of analysis of procedural and distributive justice, the confusion between which in the controversial realm of climate change negotiations may prove a further source of disagreement among parties.

A final point needs to be made. Owing to the extreme complexity of negotiations over international adaptation funding, procedural justice should not be limited to acknowledgement of the positions and voices of the most marginalized parties. It should also include a commitment by richer countries to providing effective assistance in the negotiating processes to weaker ones.

4.2 Responsibility for Climate Impacts As an Ethical Basis for Raising Funds

As the most recent literature clearly shows, not all climate impacts can be prevented. Who, therefore, should be considered as having produced such impacts, and who should pay for the activities undertaken in order to avert, avoid or reduce them? From an efficiency perspective, such as that of economics, the incurring of climate impacts mostly produced by other parties is a negative externality: that is, a harm imposed on outsiders not involved in the processes causing it, and which are not compensated. According to the economic theory, the most straightforward way to internalize negative externalities is to incorporate their costs into the utility function of polluters, those who have produced climate impacts.

However, this situation clearly also entails the broader perspective of justice. In fact, the ethical approach adopted here addresses the causes of climate change and its impacts, focusing on those subjects that have mostly given origin to, and have the possibilities to deal with, those impacts, and on those subjects that have most suffered or will suffer them. It is thus assumed that, in the sphere of distributive justice, there are two ethically relevant groups of states in relation to adaptation funding: those that have abused a basic right[1] provided by the atmosphere, its absorptive capacity of GHG, and that can restore the harmful effects that their such behaviour has produced, and those that have suffered or are suffering climate impacts the most, and for whom climate change is a matter of sheer human security. Indeed, in practical terms, every state on the globe is at the same time, yet with very different proportions, a user of atmospheric absorptive capacity, a potential restorer of the ensuing impacts, and a bearer of them. However, the specific argument put forward here is that, from an ethical point of view, there are states that should be held responsible for climate impacts because they have used more than their just share of the atmosphere and have the means to remedy the situation that their behaviour brought about, and others who have mostly suffered and will suffer, and are endangered by, climate impacts. Consequently, duties, obligations and rights in the climate arena pertain to these subjects.

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[1] It should be briefly explained why it is argued here that the atmospheric capacity to absorb GHG is a basic right, that is, the minimum reasonable demand that every subject makes on the rest of humanity. The atmosphere's capacity for absorption can be conceptualized as an ecological space which enables humankind to live in an 'environment adequate for their health and well-being' (Hayward, 2007, p. 440) thanks to the preservation of climate stability. Therefore just access to the atmosphere, be it egalitarian, prioritarian or sufficientarian, and the consequent provision of climate stability, relates to the appropriation of it by humans. In this sense a universalized just access to the atmosphere is a basic right, that is a condition sine qua non for erecting fuller systems of non-basic rights, and ultimately a matter of basic justice, as the Inuit petition referred to in Chapter 5 underlines. From a slightly different perspective, a just access to the atmosphere can also be seen as a development right of poorer countries (Baer et al., 2008), as long as current economic and social patterns of development are still largely based on carbon-emitting energy services.

Ethically justifying the existence of states of the former kind in the context of international adaptation funding requires one to analyze on ethical grounds the notion of responsibility, one of the most difficult and confusing terms in moral and political philosophy, which moreover must be further developed in order to be contextualized to international adaptation funding. A specification is in order. It might be said that a subject is responsible for a duty that she/he/it is expected to fulfil in the future. But it is also possible to maintain that a subject is responsible for a certain action that has already occurred. The first kind of responsibility is known as prospective, or forward-looking, responsibility and relates to the subject that has the duty of making a bad situation good. The second kind of responsibility can be considered as retrospective, or backward-looking: this pertains to the subject that has made the situation bad. Although this dichotomy should not be overstated, given that the different notions of responsibility cannot be sharply separated because they are inherently intertwined, it should be fixed and used as an analytical instrument in order to gain better understanding of responsibility, so that its scope in the context of international adaptation funding can be clarified.

With this categorization in mind, and acknowledging, as specified in the previous Chapter, the moral agency of collective entities, the responsibility of states can be specified as follows. States can be held retrospectively responsible for climate impacts because of their past and current excessive use of the atmosphere's absorptive capacity: a basic right, as said. States can be considered prospectively responsible towards victim states, the rightful recipients of obligations of justice, on the basis of their ability to pay and capacity to act. Hence, a state of affairs where no genuine and committed acknowledgement is made of both the retrospective and prospective responsibility of states is unjust, because there is something to be corrected and some subject that has brought it about.

More in detail, the nature of the international adaptation funding problem demands that some subjects are retrospectively responsible for climate impacts. Specifically, these subjects, due to the characteristics of climate change, should be more usefully held outcome-responsible (Miller, 2004, 2007) – that is, responsible for having made a situation bad intentionally but in a morally non-blameworthy way – and as such they should prima face bear the burdens of their carbon depleting actions. This notion of outcome responsibility should be distinguished both from moral responsibility, that is based on moral fault, and from causal responsibility, that derives from a causal chain not involving the subject's agency. According to Miller (2004, p. 246): '[i]f outcome responsibility is more stringent than bare casual responsibility, it is less stringent than moral responsibility as the term is usually understood.' In this context of analysis it seems that the notion of outcome responsibility can be grounded in a broader, 'morally neutral' (Miller, 2001, p. 460), notion of retrospective responsibility of the subjects of justice based on the fact that they have acted, whether culpably or not, voluntarily and knowingly or at least could have been reasonably expected to know. In other words, the adopted standpoint of outcome responsibility implicitly acknowledges a notion of retrospective responsibility based on the so-called control condition, which maintains that subjects of justice can be held responsible for acts and choices which they are able to control or which are their fault, as claimed by Nagel (1979) when addressing the problem of

moral luck; and it comes very close to Barry's notion as formulated in his principle of responsibility (Barry, 1999).

In the present context, this fault-based form of outcome responsibility attaching to those who have contributed to the problem even without moral guilt, in fact, avoids inclusion of ethical issues that undermine the significance of the very popular retrospective notion of historical responsibility, espoused for example by the polluter-pays principle: for instance, the difficult distinction between the anthropogenic and non-anthropogenic nature of climate impacts, insufficient knowledge about the causes and effects of climate change, and difficult application to collective entities such as states.

But outcome responsibility alone cannot generate obligations for remedying the bad situation (that is, climate impacts), because of its moral neutrality. Therefore, the ethical approach to responsibility in adaptation funding demands that outcome responsibility be supplemented by no-fault forms of prospective responsibility based on the capacity to act – in terms of institutions, technology, infrastructures, skills – and the ability to pay – in terms of welfare levels – of subjects. These ethical categories are, in fact, indicative of the capacity of subjects to discharge the bad situation that their carbon-intensive lifestyles have imposed on other subjects and of their ability to support the financial burden of such actions. They therefore ultimately justify remedial duties.

In order to identify in practice, on the basis of the ethical arguments advanced, which states can be held, at the same time, outcome and prospectively responsible in the context of negotiations on international adaptation funding, it is useful to take account of the specifications of the UNFCCC, which distinguishes among countries with the purpose of allocating responsibilities between groups. On this basis, article 3.1 UNFCCC states that the developed countries (Annex I to the Convention) should take the lead in addressing climate change, whilst articles 4.3 and 4.4 state that only Annex II countries to the Convention (all countries in the OECD in 1990) have obligations towards developing (Non-Annex I) countries. In light of the composite notion of responsibility introduced, and taking account of this UNFCCC categorization, I argue that all developed countries belonging to Annex I should be considered outcome responsible because they have all made excessive use of the atmosphere's absorptive capacity. At the same time, Annex I countries should be also held prospectively responsible, and thus be donor parties, because they all have sufficient capacity to act and ability to pay. It is to be noted that the attribution to Annex I countries, and not only to Annex II Parties as in the Convention, of obligations towards the developing world increases the political feasibility of negotiations, since in principle the larger the basis for sharing the burden, the greater the acceptability for donor countries of any such international agreement on adaptation funding.

A final specification is required for unambiguous delimitation of the approach to responsibility followed by the book. Some authors[2] when addressing, directly or otherwise, the third question that characterizes distributive justice in climate change

[2]For example, Gosseries (2004), Caney (2005), Page (2008).

put forward in the previous Chapter – what is the principle, or pattern, of distribution? – implicitly identify the responsibility of the subjects of justice on the basis of some principle of burden-sharing. In short, these authors put forward a number of backward-looking (for example, the polluter pays principle, the beneficiary pays principle) and forward-looking (for example, the ability to pay principle) moral norms, and evaluate their moral plausibility and implications in terms of responsibility for the subjects of justice in the context of climate change, independently of general distributive matters. In doing so they therefore circumscribe the subjects of justice and emphasize their responsibilities and duties. This book takes another perspective: it seeks to define and identify the responsibility of subjects of climate justice through a moral reasoning grounded in ethical categories – that is, retrospective (outcome) and prospective responsibility – that derive from principles of justice grounded in general theories of justice that give those subjects responsibility, without, however, specifying the implications for them of the envisaged notions of responsibility.

Specifically, as far as the raising of adaptation funds is concerned, the prioritarian pattern of distribution demanded by the Egalitarian and Difference principles of the RTJF has to be operationalized to capture the outcome and prospective dimensions of responsibility, through the equity criterion of Differentiated historical responsibility, as made clear below. This is very close to a polluter pays principle coupled with an ability to pay one, but it nonetheless has a different prospect and goal. This equity criterion is in fact applied with the primary aim of focusing on the justness of the outcomes that it produces, rather than on the implications of such outcomes for the subjects of justice.

4.3 Social Vulnerability to Climate Impacts as an Ethical Reference for Allocating Funds

The definition of a just allocation of adaptation resources raises subtle challenges in which the differing vulnerabilities of people, and ultimately of countries, is a central issue. Intuitively, the most straightforward benchmark for the allocation of funds seems to be the notion of vulnerability as spelled out by the IPCC: on this view, vulnerability represents the net impacts of climate change and is therefore seen as an end point. Regrettably, this notion of biophysical vulnerability alone cannot yield any information about the capacities and possibilities of parties to implement proper adaptive strategies. Therefore, any analysis based solely on biophysical vulnerability cannot be a conclusive referent for the allocation of adaptation resources according to the ethical arguments advanced by the book, because this notion of vulnerability fails to address social, economic and institutional aspects, as specified in Chapter 2.

Rather, it seems convenient to espouse the starting point notion of vulnerability, which as regards social systems is also termed, as previously pointed out, social

vulnerability. This perspective underlines the centrality of the human dimension, for it focuses on prior damages and not on future stresses, and makes social vulnerability broadly understandable as a state of well-being pertaining directly to individuals and social groups, and whose causes are related, besides climate impacts, also to social, institutional and economic factors such as poverty, class, race, ethnicity, and gender. Further, the notion of social vulnerability makes it possible to consider the different states of well-being experienced by different populations living under different social, economic and environmental conditions across time. The perspective of social vulnerability is in the end the one best suited to explaining the processes of social adaptation to climate impacts and to orient its funding, because it is focused on the socio-economic, institutional and political context that determines the capacity to deal with climate impacts. I would point out that I am not suggesting that subjects characterized by high social vulnerability are more likely to use adaptation resources efficiently, but simply that, on the basis of the ethical construct outlined, they are the ones that most deserve such resources. In other words, I am not entering into the governance aspects of the allocation of adaptation resources; rather, I limit the scope of my analysis to the definition of just principles and criteria for allocating funds among weaker countries, without exploring their effective capacity to identify adaptation needs, and to develop and deliver proper adaptation actions within their societies.

What, therefore, is ultimately the ethical imperative for putting the most socially vulnerable first; or more precisely, for using social vulnerability as the criterion for identifying victims? Several general constructs of justice can be extended to international adaptation funding. Many theories of justice show, as noted above, particular concern for the weakest parties in socio-economic terms, and this is particularly true of those most significant for our purposes here (that is, the liberal ones, namely the RTJF and the SCA). However, there are also universal principles of justice which postulate that subjects have a moral right not to suffer from the adverse effects of climate change. These general principles of justice can be operationalized, for the purpose of allocating adaptation funds, by a prioritarian social vulnerability-based rule that would demand the privileging of the most socially vulnerable and then move up the social vulnerability ladder (Paavola et al., 2006).

On practical grounds, the UNFCCC (article 4.4.) and the Kyoto Protocol (article 12.8) advocate this position. They hold that assistance is due to particularly vulnerable developing countries, whereas article 4.9 of the UNFCCC refers expressly to the LDCs as recipients of funding and technology transfer. However, so that the framework can be normatively used as an ethical reference, it is preferable to include all developing countries (that is, all Non-Annex I countries) among recipients of adaptation funds. It is in fact possible also to envision in international financial transfers for adapting to climate impacts a means to stimulate the entry of the largest possible number of developing countries in a future climate agreement with possibly binding mitigation obligations for every party, so that the wider the recipient base, the more inclusive in principle are any possible future climate agreements.

4.4 Liberalism and the Environment

Liberalism and environmental issues stand in a difficult relationship: 'liberal and environmental impulses are as opposed as it is politically possible to be.' (Dobson, 2001, p. vii). Liberalism is deemed to be neutral and as requiring that the state should not recommend any particular good life, whilst the environmentalist view maintains that the good life is the one which respects and protects the environment. However, neutralist liberalism, at least in one of its most accredited versions, the Rawlsian one, and environmentalism are not incompatible, as long as one accepts Rawls's second public reason argument, which states that we should protect the environment in order to support human health (Rawls, 1993).[3] It is also claimed that environmental goods may enter liberal theories of justice only if they are essential for living a sustainable human existence. Dobson (1998) calls these goods preconditional, and he closely connects them with Rawls's notion of primary goods. In this vein, the ecological space provided by the atmosphere's absorptive capacity, which constitutes a basic right for the subjects of climate justice is indeed critical in this sense. It is accordingly possible to regard climate stability, the public good delivered by a just access to, and use of, the atmospheric absorptive capacity, as a primary good. In other words, it seems possible to extend the constructs of justice of the mainstream liberal tradition, which deal by and large with the distribution in society of rights, goods, liberties and other advantages, to encompass essential environmental goods like climate stability because they are strictly and directly linked to other primary goods, such as the basic conditions for a healthy and safe human existence which, according to the statist focus embraced, every state should provide to, or preserve for, its inhabitants.

In sum, despite the challenges raised against liberalism by other competing approaches such as, for instance, context-related and nature-centred conceptions of justice, or, on different grounds, critical political economy, the global governance approach, and constructivism, it is possible to argue that liberal theories of justice, by and large characterized by a broad egalitarian perspective, can be employed in the context of climate change, because the environmental goods/services affected by it, owing to their essentiality in terms of sustainable human existence, 'fit naturally into standard liberal accounts of justice such as those of Rawls and Dworkin' (Miller, 1999, p. 171).

With this acknowledged, the particular usefulness of liberal theories of justice in the ethical analysis of international adaptation funding carried out by the book is that they can authoritatively underpin the ethical assumptions grounding the framework

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[3] It is however true that Rawls paid scarce attention to the environment and treated it as an extension to his theory of justice. Environmental goods may in fact be pursued only within the primary schemes that Rawlsian distributive justice requires.

of justice put forward in the Introduction: in fact liberalism ultimately requires stronger parties to assist weaker ones harmed by climate impacts as a way to achieve greater equality and to lessen injustice.

In light of these points and of the considerations put forward in the previous Chapter, I assume that liberal theories of justice, and particularly the RTJF and the SCA, may prove useful in systemizing the various elements in the definition of justice in funding international-level adaptation to climate change set out at the beginning of this Chapter, and in operationalizing them within a framework of justice intended to be both a theoretical reference and a parameter with which to evaluate the justness of the adaptation funding regime.

4.5 Fair Adaptation Funding: Inclusion, Specification and Commitment

The current literature regards procedural justice as necessary to underpin the legitimacy of the entire regime of international adaptation funding. In this regard, I believe that negotiations should be constrained by ethical considerations and principles; otherwise leverage will be decisive, and this is morally unacceptable.

An analysis of procedural justice able to address the questions entailed by international adaptation funding can usefully refer to the distinction in Rawls's *Theory of Justice* (1999a) among perfect, imperfect, and pure procedural justice. Perfect procedural justice requires an independent criterion with which to define the just outcome, and which is given before the definition and application of the procedures that will produce that outcome. Imperfect procedural justice similarly requires an independent a priori criterion, but there is no guarantee that a specific procedure will lead to a just state of affairs, whereas in pure procedural justice there are no independent rules for defining what counts as a just outcome; rather, the focus is exclusively on the principles and criteria defining just procedures. For instance, Rawls's well-known thought experiment of a just society where individuals sit behind a veil of ignorance under which they produce laws and institutions for their future society, rests upon the criterion of reciprocity, for in the original position they do not know where they will end up in the society: that is, they are ignorant of their physical endowments, their class position and their social status. Here, however, the criterion of reciprocity does not ensure that societies will be in any case just, though the processes that form social contracts are just in a pure procedural sense.

The pure procedural standpoint of this analysis therefore does not consider the justness of outcomes; and, for the reasons specified in the preceding Chapter, it is the one best-suited to international adaptation funding. In the climate adaptation context, pure procedural justice can be based on three principles (Paavola et al., 2006). The first one is Recognition, which is the foundation of procedural justice in that it requires acceptance of the different perspective of any minority without

the necessity of its assimilation to dominant paradigms. In practice, recognition makes consideration of the characteristics and interests of all subjects or groups a vital part of planning and decision-making, although it may not involve their direct participation. This implies that responsibility for climate impacts, on the one hand, and especially vulnerability to them on the other, be placed at the centre of the adaptation funding regime as the main characteristics and interests of the involved parties.

The second principle is Participation. This assumes many forms, which range from being heard to having equal status in decision-making processes. Participation should encompass the involvement, the right to be informed and to be heard in policy and law making, and the right to a general review of the enforcement of laws. In international adaptation funding, owing to the disproportion of means between the North and the South, participation can induce in weaker parties, whose voices have frequently gone unheard, trust and greater involvement in the decision making processes.

Closely linked to participation, and thus equally important in adaptation funding, is the final principle. This concerns the Distribution of power, which, in order to foster the fairness of the entire negotiating process, should assure that every party has the necessary knowledge and skills for actively taking part in planning, decision-making and governance. Again, according to this principle the voices of weaker countries in the international regime on adaptation funding must have the same authoritativeness as those of the developed countries.

In light of the just-described principles of procedural justice, the fairness criteria that should guide international adaptation funding processes, and against which they should be evaluated, are the following. First, the effective inclusion on grounds of equality and fairness of all countries, including the most vulnerable ones, which are usually without voice, in all decision-making on adaptation funding (criterion of Inclusion of all countries): a criterion mostly grounded on the Recognition principle.

Second, fair participation in negotiations requires on the one hand the right to clarify and defend for every responsible party (dispenser of funds) the magnitude of its responsibility and thus of its potential contribution, and on the other, for every vulnerable country (recipient of funds) the possibility to bring its social vulnerability and adaptation priorities into negotiations, and for both groups of countries, to make all these elements ultimately count in the processes of raising and allocating adaptation funds (criterion of Possibility to specify the terms of participation).

Third, it is required the substantive commitment of richer, responsible, countries to providing different forms of assistance to the weaker, vulnerable ones in the international adaptation funding regime, thereby enabling them to develop the ability to play an effectively proactive role in this complex context, and ultimately reduce their gap with respect to the richer and more powerful countries (criterion of Commitment to assistance from richer to poorer).

4.6 Sharing the Burden of Adaptation: Differentiated Historical Responsibility

Determining how the burden of adaptation should be shared requires consideration of the nature of the hybrid (fault-based and no-fault) notion of responsibility delineated earlier in its outcome and perspective dimensions. To quantify the outcome responsibility of countries for the amount of GHG released into the atmosphere and for consuming its capacity, their cumulative emissions – a proxy for their contributions to the problem – must be calculated. Nonetheless, the share of the atmosphere's absorptive capacity consumed, which determines countries' roles in generating climate impacts, also importantly depends on various circumstances that do not derive directly from the will of the emitting countries, but rather respond to more general institutional, social and economic conditions determining, on the one hand, say, lesser energy efficiency or capacities to produce and use renewables, and thus higher emissions, and on the other, directly influencing the capacity to act and ability to pay of countries, and which therefore eventually constitute also the reference for identifying the no-fault requirements of prospective responsibility. In other words, in order fully to capture the notion of responsibility embraced here, account should be taken of the socio-economic situations of countries.

This nuanced construct of responsibility should therefore be grounded on a robust liberal theory of justice which can simultaneously ensure substantial differences in equality through granting some form of priority to the less advantaged donor countries. This robust theory is the RTJF, which has a 'tendency to equality' (Rawls, 1999a, p. 100) because it sums up both equality and liberty, and these can be considered essential for any climate concern to be acceptable to the largest possible number of parties. Specifically considered here is the account of justice as fairness put forward in the path-breaking book *A Theory of Justice* (1971, republished 1999a). In 1999, Rawls, in his *The Law of Peoples* (1999b), presented a framework of international justice that extended his previous account of justice as fairness. The RTJF gives subjects the task of producing different declinations of equality and liberty so that they can define alternative basic structures for their society. Instead, in *The Law of Peoples* parties are actors which seek to shape liberty and equality among liberal and decent peoples. The dimension of the climate debate is indeed supranational; nonetheless, I refer here to the older, domestic, notion of justice as fairness, because I deem it more appropriate as an ethically acceptable referent for the design of an institutional order, be it at the national or the supranational level. It should be borne in mind, in fact, that any climate initiative is primarily an institutional effort. On the other hand, the concept of justice as delineated in *The Law of Peoples* seems more appropriate to the ethically acceptable rules that liberal and decent peoples should honour in order to protect their independence, and to maintain the equality and stability of liberal decent domestic national orders. In short, the reference is to the notion of justice as fairness because it is institutional and can furnish a flexible structure for any empirical context of application, whereas the notion put forward in *The Law of Peoples* is interactional and provides a general

scheme of international rules. Furthermore, Rawls himself extends the scope of the RTJF – which mainly seeks to provide moral guidance to individual persons in the definition and assessment of the basic structure of one society – beyond individuals to states, and beyond one society to the international order: Rawls, in fact, believes that a theory of justice cannot be particularistic. Therefore, despite the boundaries in space and time imposed by the particular focus adopted by a specific perspective, a robust theory of justice should be flexible enough to accommodate new and broader challenges. In Rawls's words: '[ethical] principles should be general. That is, it must be possible to formulate them without the use of what would be intuitively recognized as proper names, or rigged definite descriptions.' (Rawls, 1999a, p. 113). He also emphasises that: '[ethical] principles are to be universal in application' (Rawls, 1999a, p. 114). More specifically, Rawls broadens the scope of the RTJF to the 'justice of the law of nations and of relations between states' (Rawls, 1999a, p. 6) in paragraph 58 of *A Theory of Justice* (Rawls, 1999a, pp. 331–335), where he derives the ethical underpinnings of the international order through the imaginary deliberative forum of the original position under a veil of ignorance, which is the basis of his entire work. A closer analysis of this Rawlsian argument would be beyond the scope of this book; however, the point is that Rawls himself explicitly admits that his theory of justice as fairness can include international moral issues dealt with by states. It therefore seems possible to enlarge the scope of the egalitarian and difference principles of the RTJF, as explained below, and employ them as ethical support for an allocative scheme of duties among states in the context of international adaptation funding based on the consumption of atmospheric capacity and on the availability of social primary goods, and which aims to deliver the public good climate stability that in the Rawlsian framework can be likened, as said, to a primary good.

As anticipated, the RTJF is based on two principles of justice that guide equal, free, and mutually disinterested rational subjects in their judgments concerning their economic and social arrangements. The first – the Egalitarian principle – affirms that all subjects have the same right to the most extensive system of equal basic liberties, rights and duties, compatible with a similar system for all. The second holds that inequalities are tolerable only if they satisfy two conditions. First, legitimate inequalities can characterize only situations open to all, under conditions of fair equality of opportunity. Second, inequalities must be to the greatest benefit of the least advantaged subjects (the Difference principle). In particular, the Difference principle requires a socio-economic system that reduces illegitimated and undeserved inequalities. Put slightly differently, it holds that inequalities owing to differences in the contingencies of social and natural fortune must be minimized. The two principles, in fact, state that (principle I) in order to ensure real equality of opportunity to all, (principle II) closer attention must be paid to those who are most affected by the 'arbitrariness of natural contingency and social fortune' (Rawls, 1999a, p. 96), that is, those with fewer assets and in disadvantaged circumstances, where being advantaged is essentially determined by the availability of primary goods and services.

In sum, the Rawlsian construct requires on the one hand that equals be treated equally, as stated by principle I of RTJF, while on the other it leaves room for the wide discrepancies that characterize countries facing diverse socioeconomic conditions, as asserted by principle II of RTJF, by taking undeserved inequalities into account. In fact, the unbalanced and unjustified distribution of social primary goods, which proxies the different economic, social and institutional conditions, impedes countries from achieving real equalities of opportunity in accessing the atmosphere's absorptive capacity and determines their possibilities of supporting weaker subjects in a morally arbitrary way. Social primary goods are basically a matter of (bad) fortune, for they depend on the natural and social lottery which defines, as said, the subject's advantage, and, according to Pogge and Kosch (2007), it is possible to liken them to income and wealth. They are, therefore, all-purpose resources, or impacts measures, useful for building an index in order to distribute unequal shares.

Hence, grounding the funding of adaptation activities on the RTJF requires the application to states of a prioritarian equity criterion which encompasses all the elements that influence the use of atmospheric absorptive capacity and their possibilities of supporting countries most severely impacted by climate change, and which thus eventually determines their outcome and prospective responsibility. This is called here the criterion of Differentiated historical responsibility. It suggests that outcome responsibility, according to the Egalitarian principle, uses historical accountability as its yardstick, whereas the Difference principle requires consideration of undeserved inequalities in social primary goods that have actually influenced the historical GHG emissions of responsible states, contributed to the consumption of the atmospheric space, and, in terms of prospective responsibility, determined their capacity to act and ability to pay.

It is noteworthy that, as anticipated, the criterion of Differentiated historical responsibility includes reference both to widely agreed principles of burden-sharing in climate change, such as the polluter pays principle in its consideration of retrospective responsibility, and to the ability to pay principle in its acknowledgement of the Difference principle. On policy grounds, the structure of this criterion is also in line with the provisions of the principle of Common but differentiated responsibilities and respective capabilities affirmed by article 3.1 UNFCCC, and suggested by Parties as a crucial element of adaptation financing architectures for the post-Kyoto period.

In practical terms, the criterion of Differentiated historical responsibility envisions that adaptation funds should be raised from countries above a social primary goods-based threshold (which in the context of adaptation funding in the UNFCCC can, as said, be identified in the richer Annex I countries). The amount of each single contribution would therefore be calculated in proportion to cumulative emissions net of undeserved inequalities deriving from the dissimilar socioeconomic positions produced by an unequal availability of all-purpose resources such as primary goods. Hence, those Annex I countries with lower levels of social primary goods should contribute less.

4.7 Allocating Raised Adaptation Funds: Lack of Human Security

The ethical considerations put forward in regard to the allocation of adaptation funds require awareness of the ability of countries to cope with, and to adapt to, climate impacts. Climatic impacts being equal, the more socially vulnerable a country is, the fewer institutional possibilities and capacities it has to deal with climate hazards. In this perspective a just allocation scheme for adaptation funds should consider both the physical vulnerability of countries and their social, institutional and economic circumstances, that is, their social vulnerability.

Such an allocation scheme can usefully draw on the SCA (Sen, 1999). The Senian approach focuses on the social and economic factors which give people the opportunity to do and to be what they consider valuable. Sen suggests that well-being should be considered in terms of functionings and capabilities. Functionings relate to what a person may value doing or being: they are the living conditions achieved by an individual and represent a set of interrelated activities and states (doings and beings) that shape her/his life. Capabilities concern the ability of an individual to achieve different combinations of functionings and define the freedom to choose the life s/he prefers. These two categories are complementary but nevertheless distinct. Moreover, the SCA attaches great importance to the role of freedoms and institutions, understood in the broad sense, in advancing the conditions of the worse off. Institutions in fact play a crucial role in turning resources into effective initiatives by means of instrumental freedoms. Instrumental freedoms are the means of development, and they affect the efficiency and efficacy of institutions in enlarging the capability set. Sen in fact shows deep interest in the institutional bases of human life. Specifically, he claims that institutions are vehicles for enlarging the space of substantive freedoms, that is, functionings and capabilities. In other words, institutions and instrumental freedoms play a central role in translating resources into functionings and capabilities. It is to be noted that this perspective operates also at an aggregate level, as Sen himself acknowledges when he states that the capability approach can be used for aggregate evaluations and as a support for policy-making.

In short, the SCA can be viewed as offering an evaluative space of justice, and as challenging the resourcist and welfarist approaches. It concentrates instead on the individual and social ability to convert resources into valuable functionings and capabilities. Therefore, the distinctive feature of Sen's theory is its focus on a state of the subject of justice lying midway between the resources it generates and the utilities thereof; that is, something between primary goods and utility.

This approach is particularly useful in allocating adaptation resources because the essence of any effective adaptive response is not solely the availability of funds. Rather, it is the possibility of gaining effective protection against climate impacts from adaptation resources, as social vulnerability requires. Therefore the SCA's evaluative space is the locus where the allocation of adaptation resources can be most fruitfully read. Moreover, the beneficiaries of adaptation resources are, as said,

Table 4.1 Dimensions and domains of justice, ethical imperatives, theories and principles of justice, and fairness and equity criteria

Dimension of justice	Domain of justice	Ethical imperative	Theory of justice	Principle of justice	Fairness and equity criterion
Procedural	Negotiation processes	Fair involvement	RTJF (Pure procedural justice standpoint)	Recognition	Inclusion of all countries
				Participation	Possibility to specify the terms of participation
				Distribution of power	Commitment to assistance from richer to poorer
Distributive	Raising of adaptation resources	Responsibility	RTJF	Equality (in access to, and consumption of, atmospheric capacity) Difference (in social primary goods)	Differentiated historical responsibility (historical responsibility taking undeserved inequalities into account)
Distributive	Allocation of adaptation resources	Social vulnerability	SCA	Basic capability equality	Lack of human security (in the space of basic capabilities)

from the standpoint adopted here the developing Non-Annex I countries, by and large characterized by lower social and institutional abilities to convert resources into valuable beings and doings.

The Senian notion of well-being concerns, as said, the enlargement of substantive freedoms: functioning and capabilities. In general, adaptation resources should thus be allocated with regard to the level of some suitably selected functionings and capabilities (in practical terms, achieved functioning) according to the rule that the lower the overall level of these capabilities, the more adaptation funds are due.

The equity criterion springing from the construct of justice put forward by the SCA – which, as has been argued here, is more appropriate in the adaptation funding debate – is a prioritarian one based on a particular set of functionings and capabilities grounded in the concept of human security. It can be defined in practice by a set of basic achievable functionings more parsimonious than that envisioned by the broader concept of human development. The latter concerns the expansion of substantive freedoms, all functionings and capabilities, while the former is less ambitious and aims to provide a vital subset of basic functionings and capabilities (or achievable functionings in practice). This criterion is called here Lack of human security. Specifically, the lower the degree of human security, the greater the access for more socially vulnerable climate-affected countries to adaptation resources should be. The prime feature of human security is its focus on core social economic and institutional characteristics. This is also its main difference from the traditional concept of security, which, on the contrary, is based on the use of force to prevent threats to autonomy and territorial integrity. Although the perspective of human security first arose in the 1960s as a response to growing dissatisfaction with the traditional paradigms of security and development, it imposed itself in a structured way only in the early 1990s through the efforts of the UNDP. The 1994 UNDP Report on human security (UNDP 1994) stressed the essential properties of the notion of human security: the centrality of people, universality, the interdependency of its components, its preventive perspective. Nonetheless, the boundaries of the concept of human security are still vague and somewhat controversial. Adopted here is the notion of human security which views it as the protection and promotion of a limited number of aspects of well-being which constitute its vital core, the fundamental component of human well-being. On this view, the protection of human security does not include all aspects of human well-being, but only the crucial ones. It is worth noting that the notion of the vital core of well-being does not have a precise philosophical meaning; rather, it can be specified in terms of functionings and capabilities. Therefore, the basis and epistemological foundation of this notion of human security consists mainly in practical reasons; and, in fact, human security is employed in the book according to this perspective.

My fundamental point is that the weaker a country is in these domains of well-being (or achievable functionings) that specify human security, the fewer institutional and social capacities and possibilities it has to carry out effective adaptation actions. Hence, to increase such capacities and possibilities, practically weaker Non-Annex I countries should be given privileged access to funds. This access, though proportional to the population harmed, should nonetheless be inversely proportional

to the human security level of the individual country. In fact, the lower the level, the fewer the means to deal with climate-related damage; and, ignoring for the reasons underlined the governance issues related to the allocation of raised adaptation funds, the greater should be the just share of such funds (Table 4.1).

A final specification is in order, because full justification of the criterion of Lack of human security requires us to deal with a possible ethical concern. In short, according to Dworkin's seminal works on equality (Dworkin, 1981a, b, 2000), it is possible to distinguish between brute luck (for which subjects are not responsible because risk derives from non-deliberate gambles), and option luck (for which subjects are responsible, because risk depends on how deliberated gambles turn out). On this basis, luck-egalitarians deny that the outcomes of option luck are unjust. In the context of this book, therefore, this assumption implies that it would not be ethically justified to fund adaptation to climate impacts generated, or favoured, by irresponsible behaviours of recipient countries. However, in the context of this book, recipients of adaptation funds are developing Non-Annex I countries, which, due to internal circumstances and exogenous constraints could not have always effectively controlled, or modified, their behaviours that augmented the dangerousness of climate impacts (such as, for instance, deforestation). Hence the control condition does not hold, and Non-Annex I countries consequently cannot be held outcome-responsible for their climate-irresponsible behaviours. It thus seems possible to argue that the notion of option luck does not apply to poorer countries, and consequently that also the climate impacts deriving from their reckless behaviours are ethically relevant and should be funded, similarly to those impacts deriving from brute luck, by outcome- and remedial-responsible Annex I countries as claimed by the criterion of Differentiated historical responsibility.

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Chapter 5
The International Institutions and Instruments Governing Adaptation Funding

Abstract This Chapter examines the main international governance body concerned with the funding of adaptation to climate change: the UNFCCC, an international agreement which gave rise to the Kyoto Protocol; the UNFCCC's financial mechanism, the Global Environmental Facility; and the funds specifically created to finance adaptation. First investigated is the rationale and the different objectives and options for funding adaptation. Then the attention turns to the instruments governing adaptation funding under the UNFCCC regime: the GEF Trust Fund, the GEF Strategy and Priority on Adaptation, the Special Climate Change Fund, the Least Developed Countries Fund, and the Adaptation Fund. Finally, the Chapter also outlines financing options alternative to the UNFCCC regime.

Keywords Adaptation funding · Global Environmental Facility · Sources of funding

The urgency of adaptation requires that all countries must prepare to deal with climate impacts, and that the richer industrialized ones, owing to obligations accepted under the UNFCCC, must give financial, technical and institutional assistance to the poorer, more vulnerable countries with the least adaptive capacity. To date, the international climate regime has not delivered effective mechanisms with which to deal properly with the funding of adaptation. The current architecture, in fact, focuses predominantly on mitigation: the Kyoto Protocol, indeed, is almost entirely concerned with it, and the post-Kyoto debate is by and large still biased towards mitigation, given its main objective of bringing the largest developing countries on board, although the AWG-LCA is devoting increasing attention to adaptation and its funding. Yet proper responses to the challenge of adapting to climate change cannot be based on the duplication of mitigation schemes. Required instead is a new thinking, both within the UNFCCC framework and within the realm of the development strategies of developing countries and of development funding institutions. The funding of adaptation strategies and initiatives is, as said, particularly important for developing countries because current funding instruments neither cover the costs of adaptations and of residual climate impacts nor are linked to responsibility, as demanded by the South. In fact, the attitude of the industrialised

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countries' negotiators (most of whom are representatives of bilateral aid agencies) to adaptation funding is to view these funds as additional development assistance which should be mainstreamed into development activities. 'So far', argued a developing countries' representative, '[the developed countries'] attitude has been: give them one penny and grumble and give half a penny, bargain with them, buy them'.

5.1 Funding Adaptation: Rationale

Although it is true that adaptation financing augments its effectiveness if it is integrated into developing countries' budgets and policies, it should nonetheless be additional and distinct from Official Development Assistance (ODA), as the UNFCCC demands and the developing countries expect. Many commentators consider this the most important issue at stake in the climate debate, and argue that the UNFCCC is not the place to engage in aid discussion or to provide charity; it is not concerned with development assistance. It is the institutional setting where subjects who have harmed poor vulnerable peoples should compensate them on the basis of their responsibilities and capabilities. Therefore, unsurprisingly, the way in which the funding of adaptation is administered and its adequacy are elements crucial for any possible development of international climate policy, and these elements are assuming greater importance under the Convention. The real challenge is therefore the development of secure, adequate and predictable funding streams for the financing of adaptation needs as demanded by the Convention at article 4.3 and reiterated by the Bali Action Plan, possibly grounded on ethical considerations concerning responsibility for the impacts of climate change and for their reparation, linked to the vulnerability of weaker impacted countries, and managed in accordance with the principles of procedural justice. Any future international climate regime should acknowledge these aspects if it is to have better chances of success, as underlined in the Introduction.

Before entering into details on funding mechanisms and processes, I must clarify two intertwined issues that greatly influence the objectives, strategies and notions of available options: legal responsibility and liability for climate impacts, and the costs associated with present and future climate harms, that is, adaptation costs and residual damages.

The issue of responsibility can be read at least at two levels, one ethical the other legal. The ethical perspective was examined in Chapters 3 and 4. However, the issue of responsibility can also be analyzed within an international legal framework, as anticipated in general terms in Chapter 3. Closer to the purpose of this Chapter is specification of the notion of liability for climate damages. In the sphere of adaptation, this issue boils down to a straightforward question: who should pay for the costs caused by climate impacts? The UNFCCC principle of Common but differentiated responsibilities and respective capabilities suggests that developed countries should bear the bulk of adaptation costs. But climate negotiations have to date avoided this issue, because Northern negotiators have unilaterally removed it from the agenda. The emergence of the adaptation issue, however, has led to vocal

demands by the South that the North should recognize its responsibility for both adaptation costs and damage compensations. Tuvalu, for instance, intended to sue the United States and Australia for the threatened rise in sea level caused by climate change, on the grounds that both countries have breached their obligations under the UNFCCC. The scant commitment of the United States and Australia to combating climate change was evidenced by their refusal, at the time when Tuvalu made its intention clear, to ratify the Kyoto Protocol. Furthermore, the Inuit people had filed a legal petition with the Inter-American Commission on Human Rights (IACHR) demanding that the United States limit its emissions of GHG. The Inuits' legal brief maintains that global climate change is threatening their way of life by melting ice and thawing the permafrost, and it attempts to link climate change induced by human activity to international human rights. The Inuits' legal claim asks the United States to work within the UNFCCC to prevent dangerous anthropogenic interference in the climate system.

Northern governments obviously resist these claims because they fear that acknowledging them would entail potentially ruinous financial liability. This position is defended by citing the profoundly uncertain link between responsibility for GHG emissions and climate damage, let alone the difficulty of translating such damage into financial quantities. Indeed, linking responsibility for damage directly to GHG emissions has been unthinkable in climate negotiations. Fortunately, however, scientific knowledge evolves and can nowadays provide sounder evidence to prove the linkage between emissions and damage. For instance, probability and risk analysis can be used to quantify a link between an external input such as GHG and specific climatic events. More generally, the issue concerns the possibility of holding current GHG emitters liable for the actual impacts of their emissions. There are of course significant practical difficulties in determining who has emitted what and when, where liability lies, and since what threshold date the harm caused by GHG has been undeniable and responsibility for it should be admitted. Yet these difficulties are by no means insurmountable. Science is beginning to answer the questions that substantiate the legal (and ethical) framework of responsibility, even the most important questions of who will have to pay the costs of adaptation and compensate those who cannot adapt. Furthermore, if the value of responsibility were defendable on ethical grounds – and as argued in the previous Chapters, it is defendable if responsibility is founded on justice principles and equity criteria which take account of contributions to the problem and of possibilities to remedy it – it would be possible to weaken the resistance of wealthier countries and gain theoretical, if not yet practical, consensus on financial liability for climate impacts.

5.2 Funding Adaptation: Options

Although the aggregate costs of climate impacts are estimated at 1–25% of global GDP according to the Stern Review (Stern, 2007), the total costs of adaptation (that is, the costs of adaptation initiatives plus compensation for residual climate damage) are very difficult to estimate. Tol and Verheyen (2004) calculate that compensation

by OECD countries to developing countries, based on the estimated contribution of cumulative OECD emissions to cumulative world emissions and on the consideration of cumulative emissions as the measure of responsibility for climate impacts, would entail a financial transfer of up to 0.25% of GDP in the short run, and up to 4% in the long run. Baer (2006) proposes an indicator of net liability based on per capita responsibility as measured by cumulative per capita emissions, and vulnerability as measured by necessary adaptation investments. His calculations show that the net liability of the North (Annex I countries) amounts to a debt of about USD 22.50 for each Northerner and a claim of about USD 5.60 for each Southerner, or to a North/South cash flow of USD 26 billion. Other recent figures on adaptation costs in developing countries are available from other sources. A World Bank report (World Bank 2006) estimates the cost of climate-proofing additional (that is, only new) annual investments in developing countries as ranging between USD 9 billion and USD 41 billion annually. An Oxfam study (2007a) has quantified the cost of adapting to climate change in developing countries as at least USD 50 billion per year. A UNFCCC (2007) report estimates that the cost of adaptation for developing countries in 2030 will be between USD 28 billion and 67 billion per year. Despite these figures, current adaptation funding is still patently inadequate for the needs of developing countries, whereas many rich countries are already investing substantially in domestic adaptation needs. In fact, according to Oxfam (2007b), Australia's domestic adaptation investments amount to USD 13.1 billion (in contrast, Australia pledged USD 6.7 million to the LDCF); the Netherlands is investing USD 2.9 billion internally (and pledged USD 19 million to the SCCF and the LDCF), the UK is planning to invest USD 42 billion to upgrade the Thames flood barrier and has invested USD 373 million in cooling systems for the London Underground (in contrast, it pledged USD 39 million to the SCCF and the LDCF).

What are the options in making these sums available, or more likely, for adequate adaptation funds and channelling them to needy countries? A major distinction relates to whether adaptation, in its broadest sense, should be financed under the UNFCCC and its financial mechanism for the Convention's implementation – the GEF – or whether funding should come from other sources.

The first family of options consists of the funds established under the UNFCCC (the SCCF, the LDCF, and the AF), and of the financial services provided by the GEF. The second family comprises development assistance, insurance and pooling, public expenditure, disaster preparedness and relief, and foreign direct investments, and it is by and large characterized by the mainstreaming of adaptation funding. Yet this is solely an academic distinction, because it is becoming blurred in the reality of international climate policy, and when all development will be climate-resilient, specific funding for adaptation will be useless. But this is still in the future.

5.3 Funding Adaptation in the Convention and Kyoto Protocol

The UNFCCC regime does not systematically address either adaptation or its funding. Instead, it deals with these two issues in a number of articles, both in the Convention and in the Kyoto Protocol, and in COP and COP/MOP decisions.

Financial transfers to developing countries were originally introduced into the climate regime both to counterbalance the costs of implementing the commitments and to favour adaptation to climate impacts if the Convention itself failed to deal with them. The climate change regime is a legal basis on which developing countries can claim funds from developed ones, even though it has not to date provided adequate flows of resources. Under article 21(3) UNFCCC and various COP decisions, developed countries must in fact fund the Convention's financial mechanism, the GEF, but they may also contribute through bilateral or multilateral channels (Article 11.5).

The Convention includes two categories of mandatory financial obligations, each of which applies only to Annex II to the UNFCCC countries, which, according to article 3.1, are to take the lead in combating climate change.

Article 4.3 requires financial obligations aimed at helping developing countries implement their duties under the UNFCCC ('new and additional funding to meet the agreed full costs of developing countries' national communication obligations', as well as 'such financial resources needed by developing county Parties to meet the agreed full incremental costs of implementing measures' covered by article 4.1). The wording of article 4.3 makes its interpretation and application ambiguous. Some clarifications are therefore in order. The claim for new and additional financial resources implies that adaptation funding should be additional to expected flows of ODA. The agreed full cost should be established between the developing countries and the financial mechanism of the Convention, the GEF. The notion of incremental cost is introduced because the Convention applies only to anthropogenic climate change, with the consequence that only the additional cost for adapting produced by anthropogenic intervention is in principle to be funded. Furthermore, the GEF can generally fund only adaptation initiatives achieving global environmental benefits, that is, the cost differential between a baseline course of action and another course that yields global benefits, even though this provision is highly questionable (and in fact not adopted in practice) in the adaptation domain, which is largely characterized by local environmental benefits.

Article 4.4 introduces obligations for developed countries by specifically targeting adaptation (Annex II Parties are committed to assisting 'the developing country Parties that are particularly vulnerable to the adverse effects of climate change in meeting costs of adaptation to those adverse effects'). This provision was strongly supported by the Alliance of Small Island States (AOSIS), but it was opposed by the developed countries because it seemingly required Annex II countries to provide unquantified, and potentially ruinous, funds for adaptation. In Verheyen's opinion (2002, p. 136) article 4.4. is controversial: 'the precise legal content of article 4.4 is difficult to ascertain', the only certainty is that it 'should be the adaptation needs of countries rather than the willingness of Annex II countries to pay for adaptation measures'. Moreover, the Convention does not make clear who the particularly vulnerable Parties are. The preamble to the UNFCCC acknowledges that: '. . .low-lying and other small island countries, countries with low-lying coastal, arid and semi-arid areas or areas liable to floods, drought and desertification, and developing countries with fragile mountainous ecosystems are particularly vulnerable to the adverse effects of climate change'. However, the preamble is not binding, and it is still

unclear whether particular vulnerability concerns only the physical effects of climate change, or whether it should extend to the lack of financial, social, institutional and ultimately adaptive capacity. In this regard, the list of countries with ‘specific needs and concerns’ set out in article 4.8 UNFCCC may be helpful.[1] Moreover, the Delhi Declaration (decision 1/CP.8) states that ‘developing countries are particularly vulnerable, especially the least developed countries and small island developing states’. And decision 11/CMP.1 introduces a novel notion of particularly vulnerable countries by stating that low-lying and other small island countries, countries with low-lying coastal, arid and semi-arid areas or areas liable to floods, drought and desertification, and developing countries with fragile mountainous ecosystems are particularly vulnerable to the adverse effects of climate change.

Other articles in the Convention deal less directly with the funding of adaptation. Article 4.5 requires that Annex II Parties take all practicable steps to promote, facilitate and finance the transfer of technology, including technology for adaptation, to developing countries to favour implementation of the Convention. Article 4.7 acknowledges that the successful implementation of developing countries’ commitments under the Convention depends on the effective implementation of those of the developed countries in terms of the transfer of financial resources and technology. Under article 4.8, Parties must fully consider the actions necessary, with respect to funding, insurance and technology, to meet the specific needs and concerns of developing countries, especially those on the included list (reported in Note 1) originated by climate impacts. Article 4.9 requires Parties to take full account of the specific needs and special situations of the LDCs in their actions with regard to funding and transfer of technology. Finally, article 12.3 demands that developed countries include in their national communications details of measures taken under articles 4.3, 4.4, and 4.5.

The Kyoto Protocol deals with the funding of adaptation in article 12.8, which states that ‘a share of the proceeds’ from Clean Development Mechanism (CDM) projects shall be ‘used ... to assist developing country Parties that are particularly vulnerable to the adverse effects of climate change to meet the costs of adaptation’. The goals of the CDM are to assist non-Annex I Parties to achieve sustainable development and to contribute to the ultimate objective of the Convention, while assisting compliance by Annex I Parties. In fact, the CDM allows Annex I Parties to implement projects that reduce emissions in non-Annex I countries. The Certified

[1] It includes: small island countries; countries with low-lying coastal areas; countries with arid and semi-arid areas, forested areas and areas liable to forest decay; countries with areas prone to natural disasters; countries with areas liable to drought and desertification; countries with areas of high urban atmospheric pollution; countries with areas with fragile ecosystems, including mountainous ecosystems; countries whose economies are highly dependent on income generated from the production, processing and export, and/or on consumption of fossil fuels and associated energy-intensive products; and land-locked and transit countries.

Emission Reductions (CERs) generated by such projects can be used by Annex I Parties to help meet their emission targets. The CERs are subject to a 2% levy, known as the share of the proceeds, which concurs in the creation of the AF to help particularly vulnerable – though the meaning of this term is not defined in this context – developing countries adapt to the adverse effects of climate change. Only Parties to the Kyoto Protocol can be financed by these resources.

In light of the provisions of the Convention and of the Kyoto Protocol on adaptation funding, it seems very difficult to determine what the developed country Parties must finance, and what the developing country Parties, or sub-groups of them (for instance, particularly vulnerable countries), are entitled to claim. Some points, however, can be stressed. First, the UNFCCC and the Protocol do not address the general legal framework of responsibility, as well as burden-sharing. They foresee only partial funding for adaptation measures by Annex II countries. The UNFCCC, although its obligations are mandatory, does not require a specific amount of financial resources, and the funding pledges made are not directly connected to concrete assessment of the actual adaptation needs of developing countries. Furthermore, only the costs of adaptation to anthropogenic climate impacts are fundable, even though it is practically impossible to separate anthropogenic from non-anthropogenic climate change. Hence, the incremental cost notion in the context of adaptation is inconclusive, especially when linked to the GEF's requirement of global environmental benefits.

Second, scientific uncertainty makes it difficult to select adaptation actions, with the consequence that there is still a lack of understanding about the priorities and the ultimate meaning and purpose of adaptation. Moreover, the adequate adaptation advocated by article 4.1 is a vague expression of little use for funding purposes.

Finally, the various provisions of the climate regime draw attention to the fact that, at the time when the Convention and the Kyoto Protocol were drafted, a major concern of the North, which eventually determined the course and outcomes of negotiations, was that attributing great importance to adaptation and its financing might lead to less attention being paid to GHG mitigation. It was consequently more sensible, and environmental-friendly, to downplay the role of adaptation and consequently to gloss over its financing.

5.4 The GEF

Article 11.1 of the Convention defines a financial mechanism under the guidance of the COP and of the COP/MOP and accountable to them for implementing its provisions. Article 21 expressly mandates the GEF to serve as the financial mechanism on an interim basis, and decision 3/CP.4 has sanctioned this provision. Article 11.2 requires the financial mechanism to have an equitable, balanced and transparent representation of all Parties, and article 11.3 states that the COP and the financial mechanism shall agree on the general workings of the funding processes.

The GEF is headed by a Council in which the countries that contribute the most (major developed countries) carry the most weight. Hence, unlike the COP, not all countries have an equal vote in the GEF. The GEF originally provided funds within the climate change focal area to four Operational Programmes (OPs 5, 6, 7, and 11) exclusively concerned with mitigation. According to the GEF's operating strategy, the projects that it funds must reflect national or regional priorities, have the support of the country/ies involved, and improve the global environment or advance the prospect of reducing risks to it. GEF projects complement, but do not replace, national ones: in fact, the GEF in principle funds only incremental costs, that is, the extra costs of transforming a project with national benefits into one with global benefits, without duplicating bilateral or multilateral aid. This principle requires that the funding of a project be divided between baseline and incremental costs, with only the latter being financed.

A number of COP decisions have specified the GEF's structure and role. COP 1 (decision 11/CP.1) adopted a cautious three-stage funding process for adaptation planning and measures: Stage I – studies and assessment; Stage II – planning and adaptation projects design; and Stage III – actual adaptation projects. Furthermore, at COP 1, Parties conferred the full funding of National Communications on the GEF, and COP 4 gave the GEF the mandate to fund Stage II activities in particularly vulnerable areas identified in Stage I. At present, the GEF has funded only Stage I and II adaptation measures within its climate change focal area on a full cost basis as a part of enabling activities to prepare National Communications.

COP 7 was the real breakthrough for financing adaptation under the Convention. It sanctioned, in the so-called Marrakech Accords, raising awareness of the need for new and additional contributions to the GEF's climate change focal area and to multilateral and bilateral funding, and for more funding to developing country Parties through increased GEF replenishment. It established two new funds, the SCCF and the LDCF, and promoted the wider use of bilateral and multilateral sources (decision 7/CP.7). Concurrently, the AF was established under the Kyoto Protocol (decision 10/CP.7).

Other significant examples of COP and COP/MOP guidance to the GEF are decision 6/CP.8 on the inclusion of vulnerability assessments in preparing for adaptation; decision 3/CP.9 on the establishment of a new Strategic Priority Piloting an Operational Approach to Adaptation (SPA) in the climate change focal area; and decisions 1/CP.10 and 8/CP.10, in which the COP requires the GEF to report on its support of vulnerability and adaptation activities.

There will eventually be four sources of adaptation funds in the UNFCCC regime: (1) the GEF Trust Fund, which is based on the incremental cost approach and funds vulnerability and adaptation studies conducted for the preparation of National Communications, and enabling activities, and which comprises the SPA for pilot and demonstration projects; (2) the SCCF, which addresses adaptation directly; (3) the LDCF, which addresses adaptation in the LDCs through the financing of NAPAs; and (4) the AF, which will fund concrete adaptation programmes and projects in developing countries. The AF is the only financial instrument not

managed by the GEF: it is in fact governed by an autonomous Board as established through decision 1/CMP.3 in Bali (December 2007).

5.5 The Sources of Funding

5.5.1 The GEF Trust Fund

Developing country Parties to the Convention are eligible for adaptation funding from the GEF Trust Fund under article 4.3 of the Convention (decision 11/CP.1). The GEF Trust Fund is constrained in its disbursements by the GEF's operational rules, which mandate that eligible projects reflect national or regional priorities, and improve the global environment (or reduce risk to it). Accordingly, as mentioned above, the GEF funds only the extra cost of transforming projects with local or national benefits into ones with global benefits, with all the above-mentioned difficulties caused by this provision in the adaptation realm when moving towards the funding of Stage III activities. To date, however, GEF Trust Fund resources for adaptation have been provided for the preparation of national communications on a full-cost basis as agreed at COP 1, whereas Stage III activities have not yet been funded in the climate change focal area. By and large, developing countries have used the GEF's expedite procedure to fund national communications. In September 2005, the GEF Council eliminated its first-come first-served funding rule and adopted a Resource Allocation Framework (RAF) that radically altered the existing system for the distribution of resources under the GEF's climate change programme. The RAF basically prescribes that resources from the GEF Trust Fund must be primarily given to large emitting and rapidly growing countries. However, it does not apply to funds financing adaptation.

In 2003 the GEF Secretariat established the SPA, a programme to support pilot and demonstration projects that both address local adaptation needs and generate global environmental benefits in the GEF focal areas. It was mandated to allocate USD 50 million over three years as part of the GEF's financial plan 2005–2007.

The GEF Secretariat made it clear that the overall goal of the GEF in the sphere of adaptation is to help countries to mainstream adaptation funding into their development planning. The SPA should finance projects designed to maximize learning and capacity building in particularly vulnerable areas. As regards these projects, the GEF funds both the incremental cost of activities that generate global environmental benefits and the incremental cost of selected activities that national communications identify as being of high priority. Baseline activities are to be funded by governments, non governmental organizations, and other sources. Approximately UDS 5 million are to be allocated to the Small Grant Programme of the SPA. This initiative supports activities of up to USD 50,000 each, undertaken by non-governmental and community-based organizations in developing countries. These projects initially funded community-based adaptation actions in Bolivia, Niger, Samoa and Bangladesh.

5.5.2 The Special Climate Change Fund

The SCCF was established by decision 7/CP.7 at COP 7 in Marrakech. It covers a number of activities both in adaptation and in mitigation, but in practice its priority is adaptation. The SCCF was supposed to be operational from 2005, and funded by voluntary contributions, similarly to the LDCF.

The activities to be funded are the following: adaptation in accordance with paragraph 8 of decision 5/CP.7; transfer of technologies in accordance with decision 4/CP.7; investment in energy, transport, industry, forestry, waste management, and in activities for diversifying developing countries' economies. Fundable adaptation activities under paragraph 8 of decision 5/CP.7 include: practical adaptation initiatives in a number of areas (water, land and coastal management, agriculture, health, infrastructures, ecosystems); monitoring of diseases and vectors; forecasting and early-warning systems; supporting capacity building; and strengthening centres for response to extreme events.

Furthermore, with decision 7/CP.8, the COP stated that the GEF should: promote complementarity of funding between the SCCF and the other funds with which it is entrusted; ensure the financial separation of the SCCF from these other funds; and ensure transparency in the SCCF operations.

However, numerous difficulties have complicated operationalization of the SCCF. Chief among them have been tensions among developing countries in prioritizing activities, disagreement between developed and developing countries on full-cost funding for adaptation activities, and donors' worries about the extent of the activities to be funded. The 2003 Eighteenth Session of the UNFCCC SBI pointed out that adaptation activities to address the adverse effects of climate change were the most urgent priority. Nonetheless, at COP 9 held in Milan during November 2003, Parties failed to reach agreement on the guidelines for the SCCF. In the meantime, the GEF Council proposed a sliding scale for co-financing projects: the SCCF would provide developing countries with up to 50% of the cost of the project when it was less than USD 1 million, up to 33% when it was between 1 and 5 million, and up to 25% when it was more than 5 million. At COP 10, the AOSIS and the African Group expressed concerns about the sliding-scale approach to funding, which would have made gaining access to the SCCF a tortuous process. Nor was progress made at COP 11: delegates did not agree on the text forwarded by SBI 22 on the SCCF's priority areas, on the role of economic diversification activities, and on the timing of the COP's review of SCCF implementation in such areas. COP 12 adopted decision 1/CP.12, which gave guidance for some of the SCCF's activities; the GEF was requested to operationalize this guidance and to report to COP 13. However, no further steps were taken in Bali, nor at COP 14 in Poznan.

5.5.3 The Least Developed Countries Fund

The LDCF was created at COP 7 Marrakech by the same decision (decision 7/CP.7) which created the SCCF. It was intended to support a work programme, namely

the preparation and implementation of NAPAs for LDCs that are Parties to the UNFCCC (out of the 50 LDCs, 48 are Parties to the Convention). The NAPA is a country-driven, bottom-up process for prioritizing the urgent and immediate adaptation needs produced by expected climate impacts in a specific country.

How funds should be distributed to the LDCs has been a matter of controversy. At COP 9 Parties asked the GEF to develop operational guidelines for the LDCF based on a number of agreed elements, most notably: ensuring a country-driven approach, equitable access to funding, criteria for supporting activities on a full cost basis, guidelines for expedited support, recognition of urgency of adaptation, and prioritization of activities. At COP 11, with decision 3/CP.11, the Parties finalised its guidance and agreed that: full-cost funding was to be provided by the LDCF to meet the additional cost of activities identified in the NAPAs; the GEF was to develop a co-financing scale for supporting activities identified in NAPAs similar to the one of the SCCF. COP 12, Nairobi and COP 13, Bali introduced no new provisions for the LDCF. COP 14, Poznan gave further guidance for the operation of the LDCF, especially in terms of the more expeditious management of all processes.

Both the SCCF and the LDCF are administratively and legally outside the GEF Trust Fund for flexibility and freedom in utilising rules of procedures and governance systems that would be customized ad hoc for adaptation. In practice in the ambit of adaptation, the SCCF is very similar to the LDCF: the sectors which have been selected as priority sectors are in fact similar to those of the LDCF. In order to distinguish the two it is necessary to concentrate on the language: the task of the LDCF is described as urgent and immediate, whilst the SCCF should address long-term adaptation. On practical grounds the criteria and methodology for management of the LDCF, are very similar to those of the SCCF, and now apply to almost any GEF operation. Since it is very difficult to have stand-alone adaptation, the GEF practically finances the additional cost, which is a different concept from incremental cost. The additional cost is the full cost of adaptation if attached to the resources a country already has for its basic development programme. These two sources of financing have to be merged: in other words, it is money that a country already has. The GEF Trust Fund is instead based on co-financing, so that to undertake a project a country must raise new money, usually through bilateral funding.

5.5.4 The Adaptation Fund

The AF, established under Decision 10/CP.7, is ‘a very different animal’, as many observers have claimed, in the UNFCCC regime on adaptation funding, and the most promising financial mechanism. The AF is intended to support ‘concrete adaptation projects and programmes in developing countries Parties that have become Parties to the Protocol’, as stated in decision 28/CMP.1. As noted above, article 12.8 of the Kyoto Protocol provides that a levy on CDM projects (the share of the proceeds) should fund the AF. By decision of the COP, the share of the proceeds has been fixed at 2% of CERs issued for CDM projects (it is not applicable to projects in the

LDCs, for reasons of competitive advantage). Decision 10/CP.7 makes it clear that the AF is also to be financed from other, not specified, sources.

The difference between the AF and the other funds for adaptation derives from a number of characteristics. First of all, the AF is regulated by the Kyoto Protocol, not by the Convention. This implies firstly that it is outside the sphere of influence of countries which have not ratified the Protocol (basically the United States), and secondly that it represents an opportunity for the European Union to assume a more important role. Another specificity of the AF is the way in which its revenues are generated: that is, by an international levy on private sector activities which is expected to raise a much greater flow of resources (between USD 400 million and 1,500 million according to the most recent estimates by the UNFCCC) with respect to the other funds and to the potential amount of bilateral donations. Finally, the AF is the only fund which exclusively finances concrete adaptation activities, and therefore a potentially very large number of projects.

Negotiations on operationalization of the AF began at COP 11. But the breakthrough came at COP 12 in December 2006, in Nairobi, as will be shown in Chapter 6. The main controversy which hampered the negotiations concerned management of the AF: on the one hand, developed countries wanted the GEF to manage it; on the other, developing countries rejected this option. In Nairobi, however, this apparently insuperable difficulty was resolved when both factions took a more constructive attitude which allowed adoption of the so called Nairobi Adaptation Fund Decision (decision 5/CMP.2). This states that the AF must be managed by the Kyoto Protocol governing body, the COP/MOP, and that it should follow a one-country-one-vote voting procedure, whereas the other adaptation funds controlled by the GEF would be subject to the traditional GEF voting procedure requiring a majority of both countries and donations for carrying a vote.

The Bali COP 13 (December 2007) successfully finalized the operational details of the AF. Decision 1/CMP.3 established an Adaptation Fund Board as the financial mechanism of the AF, whose final operationalization was agreed by decision 1.CMP.4, adopted at COP 14. Independent from the GEF, the sixteen Board's members are to be equitably selected among all participating groups of countries and are under the direct authority of the COP/MOP. The Board meets at the headquarters of the UNFCCC (Bonn, Germany). The GEF should provide only a dedicated secretariat service; and in accordance with the wants of many developing countries, entitled Parties have direct access to the AF without passing through implementing agencies such as the World Bank, UNEP, or UNDP. The expected size of the AF will not cover the likely annual adaptation costs. Nonetheless, this stream of funds is very important, for it is expected to be steady and certain, and it is likely to be increased by additional private funding.

A synoptic table of the funds for adaptation under the UNFCCC regime follows (Table 5.1).

The current situation of resources for adaptation funding is summarized in Table 5.2.

Table 5.1 Funds for adaptation under the UNFCCC regime

Fund	Created under	Global environmental benefits	Beneficiaries	Funding sources	COP and GEF guidance
GEF Trust fund	UNFCCC	Incremental cost to achieve global environmental benefits	Developing countries	GEF	1/CP.1 5/CP.7 GEF/C.23/ Inf.8
GEF SPA	UNFCCC	Incremental cost to achieve global environmental benefits	Developing countries	GEF	6/CP.7 GEF/C.23/ Inf.8
SCCF	UNFCCC	Additional costs of adaptation measures Uses a sliding scale	Developing countries	Developed countries discretionary pledges	5/CP.7 7/CP.7 5/CP.9 GEF/ C.24/12 GEF/C.25/ 4/Rev.1
LDCF	UNFCCC	Additional costs of adaptation measures Uses a sliding scale	Least developed countries	Developed countries discretionary pledges	5/CP.7 7/CP.7 27/CP.7 28/CP.7 29/CP.7 6/CP.9 GEF/C.24/ Inf.7 GEF/C.24/ Inf.8/Rev.1 GEF/C/25/ 4/rev.1 Decision 11/CP.11
AF	Kyoto protocol	No	Developing countries	Share of proceeds from CDM; Other sources	5/CP.7 10/CP.7 17/CP.7 3/CMP.1 28/CMP.1 5/CMP.2 1/CMP.3

(*Source*: integrated from Mace, 2005, p. 231, Table 2)

Table 5.2 Current adaptation funding under the UNFCCC (USD million)

Fund	Purpose	Amount pledged-earmarked	Amount disbursed (or in pipeline)	Disbursement basis
GEF Trust fund	First and second national communications and capacity building for adaptation	190	80	Full-cost funding
GEF SPA	Pilot and demonstration projects that both address local adaptation needs and generate global environmental benefits Also, community-based activities under the GEF's small grants programme	50	50	Incremental cost for generating global environmental benefits
SCCF	Activities, programmes and measures for: adaptation, technology transfer, economic diversification, key economic sectors	91	41	Sliding scale
LDCF	Prioritization and implementation of urgent adaptation needs of LDCs based on NAPAs	172	40	Additional cost for meeting adaptation needs
AF	Concrete adaptation projects and programmes in developing countries that are particularly vulnerable to the adverse effects of climate change	None To be financed by a 2% levy on CDM 400–1,500 (based on low-high 2012 estimates)	91(based on current CDM pipeline)	Full cost

(*Source*: Kartha et al., 2006, p. 21; UNFCCC 2007; UNFCCC 2008)

5.6 Problems and Challenges of Adaptation Funding Under the UNFCCC Regime

There are still a number of problems in regard to adaptation funding under the UNFCCC regime. In general, developing country Parties, and especially the lesser developed ones, distrust the GEF: they, in fact, want to put adaptation funding outside its aegis. They consider the GEF's disbursement procedures too onerous, even though the RAF and the incremental cost and global environmental benefits principles do not apply to the SCCF and LCDF. And they believe that the COP has scant capacity to protect its funds against unnecessary GEF interference.

Other, more specific criticisms have been made. First, it is claimed that funds for adaptation in developing countries are unpredictable, and that it is unclear how the funds raised are to be allocated. In spite of the provisions of article 4.3 UNFCCC and of the Marrakech Accords, reiterated by the Bali Action Plan, which state that adaptation funding for developing countries must be additional, predictable, adequate, and equitable there is still no financial mechanism ensuring that such requirements are met because no legally binding quantitative obligation to fund adaptation exists. Furthermore, there is no burden-sharing rule among Annex II countries, despite the binding legal commitment accepted on ratifying the Convention. To date, countries have contributed to the GEF discretionally, and there are no objective criteria with which to define the obligations of donors (Annex II Countries). Much greater accountability is needed in regard to the provision of adaptation resources by Annex II Parties.

Second, the requirement that only official government-endorsed activities may be funded through the UNFCCC regime excludes private and local community adaptation initiatives from such funding. This is particularly damaging to developing countries with weak political and governance systems. The legal framework on adaptation funding should instead develop mechanisms to ensure that the needs of countries with less institutional capacity are not neglected.

Third, the GEF's funding practices are not easily transferable to adaptation initiatives: no institutionalized mechanism, apart from the not yet fully operational AF, exists to fund the implementation of concrete adaptation projects in response to actual needs. The incremental costs formula restricts the access of developing countries; and it is problematic because baselines for adaptation measures are difficult to establish, and because it may place the full cost of a project on a developing country. It is furthermore unclear how the concept of global benefits, developed from a pure public good perspective, relates to adaptation, whose benefits are largely local. The current GEF funding practices focus on very few specific projects (infrastructure and hardware) that can be shown to reduce vulnerability to climate change; longer-term projects are preferred to short term-ones, but their benefits are not easily distinguishable from normal climate variability. Such practices are therefore biased toward large-scale projects, and this may require small developing countries like the Small Island Developing States (SIDS) to package multi-country projects despite the COP's recognition that adaptation projects should be country-driven. Ultimately, the GEF's highly centralised funding practices cause lengthy approval times and

delays. All these requirements strongly constrain the ability of developing countries to access the GEF, and they have led to the frustration of the weakest countries, which have loudly demanded higher priority for adaptation and further support from the GEF for adaptation measures. In fact, neither the GEF first-come first-served practice nor the new RAF one – for implementation of article 4.4 UNFCCC and 12.8 of the Kyoto Protocol – comply with the provisions of the UNFCCC and the Protocol in privileging the access of particularly vulnerable countries. The COP should provide the GEF with guidelines to prioritize funding requests in an equitable manner: the NAPA bottom-up approach can, for instance, be a valid country-driven prioritization approach.

Fourth, it is not completely clear how the Funds (the SCCF, LDCF and AF) will work, and how they will relate to the GEF. The Marrakech decisions call for complementarity in the activities addressed by the GEF, the SCCF, the LDCF and the AF. But what this complementarity means is not yet clear. Probably, the troubles of developing countries in accessing the SCCF and the LDCF show that the opportunity to establish more flexible funding sources was missed when Non-Annex I Parties gave responsibility for developing guidelines for accessing these funds back to the GEF. With specific regard to the AF, its size depends on the usage of the CDM. Additionally, the fact that its resources derive solely from the 2% levy on CDM is questionable. On the one hand, it means that contributions come essentially only from developing countries; on the other, the CDM, already less convenient than the other flexibility mechanisms of the Kyoto Protocol, becomes even less attractive owing to the attached tax burden. In fact, at COP 11, developing countries demanded that the levy funding the AF should also cover Emission Trading (ET) and Joint Implementation (JI), these being flexibility mechanisms of industrialized countries.

Fifth, a link should be created with mitigation. A mandatory funding stream for adaptation related to GHG emission is in fact needed under the Convention 'to underscore ... the true cost of these emissions to vulnerable populations' (Mace, 2005, p. 246).

5.7 Funding Adaptation Outside the UNFCCC Regime: Significant Practices

In the context of adaptation funding, many things are happening outside the UNFCCC regime. For instance, there is a great deal of bilateral cooperation with China through the Canadian, Swedish and UK governments. Some NGOs are trying to stimulate a voluntary emissions market where peoples, individuals and organizations not involved in the Kyoto Protocol's flexibility mechanisms can set up their own carbon markets.

Hence, although it is not a central concern of this book, a brief overview of the most significant practices externally to the UNFCCC is in order. The principal current sources of adaptation funding outside the UNFCCC regime are: disaster relief and risk reduction, public expenditure including public-private

partnerships, insurance and financial services, development assistance, and foreign direct investment.

The annually funding claimed for disaster relief by the members of the Development Assistance Committee of the OECD was on average USD 7 billion[2] over the period 2000–2005. A huge sum indeed, which induced international aid organizations to demand more vigorous disaster risk-reduction initiatives. The funding of disaster risk reduction, which usually takes the form of ODA and of development bank loans, therefore makes it possible both to increase adaptive capacity and to reduce the vulnerability of weaker areas, when the risk is properly considered within development projects, and it ultimately represents a major stream of resources for the financing of concrete adaptation actions.

Even though developing countries in general do not have substantial resources to invest in adaptations, public expenditure may prove significant because many low-cost options exist for mainstreaming adaptation funding into public investments. Furthermore, public expenditure can be supplemented by partnerships with the private sector, for example with private companies and non-governmental organizations.

Insurance, as an ex post form of adaptation, is explicitly cited for Stage III activities under the Convention. Financial services, in general, can lessen the losses due to climate impacts, thus reducing the need for disaster relief. They can also reduce vulnerability, for instance by imposing standards for building and land use planning. Micro-credits and micro-insurance, channelled by local institutions, can complement and strengthen the traditional financial services, especially in sectors such as agriculture, where micro-credits and crop insurance have proved able to protect vulnerable communities to a substantial extent. Two climate insurance schemes are risk reduction measures and risk transfer. Risk reduction measures entail the integration into projects, policies and activities of impact reduction measures to lessen climate risk. The other strand is risk transfer, which basically consists in recourse to insurance markets. This option, however, has at least three difficulties: first, it is impossible to quantify climate change risk with sufficient accuracy for insurance companies to assume it; second, it is impossible to insure against events that happen with great uncertainty like rises in sea levels; and third, even if it were possible to quantify climate risks for non-set events like hurricanes, developing countries could not afford the premiums.

Furthermore, adaptation can, and should, also be incorporated into development activities funded through ODA. In fact, successful adaptation entails the inclusion of potential climate impacts in plans and projects at the national and sectoral levels. It is therefore becoming increasingly common to hear talk of mainstreaming adaptation into development: or, in other words, the consideration of issues related to climate impacts in regular activities. In financial terms this requires the mainstreaming of adaptation funding, that is, the integration of adaptation objectives, strategies, policies, measures or operations into national and regional development

[2] Calculations from OECD Development Co-operation Directorate (DCD-DAC) statistics.

policies, processes and budgets at all levels and stages. The aim is to make the adaptation process a critical component of existing national development plans. Likely entry points for mainstreaming adaptation funding are environmental management plans, national conservation strategies, disaster preparedness and/or management plans and sustainable development plans for specific sectors such as agriculture, forestry, transportation, and fishery. Finally, foreign direct investments (FDI) are potentially important for funding adaptation, at least because of their scale, which is usually some orders of magnitude larger than ODA. The objective would be to make investments somehow comprise adaptation considerations, and possibly off-set the extra cost through competitive loans from development banks.

However, the apparent multiplicity of adaptation funding sources for developing countries is greatly reduced by their interrelations and overlaps, and public expenditure is still the largest source. This, in turn, substantiates the belief of both scholars and practitioners that the adaptation agenda and its funding have to date been institutionally and financially marginal, especially, but not exclusively, under the UNFCCC regime.

In practical terms, some donors are currently supporting developing country governments in integrating adaptation into their national development plan. It is not yet possible to quantify these efforts, but examples include: the Canadian aid agency (CIDA), Germany's GTZ, Sweden's SIDA the UK's DFID, and USAID.

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Chapter 6
Evaluation of Procedural Justice in International Adaptation Funding

Abstract This Chapter employs the fairness criteria put forward with the justice framework to evaluate the current international regime for funding adaptation under the UNFCCC. It adopts three different perspectives to assess procedural justice in international adaptation funding in light of the emergence and meaning of the fairness criteria. First, it uses the qualitative content analysis approach to evaluate the relevant documents of the UNFCCC architecture. These documents belong to seven categories grouped into two families: that of Principal Documents and that of Non-Principal Documents. The Chapter then evaluates the emergence of fairness criteria within the governance structures, procedures and practices of the institutions of the climate change regime governing adaptation funding. The third perspective involves observation of significant selected formal negotiations and is centred on meetings on the Adaptation Fund – the most controversial, yet promising, financial instrument – and points out the effective level of procedural fairness involved.

Keywords Procedural justice · Fairness criteria · Adaptation Fund

In this Chapter and in the one that follows, respectively, the fairness and equity criteria put forward in Chapter 4 will be employed to evaluate the current international regime for funding adaptation under the UNFCCC. Specifically, I shall take three different perspectives with which to assess procedural justice in the international adaptation funding regime in light of the emergence and meaning of the fairness criteria. The first perspective centres on documents belonging to seven categories and grouped into two broad families. I use qualitative content analysis for this purpose because it enables the meaning of textual evidence to be interpreted from the relevant context. The second perspective focuses directly on the governance structures, procedures and practices of the institutions of the climate change regime governing adaptation funding. The third one involves observation of significant selected formal negotiations and is centred on meetings about the AF, which is the most controversial, yet promising, financial instrument in the UNFCCC regime.

The analysis of documents focuses, as said, on seven main categories grouped into two families: that of Principal Documents and that of Non-Principal Documents. The former comprises the Convention, the Kyoto Protocol and other general

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UNFCCC and GEF documents, such as declarations. The latter family consists of five categories of more specific texts. As made clear in Appendix A these categories of documents replicates the UNFCCC classification of documents related to the financial mechanism. The first of these categories includes documents giving guidance to the financial mechanism. In fact, the COP, supported by the SBI, provides regular policy guidance to the GEF on its climate change policy, programme priorities and eligibility criteria for funding. The GEF in turn reports annually to the COP. The second category deals with review of the financial mechanism, given that every four years the GEF is subject to a review which follows agreed criteria and guidelines. The other three categories of documents concern the three special funds created for the financing of adaptation initiatives at COP 7: the SCCF, the LDCF and the AF. The more technical and/or bureaucratic nature of the Non-Principal Documents listed in Table A.1 of Appendix A makes their analysis over-detailed and over-referenced: for this reason they are evaluated in Appendix B, whereas only the Principal ones, reported in Table 6.3, are considered in this Chapter.[1]

Procedural justice among parties is also sought through the UNFCCC governance systems (structures, procedures and practices), and through those of the GEF. Although many of the Convention's procedural provisions are in principle fair, it is increasingly difficult for developing countries to take effective part in the negotiating processes because of their growing complexity. For this reason, I shall evaluate the elements of recognition, participation and balance of power in terms of compliance with fairness criteria also within these institutions' governance structures, procedures, and practices.

Finally, I shall discuss some relevant SBI and COP/MOP formal meetings on the AF, given its particular importance and contentiousness, and I shall point out the effective level of fairness involved.

Table 6.2 summarizes the ethical foundations set forth in Chapter 4 to explain the fairness criteria used to evaluate procedural justice in adaptation funding under the UNFCCC regime in the three domains of Table 6.1. It may be helpful here to recapitulate these ethical foundations.

The first criterion, which enjoins the Inclusion of all countries, requires that all parties be effectively included in negotiations on adaptation funding on grounds of equality. It stems from the Recognition principle of procedural justice, which stipulates that acceptance of the different perspectives and claims of all parties is essential to decision-making. The criterion entitled Possibility to specify the terms of participation assumes on the one hand that every dispenser country can make the extent of its responsibility clear in negotiations; and on the other, that every recipient country should be allowed to bring its social vulnerability and adaptation priorities into negotiations, so that both groups of countries can make all these elements count in the processes of raising and allocating adaptation funds. The criterion is rooted in the Participation principle of procedural justice which entails that every subject has the right to be involved, to be informed, and to be heard in policy

[1] Other working documents of the SBI related to the AF are employed in support to the analysis of SBI 24 and 25 meetings on the AF.

Table 6.1 Evaluation of procedural and distributive justice

	Documents	Governance systems (structures, procedures, and practices)	Observation of meetings on the AF
Procedural justice	Principal documents Convention and Kyoto Protocol Other principal documents	UNFCCC: COP, COP/MOP, SBI, Expert Groups (Consultative Group of Experts-CGE, Least Developed Countries Expert Group-LEG) GEF	SBI 24, 25 and COP/MOP 2 formal meetings
	Non-Principal documents Guidance to financial mechanism Review of financial mechanism SCCF LDCF AF		
Distributive justice	Principal documents Convention and Kyoto Protocol Other principal documents	Not applicable	SBI 24, 25 and COP/MOP 2 formal meetings
	Non-Principal documents Guidance to financial mechanism Review of financial mechanism SCCF LDCF AF		

Table 6.2 Domain, ethical imperative, theories and principles of justice and fairness criteria in procedural justice

Domain of justice	Ethical imperative	Theory of justice	Principles of justice	Fairness criteria
Negotiation processes	Fair involvement	Rawls's Theory of Justice as Fairness (Pure procedural justice standpoint)	Recognition	Inclusion of all countries (Criterion 1)
			Participation	Possibility to specify the terms of participation (Criterion 2)
			Distribution of power	Commitment to assistance from richer to poorer (Criterion 3)

and law making, as well as having the right to a general review of the enforcement of laws. The final fairness criterion, namely Commitment to assistance from richer to poorer, imposes a general obligation on the richer and more powerful countries (in this context of analysis Annex I countries) to provide different forms of assistance to the poorer and weaker ones (here, Non-Annex I countries) so that they can increase their capacity to engage substantively in negotiations on adaptation funding and ultimately improve their negotiating power. The commitment criterion is based on the Distribution of power principle of procedural justice which is intended to guarantee that every party has the knowledge and skills necessary to take an active part in planning, decision-making and governance irrespectively of its international economic and social weight.

6.1 Principal Documents: Convention and Kyoto Protocol

This Section and the one that follows will use qualitative content analysis to determine whether, where, and how the three fairness criteria set out in Table 6.2 are present in the two categories of Principal Documents itemized in Table 6.3.

Table 6.3 Principal documents

UNFCCC and KP	Convention Kyoto Protocol
Other principal documents	Berlin Mandate Buenos Aires Plan of Action Beijing Declaration Delhi Declaration Bali Action Plan

The word equity is explicitly used as synonymous with justice in the text of the Convention, whose article 3.1 states, in fact, that parties must act 'on the basis of equity'. Moreover, the same article affirms that states must operate 'in accordance with their common but differentiated responsibilities and respective capabilities', and that '[a]ccordingly, the developed country Parties should take the lead in combating climate change and the adverse effects thereof'. In a broader perspective, elements of justice are also apparent in article 3.2, which provides that 'the specific needs and special circumstances of developing country Parties... should be given full consideration'; in article 4, which divides obligations into those pertaining to the developed countries and those imposed on all Parties, and recognizes that the developed country Parties have a duty of assistance to the developing ones; in article 11.2, which requires that the Convention's financial mechanism must 'have an equitable and balanced representation of all Parties within a transparent system of governance'. Another important ethical concern appears in the preamble, at paragraph 3, in the expression per capita emissions: this implicitly acknowledges the moral equality of all humans. Also significant is the reference to the concept of historical emissions (preamble and article 4.6), given its implicit recognition that the present

generation owes future ones a duty to care for the climate system, and that richer countries are, in a historical perspective, the main contributors to global emissions.

The ethical content of the Kyoto Protocol, besides the reference in its preamble to compliance with the provision of article 3 of the Convention, focuses mainly on specification of the different obligations between the developed and developing country Parties. The obligations of developed countries to limit or reduce emissions are stated in article 2, whereas the right of developing countries not to be threatened by the adverse impacts produced by the developed ones' emissions is expressed in article 3.14, and in article 11 as far as financial assistance and the transfer of technology from developed countries are concerned. Specifically, article 11.2 demands that the implementation of the financial commitments 'shall take into account the need for adequacy and predictability in the flow of funds and the importance of appropriate burden-sharing among developed country parties'. Furthermore, the CDM, envisioned in article 12, can be considered an application of justice principles because it takes into account the difference in the levels of development of participating parties.

In broader terms, the final architecture of the Kyoto Protocol agreed after COP 11 in Montreal (2005) does not seem to have been particularly attentive to ethical considerations, even though the broad participation that it assured to all countries introduced valuable elements of procedural justice. A major ethical concern of the Kyoto Protocol should have been the allocation to Annex B countries (Annex I Parties to the Convention minus Turkey and Belarus) of Assigned Amount Units (AAUs), that is, national caps on GHG. The Protocol, in fact, adopted the grandfathering approach, which implied that the allocation of permits was to be done according to an antecedent baseline (1990 emissions), a solution that seems to have disregarded any ethical principle. The Protocol should be seen as a first step in the struggle against climate change because it is still characterised by major problems. It is, in fact, expected to achieve limited reduction of GHG emissions; it excludes developing countries with fast-growing emissions; and it gives developed countries an opportunity to meet their emission targets through a number of shortcuts that downplay their real commitment. Furthermore, the Kyoto Protocol is ethically insufficient because it does not include considerations on future generations and therefore does not protect them against adverse climate effects, and because it does not address issues of responsibility and compensation for the victims of climate change. According to Aldy and Stavins (2008, p. 8) the ethical substance of the Kyoto Protocol 'boils down to this: the rich and responsible are expected to lead'.

This is not the place for detailed commentary on the general ethical substance of these two fundamental documents: this book, in fact, aims to evaluate their contents of procedural and distributive justice only in terms of the fairness and equity criteria put forward by the framework of justice. However, it is worth raising two points by way of conclusion. First, both the Convention and the Kyoto Protocol maintains that parties with greater responsibility and capacity bear greater obligations. Second, there is no general consensus on how the notions of responsibility and capacity can be operationalized.

6.1.1 Recognition: Inclusion of All Countries

The most direct reference to the fairness criterion of Inclusion of all countries is made by article 11.2 of the Convention, which states that the financial mechanism must have an 'equitable and balanced representation' of all countries, and a 'transparent system of governance' in order to achieve an adequate level of recognition. More indirectly, the reference in the preamble of the Convention to per capita emissions, besides having distributive ethical relevance, seemingly refers to the fairness criterion considered here: if individuals, and more broadly their representatives in the climate regime, that is, states, are to exercise their right to a just share of the atmosphere, they must be equally recognised and must therefore, in principle, be incorporated in the negotiations on an equal footing.

6.1.2 Participation: Possibility to Specify the Terms of Participation

A reference to the fairness criterion of Possibility to specify the terms of participation consists in the well-known notion of Common but differentiated responsibilities and respective capabilities set forth in article 3.1 of the Convention. This provision emphasises that all parties must be able to participate fairly in negotiating processes, including those on adaptation funding, that polluters must make their responsibility clear (which in the framework used here is the basis for defining their contribution to adaptation funding), and that victims must be able to negotiate on the basis of their social vulnerability to climate impacts, because it is social vulnerability that ultimately defines the capacity to adapt. Further, the possibility of developing countries to have their higher social vulnerability recognized is underlined by the provision of article 3.2 requiring that their specific needs and special circumstances 'be given full consideration'. In a broader sense, the concept of historical emissions introduced in the preamble and in article 4.6 of the Convention reinforces the view that the Common but differentiated responsibilities of article 3.1 should be understood in terms of the cumulative anthropogenic contribution to GHG, and that this concept can become a precise means with which to define and measure the richer countries' outcome responsibilities due to their larger emissions.

The Kyoto Protocol, too, through its establishment of the CDM in article 12, acknowledges the different responsibilities and capabilities of parties, and ultimately their levels of development, and thus indirectly endorses the fairness criterion in question.

6.1.3 Distribution of Power: Commitment to Assistance from Richer to Poorer

Articles 4.4 and 4.5 of the Convention state that the developed countries must assist the developing ones in dealing with climate change, which is clearly in accordance

with the fairness criterion of Commitment to assistance from richer to poorer. This commitment is reinforced by article 11 of the Kyoto Protocol, which expressly mandates assistance from the developed to the developing countries.

6.2 Other Principal Documents

6.2.1 The Berlin Mandate

The Berlin Mandate (decision 1/CP.1) introduced a process with which to strengthen developed country Parties' commitments through the adoption of a Protocol. The document states that the process should be guided by a number of Convention provisions and by some other principles. In regard to these latter, paragraphs I.1(e) and I.1(g) stress the importance of the widest possible participation of all countries, which is in line with fairness criterion 1. Paragraph II.2(a) underlines the importance that each country should properly specify its terms of participation in future binding agreements, whereas paragraph III.5 explicitly requires that the proposal of the AOSIS on these issues be taken into account. These provisions match the requirements of fairness criterion 2, namely Possibility to specify the terms of participation.

6.2.2 The Buenos Aires Plan of Action

COP 4 adopted decision 1/CP.4, The Buenos Aires Plan of Action, to strengthen implementation of the UNFCCC and to prepare for the entry into force of the Kyoto Protocol. The Plan was articulated by various decisions (those related to the financial mechanism – 2/CP.4 and 3/CP.4 – are analyzed in the Appendices) and implemented through decision 5/CP.6, Implementation of the Buenos Aires Plan of Action.

This latter document stresses the importance of criterion 3 for procedural fairness: Commitment to assistance from richer to poorer. The paragraph on the SCCF and paragraph II.2 recall that Annex II Parties should assist Non-Annex I Parties. The document also recalls that the COP agreed that Annex I Parties intending to ratify the Kyoto Protocol should support poorer countries in dealing with climate change.

6.2.3 Beijing Declaration of the Second GEF Assembly

The Beijing Declaration is a document produced by the GEF Assembly at the end of its second meeting (October 16–18, 2002) in order 'to further strengthen the GEF to respond to its evolving challenges', and it relates to all GEF focal areas. Among the fairness criteria, the Declaration underscores the importance that each country be able to make its needs and priorities clear (criterion 2: Possibility to specify the

terms of participation). In fact, paragraph 5 stresses that '[c]ountry drivenness and country ownership are essential to the success of GEF activities', and paragraph 10 that the GEF should take 'into account national priorities' in the allocation of its scarce resources.

6.2.4 The Delhi Ministerial Declaration on Climate Change and Sustainable Development

The Delhi Declaration (decision 1/CP.8) explicitly refers to fairness criterion 2 when, at paragraph (g), it calls for greater participation by developing countries, favoured by full consideration given to '[t]he specific needs and concerns of developing country Parties arising from the adverse effects of climate change'.

6.2.5 The Bali Action Plan

The so-called Bali Roadmap introduces a number of actions deemed essential for addressing climate change in the post-Kyoto era. It includes the Bali Action Plan (decision 1/CP.13), which charts the course for new negotiating processes and their main contents. This document refers to fairness criterion 1 at paragraph 5, where it is determined, in regard to the Chair and Vice-Chair of the AWG-LCA, that one should be from Annex I countries and the other from Non-Annex I countries, and that they must alternate annually. Further, at paragraph 1(d) the Action Plan requires, in line with fairness criterion 3, that the developing countries should be supported in their negotiating capacity and in their concrete abilities to deal with climate impacts.

6.3 Governance Structures, Procedures and Practices

A salient characteristic of global negotiations is their complexity, with the consequent high level of transaction costs – that is, the costs associated with the physical and financial resources, time, and human effort necessary to reach agreement. Besides this intrinsic inefficiency, global negotiations are characterized by the unequal distribution of political, economic, scientific and diplomatic capacities among countries: poorer and smaller states, typically from the South of the world, are manifestly much less able to express their positions and ultimately have them recognized and accepted. These circumstances and an unbalanced distribution of power entail different levels of effective involvement in negotiations and thus undermine the procedural justness of the process.

Moreover, climate change negotiations are among the most complex that have ever been conducted worldwide. Their difficulty has increased further in the past decade, since the number of actors has grown, the issues at stake have multiplied, and the political and general importance of climate change has augmented.

Thus, in the climate change arena, the drawbacks of global governance have grown even more acute. Climate change negotiations are, in fact, mostly conducted by institutions, scholars and activists from the richest industrialized countries, whereas procedural justice requires that all the parties involved should have equal opportunities to protect and pursue their interests.

Figure 6.1 depicts the institutions of the climate change regime and highlights those assessed in what follows owing to their importance in the processes of adaptation funding, in terms of structures, procedures and negotiating practices against the criteria of fairness defined as yardsticks in the ethical framework.

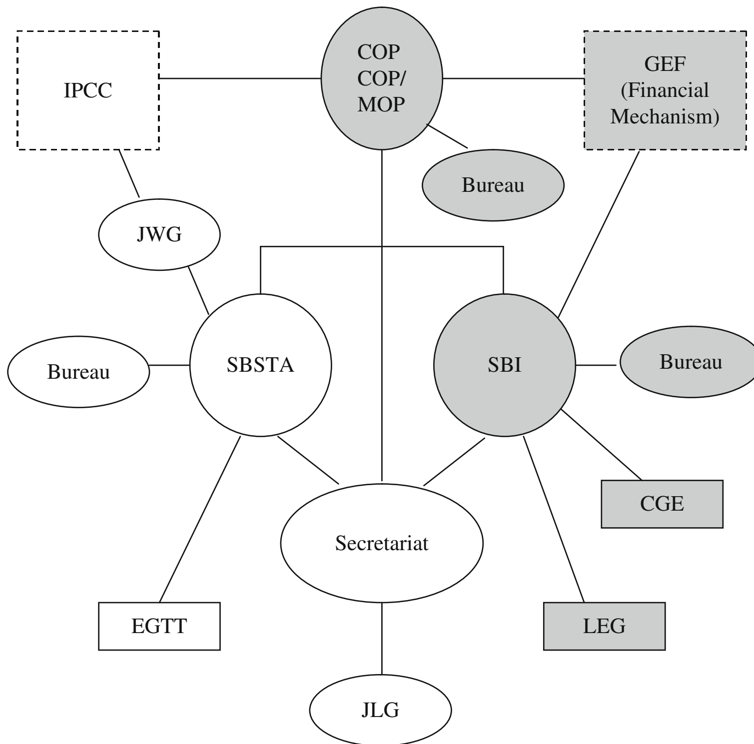

Fig. 6.1 The institutions of the climate change regime (those relevant to adaptation funding in grey) (*Source*: adapted from Yamin and Depledge (2004, p. 399))
Legend: ---- (IPCC, GEF) Independent bodies providing services to the climate change process; JLG: Joint Liaison Group (FCCC, CBD, UNCDD); JWG: Joint Working Group (Offices and Secretariats); SBSTA: Subsidiary Body for Scientific and Technological Advice; SBI: Subsidiary Body for Implementation; EGTT: Expert Group on Technology Transfer; LEG: LDC Expert Group; CGE: Non-Annex I Consultative Group of Experts

In the following evaluation of procedural justice a distinction will be drawn between two levels of analysis: that of formal rules of negotiations, and that of informal negotiating practices. The former have been set out for UNFCCC institutions in the Draft Rules of Procedure of the Conference of the Parties and its Subsidiary

Bodies (FCCC/CP/1996/2)[2], supported by a few procedural rules included in the Convention and elaborated through COP decisions. The GEF formal rules are generally framed by article 11 UNFCCC and laid down by the Rules of Procedures for the GEF Council, and other GEF documents. The second level derives from informal, unofficial practices established in the diverse negotiating arenas.

The evaluation is conducted on the UNFCCC institutions and on the GEF, and it is primarily focused on the formal level; where possible, information about informal practices is given as well.

6.4 UNFCCC Institutions

6.4.1 The Conference of the Parties

The COP is the supreme body (article 7.2 UNFCCC) of the Convention. Its mandate is to control and promote the effective implementation of the Convention. The most important of its specific functions are the following: examining the obligations of the Parties; facilitating the exchange of information on measures against climate change taken by Parties; promoting methodological approaches; and mobilizing financial resources. So that the COP can carry out its functions, its President, elected by the delegates at the opening of the COP session and subject to rotation among the five UN regional groups – Africa, Asia, Central and Eastern Europe, Latin America and the Caribbean, Western Europe and Others – is assisted by a Bureau composed of delegates elected from Parties. Rule 22 of the Draft Rules stipulates that the COP must elect eleven officers to form the Bureau for the session: a President, seven Vice-Presidents, a Rapporteur and the Chairs of the Subsidiary Bodies (Subsidiary Body for Scientific and Technological Advice (SBSTA), and SBI). Rule 22 further specifies that the five UN regional groups must be represented in the Bureau by two officers, whilst the eleventh seat must be attributed to SIDS because of their particular vulnerability to climate impacts. Bureau members are to be formally elected from among the representatives of the Parties present at the session. In practice, however, as happens in other international meetings, the UN regional groups put forward agreed nominations, with the consequence that Parties have only a say in the appointment of their representatives.

The fairness criterion of Inclusion of all countries, which requires the inclusion of all Parties on grounds of equality, seems to be respected by the process for selecting the officers forming the Bureau. These in fact fairly represent the five UN constituencies and rotate over the different sessions. Furthermore, the inclusion of a representative of SIDS in the Bureau allows this group of countries with sensitive interests at stake to bring their particular social vulnerability and adaptation

[2]This document could not be adopted at COP 1 owing to disagreement on the voting procedures of rule 42. However, the Draft Rules were all applied in the subsequent COP meetings, with the exception of rule 42, which was replaced with a pragmatic voting procedure based on consensus.

needs and priorities into the negotiations, thereby partly satisfying the criterion of Possibility to specify the terms of participation. On less formal ground, however, the contribution in terms of justice by these two fairness criteria may diminish due to the practice whereby less assertive countries within regional groups have a limited role and are usually marginalized in decision-making processes.

Another very important issue for the COP, and which is similarly important for the other UNFCCC institutions analyzed in this Chapter, concerns decision-making rules. As noted before, the climate change regime does not have a formal rule on the taking of decisions. Whilst the other rules of procedure are regularly used in each COP session, rule 42 on voting – which is subject to dispute – is not applied. Thus, in the absence of specific voting rules it is generally held that decision should be taken by consensus. There is no formal definition of consensus in the Convention or the Draft Rules. Nonetheless, it is generally viewed as being different from unanimity, and the term seems to be employed in a negative sense: that is, it implies that there are no stated or formal objections to a decision. However, the notion of consensus is highly ambiguous for it allows the presiding officer to use considerable discretion. What are the impacts of such a loose and uncertain voting practice on procedural justice? It is generally believed that consensus improves procedural justice, because it entails that even the positions of weakest subjects have to be recognised and accommodated. Therefore, in principle, the consensus rule improves compliance with the fairness criterion of Inclusion of all countries. Yet, the implicit radical view of equal recognition has major repercussions on negotiating practices and outcomes. It, in fact, results in disproportionate advantages accruing to the most laggardly Parties, which can produce environmentally weaker decisions and increase transaction costs.

Article 13.1 of the Kyoto Protocol defines a distinct body, the COP/MOP, whose importance for our present purposes is that, according to decision 5/CP.2, it controls the AF. Its functions of overseeing the Protocol's implementation and characteristics are, mutatis mutandis, very similar to those of the COP in relation to the Convention.

6.4.2 The Subsidiary Body for Implementation

The SBI, like the SBSTA, is an open-ended body formed by representatives of Parties. It provides guidance, assistance and advice to the COP 'in the preparation and implementation of its decisions' (article 10.2(c) UNFCCC) and also serves the COP/MOP with the same modalities and purposes.

The usual form taken by an SBI outcome is that of a draft decision, although the SBI can also adopt conclusions, usually of a procedural nature, on its agenda items. These draft decisions, however, do not have the political and legal connotations of those taken by the COP. Moreover, the SBI has the duty of reviewing national communications and of assisting the COP in reviewing Annex I Parties' obligations on their mitigation duties. The SBI deals specifically with the following issues of relevance here: financial mechanism; matters relating to LDCs; administrative and financial matters.

The Draft Rules state that the SBI must elect a Bureau composed of three persons: Chair, Vice-Chair and Rapporteur (rules 22 and 27). Though no specific provisions are given, these three officers must be elected 'with due regard to the principle of equitable geographic representation, and may serve for two terms only' (rule 27.6, FCCC/CP/1996/2). This is the only formal reference to procedural justice in the SBI governance structure. In terms of the fairness criteria put forward, the provision of rule 27.6 recalls the first of them: that of Inclusion of all countries in accordance with the principle of Recognition.

6.4.3 Consultative Group of Experts and Least Developed Countries Expert Group

The Consultative Group of Experts (CGE) was established at COP 5 in 1999, and its general objective is to improve National Communications from Non-Annex I Parties. It also reviews financial and technical activities in support of developing countries. The CGE is composed of twenty-four experts taken from the UNFCCC Roster of Experts: five from each of the three predominantly Non-Annex I Party regions, six from Annex I Parties and three selected from the Secretariat. The developing countries are thus overrepresented, although Non-Annex I Parties belonging to the Central and Eastern European group are unintentionally excluded. The CGE is also institutionally linked to the Least Developed Countries Expert Group (LEG), because at least two of its members – including one from an LDC and one from an Annex II Party – are also members of the LEG.

The LEG, established at COP 7 in 2001, is an important part of the Marrakech Accords on the implementation of article 4.8 and 4.9 UNFCCC. Its main function is to advise LDC Parties on the preparation and implementation of NAPAs and on access to the fund specifically instituted to finance the NAPAs process, the LDCF. Furthermore, it states its views on the SCCF and on the LDCF to the SBI. Among the twelve experts making up the LEG, nine are from LDCs (five from Africa and two each from Asia and the SIDS) and the remaining three are from Annex II countries. The LEG's Chair, Vice-Chair and Rapporteurs (one Anglophone and the other Francophone) are elected from only among its LCD members. Although the LEG reports to the SBI, it communicates directly with LDC Parties, also through a special LDC website.

In terms of procedural justice both these specialized bodies fulfil the fairness criterion of Inclusion of all countries, because the developing countries are indeed very well represented and their recognition requirements are fully taken into account. Furthermore, both bodies seem to acknowledge the Participation principle of procedural justice: especially in the LEG, each Party is able to specify its particular needs and concerns, and to have them effectively considered, as the second fairness criterion requires. The third principle of justice, namely Distribution of power and the ensuing fairness criterion of Commitment to assistance from richer to poorer are partly included in the institutional functions of the Vice-Chair of the LEG, who is called upon to encourage the developed countries to support poorer countries.

6.5 The GEF

As mentioned in Chapter 5, article 11.2 UNFCCC demands that its financial mechanism, the GEF, be characterized by an equitable, balanced and transparent representation of all Parties. Article 21.3 further states that the GEF 'should be appropriately restructured and its membership made universal to enable it to fulfil the requirements of article 11'. The most important current GEF governance structures are a Council, an Assembly and a Secretariat headed by a Chief Executive Officer.

The Assembly is the governing body of the GEF and it is composed, as of September 2009, of representatives of all 177 member countries. It meets every three to four years, and its main duties are to review and evaluate the GEF's general policies, and to run the GEF and its membership. The Secretariat has operational duties such as coordinating the formulation of projects included in the annual work program, controlling the latter's implementation, and devising operational strategy and policies. The GEF Council, notwithstanding the UNFCCC requirement that the GEF should follow the COP's guidance, takes autonomous decisions with considerable importance for the funding of adaptation, the consequence being that it is the core of the entire governance architecture. In this regard, it has a distinctive structure whereby the 177 member countries are grouped into constituencies. According to the Rules of Procedure for the GEF Council, there are 18 of these constituencies composed of recipient countries, and 14 composed of non-recipient countries. The Council thus has 32 constituencies, 16 from developing countries, 14 from developed countries and 2 from EITs (Economies in Transition: Central and Eastern European and former Soviet Union countries). Ten Council members represent a single-country constituency: Canada, China, France, Germany, Japan, Iran, Italy, the Netherlands, United Kingdom, United States. The other members represent groups of countries. Council decisions are normally taken by consensus, but any member may require a formal vote based on a double weighted majority, that is, a 60% majority of the total number of participants and a 60% majority of the total contribution. Even though to date all decisions have been taken by consensus, the possibility of the formal vote remains a forceful option of last resort. In fact, the formal voting procedure makes the major donor countries the most influential. This circumstance is a deterrent to recipient countries which induces them to reach a consensus, even if it is not a fully satisfactory one, rather than undergo a voting procedure in which they have substantially no voice. The balance of power within the Council is still in favour of the richer countries, which exert their influence largely through policy recommendations related to replenishment processes which serve the donor countries' interests. For instance the largest five donors – US, Japan, Germany, UK, France – account for more than 60% of total contributions. They are therefore able to block any GEF vote, which means, in short, that the five largest donor countries have veto power.

On a broader view, many developing countries, especially the poorest and most vulnerable ones, have considered the GEF and its management procedures to be extremely inefficient and awkward: a problem also recognized by the GEF CEO

Barbut, who declared in Nairobi that she was 'leading the GEF through a vigorous streamlining and recasting', and in her speech to the GEF Council in December 2006 presented her vision of a new GEF, one that would be strategic, innovative, equitable, accessible, and focused. Also the UNFCCC has advanced concerns about the GEF's conduct: Yvo De Boer, UNFCCC Executive Secretary, acknowledged the worries expressed by developing countries at a recent GEF Council meeting and called for the GEF to be more responsive to the guidance of the UNFCCC, to facilitate access to existing funding for adaptation, and to give greater consideration to adaptation priorities.

There are two major problems that hamper and substantially reduce procedural justice within the GEF. The first relates to the ineffective acknowledgment of the UNFCCC's guidance. Almost half of the GEF Council members and most of the GEF political focal points are from financial institutions (Finance and Economics Ministries), with the consequence that GEF decision-making is perceived as taking most account of financial concerns. The South insistently claims that this circumstance tends to overshadow other concerns, such as accessibility, transparency, and predictability, although these are among the priorities in the guidance given by the COP to the GEF.

The second problem is the substantial under-representation of countries in the GEF's decision-making procedures. In theory, the constituencies (the GEF Council members) must represent the interests of their constituents. In practice, this frequently does not happen, especially when constituencies are not interest groups: in the GEF, in fact, the constituencies are largely geographic and may thus encompass countries with conflicting interests (for example Australia and the Pacific Islands). And whilst rich countries have their voice in any case, weaker ones can have their positions recognized only if they have procedural safeguards. In other words, developing countries now rely only on the good will of their representatives, whereas they should instead make their voice heard through a one-country-one-vote voting procedure: that is, through direct democracy rights in the form of submission of motions to the GEF Council, of forcing a vote on decisions, or a secret ballot.

The GEF therefore seems to suffer from the lack of real capacities – financial, political, technical – of developing countries that greatly reduces their ability to negotiate effectively. Thus, even if at a formal level the interests of the South are taken into account, in practice major donor countries are by far the most influential in the system: they have their own seats in the Council and this makes them much more powerful. Ultimately, a fairer and more successful GEF should address this unbalanced distribution of power and increase the weaker countries' participation and recognition.

The overall impression is that there is a sharp distinction in terms of procedural justice between the formal and the substantial levels of the GEF governance structure. Formally, all countries are recognized and incorporated in decision-making processes (criterion 1 of fairness) and they can specify their interests and make them count (criterion 2 of fairness), even though this takes place indirectly through the representative of their constituency. However, on practical grounds, there is a considerable participative deficit reinforced by the financial bias of the GEF

Council, which hinders the true recognition and participation of weaker countries in decision-making. Thus, in the end, fairness criteria do not seem to be properly respected by the GEF operational approach.

6.6 The Importance of the Adaptation Fund and its Governance Structure

The choice of analysing certain key meetings on the AF has been taken because of the potentially great significance of this financial instrument for the funding of adaptation, and more generally for the climate change regime itself. For instance, De Boer claims at the Adaptation Fund Board inaugural meeting (Bonn, 28 March 2008): '[t]his is a unique fund, with mitigation action paying for adaptation. It is not reliant on donor funding or overseas development assistance. This is the climate regime beginning to become self-financing'.

Within the climate change architecture, the AF is seen by the developing countries as the primary source of funds, and for several reasons it is indeed unique. The first reason is that, unlike the other funding instruments specifically aimed at supporting adaptation (the SCCF and the LDCF), the AF is under the control of the Kyoto Protocol, and this implies that it is outside the power and direct influence of Parties that have not ratified the Protocol, namely the United States. On political grounds, this circumstance has given the European Union (EU) the leading role among industrialized countries in the negotiations on its governance structure, as the ensuing analysis shows. Another distinctive characteristic of the AF is that its revenues are raised through a 2% levy on emission permits (the CERs) generated by private sector clean projects under the Protocol's CDM (article 12 of the Kyoto Protocol), whereas the contributions to the SCCF and to the LDCF are exclusively voluntary. Besides producing a considerable, yet to be determined, stream of resources, the funding of the AF may also represent an important precedent for an international tax on private sector activities that could pave the way for the implementation of similar economic instruments. The final feature distinguishing the AF is that it is the only instrument that funds concrete adaptation activities. It thus raises considerable interest and hope, especially in countries most deserving of immediate support in coping with urgent climate impacts.

It is therefore not surprising that the governance of the AF has become a sensitive and controversial issue within climate change negotiations.

Despite its adoption at COP 7 in 2001, the negotiations on the management and governance of the AF only really started in 2005 at COP 11-COP/MOP 1 in Montreal, as pointed out in Chapter 5, after the entry into force of the Kyoto Protocol. In Montreal, the negotiations on the AF concentrated on two main issues: (i) its (co-)financing, and (ii) the nature of the subject in charge of managing it on behalf of the COP/MOP (Muller, 2006). According to the most recent estimates, the costs of adaptation amount to tens of billions USD per year whereas the current total funds in the SCCF and LDCF are about 220 USD million, and the forecast resources

raised by the CDM levy for funding the AF at the end of the first commitment period of the Protocol will range between 400 and 1,500 USD million (UNFCCC 2008), a manifestly insufficient amount. Interested Parties have therefore demanded that different solutions for co-financing the AF be found. Their line of reasoning stems from the observation that the 2% levy funding the AF is essentially a contribution made by developing countries, because it is based on assets generated in those countries. The South, led by Brazil, has suggested that a similar levy should be extended to the other flexibility mechanisms of the Kyoto Protocol, namely JI and ET, focused on transactions between industrialized countries. The Russian Federation, because of its interest in being the country with the largest potential for JI, has instead proposed that the levy on the CDM be increased.

As far as the second issue is concerned, given the above-mentioned diffidence, in terms of procedural justice, shown by the developing countries towards the GEF, the G77 and China group stated in Montreal that having the GEF as the AF's operating entity was not an acceptable option. Moreover, Tuvalu and Bangladesh stressed that the COP/MOP should manage the AF directly, and Namibia noted the cumbersome role of the GEF and demanded that an innovative approach be taken to management of the AF. By contrast, Japan, on behalf of the developed countries, defined the GEF as the entity best suited for performing this function. The COP/MOP finally agreed to postpone any decision on the management of the AF to its next session (Nairobi, 2006). It requested countries to submit their views on the issue at the SBI 24 meeting (Bonn, 17–26 May 2006) and asked for guidance on a workshop to be held beforehand (Edmonton, 3–5 May 2006). Although the Edmonton workshop made a valuable contribution to the debate, it did not ease the tension between the two blocs of countries, and in fact the immediately subsequent SBI 24 meeting on the AF's governance was a major failure in this regard. The main issue at stake in Bonn was indeed the AF's governance, and specifically the identity of the subject that should operate it: on one side of the divide were the developed countries supporting the GEF, on the other the developing countries, and especially the LDCs, who absolutely refused the GEF, basically for the reasons specified above.

The negotiations became deadlocked and produced a profound distrust between the two blocs that could have greatly undermined subsequent negotiations on the AF and even derailed the evolution of the entire climate change regime. According to most observers, open and constructive discussion of the pros and cons of the different management options would instead have been necessary, as well as more time available to communicate because it had not been materially possible to analyse the different alternatives at Bonn.

Fortunately, and rather surprisingly, the mistrust dissolved at SBI 25 held in Nairobi in December 2006, where a breakthrough was achieved in the negotiations on operationalizing the AF. In Nairobi, in fact, the apparently insuperable opposition between the developed and the developing countries was resolved thanks to the more constructive attitude taken by both factions and which allowed adoption of the so-called Nairobi Adaptation Fund Decision at COP/MOP 2 (decision 5/CMP.2 analyzed in Appendices B and C). Put briefly, this decision stated that the AF must be managed by the Kyoto Protocol governing body, the COP/MOP, that funding must

be on a full adaptation cost basis, and that its voting procedure must follow a one-country-one-vote rule and include only Parties to the Kyoto Protocol. Besides these practical achievements, whose further specifications were postponed to the SBI 26 Meeting (May 2007), the main success of the SBI 25 was that it reconciled the different interests of the North and the South by concentrating on the overarching principles, modalities and governance of the AF before addressing its institutional arrangements. This positive attitude was favoured by a number of informal intersessional meetings during which the industrialized countries participants listened to and acknowledged the views of the developing country representatives.

In a climate of effective mutual comprehension, SBI 26 (Bonn 7–18 May 2007) focused, in accordance with the dispositions of COP/MOP 2, on eligibility criteria, priority areas and monetization of the share of the proceeds channelled to the AF through the CDM. Delegates agreed that the result would be forwarded to COP 13-COP/MOP 3 (Bali, December 2007) as a negotiating text for a Draft decision. The SBI 26 conclusions on the AF (FCCC/SBI/2007/L.14, see Appendices B and C) comprised the following points: 'developing country Kyoto Parties that are particularly vulnerable to the adverse effects of climate change are eligible for funding from the Adaptation Fund; funding will be provided to concrete projects and programmes that are country-driven and are based on needs, views and priorities of the eligible parties; the entity operating the Fund is responsible for the monetization of CERs forwarded to the Fund; the monetization should ensure predictable revenue flows, optimize the revenue and be transparent and cost-effective; and the COP/MOP reviews all matters relating to the Fund at its xx session.'

The final operational details of the AF were agreed at SBI 27, COP 13, COP/MOP 3 in Bali in December 2007. The main issue at stake at Bali was close specification of the role of the GEF in regard to management of the AF. Decision 1/CMP.3 (see Appendices B and C) established an independent AF Board (whose composition and other operational details were eventually defined by decision 1/CMP.4, adopted in Poznan in December 2008) under the authority of the COP/MOP independent from the GEF. According to the will of the developing countries, especially of the most vulnerable among them, the AF Board was given direct access to funds without having to go through the implementing agencies. This achievement was one of the two major successes achieved at Bali, the other being the definition of a Roadmap for a new post-Kyoto climate regime. Marthinus van Schalkwyk, the South African Minister who ran the negotiations on behalf of the G77 and China, called the decision on the AF in a press statement on 11 December 2007 'a major victory for the developing world in setting a new governance system for funding adaptation activities'. According to observers, this straightforward agreement reached between the North and the South, which, despite the convergence reached at SBI 25 and consolidated in the following meetings, still hold different opinions on the role of the GEF, was made possible by the EU's pre-Bali statement, which specified that the EU would accept the option preferred by G77 and China for management of the AF. Other factors that favoured the success of Bali was the greater trust between the G77 and China and the EU produced by the informal meetings and discussions that they had held since the problematic SBI 24 (see the following analysis).

In light of this overview the most significant circumstance determining governance of the AF was, in my opinion, the change in the climate of trust between the North and the South which came about at SBI 25 and ensured its success. Consequently, the most important stages to analyze in order to understand the role of justice are the two meetings that manifest this change in North/South trust relations: SBI 24 and SBI 25, COP/MOP 2. The latter, moreover, also exhibits the most important features of the AF governance structure. Subsequent meetings are instead less relevant to the discussion here because they simply operationalized the details of the AF in a climate of collaboration between Parties.

6.7 Observation of Meetings on the (Governance of the) AF: Failure (SBI 24) and Success (SBI 25, COP/MOP 2)

This Section evaluates if and how formal meetings on the AF are characterized by elements of procedural justice. Specifically, a number of SBI meetings, (SBI 24, Bonn, May 2006, and SBI 25 and COP/MOP 2, Nairobi, November 2006) related to the much debated issue of the management of the AF are analyzed in order to interpret their negotiating dynamics in light of the fairness criteria put forward in the ethical framework of Chapter 4.

As Muller (2007, p. 9) puts it: '[t]he last round of negotiations on the Adaptation Fund (AF) in May 2006 [that is, at SBI 24]...ended up in a tragic farce acted out chiefly between Austria representing the European Union, the Philippines representing G77+China, and the presiding Chair of the UNFCCC Subsidiary Body for Implementation (SBI)'. However this tragic farce, the main reason for which was the severe climate of distrust between the developed and the developing countries as specified above, turned out to be a success story in the following Nairobi session of the SBI and COP/MOP meetings (SBI 25, COP/MOP 2).

Therefore, as said, it is useful to apply the lens of procedural justice (and of distributive justice, in Chapter 7) to the meetings of the Bonn and Nairobi sessions in order to determine whether the conduct of actors involved may have been inspired by, or consistent with, the fairness criteria and, if so, whether observance of these criteria helped change the attitudes of the Parties and eventually led to the success of the Nairobi negotiations on governance of the AF.

6.7.1 The Failure: SBI 24

6.7.1.1 SBI 24 First Meeting – Plenary 18/05/06

Point 6 of the Provisional Agenda of SBI 24 (FCCC/SBI/2006/1) focused on the financial mechanism under the Kyoto Protocol, and it was split into two items: (a) Adaptation Fund, and (b) Application of the Memorandum of Understanding between the Conference of the Parties and the Council of the Global Environment

Facility. At the beginning of the SBI's first meeting on Thursday 18 May, The SBI Chairman Thomas Becker (from Denmark), asked the delegates if he could adopt the agenda as contained in document FCCC/SBI/2006/1.

The Philippines did not agree and demanded the 'deletion of item 6b' from the Provisional Agenda, claiming that 'there's no financial mechanism of the Kyoto Protocol'. Saudi Arabia seconded 'the request put forward by Philippines on agenda item 6b', and similarly Saint Lucia supported 'the request made by Philippines regarding item 6b'. On the side of the developed country Parties, Austria, on behalf of the EU and its member states, could 'accept the proposal of the Philippines', while the Norway delegate said that he did not understand the reasoning behind the proposal and that he 'would like very much to have an explanation'. The Philippines answered that 'for those who are familiar with the discussion going on on the AF, we believe that the presence of this sub-item in the agenda under the voice financial mechanism... we illustrated during the meeting of the Contact Group that there is no financial mechanism under the Kyoto Protocol... item 6b is misleading, tendentious, inaccurate and it is going to prejudge the discussions that are going to take place in the Working Group [on the AF]'. The SBI Chairman then intervened to point out that item 6b had been included on the provisional agenda because it was 'unfinished business from Montreal' (that is, from SBI 23) and asked Norway if the Philippines' explanation was sufficient. Nigeria affirmed that the inclusion of item 6b on the agenda would have prejudged the outcome of the Edmonton workshop on the management of the AF, because the workshop did not offer any conclusive position on which agency should handle it, an issue on which 'we are supposed to decide here', and concluded that by 'putting this item on the agenda seems that we have picked up the GEF'. Norway was satisfied with the explanation put forward by the Philippines, which was also supported by Jamaica and Belarus. The latter further expressed its agreement with the EU's positive answer on the deletion of item 6b, but underlined that the GEF is an institutional actor working without problems on kindred issues, such as capacity building under the Convention. The Chairman stated that he could 'understand where we are going' and decided that item 6b should be deleted from the agenda.

Disagreement concerning an item on a provisional agenda is an uncommon occurrence in UNFCCC negotiations – and in fact item 6b was the only controversial one on the provisional agenda for SBI 24. It testifies to the general climate of mistrust that characterized the Bonn AF negotiations. The Philippines, by demanding the deletion of item 6b with the support of other developing country Parties, once again revealed the suspicion of the South towards the GEF, as openly expressed by Nigeria. In the last UNFCCC meetings the Philippines had usually been the leader of the G77 and China group, on whose behalf it often speaks, and in this case it acted as the aggregating leader around which the developing countries sought to consolidate their negotiating identity and power, gain recognition, and have their perspectives taken into account. The poorer countries, by claiming that a financial mechanism under the Kyoto Protocol did not yet exist, sought to prevent the implicit selection of the GEF. The EU, represented by Austria, emerged as the bloc antagonistic to

G77 and China on governance of the AF, even though it conceded that item 6b should be deleted.

Ultimately, one gains the impression from this initial skirmish that the multiple close support formally expressed by other developing countries for the proposal of the Philippines (although it is very likely that it was agreed informally before the session began) was intended to evince their determination to insist on every possible occasion that they must be included in decision-making on sensitive issues and have their positions acknowledged. In other words, the developing countries seemed to be vigorously, yet implicitly, demanding compliance with fairness criterion 1 (Inclusion of all countries) and criterion 2 (Possibility to specify the terms of participation) as far as the negotiations on governance of the AF were concerned.

6.7.1.2 SBI 24 Third Meeting – Plenary 19/05/06

'Could we venture now to agenda item 6, the Adaptation Fund?' asked the Chairman at the opening of the Third Meeting of SBI 24. The Philippines opened the discussion: 'it's very clear that there is no financial mechanism of the Kyoto Protocol'. The point being made was that identifying a financial mechanism for the Protocol at that stage would have betrayed the true spirit of article 12 (specifically 12.8) of the Protocol because not all developing countries were able to host CDM projects because of their very limited mitigation possibilities. The Philippines continued: 'these countries with limited possibilities are at the same time the most vulnerable'. The spirit of article 12.8 was 'the sharing of developing countries with the most vulnerable among themselves of the benefits of CDM projects'. And: 'the share of the proceeds is not donors' financing, it's not aid money, it should not be subject to the same processes, project cycle, monitoring, etc. of the GEF. The management of the AF should be totally different, the greatest risk is that projects under the AF would have the same project conditionality of other GEF-funded ones. We would like to see the AF projects not under this kind of conditionality and the Fund manager should do exactly 'what the Parties stated it should do'. The Philippines then added that 'the further problem with the GEF is that developing countries, and especially LDCs, are not properly represented, the representation through constituencies is not truly democratic'. Finally, the Philippines delegate emphasised the major problem that the 'richer members of the GEF Council not member to the Kyoto Protocol however control the AF, against the spirit of article 12.8 of the Protocol'.

Japan stressed that the AF should be operated by an entity entrusted with operation of the financial mechanism of the Convention under the governance of the COP/MOP, and that it was necessary to introduce a balance between developed and developing countries in the management of the AF because CDM projects are relevant to both Annex I and Non-Annex I countries. The main concerns of the management of the AF should be the minimization of transaction costs and complementarity with other funds, this being the priority of particularly vulnerable countries.

Other developing countries supported the position of the Philippines. Uruguay maintained that 'the basic principles for the management of the AF should be its

autonomy and flexibility', and that the AF 'should not be under the authority of the current manager of the other funds'. Barbados underlined the particular importance of the AF for the SIDS, saying that it wanted to see the SIDS involved in its management. Egypt reaffirmed that 'developing countries really need to be well-represented in the management of this fund', and that 'the management of this fund should be autonomous'. Colombia specified that the management of the AF should be carried out by an existing entity, because an established structure with acquired experience might facilitate the operationalization of the fund without delay, and that the GEF would be the best entity to manage the AF 'so long as there is an independent structure created for the management of the AF, with specifically tailored operational policies'.

Austria, on behalf of the EU, confirmed that the EU was interested in operationalization of the AF to achieve the greatest possible effort in support for developing countries, and pointed out that 'the GEF is the best institution to manage the AF'.

Brazil claimed that further discussion was needed and that the item could not be dealt with at SBI 24.

Switzerland was in favour of operationalizing the fund as soon as possible and of 'entrusting the GEF with the management of the fund'.

Tuvalu called for special attention to be paid to the needs of SIDS in accessing the AF.

Indonesia appealed to all Parties to ease the process for a decision on the management of the AF in Nairobi, and declared that 'many developing countries have difficulties in approaching the GEF, we have to avoid this situation'.

The Chairman finally proposed the creation of a Contact Group on the AF in order to prepare draft conclusions and a draft decision for consideration at COP/MOP 2, which the SBI agreed to discuss at its fifth meeting.

The third meeting of SBI 24 was the prologue to the tragic farce, mentioned by Muller (2007), enacted at the fifth meeting a few days later. At this third meeting the two sides began to mark out the battlefield: the developed countries indicated the GEF as the entity which should manage the AF; the developing countries 'cited concerns with existing GEF operational policies and expressed interest in exploring other options for managing the fund'. The developing countries' core objection in terms of procedural justice against the GEF as the AF's managing entity was again centred on their lack of recognition and participation in that body. As far as the first fairness criterion is concerned, the developing countries claimed that they were not properly represented in the GEF because its governance structure was not truly democratic. For this reason, since they regarded AF funds coming from CERs of the CDM as their own money, they did not want the GEF to handle those funds, also because countries that did not endorse the Kyoto Protocol (that is, the United States), and therefore could not participate in CDM projects, had great weight in the GEF's governing body, the Council. There would therefore be, in the developing countries' view, an objective misrepresentation largely biased in favour of richer countries. Moreover, the AF, the developing countries further argued, should be outside the control of the GEF; for otherwise the most vulnerable countries would not be given priority in use of the AF because of their limited mitigation possibilities – as

feared if the GEF's usual policies were applied. In other words, GEF practices would be unlikely to respect fairness criterion 2, namely the Possibility to specify the terms of participation. These claims conflicted with the developed countries strong and largely shared preference for the GEF as the management entity of the AF.

In brief, at the third meeting of SBI 24 the two blocs were preparing for the final battle: the ultimate concerns for both the North and the South were not the rules and procedures for governing the AF fairly ('further guidance on policies, programme priorities and eligibility criteria for the operation of the Adaptation Fund', as stated by the SBI agenda), where consideration of procedural justice would have been relevant, but rather the struggle to decide what the operating entity should be, an issue where power and negotiating skills were predominant.

6.7.1.3 SBI 24 Fifth Meeting – Plenary 25/05/06

The objective of the fifth SBI plenary meeting was to adopt a draft decision on management of the AF for consideration at COP/MOP 2 in Nairobi. The casus belli of the forthcoming battle was the inclusion of the word 'all' – requested by the Philippines on behalf of G77 and China and fiercely opposed by Austria on behalf of the EU – in article 3 of the draft decision before 'those contained. . ..' (Box 6.1). An inclusion, however, that did not make any substantial difference.

Box 6.1 SBI 24, Agenda item 6: Financial mechanism (Kyoto Protocol): Adaptation Fund. Paragraph 3 of Draft conclusion proposed by the Chair (FCCC/SBI/2006/L.18) (in brackets and bold the word 'all' requested by the G77 and China)

Adaptation Fund

Draft conclusions proposed by the Chair

. . ...

3. The SBI invited relevant international institutions, including, among others, **[all]** those contained in the annex referred to in paragraph 2 above, without prejudice to any institution, to submit to the secretariat, by 4 August 2006, information on issues contained in the annex referred in paragraph 2 above, and taking into account views expressed by Parties, including those contained in documents FCCC/SBI/2006/MISC.7 and Add.1 and FCCC/SBI/2006/MISC.11.

. . ..

The meeting opened with a report to the SBI on the work of the AF Contact Group from its Chair, who pointed out that agreement had been reached on all paragraphs of the draft decision except paragraph 3. The SBI Chairman then underlined the importance of making progress 'on this issue in this meeting' and asked the delegates: 'does the document represent consensus in the room in its present form?'

The Philippines, on behalf of G77 and China, after reiterating the group's position on the AF's management put forward at the third SBI meeting, proposed that the word 'all' should be included and affirmed that it was open to any 'transparent, fair, open and informed choice' about the institution that should manage the AF 'in accord with the spirit of the CDM under the Kyoto Protocol'. The delegate stressed that 'it's already a concession, because we made concession after concession in the text . . . because we know that they '[the developed countries] have a preference'.

The Chairman, after expressing his perplexity on the sense of the inclusion, asked the SBI if it would be possible to adopt the draft decision after the addition demanded by G77 and China.

Austria, on behalf of the EU, after a 10-min consultation with its group, said: 'we support the text as it stands, without any addition. We cannot go further in compromising'. Similarly, Canada, Norway and Japan expressed their non-acceptance of the inclusion of the word 'all'.

Several G77 and China countries reinforced the point made by the Philippines: Brazil, Nigeria, Saudi Arabia, Iran, Barbados. All underlined the value added of 'all', the fear that its rejection would signify a hidden agenda of the North, and the urgency to move on in specification of the governance system of the AF.

China, on its own, made an appeal to all Parties and asked them to show more flexibility and greater will to interpret the text, whilst also suggesting that the decision should be postponed to another date.

The Chairman then asked the Philippines to make a statement to be included in the minutes after endorsement of the draft decision as it stood, because there was no consensus on the addition proposed. After a number of misunderstandings and another 10-min break for consultation, the Philippines made the following statement: 'It is the understanding of the SBI meeting that the options contained in paragraph 3 of FCCC/SBI/2006/L.18 refer to all the options listed in page 9, paragraph 14 of the annex to this document as follows: the GEF, the Multilateral Fund of the Montreal Protocol, UNDP, UNEP, the Executive Board of the CDM'.

The Chairman then adopted the draft decision with the statement of the G77 and China. Unfortunately, he forgot to listen to the counterpart before its adoption. In fact Austria requested to make its statement: 'With the conclusions reached today the SBI has effectively postponed the implementation of the AF. The EU is disappointed with the decision taken, it is very harsh, but it is still looking forward for a constructive dialogue in Nairobi'. Then, in regard to the statement by the G77 and China, Austria stated that 'it's not understanding of the SBI, but of a group of countries'.

Then followed a lengthy, and sometimes overformalistic, legalistic debate in which the two blocs expressed their views on the opportuneness and legal validity

of including both statements in the draft decision. It was finally agreed that each statement would be recorded in the report of the session.

Of considerable interest is the sarcastic final comment made by Saudi Arabia, the last country to take the floor and which wished to 'highlight to the Plenary and to our partners and to everyone here, how very very constructive this has been for building trust between Non-Annex I and Annex I countries'.

The positions of the different groups were quite clear. On the one hand the developing countries expressed their non-acceptance of the GEF as the operational entity of the AF; on the other hand the developed countries advanced the opposite claim. A number of non-aligned countries, though implicitly closer to the first group, raised other points concerning management of the AF. This sharp juxtaposition of interests, not eased by the rather ambiguous attitude of the non-aligned countries, led to the final showdown at the fifth meeting of SBI 24. The pretext was rather pointless, the inclusion of 'all' in paragraph 3 of the draft decisions, but it nonetheless disclosed the deep reciprocal distrust between the developed and the developing countries. The usual first casualty of conflicts of this kind is rational and attentive consideration of causes and possible solutions, among which issues of justice should play a primary role. In fact, in this case too almost no claims concerning the importance of procedural justice were made: only the Philippines demanded fairness in the choice of the institution to manage the AF. But it seemed rather a formalistic and rhetorical claim, whereas all efforts were devoted to the trial of strength between the two sides.

6.7.2 The Success: SBI 25 and COP/MOP 2

Before the details of these rounds of negotiations are given, it is necessary to summarize what helped heal the rift between G77 and China and the EU, restore mutual trust between the two groups, and transform the patent failure of SBI 24 into the encouraging success of SBI 25 that led to adoption of an important COP/MOP decision (decision 5/CMP.2 - Adaptation Fund, whose elements of procedural justice are analyzed in detail in Appendix B, and those of distributive justice in Appendix C) on management of the AF.

One element that, according to most qualified observers proved useful was the closing of negotiations at 6 pm. In fact, it is by and large only richer countries that can afford platoons of skilled negotiators, while poor parties can field only a few negotiators, if not just one. Thus, enabling smaller delegations to participate actively in every session introduced a basic element of procedural justice, broadly understood, which created a more collaborative approach to the negotiations. Moreover, the developing countries and their groupings (G77 and China, Africa Group, LDC Group, AOSIS) came to Nairobi with a common position on management of the AF, already known by the EU. Actually, the two counterparties had exchanged views at a number of informal seminars held after the Bonn meetings. For instance, the Oxford Fellowship of the European Capacity Building Initiative advanced a proposal concerning management of the AF which suggested that the exclusive focus

should not be on the choice of the entity, but rather on defining the architecture of the fund's governance system, which would have to be guaranteed whatever institution was selected. This architecture should be based on two principles: (i) the AF's decision-making process should be flexible, transparent, straightforward and balanced in order to reflect the specific needs of the developing countries; (ii) funding should be reliable and adequate and cover the full cost of adaptation (Muller, 2007).

These were not the only reasons for the positive results of the Nairobi meetings, but they favoured the creation of a positive and very constructive climate that greatly influenced the outcomes of the negotiations. Nairobi started off on the right foot: from the outset a number of reassuring acknowledgments of the importance of moving on the operationalization of the AF were expressed. The first meeting of COP 12 (November 6, 2006) included a statement by South Africa, speaking on behalf of G77 and China, which urged agreement on the AF. Nigeria, for the African Group, underlined that the AF was among the African countries' priorities. Similarly, during the first meeting of COP/MOP 2, the EU stressed the need to operationalize the AF. However, the substantive issues concerning management of the AF were dealt with at the SBI 25 third and fourth meetings.

6.7.2.1 SBI 25 Third Meeting – Plenary 8/11/06

At the third meeting of SBI 25, Parties made their statements on the questions concerning the management of the AF.

The Philippines, on behalf of G77 and China, stressed at the outset that the AF was one of the most important items of COP 12 – COP/MOP 2. The Philippines delegate then set out the procedure that should be followed in the negotiations on the AF: 'in order to achieve rapid progress in the discussion we need first of all to agree on a very clear set of principles, governance structures, decision-making processes, modalities, priority areas, prior to any discussion on any specific institutions to manage the Fund.' And: 'the choice of any institutions will be based on its ability to meet these criteria'. The Philippines added that 'the management of this Fund should be fully under the authority and guidance, and be accountable to, the COP/MOP. The governance structure should reflect the main sources of funding for the AF, that is the share of the proceeds from CERs activities under the CDM'. Further, 'G77 and China would also like to reach agreement on the modality for the AF that would fully reflect the spirit in which article 12.8 of the Kyoto Protocol was negotiated and adopted, and should serve the purpose to assist developing country Parties particularly vulnerable to the adverse effect of climate change to meet the cost of adaptation. This fund should meet the full cost of adaptation, and should be flexible enough to take into account the interest of participating countries'.

Japan stated that 'adaptation is not a stand-alone issue, it should be integrated in national development planning processes. The UNFCCC alone cannot respond to all the challenges of adaptation. The role of the UNFCCC is to coordinate those activities in a well-organized manner'. In this regard, 'the GEF is the appropriate entity to manage the AF' because 'in financial matters the GEF has a leading role, . . . and has experience in financing adaptation also through the SCCF and the LDCF'.

Tuvalu, on behalf of the AOSIS, supported the Philippines and was keen to see rapid operationalization of the AF, stating that 'our particular vulnerability is sufficient reason for SIDS being given particular attention under the AF. The share of the proceeds . . . must be used in full for particularly vulnerable developing countries'. The Tuvalu delegate then recalled that 'all Annex I Parties have a commitment under article 4.4 of the Convention to assist particularly vulnerable developing countries to meet costs of adaptation'.

Bangladesh, on behalf of LDCs, endorsed the statement of the Philippines and also emphasized that 'there should be an executive body for the AF with regional representation such as the CDM Executive Boards'. This executive body, moreover, should have 'an extraordinary representation of LDCs' because these are the most vulnerable and thus deserve the most support.

Finland, on behalf of the EU, attached great importance to the negotiations on the AF and acknowledged 'the special features of the AF financed by the share of the proceeds'. Finland's delegate then said that 'on many area of substance we are close to an agreement, this includes the purpose of the AF, where we all agree that it should fund concrete adaptation activities, eligibility, where we all agree that particularly vulnerable developing countries are eligible for support, and finally operational modalities where we agree that the AF should respond to developing countries' needs, as defined'. However, 'on the governance and management of the Fund further consideration is needed, but we believe that there is a common interest in ensuring an efficient, effective and transparent governance and operational structure of the AF'.

Norway also affirmed its broad agreement on principles such as the country-driven approach, but stressed that the AF needed a rational decision-making system and that 'we don't believe that the direct involvement of the COP/MOP would be efficient'. Norway could eventually 'analyse the GEF to operationalize the AF'.

China, after expressing its support for the Philippines, stressed that the current COP should achieve substantive results on this issue (that is, governance of the AF).

The Chairman, the same Mr. Becker who had chaired SBI 24, recalled 'the not very constructive atmosphere that we had in Bonn' and encouraged Parties 'not to start off with the most controversial questions, but rather trying to get closer on the question where we agree'.

Then a number of individual countries took the floor. Among them, all Non-Annex I Parties supported the Philippines and raised a number of other issues. China, Egypt, Chile, and Mauritius asked for rapid implementation of the AF; Indonesia, Egypt, Chile and Mauritius agreed on the need to define the Fund's architecture before turning to institutional matters. Large support was also forthcoming for the COP/MOP authority proposal (Brazil, Argentina, Gambia) and the full adaptation cost funding (Micronesia). Other additional issues not mentioned by the Philippines were raised: the need for transparency and flexibility of modalities (Micronesia, Argentina, Gambia) and the funding of concrete adaptation projects (Micronesia and Mauritius).

Furthermore, Switzerland forcefully expressed its preference for 'entrusting the GEF with the operationalization of the AF, for its experience and efficiency', and

its fear that structures would be duplicated if a 'new or additional entity' were established.

Finally, the Chairman, again recalling the 'non constructive atmosphere we had when we talked of a specific institution', proposed the establishment of a Contact Group to propose a draft decision for consideration at COP/MOP 2. A report on this draft decision was to be presented at the last SBI 25 meeting. He concluded by urging 'the delegates to be disciplined in the negotiations'.

At this meeting the focus of the discussion shifted from the frustrating GEF/non-GEF struggle of SBI 24 to a more productive search for common principles, rules and procedures for governing the AF. Hence considerations of justice returned to centre stage. In fact, the Philippines' first claim, largely supported by other developing country Parties, that the AF's management should be under the authority and guidance of the COP/MOP, where weaker countries would have greater recognition than in the GEF, was in line with fairness criterion 1, Inclusion of all countries on grounds of equality in decision-making processes. Furthermore, the request that the management of the fund should take account of the interests of participating countries, that is, those most vulnerable to climate impacts, responded to fairness criterion 2, Possibility to specify the terms of participation, which requires that every subject must be able to make its priority count. A similar point was made by Tuvalu, whilst Bangladesh, when asking for extra representation for the LDCs in the AF's governing body, also simultaneously cited fairness criteria 1 and 2, in so far as this demand entailed both greater recognition for, and participation by, particularly vulnerable countries. The requirements of fairness criterion 2 were also recalled by the EU when it demanded that the AF should respond to developing countries' needs, and indirectly by Norway when it clarified its agreement on the 'country-driven approach'.

It is interesting that the two antagonistic blocs of countries, the South and the North, notwithstanding their different interests and characteristics, converged on the fairness criterion of Participation for the first time in the negotiations on the AF. They thus acknowledged that the possibility for weaker countries to state their priorities and vulnerabilities, and consequently to ground management of the AF on a country-driven approach, would increase the sense of belonging to a community comprising all the actors involved, and that this would greatly improve the trust between them and eventually favour new effective agreed initiatives.

6.7.2.2 SBI 25 Fourth Meeting – Plenary 14/11/06

Ambassador Adrian Macy of New Zealand, co-chair of the Contact Group, reported to the SBI final meeting (fourth meeting) on its work. The main achievements of the draft decision of the Contact Group were the definition of a number of principles and modalities for the management of the AF, and the conclusion that the membership of its governing body should comprise Parties to the Kyoto Protocol on a one-country-one-vote basis and with a majority of Parties not included in Annex I to the Convention. The co-Chair defined these outcomes 'a significant step forward', demonstrating the 'strong willingness to reach a result from every Party'.

The SBI Chairman then adopted the draft decision. Thereafter, the Philippines, on behalf of G77 and China, thanked 'all our partners for the cooperation and goodwill, in particular the EU led by Mr. Jukka Uosokainen of Finland'. The Philippines delegate then remarked that the AF was the highest priority for the developing countries, and that they did not prejudge the choice of the entity because they preferred only to lay 'the basis for its selection'. In addition, she said that 'the AF is an innovative solidarity fund of developing countries, by developing countries, for developing countries under the CDM. It allows developing countries to share the benefits that derive from CDM activities among them, in solidarity with other developing countries which have the least capabilities to host CDM projects, but which are particularly vulnerable to the adverse effect of climate change'.

China stressed that adaptation was the core element for the developing countries in the negotiations. Japan focused on the importance of coordination and hoped that the AF would be rapidly operationalized.

Finland's delegate, on behalf of the EU, underlined the genuine novelty of the AF, whose management would be transparent, open, accountable, efficient and effective and also follow a country-driven approach. He then thanked all the partners and 'Ambassador Bernaditas Muller [the Philippines delegate] who has been able to guide us with all her knowledge of articles and principles... I am looking forward to the next year with new enthusiasm'.

Finally, Tuvalu expressed its gratitude and said that it would keep its mind open to innovative approaches.

This was the meeting to celebrate the result achieved and, mostly, to express mutual appreciation of the goodwill of partners that, again, was largely centred on common acknowledgement of the importance that the developing countries should be able to specify their priorities and interests in line with fairness criterion 2.

6.7.2.3 COP/MOP 2 Tenth Meeting – Plenary 17/11/06

The tenth meeting of COP/MOP 2 adopted the draft decision recommended by SBI 25 (decision 5/CMP.2). The President of COP and COP/MOP Kibwana, Kenya's Minister of the Environment and Natural Resources, defined the adoption of the AF decision 'one of the most outstanding achievements of this Conference', and underlined that 'the outcome contained in the decision is a clear indication of substantive progress, as well as a strong signal of Parties' willingness to act together towards a common good on this sensitive issue'.

The COP's President's remark on the common willingness of Parties is further testimony to the importance of fairness criteria 1 and 2 in moving forward the negotiations on such a sensitive issue as the funding of adaptation. It is, in fact, an implicit admission that, from the perspective of procedural justice, Recognition and Participation can ensure the effective involvement of Parties with diverging interests, because only these two fairness criteria guarantee that each party's sacrifice is more than compensated by other parties' concessions.

6.7.3 Final Considerations

The first obvious consideration refers to the much greater contribution made by the developing countries to the meetings observed. A large number of developing countries took the floor to express their positions, and this testifies to their deeper concern and involvement. This was not only a matter of interest where recipients have more incentive than donors. For most of the South, as pointed out, climate change is a matter of sheer survival, and the financing of concrete adaptation actions in order to prevent or reduce climate impacts became a crucial form of defence. For most of the industrialized world, climate change is still an environmental problem, albeit a very serious one, and its emotional temperature is consequently milder.

Moreover, to be emphasized is the close coordination among the developing countries, whose cohesion, expressed through the broad support invariably given to the Philippines, their representative during the SBI 24 and 25 negotiations, confirmed their capacity to aggregate around a proactive leader in order to promote a common and stronger position. Furthermore, this effort to achieve jointly the common goal of a fairer and more accessible management of the AF ultimately enabled the developing countries to set aside their often dissimilar interests, values and characteristics and to become a homogenous negotiating group promoting a common interest.

Finally, and most importantly, considerations of procedural justice played a quite important role in the negotiations analyzed. Indeed, the core element in the climate of distrust at the SBI 24 and the reason for its failure was the lack of recognition and participation that the developing countries had, and still have, in the GEF, the financial entity indicated by the developed countries for management of the AF. The choice of SBI 25 to operationalize the AF under a different governing body directly answerable to the COP/MOP, where the developing countries are incorporated on a one-country-one-vote basis and with a majority of Parties not included in Annex I to the Convention, greatly augmented their recognition. Moreover, the architecture adopted dissipated the developing countries' fear of under-participation, because the governing body envisaged for the AF made it possible for them to promote their real adaptation priorities and to specify their most urgent vulnerabilities. In other words, acknowledgment of fairness criteria 1 and 2 produced a change in the attitudes of Parties and favoured the success of the Nairobi negotiations on governance of the AF.

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Chapter 7
Evaluation of Distributive Justice, Analysis of Fairness and Equity Criteria and of the Role of Justice in International Adaptation Funding

Abstract This Chapter uses the equity criteria introduced by the framework of justice to evaluate the current international regime for funding adaptation under the UNFCCC. It first carries out an analysis of the emergence of equity criteria in the relevant document of the UNFCCC highlighted in Chapter 6. Then the Chapter observes significant selected negotiations on meetings about the Adaptation Fund, and points out the effective level of distributive justice involved. Finally, the Chapter conducts critical analysis of the role of the fairness and equity criteria and of the broader aspects of justice within the international adaptation funding regime.

Keywords Adaptation Fund · Distributive justice · Equity criteria

In the following analysis, distributive justice will be evaluated in terms of the equity criteria of Differentiated historical responsibility and Lack of human security in regard to the Principal Documents listed in Table 6.1 (Chapter 6) and to the observed SBI 24 and SBI 25-COP/MOP 2 formal meetings. It is not possible, in fact, to assess distributive justice in governance systems directly, because they can be evaluated only in terms of procedural elements of justice, even though structures, procedures and practices indeed affect also the justness of the outcomes that governance systems deliver.

Furthermore, in what follows I shall conduct critical analysis on the role performed by the fairness and equity criteria proposed and by the broader aspects of justice within the international adaptation funding regime.

7.1 Principal Documents: Convention and Kyoto Protocol

Analyzed in this section and in the one that follows are the distributive justice contents of the Convention and the Kyoto Protocol, and of the other Principal Documents listed in Table 6.1 of the previous Chapter, through comparison against the equity criteria put forward in Chapter 4 (synthesized in Table 7.1). The analysis of the other five categories of documents (that is, guidance to the financial mechanism, review of the financial mechanism, the SCCF, the LDCF and the AF) is reported in Appendix C.

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Table 7.1 Domains of distributive justice, ethical imperatives, theories and principles of justice, and equity criteria

Domain of justice	Ethical imperative	Theory of justice	Principles of justice	Equity criteria
Raising of adaptation resources	Responsibility	Rawls's Theory of Justice as Fairness	Equality (in access to, and consumption of, atmospheric capacity) Difference (in social primary goods)	1) Differentiated historical responsibility (historical responsibility taking undeserved inequalities into account)
Allocation of adaptation resources	Social vulnerability	Sen's Capability approach	Basic capability equality	2) Lack of human security (in the space of basic capabilities)

First required is a brief review of the equity criteria in the context of international adaptation funding. The criterion of Differentiated historical responsibility affirms that countries' outcome responsibility should be calculated in proportion to cumulative emissions, and that prospective responsibility requires that undeserved inequalities such as those deriving from dissimilar socioeconomic positions be taken into account. In practical terms, the objective of the current analysis demands that richer countries (Annex I Parties in this context) with higher levels of social primary goods (resources, or income in measurable terms) should contribute more. As regards the allocation of funds raised among countries in need, the criterion of Lack of human security entails that the weaker a country is in the space of the basic capabilities forming the core of human security, the fewer are its institutional and social possibilities and capacities to turn adaptation resources into effective adaptation actions. Hence, in practical terms, weaker Non-Annex I countries should be given privileged access to funding.

7.1.1 Equality and Difference: Differentiated Historical Responsibility

The most evident reference to equity criterion 1 resides in the well-known principle of Common but differentiated responsibilities and respective capabilities introduced by the Rio Declaration and stressed, with different inflections and purposes, in the preamble, articles 3.1 and 4.1 of the Convention, and in articles 10 and 13.d of the Kyoto Protocol – and which is also important in terms of criterion 2 for procedural justice as specified in Chapter 6.

Although this principle is neither detailed nor operationalized, it is still of great importance within the climate regime. Indeed, it is found in the provisions of both the Convention and the Kyoto Protocol, and it encompasses diverse instances: first, the common responsibility of states in protecting the climate; second, acknowledgement that the developed countries have primary responsibility, as evinced by their historical contribution to climate change, and must consequently take a leadership role; third, the recognition that countries differ substantially in terms of economic development, consumption level, and vulnerability. The principle of Common but differentiated responsibilities is not, however, exempt from criticisms on its ethical substance. For instance, despite its widespread acknowledgment, no ethical principles that are usually supposed to justify it (Contribution to the problem, Ability to pay, Beneficiary pays) provide it with a sound ethical basis (Page, 2008). This principle evinces some other ethical problems as well: its exclusive focus on states as subjects of justice, a notion of historical responsibility in which states are accountable for earlier generations' emissions, its non-consideration of the ignorance, up to some point, of the harmful effects of GHG emissions (Caney, 2005). The main significance of the principle of Common but differentiated responsibilities, in the context of the treatment here, is that it claims that the cost of adaptation measures in developing countries should be financed on the basis of developed countries' past and present contributions to climate change in terms of GHG emissions, and that such financing should take account of their patterns of economic development over time, as expressly required by article 10 of the Kyoto Protocol. Its ethical significance can therefore be grounded in the equity criterion of Differentiated historical responsibility, given that the principle of Common but differentiated responsibilities openly acknowledges that there are substantial differences in economic structures (for example energy production and efficiency, industrial organization) and levels of development among the developed countries, and that these differences affect their interests and their willingness and possibility to commit and to fulfil commitments.

Moreover, article 4, points 3, 4 and 5 of the Convention, and article 11.2 of the Kyoto Protocol expressly state that the developed country Parties should provide financial and technological support to the developing countries so that they may adapt to the adverse effects of climate change, and that they should do so according to an appropriate burden-sharing arrangement. These provisions implicitly recognize the responsibility of the developed countries, and explicitly call for differentiation in their responsibilities and therefore in their contributions to the financing of adaptation activities. This view, again, is perfectly coherent with the criterion of Differentiated historical responsibility.

7.1.2 Basic Capability Equality: Lack of Human Security

The criterion of Lack of human security essentially requires that countries weaker in terms of institutional and social capacities and which are most at risk of climate hazards – that is, the developing countries, or Non-Annex I Parties, in the jargon of climate negotiations – should be given access to adaptation funds proportionally to

their level of social vulnerability, this being measured by the Lack of human security in the space of Basic capabilities. Both the Convention and the Kyoto Protocol incorporate this condition where they recognize that particularly vulnerable developing countries and their specific needs and special circumstances should be given full consideration. Specifically, the Convention states that particularly vulnerable developing countries should be given privileged access to adaptation funds at article 4.4, whereas the Kyoto Protocol requires that a share of the proceeds of the CDM should be used to assist 'developing country Parties that are particularly vulnerable to the adverse effects of climate change to meet the costs of adaptation' (article 12.8).

7.2 Other Principal Documents

7.2.1 The Berlin Mandate

The Berlin Mandate, in its endeavour to strengthen the effectiveness of the climate regime, acknowledges both of the above equity criteria. In fact, it underlines at the outset (paragraphs 1(a) and (e)) that the process of reinforcing the commitments should be guided by article 3.1 of the Convention, and specifically by the principle of Common but differentiated responsibility, which complies with equity criterion 1. The same equity criterion is fulfilled by paragraph 2(a), which calls for developed countries' commitments to take account of their different economic conditions and of the equity and appropriateness of their contributions. Equity criterion 2 is instead acknowledged by paragraph 1(b), which reiterates that consideration of the special needs and special situations of LDCs should be the guiding principle for the entire process.

7.2.2 The Buenos Aires Plan of Action

Decision 5/CP.6 Implementation of the Buenos Aires Plan of Action recalls in the annex, section I – Funding under the Convention, paragraph 3(d) that the COP agrees that '[a]ppropriate modalities for burden-sharing among the Parties included in Annex II need to be developed'. This point fulfils equity criterion 1, which states that the developed countries should contribute to different extents in proportion to their historical differentiated responsibilities.

7.2.3 The Bali Action Plan

The Bali Action Plan requires at paragraph 1(e) that financial resources should be provided in accordance with criterion 2 concerning Lack of human security, privileging developing countries parties that are particularly vulnerable to climate change.

7.3 Observation of Meetings on the (Governance of the) AF: Failure (SBI 24) and Success (SBI 25, COP/MOP 2)

The SBI formal meetings (SBI 24, Bonn, and SBI 25 COP/MOP 2, Nairobi) on the AF observed in Chapter 6 are now analyzed through the lens of distributive justice. Chapter 6 set out the reasons for selecting the AF; an overview of the development of its governance structure; the rationale for focusing on the Bonn and Nairobi sessions meetings; an explanation of their success and failure; and a brief account of the methodology used for the analysis. It also gives detailed reports on the meetings. The aim of this Section is to verify if and where references were made to the equity criteria considered here during the formal meetings observed.

7.3.1 The Failure: SBI 24

7.3.1.1 SBI 24 First Meeting – Plenary 18/05/06

SBI 24 first meeting was the prelude to the clash between the developed and the developing countries which doomed the Bonn negotiations to failure as far as the AF was concerned. The conflict was sparked by the Philippines delegate's request on behalf of the developing countries for item 6b to be deleted from the provisional agenda, the purpose being to prevent the otherwise inevitable choice of the GEF as the financial mechanism of the AF.

Neither explicit general concerns on distributive justice nor specific reference to operational equity criteria emerged during this meeting. On ethical terrain, attention focused on procedural justice and on the need to ensure participation by developing countries in climate negotiations. However, it seems possible to claim that part of the reason for the failure of this meeting was the unexpressed fear of the developing countries that a GEF-controlled AF would have produced unfavourable outcomes for them: that is, it would have been unjust also in distributive terms.

7.3.1.2 SBI 24 Third Meeting – Plenary 19/05/06

The third meeting of the SBI in Bonn laid bare the rift between the developed and the developing countries on management of the AF. During this troubled meeting, the developing countries repeatedly stressed that the AF must give priority to the weakest of them, as required by the equity criterion of Lack of human security. The Philippines, on behalf of the G77 and China, insisted that the true spirit of article 12.8 of the Kyoto Protocol was the sharing among developing countries, and with special regard to the most vulnerable of them, of the benefits of CDM projects, and hence that the AF disbursement practices should take this objective into account. Barbados and Tuvalu stressed the vital importance of the AF for the SIDS, probably the most vulnerable group of countries, and therefore demanded that special attention be paid to their needs in management practices. Interestingly, Japan too affirmed that the AF should give priority to particularly vulnerable countries.

It is highly likely that the demand made at this meeting by the developing countries – that management of the AF be outside the control of the GEF – was partly driven by a widely shared, and implicitly acknowledged, imperative to ensure that the most vulnerable among them would have priority in accessing funds. This would fulfil equity criterion 2, which otherwise would have been flouted.

7.3.1.3 SBI 24 Fifth Meeting – Plenary 25/05/06

The struggle between the developed and developing countries at the SBI 24 fifth meeting left no room for considerations of distributive justice, let alone for compliance with any equity criterion.

7.3.2 The Success: SBI 25, COP/MOP 2

7.3.2.1 SBI 25 Third Meeting – Plenary 8/11/06

Everything changed in Nairobi some six months later, and the Bonn debacle became an encouraging success, as described in Chapter 6.

The third meeting of the SBI 25 dealt with Parties' statements on the issues involved in management of the AF. The Philippines, on behalf of G77 and China, reiterated that the AF should reflect the true spirit of article 12.8 of the Kyoto Protocol, that of assisting particularly vulnerable developing countries in meeting the costs of adaptation. Tuvalu and Bangladesh, on behalf of the LDCs, maintained that the particular vulnerability of some developing countries was sufficient reason for them to receive the most support under the AF. Accordingly, Finland, on behalf of the EU, acknowledged that particularly vulnerable developing countries would be eligible for support from the AF. All these statements recognized the core of equity criterion 2, namely that adaptation funds should privilege weaker countries because of their more limited institutional and social possibilities and capacities.

Tuvalu also claimed that Annex I Parties had an obligation, although it differed from country to country, to assist the developing ones. This assertion referred, albeit implicitly, to equity criterion 1 of Differentiated historical responsibility.

It seems evident that the main interest advanced at this meeting by the developing countries, and recognized by the developed ones, was that the AF be structured in such a way that the richer countries effectively provide funds to particularly vulnerable ones. And this was broadly in accordance with the two equity criteria put forward.

7.3.2.2 SBI 25 Fourth Meeting – Plenary 14/11/06

In celebrating the result achieved (that is, adoption of a draft decision on management of the AF, decision 5/CMP.2) the Philippines emphasized that the agreed governance structure of the AF should be coherent with the objective that CDM benefits should mostly benefit developing countries particularly vulnerable to the

adverse effects of climate change. Once more, the importance of equity criterion 2 was evident.

7.3.2.3 COP/MOP 2 Tenth Meeting – Plenary 17/11/06

The President of the COP and COP/MOP and Kenya's Minister of the Environment and Natural Resources Kibwana made no reference to equity criteria in regard to governance of the AF.

7.3.3 Final Considerations

Quite unsurprisingly, little room was explicitly given to distributive justice in the above-described SBI and COP/MOP formal meetings on the management of the AF. However, very apparent was the implicit claim made by the developing countries. All the representatives of the developing world that took the floor emphasised the financial needs of particularly vulnerable Parties. This appeal demonstrated the profound awareness among the developing countries that their limited institutional and social capacities, coupled with their greater physical vulnerability, undermined their adaptive capacity, and that justice demanded that this circumstance be compensated for by more substantial and privileged access to funds raised for adaptation, according to the inner meaning of the equity criterion of Lack of human security. Also interesting is the reiterated request that the AF be managed in accordance with the genuine spirit of the CDM as defined by article 12.8 of the Kyoto Protocol, so that allocation practices share the benefits among developing countries with particular regard to the most vulnerable ones. More generally, the CDM seems to stem directly from the principle of Common but differentiated responsibility. This flexibility mechanism is intended to establish a mutual relationship between the developed and developing countries on the basis of their different responsibilities and vulnerabilities and articulate them into differentiated commitments and rights which ultimately respond to the broad provisions of distributive justice in the realm of adaptation funding envisioned by the equity criteria put forward. These provisions, in fact, can be inscribed in the body of liberal, broadly egalitarian, theories of justice that have a tendency to equality as far as both donors and recipients are concerned and that aim eventually to improve the conditions of the badly-off.

7.4 Fairness and Equity Criteria in Documents

It is useful to conduct a brief quantitative analysis of the occurrence of fairness and equity criteria in the seven categories of documents investigated in order to shed further light – through interpretation of the main findings emerging from the qualitative content analysis conducted in this and the previous Chapters and in Appendices B and C – on the meaning and role of procedural and distributive justice in the UNFCCC documentary architecture related to adaptation funding.

Table 7.2 reports the absolute frequencies of the occurrence of fairness and equity criteria in all the categories of documents considered. Table 7.3 instead shows their relative frequencies.

Table 7.2 Absolute frequencies of fairness and equity criteria in all categories of documents

		Principal documents		Non-principal documents					
		C/KP	OPD	GFM	RFM	SCCF	LDCF	AF	Total
Procedural justice	PJ1	1	1	5	6	3	2	7	25
	PJ2	5	3	16	2	12	7	6	51
	PJ3	2	3	2	5	9	1	–	22
Distributive justice	DJ1	9	4	–	1	1	–	1	16
	DJ2	2	2	11	1	1	–	4	21
Total		19	13	34	15	26	10	18	135

Table 7.3 Relative frequencies (%) of fairness and equity criteria in all categories of documents

		Principal documents		Non-Principal documents				
		C/KP	OPD	GFM	RFM	SCCF	LDCF	AF
Procedural justice	PJ1	5.3	7.7	14.7	40.0	11.5	20.0	38.9
	PJ2	26.3	23.1	47.1	13.3	46.2	70.0	33.3
	PJ3	10.5	23.1	5.9	33.3	34.6	10.0	–
Distributive justice	DJ1	47.4	30.8	–	6.7	3.8	–	5.6
	DJ2	10.5	15.4	32.4	6.7	3.8	–	22.2
Total		100	100	100	100	100	100	100

C/KP: Convention and Kyoto Protocol; OPD: Other Principal Documents; GFM: Guidance to the Financial Mechanism; RFM: Review of the Financial Mechanism; SCCF: Special Climate Change Fund; LDCF: Least Developed Countries Fund; AF: Adaptation Fund; PJ1: Criterion 1 of Procedural Justice (Inclusion of all countries); PJ2: Criterion 2 of Procedural Justice (Possibility to specify the terms of participation); PJ3: Criterion 3 of Procedural Justice (Commitment to assistance from richer to poorer); DJ1: Criterion 1 of Distributive Justice (Differentiated historical responsibility); DJ2: Criterion 2 of Distributive Justice (Lack of human security).

In absolute terms, the GFM and SCCF categories are those that comprise most fairness and equity criteria, with respectively 34 and 26 occurrences, and in both categories the weight of the former is greater. Fairness criteria occur most often in Non-Principal Documents (GFM, RFM, SCCF, LDCF, AF), whilst the equity criterion of Differentiated historical responsibility (DJ1) predominates in the Principal Documents (C/KP, OPD). This is as to be expected, because considerations of distributive justice related to the responsibility of the developed countries are more apparent in documents putting forward the general framework in a more theoretical manner, whereas more specific documents, like those in the

Non-Principal categories, make more detailed and pragmatic references, like those entailed by procedural justice. More specifically, among fairness criteria, PJ1 is frequently referred to in the categories of documents that give directions for guidance (14.7%) and review (11.5%) of the financial mechanism, and in those defining the AF (38.9%). PJ2 occurs most often in GFM documents (47.1%), whilst PJ3 does so in those related to the SCCF (34.6%). Turning to equity criteria, DJ1 is most apparent in Principal Documents (about 78%), in line with expectations, whilst the high frequency of DJ2 in Non-Principal categories of documents (about 73%) can presumably be explained by the generally closer attention that guidance documents (32.4%) and those related to the AF (22.2%) pay to the weakest countries.

From a different perspective, and referring to the frequency of fairness and equity criteria within a single category of documents (Table 7.4), fairness criteria have a greater representation (98) than equity ones (37), and criterion 2 of fairness is the one most often referred to (51 times), whereas all other criteria, both procedural and distributive, occur much less frequently.

Table 7.4 Relative frequencies (%) of the occurrence of fairness and equity criteria within single categories of documents

		Principal documents		Non-Principal documents					
		C/KP	OPD	GFM	RFM	SCCF	LDCF	AF	Total
Procedural justice	PJ1	4.0	4.0	20.0	24.0	12.0	8.0	28.0	100
	PJ2	9.8	5.9	31.4	3.9	23.5	13.7	11.8	100
	PJ3	9.1	13.6	9.1	22.7	40.9	4.5	–	100
Distributive justice	DJ1	56.3	25.0	–	6.3	6.3	–	6.3	100
	DJ2	9.5	9.5	52.4	4.8	4.8	–	19.0	100

DJ1 mostly occurs in the Convention and the Kyoto Protocol (about 81%). At the same time DJ2 does not occur as frequently as expected in Principal Documents (only 19%). The former finding is amply understandable in light of the broad and general scope of these documents, whilst the latter requires some discussion. The under-representation of DJ2 is probably due to the closer attention that the Convention and the Protocol pay to developed countries, as recognized by the literature (for instance, Najam et al., 2003): DJ2 in fact is patently directed to the developing countries, which are not the main focus of these Principal Documents. Similar considerations apply to the Other Principal Documents (OPD). In the case of Non-Principal Documents, the higher incidence of fairness criteria is predictable. More worthy of note is the high frequency of DJ2 in both the GFM (52.4%) and AF (19%) documents. As far as the GFM category is concerned, this circumstance presumably again depends on the general concern of these documents with the most vulnerable countries. The AF documents, on the other hand, contain numerous references to DJ2 because of the intrinsic characteristics of the AF, whose governance is expressly aimed at giving priority of access to adaptation funds to particularly vulnerable developing countries.

7.5 Fairness Criteria in Governance Systems

The earlier-analyzed governance systems (structures, procedures and practices) of the UNFCCC (the COP and the COP/MOP, the SBI, the CGE and the LEG) formally fulfil, by and large, the three fairness criteria put forward. Distributive justice is out of the picture here, because its provisions are not directly applicable to the structures themselves, but only to their products, that is, only to outcomes.

The COP (and the COP/MOP) respects PJ1 since its (their) officers fairly represent all Parties. And through the inclusion in the Bureau of a representative of the SIDS directly able to bring their particular needs into the negotiations, it partly satisfies PJ2 as well.

The SBI complies with PJ1 in the process for election of its three-member Bureau, which must have an equitable geographic representation.

The CGE and the LEG satisfy PJ1, because the developing country Parties are significantly represented; and to a lesser degree they satisfy PJ2 as well, in that Parties are able to specify their needs and concerns. Moreover, the LEG, through the institutional function of its Vice-Chair of stimulating support by the developed for the developing countries, partly acknowledges the PJ3 Commitment to assistance from richer to poorer.

The GEF governance systems formally satisfy the first two criteria of procedural fairness. All countries are in fact included in decision-making processes (PJ1), and they are able to voice their interests (PJ2).

However, both the UNFCCC and the GEF governance architectures reveal a gap, even more evident for the latter, between the formal and substantial levels of procedural justice. Although the foregoing analysis has mostly focused on the formal level, the mismatch between the two levels has nonetheless emerged with different intensity. In the UNFCCC governance systems, despite the manifest effort after inclusiveness and equal access for every subject, procedural justice seems to weaken in practical terms, because the more powerful countries have a greater role in decision-making, whilst the weaker ones are typically marginalized. The GEF is, however, the governance system of the international adaptation funding regime where the difference between formal and substantial procedural justness is most dramatically evident. In formal terms, the GEF does in fact comprise elements of procedural justice. But the developing countries generally consider its decisional processes and its practices to be inefficient and, especially, unfair. They claim that the GEF has not followed the COP's guidance and that this circumstance, compounded by the financial bias of the GEF Council members, has produced their under/misrepresentation in the governance system, where all decisions are managed and controlled by the largest donor countries. In practice, this means that there is a significant participative deficit that thwarts the Inclusion of countries on grounds of equality (PJ1) and the Possibility to specify the terms of participation (PJ2), and that this severely jeopardizes procedural justice as it is perceived by the developing countries.

7.6 Fairness and Equity Criteria in Formal Adaptation Fund Meetings

The most prominent features of procedural justice that, according to the developing countries, should characterize the AF are, first, that they should be included in its governance structure and in the formal negotiating processes determining it, as requested by PJ1; and, second, that the AF, in allocating funds, should acknowledge, and be coherent with, their vulnerabilities and particular needs, in line with PJ2. At the AF meetings of SBI 24 observed, the issues at stake were indeed the recognition and participation of the developing countries in both negotiations on the AF and its management. On the one hand, the developing countries argued that their inclusion and recognition were essential because they considered the AF's money to be their money, generated through the CDM mechanism on assets located in their territories. On the other hand, the developed countries did not concede the point, citing the supposedly greater efficiency of the GEF in managing funds for adaptation, and thus implicitly disavowing the calls for procedural justice made by the developing countries. It is likely that this non-compliance with fairness criteria 1 and 2 was one of the main reasons for the SBI 24's failure. Although references to procedural justice were infrequent during the Bonn meetings, the South's implicit demand for recognition and participation was the element that both cemented the developing countries bloc together and opposed it against the Northern one. The two blocs disagreed on a number of rather trivial matters, but in the end the SBI 24 fiasco was due, as stated, to reciprocal distrust. In light of the analysis conducted it is possible to argue that the developing countries' distrust partly derived from the non-acknowledgment by the developed ones of their needs in terms of procedural justice, namely their exigencies of recognition and participation. Conversely, the success of SBI 25 came about because of a wide acknowledgment of procedural justice issues which bridged the North-South divide. At the Nairobi meetings, the developing countries were compact in urging acceptance of the advanced fairness criteria. Interestingly, the assertion that the AF's governance structures should comply with the PJ2 criterion – that a country should be able to specify the terms of its participation – was also made by the EU, the leading opponent of the developing countries bloc in these negotiations.

Procedural justice played a quite prominent part in both the Bonn and Nairobi meetings on the AF. Whilst its non-observance and the consequent neglect of the participation and recognition demanded by the developing countries in management of the AF reinforced the climate of distrust that eventually derailed SBI 24, the leading role that it acquired in Nairobi was one of main reasons for the success of the Kenyan AF negotiations. In fact the choice of operationalizing the AF under the COP/MOP, and not under the GEF, granted the developing countries the right to participate on grounds of equality sanctioned by the one-country-one-vote rule with a majority of Non-Annex I Parties. Further, the governance structure envisaged also gave the developing countries the right to be recognized in terms

of their specific needs and vulnerabilities, and guaranteed the deeper commitment of richer countries to effectively assisting weaker ones by means of adequate and predictable funding. Procedural justice thus had first a negative and then a positive influence on the development and outcomes of the negotiations on the AF. Fortunately, in fact, Parties were able to understand the detrimental role that the non-recognition of procedural justice in the management of the AF had played in Bonn, and their acknowledgement proved to be a major factor in the success of the Nairobi negotiations.

As pointed out, considerations of distributive justice and equity criteria were not explicitly cited during the meetings observed. However, the exigency that the needs and special circumstances of weaker parties should be given priority was the implicit rationale of all the arguments advanced by the developing countries, and this clearly testifies to the fundamental importance of DJ2 as far as the management of the AF is concerned. Further, the representatives of the developing countries maintained that an AF governance structure effectively able to raise funds would have to differentiate among the contributions made by the developed countries, as envisaged by DJ1. It is thus possible to argue that the negotiations on the AF evinced that an aspiration to distributive justice, though not explicitly demanded, characterized both blocs of countries and that this common ground favoured the definition of a proper governance structure for the AF and eventually the success of SBI 25.

7.7 Some Final Considerations on Justice in International Adaptation Funding

At a general level, it must be first made clear that procedural justice is a major concern in the climate architecture. Its omission is widely regarded as a dangerous failure that may hinder the advancement, and even the stability, of the entire negotiating framework. Moreover, the current climate change regime embraces a notion of distributive justice based on responsibility and capability, but it does not offer any effective indications as to how these ethical categories should be operationalized, apart from the rather generalist provisions concerning the principle of Common but differentiated responsibilities and respective capabilities.

However, the empirical analysis yielded strong evidence that, despite the formal importance given to ethical issues, in practice these still play an inadequate role in the institutions of the climate regime, especially in the GEF and with specific regard to adaptation financing.

What is ultimately the place of justice in international adaptation funding? It should be borne in mind that the ethical framework used for the analysis here rests on a deliberately loose definition of justice in the international funding of adaptation to climate change, and which describes it as the fair process, which involves all relevant parties, of raising adaptation funds according to the responsibility for climate impacts and of allocating raised funds putting the most vulnerable first.

The fairness of the process is a matter of pure procedural justice that excludes any consideration of outcomes. Procedural justice in international adaptation funding can perform two functions: a positive one when it is included, and a negative one when it is not taken into account. It is in fact frequently cited in Principal Documents and constantly sought after in Non-Principal ones. Governance systems have been defined by taking procedural justice requirements into account, even though they are not properly implemented. And in regard to a sensitive issue like management of the AF, procedural justice has proved crucial in fostering negotiation processes and practices: its non-acknowledgement hindered the negotiations at Bonn, whilst its inclusion helped notably to dissipate the mistrust between Parties, a circumstance that eventually helped to achieve the success at Nairobi.

The role of distributive justice is more indeterminate. It is a close concern of the Principal Documents of the climate regime, especially as regards allocation of the burden of adaptation financing, whereas the second part of the present definition of distributive justice in international adaptation funding seems to receive less consideration at this level. However, the responsibility-based allocation of adaptation costs is not completely operationalized in Non-Principal Documents, as if it were more of theoretical interest than a concrete goal for adaptation funding policies. Further, distributive justice was of relatively marginal weight in the negotiations observed, despite the repeated urging that disbursement rules and practices should pay closer attention to the vulnerability of the developing countries. Greater, though implicit, attention is paid to the allocative side of distributive justice, whereas the other dimension – the raising of adaptation funds – remains a theoretical aspiration which has not effectively given rise to practical provisions. I nonetheless conclude that the grounding of distributive justice in adaptation funding on liberal theories of justice is both theoretically sound and pragmatically viable. In fact, this family of theories of justice – which includes the RTJF and the SCA – used to support the fairness and equity criteria, pays particular attention to the weakest, as repeatedly underlined by the climate change regime and expressly demanded by the more vulnerable developing countries. This correspondence thus makes the achievement of distributive justice, or at least its greater acknowledgment, a fundamental factor in advancing the processes and practices of international adaptation funding.

A final point remains to be made concerning distributive justice. It is a common view among practitioners and scholars alike that the implementation of the notion of responsibility in negotiations on adaptation funding is a major challenge with limited likelihood of success. Responsibility would be strongly, and very likely successfully, opposed by the powerful developed countries, even though some observers concede that it is time to put justice at centre stage and use responsibility as a moral argument in the climate regime. Climate negotiations, however, are not a static game: they evolve quite rapidly, and circumstances may change. I believe that the struggle over the AF left a valuable legacy: implicit acknowledgement by the developed countries of their responsibility. The industrialized countries, in the end, by granting the developing countries' instances concerning management of the AF, acknowledged that their carbon intensive patterns of development interfered with climate systems and implicitly admitted their responsibility for the effects generated.

In sum, the discourse on justice in adaptation funding, and more generally in climate change, can and should be conducted from two complementary but distinct perspectives: the theoretical perspective and the empirical one. Procedural justice needs greater theoretical insight if is to gain wider substantial acceptance. It is nonetheless acknowledged in the climate regime, albeit rather formally. By contrast, the theoretical foundations of distributive justice are well developed, even if still usefully debated, and it is time to push the notion forcefully into the empirical sphere. Hence more substantial acknowledgment and further development of the theoretical bases of procedural justice, coupled with closer consideration of distributive justice, would be the main ethical means to move international adaptation funding, and eventually climate policy, forward.

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Chapter 8
Further Application of the Framework of Justice and Concluding Remarks

Abstract Chapter 8 extends the application of the fairness and equity criteria of the framework of justice put forward in Chapter 4 to some of the multilateral proposals advanced for funding adaptation to climate change in the post-Kyoto period. It summarizes the book's main contributions, and puts forward some policy ideas prompted by the analysis carried out.

Keywords Adaptation funding proposals · Post-Kyoto regime

8.1 Evaluation of Post-Kyoto Adaptation Funding Proposals

This book has argued that justice is both an important theoretical basis for, and to some extent a practical requirement of, international adaptation funding. Therefore, after assessment of the current UNFCCC regime for adaptation funding conducted in the previous Chapters, I believe that it is worth evaluating the ethical contents of the structures and procedures envisaged by some of the multilateral proposals that have recently emerged in the climate change debate with a view to improving international adaptation funding against the same fairness and equity criteria as advanced in Chapter 4.

The Bali Action Plan (UNFCCC decision 1/CP.13), in fact, on charting the course for new negotiating processes for the post-Kyoto commitment period and their main objectives, emphasizes the importance of adaptation funding. It expressly demands, at paragraph 1(e), the acknowledgment of a number of key issues – partly sanctioned also by the UNFCCC at article 4.3 – in order to strengthen adaptation funding: improved access to new and additional resources, their adequacy in terms of amount, their predictability. Which are characteristics of funding processes that, according to the same article 4.3 UNFCCC, are greatly favoured by appropriate burden-sharing among the developed country Parties.

In light of these observations, I argue that the equity criteria proposed in this book can be used as yardsticks with which to evaluate the appropriateness of adaptation burden-sharing for donor countries, as well as the potential for justly including

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vulnerable developing countries in some of the multilateral policy architectures set forth for the post-Kyoto period. At the same time, the improved access claimed by the Bali Action Plan can be viewed as a demand for the greater inclusion of the weaker countries in the governance systems of such architectures, and thus usefully read in light of the fairness criteria introduced by the framework of justice.

However, before evaluation is made of the ethical contents of the structures and procedures of the proposals, some further specifications are required concerning the applicability of the fairness and equity criteria put forward on the development of adaptation funding in the post-Kyoto period. Principles of justice and fairness and equity criteria were, in fact, theoretically validated in Chapters 3 and 4, in so far as validation requires analysis and contextualization of the theoretical constructs that govern the argument concerned. And since they were specifically tailored for the current international adaptation funding regime, they could be employed, in Chapters 6 and 7 and in Appendices B and C, as ethical yardsticks in the original context of analysis. But, on moving to a different temporal perspective of analysis, a question has to be addressed. It should be noted that, on the one hand, fairness criteria are presumably universal in so far as their ethical imperative is a general demand for fair involvement. Conversely, equity criteria are more context-dependent, because they are grounded in the ethical imperatives of responsibility and social vulnerability, dimensions that closely characterize adaptation funding as currently framed in the UNFCCC. This implies that although equity criteria are ethically validated by the moral arguments that back them, and are consequently ethically sound and can be applied in the context of the current international adaptation funding regime (as done in Chapter 7 and in Appendix C), their high context-dependency requires a certain degree of stability of the context when they are empirically applied for evaluation purposes on a different temporal scale (and, indeed, also in different ambits).

More specifically, the equity criteria identified by the book are expressly tailored to the present-day reality of climate change characterized, as made clear in the Introduction, by differences in power and in economic and institutional capacities that have brought about the current situation in terms of responsibility and social vulnerability. Were this situation to change, the application for evaluation purposes of the criteria of Differentiated historical responsibility and of Lack of human security would have to be carefully reconsidered in light of the diverse emerging dynamics. These criteria may even have to be abandoned if they prove unable to handle the novel challenges raised by the different or new situation. On the contrary, as said, the broader ethical imperative of fairness criteria makes them more robust against the instability of the context. They can thus be employed with less caution to evaluate, for instance, the ethical contents of other global environmental concerns, or of future adaptation funding architectures.

In practice, equity criteria should be applied in ethical evaluations of international adaptation funding on diverse temporal horizons with particular attention paid to the stability of the context. For instance, if fast-growing developing countries become large emitters to the extent that their emissions rival or even exceed those of current industrialized countries, or if weaker countries greatly reduce their social

Table 8.1 Fairness and equity criteria in international climate adaptation funding proposals

Nature (Conventional, Unconventional Hybrid)	International adaptation funding proposal	Proposing entity	Fairness and equity criteria
Conventional	+0.5% GNP from Annex I Parties	G-77 and China	PJ1
	Adaptation Finance Index	Oxfam	DJ1
	Climate Change Fund	South Centre	PJ1 (PJ2)
	Models based on existing precedents: Global Fund to fight AIDS, Tuberculosis, Malaria – Multilateral Fund for the implementation of the Montreal Protocol	Actionaid	PJ1, PJ2
	Multilateral Financial Structure for Climate Change	Third World Network	PJ1, PJ3, (DJ1)
Unconventional	Carbon-Gold	Oxfam	(PJ1), DJ2
	Financing Adaptation by Auctioning	Norway	–
	Global Carbon Adaptation Tax	Switzerland	DJ1, DJ2
	Greenhouse Development Rights	Heinrich Böll Foundation – Christian Aid	DJ1, DJ2
	Insurance Instruments for Adapting to Climate Risks	Munich Climate Insurance Initiative (MCII)	(PJ1), DJ1, DJ2
	International Air Passenger Adaptation Levy	Maldives (on behalf of LDCs)	DJ1, DJ2
	International Climate Change Adaptation and National Security Fund	United States	PJ3, DJ2
Hybrid	Convention Adaptation Fund	AOSIS	DJ1, DJ2
	Indian Financing Architecture	India	PJ1
	Integral Financial Mechanism for Living Well	Bolivia	PJ1
	International Blueprint on Adaptation	Tuvalu	DJ1, DJ2
	Sao Paulo Proposal	Basic project	DJ2
	World Climate Change Fund (Green Fund)	Mexico	PJ1, DJ1, DJ2

PJ1: Criterion 1 of Procedural Justice (Inclusion of all countries); PJ2: Criterion 2 of Procedural Justice (Possibility to specify the terms of participation); PJ3: Criterion 3 of Procedural Justice (Commitment to assistance from richer to poorer); DJ1: Criterion 1 of Distributive Justice (Differentiated historical responsibility); DJ2: Criterion 2 of Distributive Justice (Lack of human security). Criteria in parentheses are only partially satisfied.

vulnerability, equity criteria will not be applicable in assessment of the distributive justice of a future regime. Nonetheless, I believe that equity criteria can still be applied to the proposed architectures for adaptation funding, because the context of the second commitment period is, and will be, in my opinion, still largely the same as that of the first commitment period of the Kyoto Protocol in terms of responsibility and social vulnerability. Therefore, the risk that the instability of the context would impede the use of equity criteria seems to be averted.

Among the international climate adaptation funding proposals for the post-Kyoto period, now analysed are some of the most relevant multilateral ones, reported in Table 8.1. They were put forward both by international NGOs and research initiatives, and by Parties to the Convention. Considered among the latter are only the more structured ones, mostly presented at the UNFCCC Workshop on Investment and Financial Flows to Address Climate Change (In-Session Workshop at the Second Session of the AWG-LCA – Bonn, 5 June 2008) and submitted to the AWG-LCA Third (Accra, August 2008) and Fourth (Poznan, December 2008) Sessions. Not considered are the unstructured proposals, because they are insufficiently organized, and mainly consist in general principles and declarations of intent.

The proposals are grouped according to whether the nature of the contribution is conventional (i.e. grants or loans made available by the general budget of the donor country), unconventional (i.e. raised through alternative market mechanisms such as the carbon-based ones, or more generally taxes and levies), or hybrid (i.e. a combination of the previous two).

In what follows I shall not enter into the technical, scientific or policy details of the proposals examined; rather, after a brief specification of their main features, I shall evaluate the envisioned architectures solely against – that is, I check in their structures and procedures the emergence of – the fairness and equity criteria advanced in Chapter 4.

8.2 Conventional Funding: Budgetary Contributions

8.2.1 +0.5% GNP from Annex I Parties

The G-77 and China proposal (UNFCCC 2008a) suggested the establishment of a financial mechanism under the authority of the COP to give full implementation to the Convention's commitments for the provision of financial resources for a number of activities, among which adaptation actions. It should be funded by a contribution from Annex I countries ranging from 0.5 to 1% of their GNP.

In terms of procedural justice, PJ1 seems to be respected insofar as the envisaged financial mechanism should be governed by a Board, appointed by the COP, which shall have an equitable and balanced representation of all Parties.

The equity criteria put forward, instead, are not apparent in this proposal, despite its vague reference to the principle of equity and Common but differentiated responsibilities that should underpin the mechanism.

8.2.2 Adaptation Finance Index

The Adaptation Finance Index (AFI) is a burden-sharing rule proposed by Oxfam International (Oxfam 2007) with which to estimate countries' financial contributions to adaptation in the developing world based on their responsibility for, and capabilities to shoulder the costs of adapting to, climate impacts.

As such, it neglects procedural justice and provides no guidance for the allocation of raised funds because it focuses only on the burden-sharing side of distributive justice. In this regard, the AFI fits well with DJ1, because it takes account of historical responsibility in terms of cumulative emissions and includes considerations of countries' capacity to contribute insofar as they lie above a sufficientarian threshold of human development (Human Development Index > 0.9). Thus, from a different perspective, the AFI, similarly to DJ1, is based on retrospective responsibility coupled with prospective responsibility.

8.2.3 Climate Change Fund

The South Centre (South Centre 2008) proposed the establishment of a Climate Change Fund (CCF) under the COP's direct guidance so that the requirement of the Convention in providing the funding to respond to climate change could be wholly fulfilled, also in terms of adaptation.

The institutional structure of the CCF envisages an Intergovernmental Board, similar to that of the AF, in which Parties are represented in an equitable and balanced way, thus fulfilling PJ1. A hesitant reference to PJ2 is made when it is affirmed that the selection of activities to be funded should consider, according to article 4.1 UNFCCC, the developing countries' priorities, objectives, and circumstances.

No references are made to distributive justice.

8.2.4 Models Based on Existing Precedents: Global Fund to Fight AIDS, Tuberculosis, Malaria – Multilateral Fund for the Implementation of the Montreal Protocol

Actionaid (Actionaid 2007) explored and evaluated two models for funding adaptation based on established mechanisms: the Global Fund to fight AIDS, Tuberculosis, Malaria, and the Multilateral Fund for the Implementation of the Montreal Protocol. In both cases the suitability of the analyzed precedents to the funding of adaptation was mainly seen as residing in their governance structures and procedures, so that considerations of distributive justice were excluded. The Global Fund, according to the analysis carried out, can serve as a model for an adaptation fund because it includes in its governance structure all countries that respect PJ1 on a one-country-one-vote basis; and because of its commitment to country ownership and country-led processes, which reflect PJ2. Similarly the Multilateral Fund model,

according to Actionaid, can be usefully applied to adaptation funding because of the equitable representation that it assures to all Parties, which is in line with PJ1.

8.2.5 Multilateral Financial Structure for Climate Change

The Third World Network (UNFCCC 2008g) suggested the establishment of a Multilateral Financial Structure for Climate Change (MFS) under the authority and guidance of the COP in order to provide comprehensive funding for, inter alia, the implementation of adaptation measures. The governance structure envisaged, similar to that of the AF, would be characterized by the balanced regional representation of all countries, and thus would satisfy PJ1. Furthermore, the MFS also establishes a Technical Assistance Programme for providing support and advice to developing countries, as suggested by PJ3.

The only partial reference to an equity criterion – namely DJ1 – is made when it is affirmed that the MFS should be funded by the developed countries according to the ratio of their United Nations contributions. Since this scale is the percentage of the UN budget that the organization charges its member states, it requires, in practice, that countries with higher levels of income should contribute more. This is as required by the Rawlsian difference principle in regard to prospective responsibility, which jointly with the principle of equality (not referred to in any terms here), characterizes the equity criterion of Differentiated historical responsibility.

8.3 Unconventional Funding: Contributions Raised Through Market-Based Instruments, Taxes, and Levies

8.3.1 Carbon-Gold

Oxfam's Turning Carbon into Gold proposal (Oxfam 2008) posited that post-2012 adaptation needs should be funded with an auctioned portion (7.5%) of the international emission allowances (the AAUs) assigned to Annex I Parties so that they may fulfil their emission commitments, and with revenues generated by emission trading schemes established in sectors, such as international aviation and shipping, which should be regulated in the developed countries because they have both the potential to reduce GHG emissions and to generate new adaptation finance. The revenues raised should be allocated by privileging the needs of the most vulnerable subjects through a financial mechanism under the governance of the UNFCCC such as the AF.

Part of the procedural justness of the Carbon-Gold proposal, namely that captured by PJ1, is therefore achieved through the governance system of the AF, which, in fact, 'provides a fair and appropriate level of representation for developing countries' (Oxfam 2008, p. 18). The burden-sharing side of distributive justice is

not relevant because revenue-raising is fully resolved through market mechanisms. By contrast, the allocative side of distributive justice is coherent with DJ2 because the disbursement processes should be primarily targeted on subjects, in this case communities, with scant levels of human security: that is, the most vulnerable ones.

8.3.2 Financing Adaptation by Auctioning

Norway's submission to the AWG-LCA (UNFCCC 2008b) consists in a proposal for the financing of adaptation by auctioning – directly or through a tax on emissions – a quota (Norway proposes 2%) of the emission permits assigned to states under a cap and trade system. The revenues could also be used to fund adaptation actions.

The Norwegian proposal refers neither to procedural nor to distributive justice in any of its contents.

8.3.3 Global Carbon Adaptation Tax

The Swiss proposal (UNFCCC 2008c) envisions 'a global burden-sharing system, based on the principle of common but differentiated responsibilities, and legally binding to all nations' (UNFCCC 2008c, p. 94). The revenues are to be raised through a uniform global carbon tax of \$2/tCO2 on all fossil fuel emissions, with a basic tax exemption of 1.5t CO2-eq per inhabitant. Countries with higher emission levels (and thus high income levels, given their strict correlation) thus contribute the most, and the free emission level guarantees further lessen the burden of low-emitting countries, who can have most of their emissions covered by the exemption. In ethical terms, this structure implies that funds are to be accumulated on the basis of DJ1, since each country contributes according to its emissions through the tax, and since contributions take account of the differing abilities to pay through the introduction of a per capita-based basic tax allowance.

The funds raised, apart from a quota financing domestic adaptation policies, are channelled, in differentiated proportions, according to countries' per capita GDP, into a Multilateral Adaptation Fund (MAF) which invests money in two areas: prevention and insurance. The insurance pillar has the general aim of safeguarding public goods not covered by private insurance schemes, and it is focused in particular on 'vulnerable institutions, enterprises, and segments of population in medium and low income countries', while 'compensation of lost assets of the most vulnerable groups shall have priority' (UNFCCC 2008c, p. 97). Thus, in this provision, the MAF complies with DJ2.

An open question raised by the Swiss proposal 'How to ensure an effective governance ...' (UNFCCC 2008c, p. 100) testifies that future developments of this architecture will concentrate on issues of procedural justice as well.

8.3.4 Greenhouse Development Rights

Baer et al. (2008) introduced a framework – the Greenhouse Development Rights (GDR) – within which to achieve the ultimate goal of stabilizing the climate through an international effort able to safeguard 'the right of all people to reach a dignified level of sustainable human development.' (Baer et al., 2008, p. 13). Although the GDR is not specifically targeted on funding adaptation, it is considered here because it aims to reduce poverty and to enhance human development by helping the most vulnerable subjects to cope with climate change. In this regard, the objective of bringing all persons above a development threshold of 7,500 US$ (2007 PPP) a year (or 125% of the 6,000 US$ a year that define the global poverty line) is entirely consistent with the ethical focus on social vulnerability and on the enlargement of human development that substantiate DJ2. On the burden-sharing side, the GDR envisages that the allocation of costs for each country be determined by a Responsibility and Capacity Index (RCI) and raised by means of a progressive global climate tax levied on all countries on the basis of their RCI scores. Responsibility and capacity are defined in individual terms as, respectively, cumulative emissions that correspond to consumption, and total income above the development threshold, aggregated to obtain the country's figure and eventually combined with equal weight.

The GDR thus clearly includes the principles of justice underpinning DJ1, and, in complementary terms, it can be similarly considered as based on both retrospective and prospective responsibility.

8.3.5 Insurance Instruments for Adapting to Climate Risks

The Munich Climate Insurance Initiative's (MCII) Insurance Instruments for Adapting to Climate Risks proposal (UNFCCC 2008e) aims to assist the most vulnerable Parties in adapting to climate change by reducing climate-related risks. The MCII's module envisages a prevention pillar to reduce climate risk through insurance instruments, and a two-tiered insurance pillar which will cover the premium payments and enable the creation of public-private insurance systems targeted on the specific needs and special circumstances of particularly vulnerable developing countries. In this regard the MCII's proposal seemingly complies with DJ2.

The proposed insurance scheme is to be funded by annual contributions from a multilateral adaptation fund, in its turn financed by Annex I Parties, who should agree on a premium payment formula in which contributions should be proportional to current or historical CO2 emissions. A threshold for paying entities of CO2/capita emissions should be fixed, with countries below this threshold being fully exempted from the payments. One component of the formula could also be based on GDP. These provisions therefore render the contribution side of the MCII proposal consistent with DJ1.

Furthermore, the MCII claims that developing country ownership and public transparency of decision-making should be necessary features of the institutional structure of the insurance pillar. It thus indirectly recalls PJ1.

8.3.6 International Air Passenger Adaptation Levy

The Maldives have proposed an adaptation solidarity levy on air passengers so as to provide more adequate funding for adaptation in the poorest and most vulnerable countries (UNFCCC 2008f). Inspired by the French solidarity levy to combat HIV/AIDS, and shaped by the IATAL solidarity levy (Muller and Hepburn, 2006), this scheme should contribute to replenishing the AF.

The Maldivian proposal is indeed in line with DJ2, given its focus on particularly vulnerable countries and communities. However, it seems to be also inspired by principles of justice akin in their logic, although declined at the individual level, to those that gave origin to DJ1, given that it considers the responsibility of air passengers for the international emissions produced, and their capacity to contribute as reflected by their possibility to afford international air travel, and envisages a much higher level of the levy for business/first class journeys. No procedural aspects of justice are explicitly considered, however.

8.3.7 International Climate Change Adaptation and National Security Fund

The US Lieberman-Warner Climate Security Act of 2008 (US Senate 2008) proposed that the US Treasury establish an International Climate Change Adaptation and National Security Fund with which to finance an International Climate Change Adaptation and National Security Program. The revenues for the Fund should be raised by auctioning a percentage, growing over the years, of the annual emission allowances of the envisaged US emission trading scheme: up to 60% of the funding can be allocated to international adaptation activities.

The Program aims, inter alia, to provide assistance to the most vulnerable developing countries in the planning, financing and execution of adaptation projects, and to support adaptation research in and for them. It seems possible to argue that these objectives make the US proposal coherent respectively with DJ2 and with PJ3.

8.4 Hybrid Funding: Conventional and Unconventional Contributions

8.4.1 Convention Adaptation Fund

The AOSIS's Input paper (UNFCCC 2008d) addresses adaptation funding among other issues. The AOSIS demands the establishment of a Convention Adaptation

Fund (CAF), complementary to the AF and targeted on developing countries, to fund adaptation planning and projects, and a Multi-Window Mechanism to Address Loss and Damage from Climate Change Impacts. The CAF should be funded through '[a]ssessed contributions based on the level of countries' GHG emissions, taking into account their respective levels of development and ability to pay as well as historical responsibilities' (UNFCCC 2008d, p. 22); international market-based instruments (auctioning of percentages of national mitigation allocation schemes, and international levies); and voluntary contributions. It is further specified that prioritarian access to the CAF should be granted to 'particularly vulnerable developing countries SIDS and LDCs' (UNFCCC 2008d, p. 22).

In light of these specifications, the AOSIS' mechanism seems to be consistent with DJ1, and, on the allocative side of distributive justice, also with DJ2.

8.4.2 Indian Financing Architecture

India submitted to the Fourth Session of the AWG-LCA a Financing Architecture for Meeting the Financial Commitments under the UNFCCC (UNFCCC 2008d). This proposes that mitigation and adaptation should be funded by 0.5% of the total GDP of the developed world, freely raised according to each country's preferences (e.g. through the auctioning of emission rights, carbon taxes, etc). Individual contributions by the developed countries can be multilaterally defined on the basis of references such as historical responsibility, current emission level, per capita GDP. Other proposed funding sources are levies on international travel negotiated under the Convention, and any other grants or contributions made on a voluntary basis. The governance of the funds made available should be based on a transparent structure that, similarly to that of the AF, assures equitable and balanced representation to all Parties, according to the provisions of article 11.2 UNFCCC.

Therefore, as far as distributive justice is concerned, neither DJ1, because the specific principles for raising funds are not specified, nor DJ2, whose area of investigation is not taken into account, emerge in the Indian architecture. On the procedural side, PJ1 seems to be respected.

8.4.3 Integral Financial Mechanism for Living Well

Bolivia submitted to the AWG-LCA Fourth Session a document (UNFCCC 2008d) that includes a proposal to create an Integral Financial Mechanism for Living Well. This mechanism should be funded by 'a contribution of at least 1% of the GDP in developed countries and other contributions from taxes on oil and gas, financial transactions, sea and air transport, and the profits of transnational companies.' (UNFCCC 2008d, p. 3). Furthermore, it should be managed in a transparent and non-bureaucratic way whereby decisions are taken by all member countries, especially the developing ones. It thus seems that the Bolivian proposal takes account only of PJ1.

8.4.4 International Blueprint on Adaptation

Tuvalu's International Blueprint on Adaptation (UNFCCC 2007) has the general objective of providing predictable and adequate international funding to the most vulnerable for preparing for, and coping with, climate impacts. Among the instruments proposed, the Blueprint envisages a Burden Sharing Mechanism to provide funding for the SCCF and for the LDCF. This Burden Sharing Mechanism would be based on a levy made on international aviation and maritime transport, differentiated on the basis of the group of countries operating the transport. Furthermore, the Burden Sharing Mechanism should be funded by contributions from 'Annex II and higher income Annex I countries (noting the principle of common but differentiated responsibilities) . . . based on a scale that could be calculated using a formula that accounts for the level of GHG emissions per country since 1990 and a GDP rating (ability to pay factor).' (UNFCCC 2007, p. 6). This latter provision makes the Tuvalu's Blueprint consistent with DJ1, whereas its objective of privileging the most vulnerable shows its consistency with DJ2.

8.4.5 Sao Paulo Proposal

The Sao Paulo proposal (Basic Project 2006) advances a highly composite agreement on future international climate policy. Core element 11 Enhanced Implementation of Adaptation (Basic Project 2006, pp. 23–25) also deals with adaptation funding. According to the proposal, enhanced funding to the AF should be secured through a 2% levy on VERs (Verified Emission Reductions), similar to the 2% share of the proceeds on CERs, proceeds from auctioned allowances for international bunkers, and a share of the financial commitment (funded by the general budget) of Annex I/B countries as defined by Core element 2. In regard to the raising of funds, no distributive justice issues are taken into account. As far as disbursement of the raised funds is concerned, the Sao Paulo proposal recommends that they be targeted primarily on 'programmatic approaches and projects in developing countries that help ecosystems and people particularly vulnerable to the adverse effects of climate change to adapt to climate change.' (Basic Project 2006, p. 25), which is clearly in line with DJ2.

No concerns of procedural justice are explicitly raised by the Sao Paulo proposal.

8.4.6 World Climate Change Fund (Green Fund)

Mexico's proposal (UNFCCC 2008b) suggested establishing a multilateral financial mechanism – the World Climate Change Fund (Green Fund) (WCCF) – complementary to the existing funding mechanisms, with the objective, among others, of supporting adaptation to climate hazards and to the impacts of response measures. The revenue mechanisms envisaged by the Mexican fund are particularly

interesting. Contributions, generated both by countries' budgets and the auctioning of emission permits, are expected from all countries (i.e. both developed and developing) with the exception of the LDCs, in strict accordance with the principle of Common but differentiated responsibilities, which should be operationalized through different combinations of three indicators: greenhouse gas emissions, population, and GDP. The specific burden-sharing formula should be determined, preferably on a consensual basis and periodically reviewed, by criteria such as polluter pays, equity, efficiency, and payment capacity. This formula should, however, ensure that developed countries are the largest contributors and that developing countries receive benefits that exceed their contributions. Furthermore, the WCCF also envisages that the contributions received be subject to a, yet to be determined, adaptation levy allocated to the AF. These two features of the WCCF's disbursement scheme make it consistent with DJ2, for it privileges, directly or via the AF, the weakest Parties, despite its wider span, which includes also the developed countries among the recipients of funds.

On the burden-sharing side of distributive justice, the WCCF is line with DJ1 because its burden-sharing rule is based on a Responsibility-and-Capability indicator which, among donor countries, privileges those with lower capacities to pay.

As far as procedural justice is concerned, the governance structure of the WCCF envisions that all contributing and beneficiary countries, developed and developing, participate on an equal ground in the systems, which accords with the requirements of PJ1.

8.5 Some Final Reflections on Justice in the Post-Kyoto Architectures

What are the reasons for, and the implications of, the emergence of the different themes of procedural and distributive justice that characterize the architectures analyzed?

A first general consideration relates to the attention paid by the architectures for funding adaptation in the post-Kyoto period to justice in both its procedural and distributive aspects. This circumstance testifies, I believe, to the growing awareness of all involved parties that ethical considerations can reconcile their different instances, make it possible to gain theoretical consensus on an approach to adaptation funding, and eventually enhance the political feasibility of the financial architecture deemed just.

More specifically, conventional proposals are more attentive to procedural justice, and to the burden-sharing side of distributive justice. These architectures probably under-evaluate the importance of the allocation of raised funds because, on the one hand, they implicitly assume that the allocative side of distributive justice is far less arguable than the distribution of burdens due to the nature of the contribution (i.e. resources deriving from the donor's budget). On the other hand, this family of proposals seems implicitly to rely on a perfect procedural justice

approach that assigns the resolution of allocative issues to processes themselves. Unconventional architectures, instead, pay close attention to both sides of distributive justice, and they neglect procedural justice almost entirely. It seems that unconventional accounts, by avoiding references to fairness criteria, assume the efficiency of markets and their consequent inherent capacity for fair allocation: in short, market efficiency would make any procedural concerns pointless. However, this is an assumption difficult realistically to defend owing to the wide disparity of negotiating power between rich and poor countries.

From a different perspective, the demand for procedural justice put forward by the proposals examined seems to concern only the principle of Inclusion. I would maintain, however, that neglecting the other two principles of procedural justice (Recognition and Balance of power) produces a dangerous void that may undermine the entire significance of procedural justice. On the contrary, distributive justice, when considered, comprises both of its foundational principles (Equality and Difference in regard to burden-sharing; Basic capability equality in regard to its allocative side) and therefore offers a more solid ethical argument for the feasibility of the relevant proposals.

8.6 Main Contributions of the Book

This book is, in the end, an attempt to consider critically and to define the funding of adaptation to climate change at the international level. In fact, it claimed at the outset that three assumptions should characterize the ethical dimension of the international-level funding of adaptation: the fairness of its processes, acknowledgment of responsibility as a reference for raising adaptation funds, and acknowledgement of social vulnerability for the allocation of those funds. The book has sought to substantiate these claims in two ways: by justifying them in ethical terms; and by developing a framework of justice for funding adaptation at the international level and using it to evaluate the justness of the current regime – and, in this Chapter, briefly to assess its most prominent developments in the post-Kyoto period. This conclusion will indicate where these efforts have led.

On the one hand, some issues have come to the fore in strict relation to the perspective of investigation adopted: the occurrence and meaning of these issues depend on the fairness and equity criteria advanced by the ethical framework, which in their turn are determined by the three normative assumptions that should characterize the international adaptation funding regime. These issues therefore mainly relate to the second general objective pursued by the book: evaluation of the adaptation funding regime against the fairness and equity criteria put forward in the framework of justice.

The textual analysis of UNFCCC documents has yielded some evidence of the role of justice. Procedural justice has a more prominent role than distributive justice in the documents related to adaptation funding. The Convention and the Kyoto

Protocol, the foundational documents of the UNFCCC regime, mostly refer to distributive justice, and especially to the grounding of fund-raising on responsibility, as required by the equity criterion of Differentiated historical responsibility. However, the other Non-Principal Documents, such as COP decisions, SBI texts, GEF documents, instead include a considerable number – the majority – of references to procedural justice. Among principles of procedural justice, that of Participation, as expressed by the fairness criterion of Possibility to specify the terms of participation, is the most recurrent.

The governance systems of the UNFCCC that deal with adaptation funding formally acknowledge procedural justice in so far as they respect the fairness criteria employed. However, it is widely acknowledged that there is still a wide gap between the formal and the substantial level of procedural justice, especially within the GEF. Developing countries still vocally complain about the existence of a significant participative deficit due to an unbalanced distribution of power that impedes the inclusion of all countries on grounds of equality and the possibility to participate in negotiations fairly.

This has also been made evident by the observations of meetings concerned with the AF. The developing countries constantly demanded their inclusion in the governance structures of the AF and strenuously rejected the GEF as the financial entity to manage it, owing to their scant substantial participation in the GEF governance system. Another important circumstance yielded by observation of the AF meetings is that, in any discussion on the funding of adaptation, the developing countries place especial importance on consideration of distributive justice related to the allocation of raised funds. They do so because of their social vulnerability, and because acknowledgement of their needs and special circumstances is the sine qua non for their involvement, and ultimately also for the advancement of the entire climate change regime.

On the other hand, in achieving its first objective – the justification and development of a framework of justice for international adaptation funding – the book has also put forward some reflections on the ethical substance of international adaptation funding. In this regard, the greatest effort has been devoted to the definition of the ethical basis for funding adaptation and to the development of the consequent framework of justice. Specifically, this is apparent both in the attempt to give novel synthesis and organization to some important issues of justice related to international adaptation funding in order to substantiate the framework proposed, and hopefully in the framework itself.

As far as the first point is concerned, the book has sought to clarify, organize and justify particular critical dimensions of justice in order to lay an ethical basis for international adaptation funding. It has thus sought to explain how it is possible, as required by the context of analysis, to defend the collectivist choice of considering states as primary subjects of justice, and to show that a suitable pattern of distributive justice related to the raising and allocation of adaptation funds is a prioritarian one grounded in liberal, broadly egalitarian theories of justice such as those of Rawls and Sen. Further, the book has defended the utility of referring to international justice in adaptation funding by adopting a pure procedural perspective on

the side of procedural justice, and the statist approach operationalized by means of Rawls's and Sen's theoretical constructs on the distributive side. Then, in order to analyze the ethical dimensions of international adaptation funding, the book has put forward a broad, and thus inevitably not clear-cut, definition of justice as the fair process, which involves all relevant parties, of raising adaptation funds according to the responsibility for climate impacts and of allocating such funds by putting the most vulnerable first. In advancing this definition, the intention has not been to give a succinct and definitive account, but rather to identify a basis on which to discuss in detail the core elements of justice in international adaptation funding necessary to substantiate the ethical arguments of the book. Therefore explored have been the ethical roots of the components of the definition put forward – the fairness of the process in terms of involvement of all parties; the responsibility for climate impacts as a basis for raising funds; the social vulnerability to climate impacts as a reference for allocating funds – in order to define the ethical bases and imperatives for the three pillars of the framework of justice.

A second area of theoretical elaboration is the framework of justice itself. This starts from awareness that liberal theories of justice require stronger parties to assist weaker ones harmed by climate impacts, as a means to achieve greater equality and to lessen injustice, and that these constructs are therefore those best suited to dealing with the ethical aspects of international adaptation funding. Particularly, the RTJF and the SCA may prove useful in systemizing the various elements that form the above definition of justice in the funding of international-level adaptation to climate change. In regard to procedural justice, the pure procedural standpoint of the analysis has been taken from Rawls. It has been selected because it allows for very unrestricted interactions among the parties participating in climate processes, and because it simply focuses on just procedures, irrespectively of the level at which they take place and independently of the features of the outcomes. Hence it does not overlap with the distributional aspects of justice and it augments the clarity and transparency of negotiating processes. The pure procedural perspective makes it possible to define three principles of procedural justice as fundamental for international adaptation funding: Recognition, Participation, and Distribution of power. On the basis of these principles the framework of justice defines three fairness criteria. The first requires the effective inclusion on grounds of equality and fairness of all countries, especially the more socially vulnerable ones, which are usually without voice in all decision-making on adaptation funding. The second criterion of fair participation in negotiations entails on the one hand the right of every polluting country to clarify and defend the magnitude of its responsibility and thus of its potential contribution, and on the other, the right of every harmed country to bring its social vulnerability and adaptation priorities into negotiations; and for both groups of countries the right to make all these elements count in the processes of raising and allocating adaptation funds. The third fairness criterion requires the substantive commitment of richer countries to providing assistance in the international adaptation funding regime to the more socially vulnerable ones, thereby enabling them to develop the capacity to participate effectively in this complex process and ultimately enhance their negotiating power.

In the distributive realm, as far as the raising of adaptation funds is concerned, the book has again relied on Rawls's construct, because it sums up both equality and liberty, and these are deemed essential for grounding the complex notion of responsibility advanced. Rawls's two principles of distributive justice – the Egalitarian and the Difference ones – entail, in the realm of international adaptation funding, the equity criterion of Differentiated historical responsibility. This suggests that, according to the Rawlsian Egalitarian principle, the yardstick for raising adaptation funds must be outcome responsibility based on historical accountability, whereas the Difference principle requires consideration of undeserved inequalities in social primary goods among the dispenser countries that have actually influenced historical GHG emissions and contributed to the consumption of atmospheric capacity, and determined, in terms of prospective responsibility, their capacities and possibilities to support deserving countries.

On the allocative side of distributive justice, the theoretical reference is Sen's approach, which exhibits a broadly egalitarian perspective on justice that aims to increase the well-being of the poorer. The Senian construct offers an evaluative space of justice centred on the ability to turn resources into valuable beings and doings that form well-being. The book has further argued that, in the context of international adaptation funding, it is useful to refer to the notion of human security understood as the protection and promotion of a limited number of central components of well-being that ultimately determine social vulnerability. The equity criterion springing from this construct of justice, and advanced by the ethical framework for international adaptation funding, is that of Lack of human security. Specifically, this criterion states that the lower the degree of human security, the greater access the more socially vulnerable climate-affected countries should have to adaptation resources.

8.7 Policy Ideas

A book on a controversial policy topic such as climate change usually concludes with analysis of its policy implications, or even, in the most audacious cases, with policy recommendations. The normative slant of this book, however, reduces its policy-oriented potential to the criticalities highlighted by the empirical analysis. In other words, it seems possible to suggest improvements for, and to verify their emergence in, the future regime on adaptation funding on the basis of the limitations of the current UNFCCC regime in terms of compliance with the fairness and equity criteria.

In short, the most evident critical issues are, as noted above, a simple, yet differentiated, acknowledgment within the UNFCCC architecture on adaptation funding of procedural and distributive justice, and a consequent lack of effectiveness in their operationalization; the marked difference between a formal and a substantial recognition of ethical issues; the potential usefulness of a greater role of procedural justice; and the need for more concrete attention to distributive justice. And,

since approaches to international adaptation funding have to date been rather unsatisfactory and ineffective, as the climate change community points out, it may be worthwhile being courageous and presumptuous in putting forward policy ideas, be they moderate or radical, that could improve the future regime on adaptation funding; ideas that, despite a certain unavoidable generality, may echo the sensibilities of the many, from practitioners to academics, involved in the debate.

The first criticality can be addressed by incorporating detailed procedures for implementing the ethical provisions acknowledged into the UNFCCC architecture on adaptation funding. The operationalization of procedural justice can, it seems, be carried out by implementing the most neglected fairness criteria advanced by the ethical framework, although this may further weigh down an already cumbersome architecture. Thus, as required by the criterion of Possibility to specify the terms of participation, institutional fora should be created to bring the real dimensions of responsibility and social vulnerability into negotiations, and/or some forms of binding commitment and modalities for richer countries to support the negotiating capacities of poorer ones, as required by the fairness criterion of Commitment to assistance from richer to poorer. In this regard, the post-Kyoto architectures analyzed, despite their generally greater attention to justice, seem still to neglect the criteria of Possibility to specify the terms of participation and of Commitment to assistance from richer to poorer.

The effective operationalization of distributive justice demands that the notions of responsibility and vulnerability be clearly identified and, to some extent, quantified. The equity criterion of Differentiated historical responsibility and of Lack of human security, structured as specified, may prove useful in this regard. Moreover, such a pragmatic approach to the implementation of justice would presumably considerably improve the substantial recognition of ethical issues within the UNFCCC adaptation funding regime, its other major drawback, in so far as concrete provisions are more difficult to avoid, and compliance with clearly spelled out criteria easier to control. The unconventional and hybrid proposals scrutinized are attentive to distributive justice, and some of them constitute concrete attempts to operationalize its burden-sharing side through mechanisms that seem very close to the logic that inspired the criterion of Differentiated historical responsibility.

A further point concerns the still insufficient importance given to procedural justice in substantial terms. Both its inclusion in, and its exclusion from, the international adaptation funding regime have played roles, respectively, in the success and failure of negotiations. Therefore, again, unambiguous specification of the essence and boundaries of procedural justice, including the dimensions put forward by the framework of justice, which unfortunately seem disregarded by the developments of the funding regime taken into account, may favour its substantial consideration and ultimately strengthen and advance the entire negotiating regime. A similar conclusion can be drawn in regard to distributive justice. However, in this context primary attention should be given to identification of its possible operational meaning. The notions of responsibility and of social vulnerability, as substantiated by the framework through the equity criteria of Differentiated historical responsibility and Lack of human security, seem promising alternatives. Only when the essence of

distributive justice has been specified, as for instance has happened in certain architectures put forward for the post-Kyoto period, will it be possible to expand its role in the future regime on adaptation funding in such a way that negotiations are enhanced.

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Appendix A
List of Non-Principal Documents

The following classification of the Non-Principal Documents examined is based on the one used by the UNFCCC in its website to group those relevant to financial mechanism under the heading Cooperation and Support. It does not include all documents, but only those that the UNFCCC itself regards as most important: as said in Chapter 6, other SBI working documents related to the AF were considered and employed in the analysis of SBI 24 and 25 meetings on the AF.

It should be specified that the climate change regime has several document types denoted with different symbols. The most common are the following. Regular (no symbol): session reports, provisional agendas, most Secretariat background documents, negotiating texts; Information (INF): logistical data, other information, workshop reports; Miscellaneous (MISC): proposal or views submitted by parties; Technical Papers (TP): detailed background papers on technical issues; Limited distribution (L): draft decisions or conclusions presented to the COP or SBs for adoption. Documents denoted with Add, Rev and Corr are subsequent additions, revisions or corrections to any of the above documents.

Table A.1 Non-Principal documents

	COP (CP) and COP/MOP (CMP) decisions	Other UNFCCC documents	GEF documents
Guidance to financial mechanism	11/CP.1	FCCC/CP/2004/6	GEF Resource Allocation Framework
	12/CP.2 12/CP.3	FCCC/CP/2006/3	GEF/C.23/Inf.8/Rev.1
	11/CP.2	FCCC/SBI/2007/Misc.11	GEF/C.28/4/Rev.1
	2/CP.4	FCCC/SBI/2007/Misc.11/Add.1	Report on the GEF to the Tenth Session of the COP to the UNFCCC

M. Grasso, *Justice in Funding Adaptation under the International Climate Change Regime*, DOI 10.1007/978-90-481-3439-7_8, © Springer Science+Business Media B.V. 2010

Table A.1 (continued)

	COP (CP) and COP/MOP (CMP) decisions	Other UNFCCC documents	GEF documents
	6/CP.7	FCCC/CP/2008/L.5	Report on the GEF to the Twelfth Session of the COP to the UNFCCC
	5/CP.8		Report on the GEF to the Thirteenth Session of the COP to the UNFCCC
	6/CP.8		FCCC/CP/2008/2/Rev. 1
	4/CP.9		
	8/CP.10		
	3/CP.12		
	7/CP.13		
Review of financial mechanism	9/CP.1	FCCC/SBI/2004/18	GEF OPS 1
	12/CP.2	FCCC/SBI/2005/INF.7	GEF OPS 2
	13/CP.2	FCCC/SBI/2006/MISC.9	GEF OPS 3
	11/CP.3	FCCC/SBI/2006/MISC.3	
	12/CP.3	FCCC/SBI/2006/7	
	3/CP.4	FCCC/SBI/2006/L.4	
	5/CP.8	FCCC/SBI/2006/L.32/Add.1	
	9/CP.10	FCCC/SBI/2007/L.34/Add.1	
	2/CP.12	FCCC/SBI/2007/21	
	6/CP.13	FCCC/TP/2007/4	
		FCCC/SBI/2008/L.29	
Special Climate Change Fund	4/CP.7	FCCC/SBI/2004/MISC.6/ Add.1	GEF/LDCF.SCCF.1/Inf.2/ Rev.1
	5/CP.7	FCCC/SBI/2005/10	GEF/LDCF.SCCF.1/3/Rev.1
	7/CP.7	FCCC/SBI/2006/L.6	GEF/LDCF.SCCF.1.6
	7/CP.8	FCCC/SBI/2006/L.33	GEF/LDCF.SCCF.2/Inf.2
	5/CP.9		GEF/LDCF.SCCF.2/Inf.3
	1/CP.12		GEF/LDCF.SCCF.2/Inf.4
			GEF/LDCF.SCCF.2/Inf.6
			GEF/LDCF.SCCF.2/4
			GEF/C.24/12
			GEF/C.29/5

Table A.1 (continued)

	COP (CP) and COP/MOP (CMP) decisions	Other UNFCCC documents	GEF documents
Least Developed Countries Fund	5/CP.7	FCCC/SBI/2007/12	GEF/C.28/18
	7/CP.7	FCCC/SBI/2007/L.2	
	27/CP.7		
	28/CP.7		
	8/CP.8		
	6/CP.9		
	3/CP.11		
	5/CP.14		
Adaptation Fund	5/CP.7	FCCC/SBI/2007/MISC.2	–
	10/CP.7	FCCC/SBI/2007/L.14	
	17/CP.7		
	3/CMP.1		
	28/CMP.1		
	5/CMP.2		
	1/CMP.3		
	1/CMP.4		

Appendix B
Analysis of Documents (Procedural Justice)

This Appendix analyzes where and how procedural justice in terms of the three fairness criteria set out in Table 6.2, Chapter 6 (Criterion 1 – Inclusion of all countries, Criterion 2 – Possibility to specify the terms of participation, and Criterion 3 – Commitment to assistance from richer to poorer countries) is contemplated by the five, Non-Principal, categories of documents listed in Table A.1 (that is, guidance to the financial mechanism, review of the financial mechanism, the SCCF, the LDCF and the AF).

B.1 Guidance to the Financial Mechanism

This block of texts divides into the three groups reported below: the COP's decisions, other UNFCCC documents, and the GEF's documents.
COP's decisions: These decisions specify the guidance that the COP must provide for the financial mechanism (that is, to the GEF) according to article 11.1 UNFCCC.

- 11/CP.1: Initial guidance on policies, programme priorities and eligibility criteria to the operating entity or entities of the financial mechanism;
- 12/CP.2 and 12/CP.3: Memorandum of Understanding between the Conference of the Parties and the Council of the Global Environmental Facility;
- 11/CP.2: Guidance to the Global Environment Facility;
- 2/CP.4: Additional guidance to an operating entity of the financial mechanism;
- 6/CP.7: Additional guidance to an operating entity of the financial mechanism;
- 5/CP.8: Review of the financial mechanism
- 6/CP.8: Additional guidance to an operating entity of the financial mechanism;
- 4/CP.9: Additional guidance to an operating entity of the financial mechanism;
- 8/CP.10: Additional guidance to an operating entity of the financial mechanism;
- 5/CP.11: Additional guidance to an operating entity of the financial mechanism;
- 3/CP.12: Additional guidance to the Global Environment Facility;
- 7/CP.13: *Advance version*. Additional guidance to the Global Environmental Facility.

Other UNFCCC documents: The first two documents are Notes by the Secretariat of the UNFCCC, which include the submission to the COP of the relevant annual reports on the GEF, as stipulated by decision 12/CP.2 (the Memorandum of Understanding). The two final documents consist in views and recommendations from Parties to the GEF on funding issues.

- FCCC/CP/2004/6: Report on the GEF to the Tenth Session of the COP to the UNFCCC – Note by the Secretariat;
- FCCC/CP/2006/3: Report on the GEF to the Twelfth Session of the COP to the UNFCCC – Note by the Secretariat;
- FCCC/SBI/2007/Misc.11: Views and recommendations on the funding available in the climate change focal area. Submissions from Parties;
- FCCC/SBI/2007/Misc.11/Add.1: Views and recommendations on the funding available in the climate change focal area. Submissions from Parties. Addendum.
- FCCC/CP/2008/L.5: Additional Guidance to the Global Environmental Facility.

GEF documents: These are miscellaneous GEF documents concerning guidance from the COP to the GEF on the financing of adaptation, and they include some relevant reports by the GEF to the COPs.

- GEF Resource Allocation Framework: indicative resource allocations for GEF 4, for the Biodiversity and Climate Change Focal Areas;
- GEF/C.23/Inf.8/Rev.1;
- GEF Assistance to address adaptation;
- GEF Status Report on climate change funds;
- GEF/C.28/4/Rev.1;
- Report of the GEF to the Tenth Session of the COP to the UNFCCC;
- Report of the GEF to the Twelfth Session of the COP to the UNFCCC;
- Report of the GEF to the Thirteenth Session of the COP to the UNFCCC;
- FCCC/CP/2008/2/Rev. 1.

B.1.1 Recognition: Inclusion of All Countries

COP decisions: Decision 12/CP.2 (Memorandum of Understanding), in paragraph 5 of the annex, states that '[t]he funding decisions for specific projects should be agreed between the developing country Parties and the GEF in conformity with policy guidance from the COP'. This proviso implicitly recognizes the inclusion of all parties on grounds of equality, as required by fairness criterion 1.

Other UNFCCC documents: The Report of the Global Environmental Facility to the Twelfth Session of the Conference of the Parties (Annex to FCCC/CP/2006/3) stresses (part 2, p. 21 and part 3 p. 27) that the Council of the GEF should take decisions on the funds for adaptation (SCCF, LDCF, AF) by consensus, as the

first option. In principle, this procedural voting practice assures the recognition of all countries and their involvement in decision-making processes. Furthermore, annex 10 of the Report of the GEF (points 21 and 22, p. 71) specifies that any Council member can participate in the LDCF/SCCF Council or attend as an observer, and that decisions on the operation of the AF should be taken by consensus. Again, these provisions underline the involvement of all Parties as required by fairness criterion 1.
GEF documents: No references.

B.1.2 Participation: Possibility to Specify the Terms of Participation

COP decisions: Decision 11/CP.1, at paragraph 1(a)(i), requires that the operating entity of the financial mechanism must take account, in all decisions related to funding, 'of the specific needs and special situations of the least developed countries' as specified by the Convention (see Section 5.3, Chapter 5), and that the financing of adaptation be undertaken 'in accordance with national development priorities' (Art. 1(b)(iv)). Furthermore, it states (paragraph 1(d)(i)) that planning activities should enable the identification of 'particularly vulnerable countries or regions'. Quite clear here is reference to the possibility for developing countries to specify the terms of their participation (fairness criterion 2).

Decision 11/CP.2, paragraph 1(d) recommends that the GEF should '[c]onsider country-specific needs', and decision 2/CP.4 further specifies that the GEF must 'enable them [i.e. the developing country Parties] to identify and submit to the Conference of the Parties their prioritized technology needs' (paragraph 1(b)). This complies with fairness criterion 2.

Decision 6/CP.7, at paragraph 2 (d), invites the GEF to 'further encourage the use of national and regional experts and/or consultants' to make evident the possibility for developing countries to specify their terms of participation better, whilst decision 5/CP.8 (paragraph 4(d)) invites the GEF to promote the consistency of its activities with national priorities, thus broadening the scope for developing countries to express their interests.

Finally, decision 4/CP.9 (paragraph 3) again invites the GEF 'to give appropriate consideration to addressing the priority needs identified by non-Annex I Parties'.

Other UNFCCC documents: FCCC/CP/2004/6, in the annex (Report of the Global Environmental Facility to the Tenth Session of the Conference of the Parties), Section 3, point 38, p. 12 includes among the funding objectives of the GEF assistance to countries in preparing self assessments of their capacity needs and priorities, and further specifies at point 42, p. 13 that this financing 'should be based on identified priority needs' highlighted by the developing countries. Therefore, also this GEF document recognizes the importance that developing countries should specify their interests and needs, as required by fairness criterion 2, in order to make funding processes more focused and efficient.

The centrality of fairness criterion 2 is also emphasized by FCCC/CP/2006/3 in its annex (Report of the Global Environmental Facility to the Twelfth Session of the Conference of the Parties) part 1 – III, point 22, p. 5, which states that the Resource Allocation Framework (RAF) should allow countries to use resources provided 'in accordance with national priorities and commitments'. Moreover, point 40, p. 8, stresses the importance for countries to identify and prioritize their capacity needs, circumstances, strengths and gaps, through a National Capacity Self Assessment (NCSA, point 41). The same document, in part 2, point 108(a), p. 21 and point 110, p. 22, specifies, respectively, that the LDCF and the NAPAs are country-driven instruments, so that they are intrinsically consistent with fairness criterion 2.

GEF documents: GEF Assistance to Address Adaptation (GEF/C.23/Inf.8/ Rev.1) states at points 22(f) and (h), p. 7, when setting forth the guidelines on developing projects for the strategic priority, that 'adaptation activities must be country-driven' and that the 'selection of particularly vulnerable sectors will be based on information contained in the . . . NAPAs, and other major national or regional studies'. In specifying this, the GEF manifestly respects fairness criterion 2.

B.1.3 Distribution of Power: Commitment to Assistance from Richer to Poorer Countries

COP Decisions: Decision 2/CP.4, paragraph 1(e) and (f) states that the GEF should financially assist the developing countries (that is, that it should commit itself to the transfer of resources from richer to poorer countries as required by criterion 3 of fairness) in the preparation of national programmes to address climate change and in developing, strengthening and/or improving of activities for public awareness and education on climate change and response measures, as stipulated by the Convention (see Chapter 6, Section 1).

Other UNFCCC documents: No references.

GEF documents: No references.

B.2 Review of the Financial Mechanism

COP's decisions: The decisions grouped here refer to the requests that the COP puts to the GEF in order to improve the consistency of its financing processes and activities with the provisions set forth by the Convention at article 4(3) and 11(4).

- 9/CP.1: Maintenance of the interim arrangements referred to in article 21, paragraph 3, of the Convention;
- 12/CP.2: Memorandum of Understanding between the Conference of the Parties and the Council of the Global Environment Facility;
- 13/CP.2: Memorandum of Understanding between the Conference of the Parties and the Council of the Global Environment Facility: annex on the determination of funding necessary and available for the implementation of the Convention;

- 11/CP.3: Review of the financial mechanism;
- 12/CP.3: Annex to the Memorandum of Understanding on the determination of funding necessary and available for the implementation of the Convention;
- 3/CP.4: Review of the financial mechanism;
- 5/CP.8: Review of the financial mechanism;
- 9/CP.10: Assessment of funding to assist developing countries in fulfilling their commitments under the Convention;
- 2/CP.12: Review of the financial mechanism;
- 6/CP.13: *Advance version*. Review of the financial mechanism.

Other UNFCCC documents: These SBI reports to the COP relate to the review and assessment of the financial mechanism and, more broadly, of adaptation funding processes, needs and opportunities. The document FCCC/TP/2007/4 is a technical paper prepared by the UNFCCC in response to the request of the COP and it provides an overview of the funding practices of international institutions relevant to developing countries.

- FCCC/SBI/2004/18: Report on the assessment of funding necessary to assist developing countries in fulfilling their commitments under the Convention prepared in the context of the Memorandum of Understanding between the Conference of the Parties and the Council of the Global Environment Facility (Note by the Secretariat);
- FCCC/SBI/2005/INF.7: Experience of international funds and multilateral financial institutions relevant to the investment needs of developing countries in meeting their commitments under the Convention;
- FCCC/SBI/2006/MISC.9 – FCCC/SBI/2006/MISC.3: Experiences on the effectiveness of the financial mechanism;
- FCCC/SBI/2006/7: Synthesis Report on the financial mechanism;
- FCCC/SBI/2006/L.4 – FCCC/SBI/2006/L.32: Third review of the financial mechanism;
- FCCC/SBI/2007/L.34/Add.1: Fourth review of the financial mechanism;
- FCCC/SBI/2007/21: An assessment of the funding necessary to assist developing countries in meeting their commitments relating to the Global Environment Facility;
- FCCC/TP/2007/4: Review of the experience of international funds, multilateral financial institutions and other sources of funding relevant to the current and future investment and financial needs of developing countries;
- FCCC/SBI/2008/L.29: Financial mechanism of the Convention: fourth review of the financial mechanism.

GEF Documents: Included in this category are the three GEF Overall Performance Studies.

- GEF OPS 1: Study of the GEF's Overall Performance;
- GEF OPS 2: The first decade of the GEF. Second Overall Performance Study;
- GEF OPS 3: Progress toward environmental result – Third Performance Study of the GEF.

B.2.1 Recognition: Inclusion of All Countries

COP decisions: The opening provisions of decision 2/CP.12 Review of the financial mechanism note, in line with fairness criterion 1, that, since adaptation is a high priority for all countries and especially for the weaker ones, they must all be considered in issues regarding its financing. At paragraph 2, moreover, the COP requests the GEF to recognize and respond to the challenges faced by the SIDS and the LDCs in accessing funds, and in paragraph 3(f) the COP further requests the GEF to report how it has recognized and responded to the concerns of paragraph 2. The COP seems here to demand that the GEF facilitate the incorporation of all parties, including the weakest, in matters related to the funding of adaptation.

Other UNFCCC documents: Among the SBI documents analyzed, only FCCC/SBI/2006/MISC.3 Experience on the effectiveness of the financial mechanism – Submission from intergovernmental organizations and FCCC/SBI/2006/MISC.9 Experience on the effectiveness of the financial mechanism – Submission from Parties refer to procedural justice, and more specifically to fairness criterion 1. These are documents solicited by the SBI from Parties and international organizations in the context of the third review of the financial mechanism and in accordance with the guidelines annexed to decision 3/CP.4.

In the first document, the submission by Bangladesh on behalf of LDCs highlights the absence in practice of the Recognition principle of procedural justice: 'The GEF Council has very little representation' (p. 3), and stresses that, according to the related fairness criterion 1, that an 'adequate representation of LDCs would strengthen the GEF Council' (p. 3 and p. 5).

In the second document, the submission by UNIDO (United Nations Industrial Development Organizations) at point A, p. 4 criticises the lack of transparency in the GEF's decision-making processes and the consequent scant involvement of all countries in them, and demands improvement in the actual situation.

GEF documents: No references.

B.2.2 Participation: Possibility to Specify the Terms of Participation

COP decisions: The annex of decision 3/CP.4, in Section B. Methodology, point (a), requires that the review of the financial mechanism be based upon '[i]nformation provided by parties regarding the financial mechanism'. This provision very likely means that Parties are supposed to be able to specify clearly the terms of their participation in the processes governing the GEF, as stipulated by fairness criterion 2.

Other UNFCCC documents: The second document of this group also contains references to fairness criterion 2. The submission by Bangladesh on behalf of LDCs points out that '[t]he GEF-funded projects must be country-driven', that

'[i]nformation flows between recipient countries and GEF need to be improved', that '[a]ccess to GEF funding for adaptation to impacts of climate change should be simplified and guided by needs of recipient countries', and that it is essential that 'the voices of the vulnerable Parties are to be heard and responded to'. All these requests make it manifestly clear that at least the LDCs expect a higher and deeper level of participation in the negotiating processes so that they can more effectively voice their vulnerabilities and adaptation priorities.

GEF documents: No references.

B.2.3 Distribution of Power: Commitment to Assistance from Richer to Poorer

COP decisions: Decision 2/CP.12 contains a reference to fairness criterion 3: at paragraph 3(g), the COP, in fact, requests the GEF to report on the '[s]teps taken to assist developing countries to formulate project proposals'. This provision entails the commitment of the GEF, on behalf of richer countries, to support poorer ones in order to improve the effectiveness of their participation in negotiating processes.

Other UNFCCC documents: The submission by Saudi Arabia to the SBI (p. 9, FCCC/SBI/2006/MISC.9) reiterates the necessity that richer countries assist poorer ones, where it specifies the activities and actions that should be supported through the GEF, the SCCF and other bilateral and multilateral sources. Stated at point 2 is that Annex II Parties should assist developing countries; at point 5 Annex II Parties are urged to facilitate the participation of developing countries in the development and diffusion of clean technologies; point 6 underlines that Annex II Parties should provide financial and technological support in strengthening the capacity of developing countries to increase their efficiency in the use of fossil fuels; point 7 states that Annex II Parties should assist developing countries in the development, production, distribution and transport of domestic less carbon-emitting energy sources.

GEF documents: No references.

B.3 The Special Climate Change Fund

COP decisions: The decisions related to COP 7 constitute the so-called Marrakech Accords for the funding of adaptation through the establishment of three new funds (the SCCF, the LDCF, the AF). They define the operational rules for the managements of these funds. Here the focus is specifically on those related to the SCCF. Some decisions refer simultaneously to the SCCF and to the LDCF and put forward joint provisions for both: they will be analyzed in this Section. Further details on the SCCF are also given in the other decisions adopted in the following COPs.

- 4/CP.7: Development and transfer of technologies (decisions 4/CP.4 and 9/CP.5) (paragraph 3);
- 5/CP.7: Implementation of article 4, paragraphs 8 and 9, of the Convention (decision 3/CP.3 and article 2, paragraph 3, and article 3, paragraph 14, of the Kyoto Protocol) (paragraphs 8 and 19);
- 7/CP.7: Funding under the Convention (paragraphs 1 and 2);
- 7/CP.8: Initial guidance to an entity entrusted with the operation of the financial mechanism of the Convention, for the operation of the Special Climate Change Fund;
- 5/CP.9: Further guidance to an entity entrusted with the operation of the financial mechanism of the Convention, for the operation of the Special Climate Change Fund;
- 1/CP.12: Further guidance to an entity entrusted with the operation of the financial mechanism of the Convention, for the operation of the Special Climate Change Fund.

Other UNFCCC documents: The three SBI documents analyzed include a view from Uzbekistan on the financial mechanism, a report and a recommendation of the SBI to the COP on the adaptation funds.

- FCCC/SBI/2004/MISC.6/Add.1: Views on activities, programmes and measures in the areas listed in paragraph 2(c) and (d) of decision 7/CP.7;
- FCCC/SBI/2005/10: Report of the Subsidiary Body for Implementation on its twenty-second session, held at Bonn from 20 to 27 May 2005;
- FCCC/SBI/2006/L.6 – FCCC/SBI/2006/L.33: Special Climate Change Fund – Recommendation of the SBI.

GEF Documents: The following are working and information documents from the first and second GEF LDCF/SCCF Council meetings. GEF/C.24/12 is a Council programming paper which provides operational guidance for the preparation of proposals in regard to financing by the SCCF. The last one (GEF/C.29/5) is a GEF Secretariat paper on the GEF's view on the governance of the three climate change funds (it is analyzed in this Section for practical reasons).

- GEF/LDCF.SCCF.1/Inf.2/Rev.1: Status Report on climate change funds;
- GEF/LDCF.SCCF.1/3/Rev.1: Rules of procedure for the LDCF/SCCF Council;
- GEF/LDCF.SCCF.1.6: Approach to mobilization of resources;
- GEF/LDCF.SCCF.2/Inf.2: Status Report on the climate change funds as of April 30, 2007;
- GEF/LDCF.SCCF.2/Inf.3: LDCF and SCCF programming update;
- GEF/LDCF.SCCF.2/Inf.4: Working draft on the development of a result framework for adaptation programming;
- GEF/LDCF.SCCF.2/Inf.6: Views on how the GEF would operationalize decision-/CMP.2;

- GEF/LDCF.SCCF.2/4: Programming to implement the guidance for the SCCF adopted by the COP at its twelfth session;
- GEF/C.24/12: Programming to implement the guidance for the SCCF adopted by the COP at its ninth session;
- GEF/C.29/5: Governance of the climate change funds.

B.3.1 Recognition: Inclusion of All Countries

COP decisions: Decision 5/CP.7, in its preliminary paragraphs, acknowledges that the social and economic conditions of the LDCs limit their capacity to participate in the climate process and to prepare and submit national communications. This recognition implicitly entails that all countries should be allowed to enter climate negotiations on grounds of equality, in line with fairness criterion 1. Furthermore, at paragraph 16, it is decided to consider the establishment of a Least Developed Countries Group of Experts (LEG), geographically balanced and representative of the interests of LDCs, as demanded by fairness criterion 1 regarding the inclusion of all countries on grounds of equality. The LEG, in fact, enables LDCs to promote their interests better and to gain recognition of them (see Chapter 6, Section 4).

Other UNFCCC documents: No references.

GEF Documents: GEF/LDC.SCCF.1/3/Rev.1 outlines the rules of procedures for the LDCF/SCCF Council. This document stresses, as previously done by the Report of the Global Environmental Facility to the Twelfth Session of the Conference of the Parties (Annex to FCCC/CP/2006/3) in relation to the GEF Council, that the LDCF/SCCF Council should make decisions by consensus, as the first option, and that any Council member may participate or attend as an observer. These provisions ensure that fairness criterion 1 is formally respected and that all countries are included in decision-making processes.

B.3.2 Participation: Possibility to Specify the Terms of Participation

COP decisions: Decision 5/CP.7, in its preliminary paragraphs, repeatedly recognizes the specific needs and concerns of developing countries and the particular vulnerability to climate impacts of some of them; reaffirms that a climate agreement should be based on equity and grounded on the principle of Common but differentiated responsibility and that the specific circumstances of weaker countries should be fully taken into account; claims that the priority needs of developing countries must be considered; and acknowledges that adaptive measures vary from country to country owing to the particular characteristics of the developing countries. All these points evince the aim of this decision to make the interests and circumstances of the developing countries and their greater vulnerability (especially of the LDCs) count

in the negotiating processes, as demanded by fairness criterion 2, which requires the possibility to specify the terms of participation in the negotiating processes.

Moreover, in paragraph 1, decision 5/CP.7 asserts the importance of a country-driven approach 'that allows developing country Parties to pursue the specific activities most appropriate to their unique national circumstance' and encourages Non-Annex I Parties to identify their specific needs and concerns arising from climate impacts (paragraph 3). At paragraph 11(b), it is decided to provide training in negotiating skills and language so as to enable the LDCs to participate effectively in the negotiations. All these provisions increase the possibility for developing countries to participate in negotiations and to point out their needs and priorities.

Finally, all paragraphs of section IV (from 32 to 37) request the Secretariat to organize workshops in order to increase the negotiating possibilities of the developing countries.

Decision 7/CP.8, paragraph 2(a)(ii) requests the LEG to submit views on activities, programmes and measures for the SCOF, thus allowing the developing countries through the LEG to attune this fund more closely to their needs and characteristics, in line with fairness criterion 2.

Decision 5/CP.9, paragraph 1(b) states that activities to be funded by the SCCF should be country-driven and that they should take into account any communication and information provided by the applicant Party. Again, fairness criterion 2 seems to be fulfilled.

Other UNFCCC documents: No references

GEF Documents: No references

B.3.3 Distribution of Power: Commitment to Assistance from Richer to Poorer

COP decisions: Decision 4/CP.7 urges developed countries to provide technical and financial assistance for implementing the relevant provisions of the Convention, thus expressly asserting the Commitment to assistance from richer to poorer countries stipulated by fairness criterion 3.

Decision 5/CP.7 reaffirms in its preliminary paragraph that the developed country Parties should take the lead in combating climate change and its adverse effects, while paragraph 4 stresses the role of Annex II Parties on this point. Section II of this decision is devoted to the 'implementation of article 4, paragraph 9, of the Convention': in paragraph 14, Annex II Parties are expressly invited to support LDC Parties in a number of activities. In the subsequent section, at paragraph 21, Annex II Parties are required to communicate their planned support programmes to assist developing countries in meeting their capacity-building needs (paragraph 23), to provide financial and technological support for strengthening the capacity of

developing countries (paragraph 27), to promote investment in, and to cooperate with, developing countries in the development of clean technologies (paragraph 28) and in research on this issue (paragraph 29). All these provisions commit the developed country Parties to providing assistance, in different forms, to the developing country Parties.

Other UNFCCC documents: No references

GEF Documents: No references

B.4 The Least Developed Countries Fund

COP decisions: The first two decisions (5/CP.7 and 7/CP.7) refer to the establishment of the LDCF (and of the SCCF), and they have been analyzed in Section B.3. The remaining decisions analyzed in this Section refer to guidance given by the COP to the LDCF.

- 5/CP.7: Implementation of article 4, paragraphs 8 and 9, of the Convention (decision 3/CP.3, article 2, paragraph 3, and article 3, paragraph 14, of the Kyoto Protocol) (paragraph 12) [analyzed in Section B.3 – The SCCF];
- 7/CP.7: Funding under the Convention (paragraph 6) [analyzed in Section B.3 – The SCCF];
- 27/CP.7: Guidance to an entity entrusted with the operation of the financial mechanism of the Convention, for the operation of the Least Developed Countries Fund;
- 28/CP.7: Guidelines for the preparation of National Adaptation Programmes of Action (paragraph 4);
- 8/CP.8: Guidance to an entity entrusted with the operation of the financial mechanism of the Convention, for the operation of the Least Developed Countries Fund;
- 6/CP.9: Further guidance for the operation of the Least Developed Countries Fund;
- 3/CP.11: Further guidance for the operation of the Least Developed Countries Fund;
- 5/CP.14: Further guidance for the operation of the Least Developed Countries Fund.

Other UNFCCC documents: The first document reports to the eleventh meeting of the LEG on the development of a working programme for the implementation of NAPAs. The second document is a draft conclusion of the Chair of the SBI on further developments needed to fully operationalize the LDCF.

- FCCC/SBI/2007/12: Report on the eleventh meeting of the Least Developed Countries Expert Group;
- FCCC/SBI/2007/L.2: Least Developed Countries Fund.

GEF Documents: The document analyzed is a programming paper providing a framework for guiding operations under the LDCF.

- GEF/C.28/18: Programming Paper for Funding the Implementation of NAPAs under the LDC Trust Fund.

B.4.1 Recognition: Inclusion of All Countries

COP decisions: Decision 27/CP.7 states that the access to the LDCF by LDCs should be 'expedited' (paragraph 1(d)), and not penalized by their lack of capacities, in line with the recommendation of fairness criterion 1.

Decision 6/CP.9 requests that equitable access, as required by fairness criterion 1, be given to the LDC Parties to funding for the implementation of NAPAs.

Other UNFCCC documents: No references.

GEF Documents: No references.

B.4.2 Participation: Possibility to Specify the Terms of Participation

COP decisions: In decisions 27/CP.7 (introduction), 28/CP.7 (introduction), 8/CP.8 (introduction) the COP recognizes the specific needs and special situations of the LDCs, according to the requirement of fairness criterion 2.

In decision 28/CP.7 (paragraph 4), the COP invites the LDCs to use the mentioned guidelines 'in accordance with their national circumstances, in preparing their National Adaptation Programmes of Action'. This provision increases their possibilities to participate in the climate regime.

In decision 8/CP.8, the COP requests the LDC Council to organize four regional workshops to support LDCs in the preparation of NAPAs (paragraph 3), and invites all Parties, the LEG, the GEF and its implementing agencies, to submit to the Secretariat views on strategies for implementing NAPAs to meet the urgent and immediate adaptation needs of the LDCs (paragraph 6).

In decision 6/CP.9, paragraph 3(a) and 3/CP.11 (paragraph 1(a)), the COP requests that the guidelines for funding the NAPAs ensure a country-driven approach in line with national priorities.

In decision 3/CP.11, the COP decides that full-cost funding to meet the additional costs of adaptation identified and prioritized in the NAPAs should be introduced, and requests the GEF to develop a co-financing scale for supporting activities identified in the NAPAs, taking account of the specific circumstances of the LDCs.

All these provisions emphasise the COP's awareness that the weakest countries, the LDCs, should have real opportunities to express their vulnerability and

adaptation priorities so that they are truly part of the adaptation funding process, which is in accordance with fairness criterion 2.

Other UNFCCC documents: No references.

GEF Documents: No references.

B.4.3 Distribution of Power: Commitment to Assistance from Richer to Poorer

COP decisions: Decision 8/CP.8 states at paragraph 5 that the COP encourages Annex II and Annex I Parties ‘to address the needs of least developed countries with regard to training in negotiating skills and language’, thus requiring a Commitment to assistance from richer to poorer countries as suggested by fairness criterion 3.

Other UNFCCC documents: No references.

GEF Documents: No references.

B.5 The Adaptation Fund

COP decisions: These decisions, adopted by the COPs from Marrakech to Bali, refer to the governance of the AF, and to the modalities, and procedures for the CDM defined by article 12 of the Kyoto Protocol and expected to fund the AF through a 2% levy on the Certified Emissions Reductions (CERs).

- 5/CP.7: Implementation of article 4, paragraphs 8 and 9, of the Convention (decision 3/CP.3, article 2, paragraph 3, and article 3, paragraph 14, of the Kyoto Protocol) [analyzed in Section B.3 – The SCCF];
- 10/CP.7: Funding under the Kyoto Protocol;
- 17/CP.7: Modalities and procedures for a Clean Development Mechanism, as defined in article 12 of the Kyoto Protocol (paragraphs 15 and 66 of the annex);
- 3/CMP.1: Modalities and procedures for a Clean Development Mechanism, as defined in article 12 of the Kyoto Protocol, paragraph 1;
- 28/CMP.1: Initial guidance to an entity entrusted with the operation of the financial mechanism of the Convention, for the operation of the Adaptation Fund;
- 5/CMP.2: Adaptation Fund;
- 1/CMP.3: *Advance version*. Adaptation Fund;
- 1/CMP.4: Report of the Adaptation Fund Board.

Other UNFCCC documents: The first document consists of the views submitted by the GEF to the SBI on how to operationalize the AF according to the guidance provided by decision 5/CMP.2. The second one includes the points to be discussed by COP/MOP 3 (Bali, December 2007) on the institutional arrangements of the AF.

- FCCC/SBI/2007/MISC.2: Views from interested institutions on how they would operationalize decision 5/CMP.2;
- FCCC/SBI/2007/L.14: Adaptation Fund. Draft conclusions proposed by the Chair.

As pointed out, other relevant more specific documents for the management of the AF are considered in Chapter 6.

B.5.1 Recognition: Inclusion of All Countries

COP decisions: Decision 5/CMP.2 includes among the guiding principles of the AF the '[a]ccess to the fund in a balanced and equitable manner' (paragraph 1(b)) and '[t]ransparency and openness in the governance of the fund' (paragraph 1(c)). Both these requirements pertain to the principle of procedural justice of Recognition and thus acknowledge fairness criterion 1 on Inclusion of all countries. Furthermore, paragraph 3 decides that the governing body of the AF shall be constituted by parties to the Kyoto Protocol, follow a one-country-one-vote rule and have a majority of Parties Non-Annex I to the Convention. More specifically, decision 1/CMP.3 at paragraph 6 decides the composition of the management entity of the AF – the Adaptation Fund Board – in such a way that all Parties have a 'fair and balanced representation'. The detailed composition of the Adaptation Fund Board that assures the inclusion of all Parties is specified in annex I, point III of decision 1/CMP.4. These provisions reinforce the possibility for every country to take part in decisional processes on grounds of equality.

Other UNFCCC documents: The UNFCCC, in its submission to the Secretariat on the operationalization of the AF according to the guidance provided by decision 5/CMP.2 (FCCC/SBI/2007/MISC.2), requested the views of interested institutions; it received only the view of the GEF, which specified that the operationalization of the AF should provide the transparency and openness required by paragraph 1(b) decision 5/CMP.2 (point 8), and that it should provide the transparency and openness required by paragraph 1(c) decision 5/CMP.2 in the management of the AF (point 9). Furthermore, it requested that its governance be 'transparent, universal, and oriented to respond to Convention guidance' (point 44). Here too, therefore, it seems that fairness criterion 1 has been taken into account.

B.5.2 Participation: Possibility to Specify the Terms of Participation

COP decisions: Decision 5/CMP.2 at paragraph 2(c) states that projects to be financed through the AF 'should be country driven and should be based on needs, views and priorities of eligible Parties', as required by the principle of justice of Participation and expressed in terms of the Possibility to specify the modalities of participation, as per fairness criterion 2.

Further, decision 1/CMP.3, at paragraph 29, decides that Parties eligible for funding from the AF should submit their projects directly to the Adaptation Fund Board: this opportunity greatly increases the Possibility to specify the terms of participation envisaged by criterion 2 of fairness.

Other UNFCCC documents: The GEF submission to the SBI (FCCC/SBI/2007/MISC.2) states at point 8 that '[t]he GEF will work with countries interested in accessing the fund to identify their national priorities' in line with criterion 2 of fairness. Furthermore, in answering to paragraph 2(c), decision 5/CMP.2 the GEF recalls that in the first instance a GEF-funded project must be country-driven (point 34) and reiterates this concept in annex B, points 6 and 7, thus confirming its acknowledgement of fairness criterion 2.

B.5.3 Distribution of Power: Commitment to Assistance from Richer to Poorer

COP decisions: No references.

Other UNFCCC documents: No references.

Appendix C
Analysis of Documents (Distributive Justice)

Analyzed in this Appendix is where and how distributive justice in terms of the two equity criteria set out in Table 7.1 (Criterion 1 – Differentiated historical responsibility, and Criterion 2 – Lack of human security) is contemplated in the five, Non-Principal, categories of documents set out in Appendix A (that is, guidance to the financial mechanism, review of the financial mechanism, the SCCF, the LDCF and the AF). The documents considered are the same as those evaluated in terms of the fairness criteria in Appendix B: hence, for a list, an explanation of the articulation of these documents, and a general description of their contents and characteristics, it is useful to refer to the relevant Sections of Appendix B.

C.1 Guidance to the Financial Mechanism

C.1.1 Equality and Difference: Differentiated Historical Responsibility

COP decisions: No references.

Other UNFCCC documents: No references.

GEF documents: No references.

C.1.2 Basic Capability Equality: Lack of Human Security

COP decisions: Decision 11/CP.1 states at paragraph 1(a)(i) that the financial mechanism in its funding decisions should 'take full account of the specific needs and special situations of the least developed countries'. Similarly, decision 2/CP.4 at paragraph 1(a) disposes that funding should be provided for developing countries to implement measures in light of their particular vulnerability.

Decision 6/CP.7, at paragraph 1, 6/CP.8 at paragraph 1(d) and 7/CP.13, require that the GEF should provide adaptation funding to developing country Parties, and among these, in particular to the LDCs and the SIDS, whereas decision 3/CP.12 urges that the same provision be satisfied in a 'more timely manner'.

All these prioritarian concerns for the weakest countries are consistent with equity criterion 2.

Other UNFCCC documents: The Report of the Global Environmental Facility to the Tenth Session of the Conference of the Parties (FCCC/CP/2004/6) emphasises at paragraph 50 that the strategic priority on adaptation should be the funding of projects that maximize 'the opportunity for learning and capacity building' in 'particularly vulnerable regions, sectors, geographic areas, ecosystems and communities', which is in line with the requirements of equity criterion 2.

The submissions by Bolivia and Paraguay on the funding available in the climate change focal area (FCCC/SBI/2007/Misc.11 and FCCC/SBI/2007/Misc.11/Add.1) assert that priority in access to funding should be given to vulnerable developing countries 'who have less capacity for embarking successfully the process of adaptation to climate change', as demanded by equity criterion 2.

GEF documents: The same provision as in the above cited document (FCCC/CP/2004/6, paragraph 50) is put forward by the document GEF assistance to address adaptation (GEF/C.23/Inf.8/Rev.1), in paragraph 20. Further, it recognizes, at paragraph 23, that small communities are those most severely affected by climate impacts and yet the least able to cope with them, and thus disposes that 10% of the funds under the Strategic Priority (SPA) be allocated to the Small Grants Programme, specifically tailored to the funding of community-based adaptation projects. These are explicit references to the Lack of human security equity criterion.

C.2 Review of the Financial Mechanism

C.2.1 Equality and Difference: Differentiated Historical Responsibility

COP decisions: No references.

Other UNFCCC documents: The SBI document FCCC/SBI/2004/18, at paragraph II.5, recalls that the developed countries should provide new and additional funding to the developing ones in accordance with an appropriate burden-sharing rule taking into account their contribution capabilities, as suggested by equity criterion 1 envisaging Differentiated historical responsibility.

GEF documents: No references.

C.2.2 Basic Capability Equality: Lack of Human Security

COP decisions: No references.

Other UNFCCC documents: The submission by Bangladesh on behalf of LDCs to the SBI on the effectiveness of the financial mechanism for its third review (FCCC/SBI/2006/Misc.9) recognized that most of the adaptation funds should be

addressed to vulnerable countries and communities, and that the GEF should accelerate funding processes for countries where adaptation is a top priority, as required by equity criterion 2 envisaging Lack of human security.

GEF documents: No references.

C.3 The Special Climate Change Fund

C.3.1 Equality and Difference: Differentiated Historical Responsibility

COP decisions: Decision 7/CP.7 clarifies that Annex II Parties, and other Parties able to do so, should provide funds to developing countries through several channels, and that (paragraph 1(d)) these funds should be raised according to appropriate modalities of burden-sharing among those Parties, as required by equity criterion 1.

Other UNFCCC documents: No references.

GEF documents: No references.

C.3.2 Basic Capability Equality: Lack of Human Security

COP decisions: Decision 7/CP.7, at paragraph 6, states that the financial instruments established under the Convention ought to support a work programme for the LDCs, the weakest subjects in the climate arena, as presumed by the Lack of human security equity criterion.

Other UNFCCC documents: No references.

GEF documents: No references.

C.4 The Least Developed Countries Fund

C.4.1 Equality and Difference: Differentiated Historical Responsibility

COP decisions: No references.

Other UNFCCC documents: No references.

GEF documents: No references.

C.4.2 Basic Capability Equality: Lack of Human Security

COP decisions: No references.

Other UNFCCC documents: No references.

GEF documents: No references.

C.5 The Adaptation Fund

C.5.1 Equality and Difference: Differentiated Historical Responsibility

COP decisions: Decision 10/CP.7 recognizes in its preamble the provisions of article 4.3 of the Convention and 11.2 of the Kyoto Protocol on the appropriate burden-sharing rule among developed countries for the raising of funds for an instrument under the Protocol. Again, this is clearly in line with equity criterion 1.

Other UNFCCC documents: No references.

GEF documents: No references.

C.5.2 Basic Capability Equality: Lack of Human Security

COP decisions: Decision 17/CP.7 defines the modalities and procedures for the CDM. In paragraphs 15(a) and (b), it recalls respectively that the share of the proceeds of the CDM should assist particularly vulnerable developing countries, and that CDM projects in LDCs must be exempt from the share of the proceeds to favour adaptation projects. Whilst the consistency of the first provision with equity criterion 2 is evident, that of the second is also obvious, for the preferential treatment that it gives to LDCs is the result, presumably, of considerations of equity similar to those assumed by the Lack of human security criterion.

Decision 5/CMP.2 states that a share of the proceeds from CDM projects should assist developing countries Parties particularly vulnerable to the adverse effects of climate change; similarly, decision 1/CMP.3 stresses that only particularly vulnerable developing country Parties to the Kyoto Protocol are eligible for funding from the Adaptation Fund. Again, the attention given to particular vulnerability is exactly as required by equity criterion 2.

Other UNFCCC documents: No references.

GEF documents: No references.

Glossary

AAUs: Assigned Amount Units

AF: Adaptation Fund

AFI: Adaptation Finance Index

AICCC: Assessment of Impacts and Adaptation to Climate Change

AOSIS: Alliance of Small Island States

APF: Adaptation Policy Framework

AWG-LCA: Ad Hoc Working Group on Long-Term Cooperative Action under the Convention

CAF: Convention Adaptation Fund

CBD: Convention on Biological Diversity

CCF: Climate Change Fund

CDM: Clean Development Mechanism

CERCLA: Comprehensive Environmental Response, Compensation and Liability Act

CERs: Certified Emission Reductions

CGE: Consultative Group of Experts

CO2: Carbon Dioxide

COP: Conference of the Parties

COP/MOP: Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol

EITs: Economies in Transition

ENSO: El Niño - Southern Oscillation

ET: Emission Trading

EU: European Union

FDI: Foreign Direct Investments

G77 and China: Group of 77 and China

GDR: Greenhouse Development Rights

GEF: Global Environmental Facility

GFM: Guidance to the Financial Mechanism

GHG: Greenhouse Gases

IACHR: Inter-American Commission on Human Rights

IMERS: International Maritime Emission Reduction Scheme

IPCC: Intergovernmental Panel on Climate Change

JI: Joint Implementation

LDCF: Least Developed Countries Fund

LDCs: Least Developed Countries

LEG: Least Developed Countries Expert Group

MAF: Multilateral Adaptation Fund

MFS: Multilateral Financial Structure for Climate Change

NAPAs: National Adaptation Programmes of Action

ODA: Official Development Assistance

OECD: Organisation for Economic Co-operation and Development

OPs: (GEF) Operational Programmes

RAF: (GEF) Resource Allocation Framework

RFM: Review of the Financial Mechanism

RTJF: Rawls's Theory of Justice as Fairness

SBI: Subsidiary Body for Implementation

SBSTA: Subsidiary Body for Scientific and Technological Advice

SCA: Sen's Capability Approach

SCCF: Special Climate Change Fund

SIDS: Small Island Developing States

SPA: (GEF) Strategic Priority Piloting an Operational Approach to Adaptation

UNCLOS: United Nations Convention on the Law of the Sea

UNDP: United Nations Development Programme

UNEP: United Nations Environmental Programme

UNFCCC: United Nations Framework Convention on Climate Change

VERs: Verified Emission Reductions

WCCF: World Climate Change Fund (Green Fund)

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