

The Political Dimension of Vulnerability: Implications for the Green Climate Fund

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Abstract As the availability of adaptation finance for developing countries increases, so does the need for a transparent way of prioritising countries for the allocation of money. It is intuitive that some countries are more vulnerable to climate change than others, and that countries that are particularly vulnerable should be given priority for adaptation finance. However, research has shown that science cannot be relied upon for a single objective ranking of vulnerability. This article analyses how the Global Climate Change Alliance (GCCA), the Pilot Program for Climate Resilience (PPCR) and the Adaptation Fund currently make decisions on adaptation finance allocations. It finds that each of the funds uses vulnerability to prioritise among countries, but the criteria applied vary and other criteria also play a role. Thus, vulnerability is politically, as well as scientifically, ambiguous. The Cancun Agreements have not resolved this, leaving a challenge for the Green Climate Fund.

1 Introduction

With the conclusion of the 2010 United Nations Climate Change Conference in Cancun, Mexico, and the adoption of the Cancun Agreements, the question of how to define and compare vulnerability, and any bearing it has on the allocation of adaptation finance, has once again raised its head. Countries agreed in the Cancun Agreements that scaled-up, new and additional funding shall be provided to developing countries, taking into account the urgent and immediate needs of developing countries that are *particularly vulnerable to the adverse effects of climate change*. Countries further agreed that a significant share of such funding, which could amount to US\$50 billion per year by the year 2020,¹ should flow through the newly established Green Climate Fund (UNFCCC 2010).

There has been ambiguity about the meaning of ‘particularly vulnerable to the adverse effects of climate change’, ever since this phrase was introduced in the original 1992 United Nations Framework Convention on Climate Change (UNFCCC 1992). However, in the absence of substantial and predictable international finance for adaptation purposes, clarifying this issue has

never been a high priority. This has now changed; with the prospect of annual funding available for adaptation reaching ten digits, to be considered particularly vulnerable could have substantial financial implications for countries. The definition of ‘particularly vulnerable’ could therefore be a stumbling block to making the Green Climate Fund operational.

Defining ‘particularly vulnerable’ has both a scientific dimension and a political one. The scientific dimension concerns the design and use of methods for assessing, quantifying and comparing between vulnerability across regions and countries. The political dimension concerns the choices to be made in the application of these methods, and how results (i.e. vulnerability measurements and ranking) would affect decisions on the prioritisation and disbursement of adaptation finance, including the timing and amount of funds.

This article first reflects on the main scientific issues around defining ‘particularly vulnerable’, but then focuses on the political dimension of the term, in particular its use in three currently operational funds for adaptation in developing

countries. The analysis may be of relevance to the design of the Green Climate Fund, which is to be concluded by the United Nations Climate Change Conference in Durban, South Africa, in November/December 2011.

2 The scientific dimension of vulnerability

The Intergovernmental Panel on Climate Change (IPCC) defines vulnerability as ‘the degree to which a system is susceptible to, and unable to cope with, adverse effects of climate change, including climate variability and extremes’ (IPCC 2007). None of the research on vulnerability to date has resulted in a systematic and agreed way of assessing, measuring, expressing and comparing the vulnerability of countries to climate change. Three recent peer-reviewed articles suggest that this is not due to any of this research being insufficient. The collective conclusion of these three articles is that additional efforts by scientists will not help to overcome any of the barriers to making the term ‘particularly vulnerable’ operational for the purpose of adaptation funding.

Using a broad range of disaggregated vulnerability indicators for food security, human health, water supply and coastal populations, Fussler (2010) presents a comprehensive semi-quantitative analysis of the disparity between countries’ responsibility for climate change, their capability to act and assist, and their vulnerability to climate change. He reveals complex and geographically heterogeneous patterns of vulnerability, and argues that the allocation of international adaptation funds to developing countries should be guided by sector-specific or hazard-specific criteria.

Analysing the possible use of vulnerability indicators for six different purposes, Hinkel (2011) finds that vulnerability indicators are only appropriate for identifying vulnerable people, communities and regions, and then only at relatively large (i.e. local to national) scales, when systems can be narrowly defined and inductive arguments can be built. He concludes that for other purposes, including the allocation of adaptation funds, either vulnerability is not the adequate concept or vulnerability indicators are not the adequate methodology. According to Hinkel (2011), speaking of ‘measuring’ vulnerability is particularly misleading, as this is impossible and raises false expectations.

Klein (2009) notes that in the absence of an agreed method to measure vulnerability, the many facets to the concept give rise to many possible interpretations of what constitutes ‘particularly vulnerable’. He argues that the decision on how to compare potential impacts of climate change on, for example, human life, physical infrastructure and biological diversity eventually requires a subjective judgement as to which expected outcomes are more or less desirable. He concludes that while scientists may well make an important contribution (e.g. by proposing methods and collecting data), negotiators would be misguided to rely on them to develop a definitive, objective and unchallengeable method to rank countries according to their vulnerability to climate change. There is no objectivist ‘truth’ in vulnerability assessment; any agreed approach will have to be the socially constructed outcome of a negotiation process.

3 The political ambiguity around ‘particular vulnerability’

The discussion on linking vulnerability with financial support for adaptation is not new to the UNFCCC. Article 4.4 of the Convention commits developed countries ‘to assist developing countries that are particularly vulnerable to the adverse effects of climate change in meeting costs of adaptation to those adverse effects’. However, the Convention does not clearly state which countries are particularly vulnerable, or how one should identify these countries.

Vulnerability is first mentioned in the nineteenth preambulatory paragraph of the Convention, which presents groups of countries that are considered particularly vulnerable based on their geographical characteristics (UNFCCC 1992: 2):

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...

Article 4.8 then provides another, partially overlapping listing of groups of developing countries with ‘specific needs and concerns’, to which Parties shall give full consideration, ‘including actions related to funding’ (UNFCCC 1992: 8–9). Of those groups included in the list,

the following relate to the adverse effects of climate change:

- (a) Small island countries;
- (b) Countries with low-lying coastal areas;
- (c) Countries with arid and semi-arid areas, forested areas and areas liable to forest decay;
- (d) Countries with areas prone to natural disasters;
- (e) Countries with areas liable to drought and desertification;
- (f) Countries with areas of high urban atmospheric pollution;
- (g) Countries with areas with fragile ecosystems, including mountainous ecosystems.

Parties then referred to ‘particularly vulnerable’ countries in the Bali Action Plan in 2007. The Plan lists the issues Parties wish to see addressed in an ‘agreed outcome’ that would enable the full, effective and sustained implementation of the Convention through long-term cooperative action, now, up to and beyond 2012, including consideration of enhanced action on adaptation, through (UNFCCC 2007: 4):

International cooperation to support urgent implementation of adaptation actions... taking into account the urgent and immediate needs of developing countries that are particularly vulnerable to the adverse effects of climate change, especially the least developed countries (LDCs) and small island developing states (SIDS), and further taking into account the needs of countries in Africa affected by drought, desertification and floods...

The word ‘especially’ does not exclude the possibility of support to other particularly vulnerable developing countries not listed here, but it implies that a certain priority be given to the countries listed.

The Copenhagen Accord, formulated in 2009, was not the ‘agreed outcome’ the Bali Action Plan set out to reach, and its reference to ‘particularly vulnerable’ is again different. The Copenhagen Accord states (UNFCCC 2009: 6):

[e]nhanced action and international cooperation on adaptation is urgently required... in developing countries, especially in those that are particularly vulnerable, especially LDCs, SIDS and Africa.

Note the double use of the word ‘especially’ and the inclusion of all of Africa as being particularly vulnerable (as opposed to ‘further taking into account the needs of countries in Africa affected by drought, desertification and floods’).

The Cancun Agreements, adopted in December 2010, did succeed in setting up an institutional and financial architecture to support enhanced action on adaptation. In contrast to the Bali Action Plan and the Copenhagen Accord, the Cancun Agreements do not specify any groups of countries that are considered particularly vulnerable. The collective commitment by developed countries to provide fast-start funding for adaptation to be ‘prioritized for the most vulnerable developing countries, such as the LDCs, SIDS and Africa’, which was part of the Copenhagen Accord, is only taken note of in the Cancun Agreements. The Copenhagen Accord wording is not repeated under the operative provisions for long-term funding.

In the Cancun Agreements, countries decide that (UNFCCC 2010: 3):

... enhanced action and international cooperation on adaptation is urgently required... in developing country Parties, taking into account the urgent and immediate needs of those developing countries that are particularly vulnerable and that funding shall be provided to developing country Parties, taking into account the urgent and immediate needs of developing countries that are particularly vulnerable to the adverse effects of climate change.

Thus, after almost 20 years, the political ambiguity about the meaning of ‘particularly vulnerable’ is as great as ever. It is difficult to see how future negotiations could change this situation.

4 Prioritising adaptation funding on the basis of vulnerability: Design

In spite of the ongoing lack of agreement among Parties on what it means to be ‘particularly vulnerable’, the Green Climate Fund is not the first fund that should take into account vulnerability in its funding decisions. This section analyses three existing funding avenues for adaptation that explicitly state to consider vulnerability in their operations: the Global

Table 1 First-order issues to be considered to select countries for participation in the PPCR

Country vulnerability	Country eligibility
<ul style="list-style-type: none"> ● Vulnerability to one or multiple climate risks (droughts, floods, storms, coastal inundation) ● Relevant special needs as recognised by, for example, the IPCC and relevant principles and articles of the UNFCCC ● Country exposure, sensitivity (a function of dependence of GDP on climate sensitive sectors) and adaptive capacity (partly a combination of the human development index and governance) 	<ul style="list-style-type: none"> ● ODA-eligible (as per OECD/DAC guidelines) ● Existence of active multilateral development bank (MDB) country programme ● Highly vulnerable LDC eligible for MDB concessional funds, including LDC SIDS

Source: CIF (2008b).

Climate Change Alliance of the European Union (GCCA) ('most vulnerable'), the Pilot Program for Climate Resilience (PPCR) under the World Bank's Climate Investment Funds ('highly vulnerable') and the Adaptation Fund under the Kyoto Protocol to the UNFCCC ('particularly vulnerable').

One of the objectives of the GCCA, which was established by the European Commission (EC) in 2007, is to enhance support for adaptation to poor developing countries most vulnerable to climate change. The selection of beneficiary countries has been guided by the Bali Action Plan. As such, the primary target groups of the GCCA are LDCs and SIDS, based on the assumption that these are the countries that are most vulnerable and have the least resources, both human and financial, to address those challenges (EC 2007). Additional criteria were applied to select countries among the LDCs and SIDS, including the existence of national and/or sectoral climate change policies; a keenness to enhance policy dialogue and cooperation on climate change with the European Union and a strong involvement under the UNFCCC; and the presence of an EC Delegation with sufficient capacity to prepare and follow-up implementation of the GCCA programme. As of January 2011, 17 countries and one regional group have received support.² The GCCA has not set up a new fund or governance structure but works through established channels of European official development assistance (ODA).

The PPCR, which was set up under the World Bank's Climate Investment Funds in 2008, seeks 'to pilot and demonstrate ways to integrate climate

risk and resilience into core development planning'. Priority is to be given to highly vulnerable LDCs, including the SIDS among them (CIF 2008a; Seballos and Kreft, this *IDS Bulletin*). An expert group was established to inform the selection of countries. According to its terms of reference, the expert group was to take into account 'country vulnerability' and 'country eligibility' as the first-order selection criteria when recommending countries (CIF 2008b). For each of these criteria, Table 1 presents a list of issues that were to be considered by the expert group.

As its own report, CIF (2009) suggests, the expert group's approach to country selection focused on climate risks (i.e. the first issue under the vulnerability criterion). The group employed a two-stage risk assessment process. The first step involved the identification of vulnerable regions, based on a combination of climate projections from the IPCC Fourth Assessment Report (Christensen *et al.* 2007) and expert judgement. The second step involved screening countries within these regions on the basis of vulnerability as represented by a number of indicators. Countries thus defined as potentially 'high risk' were then subject to further analysis, taking into account second and third-order criteria, such as country preparedness, geographical distribution and value added (see Shankland and Chambote; Seballos and Kreft; Ayers *et al.* all in this *IDS Bulletin*). The expert group recommended seven countries and three regional groups to participate in the PPCR. As of January 2011, programmes for nine countries and two regions have been established.³ Bangladesh, Niger and Tajikistan were the first countries to receive a US\$50 million grant each.

The Adaptation Fund was established to finance concrete adaptation projects and programmes in developing country Parties to the Kyoto Protocol that are particularly vulnerable to the adverse effects of climate change. The Strategic Priorities, Policies and Guidelines of the Adaptation Fund (decision 1/CMP.4, annex IV) state that (UNFCCC 2008: 21):

[e]ligible Parties to receive funding from the Adaptation Fund are understood as developing country Parties to the Kyoto Protocol that are particularly vulnerable to the adverse effects of climate change including 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.

This is the same listing as in the UNFCCC preamble, but the additional word ‘including’ implies that the possibility exists that countries not covered by the preamble are still particularly vulnerable and therefore eligible for funding from the Adaptation Fund.

To prioritise among eligible Parties, the Strategic Priorities, Policies and Guidelines list seven criteria, ‘[t]he decision on the allocation of resources of the Adaptation Fund among eligible Parties shall take into account’. The first of these criteria is ‘level of vulnerability’; other criteria include ‘level of urgency and risks arising from delay’ and ‘adaptive capacity to the adverse effects of climate change’ (UNFCCC 2008: 22). The Adaptation Fund Board has not yet agreed on how to determine the level of vulnerability. Nonetheless, as of January 2011, funding has been approved for four countries.⁴

5 Prioritising adaptation funding on the basis of vulnerability: Implementation

As shown above, the GCCA, the PPCR and the Adaptation Fund have all been designed to make decisions on country prioritisation and the allocation of funds based on an understanding of developing countries’ level of vulnerability. However, there are marked differences amongst the three funding avenues in the way vulnerability has informed such decisions. The GCCA has applied a category approach to vulnerability in determining eligibility: only LDCs and SIDS – categorised as the most

vulnerable – are eligible for funding. The PPCR expert group applied a more sophisticated category approach: based on a first screening of climate risks it identified nine vulnerable regions, and only countries belonging to these nine regions were then considered eligible and subject to further analysis. African LDCs were then added as a tenth group of vulnerable countries to avoid underrepresentation of African countries. The expert group itself acknowledged shortcomings to its selection approach (CIF 2009: 34):

It must be recognised that countries not identified using this methodology may also face considerable climate change risks associated with more subtle and complex interactions between hazard and vulnerability than are represented by the broad risk assessment employed here. In particular, very poor countries with low capacities to respond and adapt to climate change hazards and extremes may be at high risk as a result of their underlying systemic vulnerability. This is likely to be particularly true of LDCs, the majority of which are located in Africa. Many African countries not selected in this analysis may well be more vulnerable than countries selected from other geographical regions.

In contrast to the category approach to vulnerability of the GCCA and the PPCR, the Adaptation Fund does not have a predefined set of developing countries from which it can choose. Its Operational Policies and Guidelines (AFB 2009) do not provide additional guidance to make the notion of particular vulnerability operational beyond what was agreed in the Strategic Policies and Guidelines. An invitation letter to submit project and programme proposals was sent to all Parties to the Kyoto Protocol that are Non-Annexe I Parties to the Convention, which implies that these are the eligible Parties (AFB 2010a). Nonetheless, when submitting a proposal countries also have to declare themselves particularly vulnerable and thus eligible. So far, funding has been provided on a first come, first served basis, provided that project proposals complied with the guidelines. None of the rejected proposals has been rejected for not demonstrating particular vulnerability.

The three funding avenues have used different approaches in letting countries’ level of

vulnerability guide the amount of funding allocated. In the case of the GCCA, amounts differ amongst countries: Ethiopia has received €13 million, while the Solomon Islands have received €2 million. However, information publicly available suggests that the allocated amounts are at least in part also determined by factors other than the climate vulnerability of each recipient, such as absorptive capacity. In the case of the PPCR, each recipient country was allocated US\$1.5 million for preparing a Strategic Program for Climate Resilience (SPCR). The PPCR's governing committee agreed in June 2010 that 'for each of the nine PPCR pilot countries, a range of US\$40–50 million may be programmed per SPCR and for PPCR regional pilot programs, a range of US\$60–75 million may be programmed per regional pilot' (CIF 2010: 4). Each of the three countries that has received funding so far was allocated the maximum possible grant funding, i.e. US\$50 million. The committee further agreed that 'no new pilot programs will be considered at this time' (CIF 2010: 5), thus restricting this equitable treatment to the current PPCR membership.

The Adaptation Fund Board has not yet agreed on allocating amounts based on the level of vulnerability, but it has begun to discuss the possibility of assigning allocation caps for eligible countries. Options under discussion include a uniform cap per country (i.e. no differentiation based on the level of vulnerability) and variable caps. Two types of variable caps are discussed: one providing extra resources to countries belonging to a specific vulnerability category (LDCs, SIDS or Africa), and a second one in which resource allocations are determined individually for each country, based on a numerical combination of indices (AFB 2010a). The Adaptation Fund Board has deferred further discussions on allocation caps to March 2011 and further discussion on vulnerability to June 2011 (AFB 2010b).

6 Relevance to the Green Climate Fund

Considering the above experience with the GCCA, the PPCR and the Adaptation Fund, the Green Climate Fund appears to have three options for 'taking into account the urgent and immediate needs of developing countries that are particularly vulnerable':

- 1 Prioritisation and allocation of funds based on quantified levels of vulnerability measured through indices;

- 2 Prioritisation and allocation of funds based on predefined categories of particularly vulnerable developing countries;
- 3 No prioritisation and allocation of funds based on particular vulnerability.

The Cancun Agreements have not provided guidance on which countries are particularly vulnerable. Members of the Transitional Committee, who are tasked with designing the Green Climate Fund (UNFCCC 2010: 27), may therefore be inclined to consider Option 1. However, as Section 2 of this article has shown, 'vulnerability' cannot be objectively measured. A vulnerability index therefore cannot provide incontrovertible guidance and will not resolve the ambiguity. Experience with the PPCR also demonstrates the limitations of this approach. The construction of a vulnerability index involves positive (i.e. scientific) and normative (i.e. political) steps. Scientists may well make an important contribution (e.g. by proposing methods and collecting data), but the normative decisions are best left to the Transitional Committee. These decisions include which variables to consider, what weights – if any – to attach to them, and where to set the threshold beyond which countries are considered particularly vulnerable. But because these decisions will greatly influence the ranking produced by the index, and thereby any prioritisation and allocation of funds, agreement may be difficult to reach.

Once the members of the Transitional Committee recognise the complexities surrounding vulnerability indices, they may turn to Option 2: defining categories of particularly vulnerable developing countries, such as LDCs and SIDS. For the GCCA it was politically feasible to agree on prioritising SIDS and LDCs, but experience over the past years, summarised in Section 3 of this article, suggests it may not be feasible for the Green Climate Fund to select any particular group of countries for prioritisation. The Transitional Committee consists of 40 members, 15 of whom are from developed countries and 25 from developing countries. Africa, Asia and the Group of Latin American and Caribbean States are each represented by seven members, and the LDCs and SIDS by two members each. Committee members may interpret the question of identifying developing

countries that are particularly vulnerable as being of operational significance rather than a design issue, and forward it to the Board of the Green Climate Fund. This Board will comprise an equal number of members from developing and developed country Parties. Similar to the Adaptation Fund Board, the Board of the Green Climate Fund may find it difficult to agree on prioritising one category of developing countries over another. Resolving the issue at a higher level (i.e. the provision of additional guidance by the Conference of the Parties) is also unlikely. After all, none of the previous references to particular vulnerability, including preambulatory paragraph 19 of the Convention, the Bali Action Plan and any combination thereof, garnered sufficient support.

Given these scientific and political challenges, Option 3 appears to be the most feasible. In this option, the question of which countries can be

considered to be particularly vulnerable would not be addressed by the Green Climate Fund, but by the countries themselves, as currently practised by the Adaptation Fund (see Section 4). In requesting funding, developing countries would elaborate on their particular vulnerability in their proposals, and in line with the Cancun Adaptation Framework the proposed adaptation action would take into consideration vulnerable groups, communities and ecosystems.

On a final note, if sufficient adaptation finance were available for each developing country, then the need to prioritise among countries would become less pertinent. Designers and decision-makers of the Green Climate Fund may therefore wish to prioritise the mobilisation of the agreed resources, rather than risk paralysis in the negotiations over a seemingly simple question that has only very complicated answers, none of which will satisfy everybody.

Notes

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- 1 The terms of reference for the design of the fund call for 'achieving balanced allocation between adaptation and mitigation' (UNFCCC 2010: 27).

- 2 The 17 countries are Bangladesh, Belize, Cambodia, Ethiopia, Guyana, Jamaica, the Maldives, Mali, Mozambique, Mauritius, Nepal, Rwanda, Senegal, the Seychelles, the Solomon Islands, Tanzania and Vanuatu. The region that has received support is the Pacific.
- 3 The nine countries are Bangladesh, Bolivia, Cambodia, Mozambique, Nepal, Niger, Tajikistan, Yemen and Zambia. The two regions are the Caribbean, which includes Dominica, Grenada, Haiti, Jamaica, Saint Lucia and Saint Vincent and the Grenadines; and the Pacific, which includes Papua New Guinea, Samoa and Tonga.
- 4 The four countries are Honduras, Nicaragua, Pakistan and Senegal.

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