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The Reality of Official Climate Aid

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Summary

Recent contributions to the Ad Hoc Working Group on Long-Term Cooperative Action of the UNFCCC call for “predictability, stability and timeliness of funding” that is additional to existing flows of Official Development Assistance. Much has been said about the need for financing, but little systematic research exists about what has actually been done: this paper provides preliminary findings on trends in climate aid from the world's major donor nations from 2000 to 2006 based on individual categorization of over 115,000 aid projects randomly selected from the OECD/CRS database. After five years of hovering around US\$ one billion a year through 2004, mitigation funding increased sharply in 2005 and 2006, reaching an estimated \$10 billion by 2006. Most of the increase in mitigation funding is accounted for by major hydroelectric stations, a point of contention among many climate change activists and experts. Adaptation funding is miniscule by comparison, and is mostly spent on disaster planning and management as opposed to explicit adaptation to the demands of a changing climate. We document who the largest bilateral and multilateral donors of official climate aid in these seven years are, and which nations and regions receive the most of these funds; this independent categorization of significance in fighting and adapting to climate change as project aid paints a very different picture than the OECD/CRS' voluntary self-reporting by donors under its Rio Markers system. In our final section we discuss the implications of these findings in the context of demands for adequate, predictable, stable and timely climate funding.

Introduction

After nearly twenty years of negotiations, the Kyoto Protocol remains in the balance, as promises made by wealthier countries to finance developing countries' efforts to cope with climate change and reduce emissions have not been kept. The Bali Action Plan reiterated the crucial nature of funding flows that are new and additional, not taking the place of previous commitments of foreign aid (official development assistance, or ODA), and which are “measurable, reportable, and verifiable” (UNFCCC 2007). Recent contributions by the G-77 and China to the Ad Hoc Working Group on Long-Term Cooperative Action call for “predictability, stability and timeliness of funding” (UNFCCC 2008). Much has been said about the need for financing (World Bank 2005; Oxfam 2007; UNDP 2007; Müller 2007; G-77 2008), but little systematic research exists about what has actually been done: this paper examines trends in climate aid from the world's major donor nations from 2000 to 2006 by individual categorization of over 115,000 aid projects.

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Under the UN Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol, three funds were created to finance the costs of climate change in developing countries. Since these nations are suffering worst and first from the impacts of climate change (IPCC 2007; Roberts and Parks 2007; Tearfund 2008), there is clear need for major flows to help them prepare for, cope with, and recover from major climate-related impacts. This is increasingly seen as "good development practice" (World Bank 2008; USAID 2007; DANIDA 2008; Roberts 2007). On the other side, adapting to climate impacts gets even more difficult and expensive if emissions are not reduced (Stern 2007, 2008), and seventy percent of the expected rise in greenhouse gases is expected to come from developing nations (IEA 2008). The availability and ease of cheap fossil energy like coal makes its use nearly unavoidable for developing countries like China and India, who have pressing social and economic needs to address. The question, therefore, is what sources of funding will be immediate and substantial enough to help them in both reducing emissions and adapting to a changing climate. Whether one agrees that funding should be only through UN channels, official foreign assistance has a potentially important and understudied role to play on both sides of the climate equation.

Market mechanisms have the promise of bringing in substantial volumes of funding, if and when carbon markets grow in size and carbon prices stabilize (OECD 2008). The policy debate about viable options to address climate change has narrowed sharply to favor these responses, especially the cap-and-trade systems now built into the EU's Emissions Trading System, the Kyoto Protocol's Joint Implementation and the Clean Development Mechanism, and major climate legislation in other nations including the United States.

While they hold promise to raise substantial funds for reallocation in the future, in the short term, such market-based approaches remain very uncertain tools to address a problem of such magnitude as climate change. It is unrealistic to expect that a massive global "public good" like avoiding climate change--where everyone benefits from its being addressed, but each have incentives to shirk responsibility--could be solved with market mechanisms alone. In this paper, we test the response of bilateral and multilateral aid to "fill the gap" in addressing the needs of climate protection in times of "market failures" (OECD 2008).

Ideally, the three UNFCCC and Kyoto funds created as part of the Marrakesh Accords would allow nations to work cooperatively to gain economies of scale, and develop technical expertise to administer climate funds efficiently. They also have the advantage of being part of the UNFCCC and Kyoto processes, within which developing countries have relatively greater influence over allocation rules. The Special Climate Change Fund (SCCF), based entirely on voluntary donations, was created to facilitate technology transfer from wealthy countries to poorer ones. Another voluntary fund called the Least Developed Countries Fund (LDC Fund) is focused entirely on the 45 least developed countries around the world. The Adaptation Fund (AF) is financed by a two percent levy on the Clean Development Mechanism.

However, all three of these funds have been grossly under-funded (Müller and Hepburn 2006; UNDP 2007). Estimates for the need to fund the mitigation of climate change are now in the hundreds of billions of dollars a year; estimates on adaptation needs run in the tens of billions a year. Instead, as of 2 October 2008, the SCCF had only \$106 million pledged and a mere \$94 million paid. The LDC Fund had only \$172 million pledged and only \$131 million paid (UNFCCC 2008). As the African Group paper, submitted 26 August 2008, put it, financing must be "massively scaled-up (by 2 or 3 orders of magnitude) and must redress the historical inequity in allocation of funds for adaptation" (UNFCCC 2008).

During the summer of 2008, several donors went to the World Bank and created two new Climate Investment Funds (CIFs), with pledges now totaling over \$6.1 billion. The funds are to be administered by the World Bank, which has made some developing nations concerned about their ability to influence its disbursement. Several critics argue that their establishment undermines the power of the United Nations system to address climate change, since multilateral funding for mitigation and adaptation can now be obtained from a non-UN body. Additional criticism claims that it entirely un-links payments for climate efforts from obligations under the UNFCCC's "common but differentiated responsibilities." (Bird and Peskett 2008; Müller 2008; Redmond 2008a, 2008b).

Methods for Estimating ODA Climate Funding

The aim of this study is to gauge the amount of climate change related Official Development Assistance (ODA) channeled through the OECD's bilateral and multilateral donors such as DFID, GTZ, USAID, the World Bank and the regional banks. The need for such research is highlighted in a forthcoming IEA/OECD Annex I Working Group report which criticized the OECD's Creditor Reporting System's "Rio Markers" of self-reporting by donors on whether their projects addressed climate change as being "incomplete" and including many reporting inconsistencies (OECD 2008). We categorized a random sample of 115,000 projects in the CRS database from 2000 to 2006 by systematic criteria which allowed us to document trends and priorities of donors in funding. It also allowed us to compare our independent and systematic categorization of projects with the OECD donors' claims that their projects address climate change.

This analysis fills a crucial gap in our understanding of the role of budgetary contributions by developed countries in addressing climate change. It reveals trends in funding, including what types of projects are receiving funding and which might need prioritization, and it assesses the quality of self-reporting by donors. It also provides an update on our research reported in *Greening Aid*, which we conducted for the period 1980-1999. That study of 427,000 projects conducted by the Project-Level Aid (PLAID) research team found about one billion dollars a year in funding by bilateral and multilateral donors was addressed to climate change at the end of the 1990s. This was a mere seven percent of the amount believed to be needed by the authors of the 1992 Rio Earth Summit consensus document *Agenda 21* (Hicks et al. 2008). Recent estimates of the incremental annual investment and financial flows needed for non-Annex I mitigation and adaptation in 2030, are between \$100 and \$140 billion per annum (Müller 2008: 19).

We gathered our project data from the OECD'S Creditor Reporting System database, which contains data on ODA projects. The sample space included all the projects in the CRS from the years 2000 to 2006, totaling 680,617 projects. We took random samples of 20,000 projects a year, before dropping projects that could not be coded. We ended up with an average of 16,433 projects per year, 115,031 projects in total. For the final section of this paper where we compare the climate change projects as coded by OECD donor countries, we used the sample of these projects that had been coded for climate change by the donors under the Rio Marker system (7,771 projects).

Our scheme for categorizing OECD projects accounted for the type of action that was taken to combat climate change. Mitigation projects are those designed to reduce or eliminate emissions of greenhouse gases or to capture greenhouse gases. Adaption projects include policies or actions designed to prepare for or cope with the effects of climate change. Among mitigation and adaption, each was subdivided into three specific subcategories.

1 – *Mitigation - energy efficiency and reducing emissions*: Projects that sought to update existing technologies to reduce their impact on climate change. Examples include power plant emissions reduction, energy star products, compact fluorescent light bulbs, cleaner production, and unspecified Kyoto or Rio activity.

2 – *Mitigation – renewable energy*: Projects that sought to develop and deploy new technologies that have zero or low emissions of greenhouse gases, such as solar power, geothermal/geothermic power, wind power, biomass, photovoltaic, alternative energy, biogas, hydroelectric, and hydropower.

3 – *Mitigation – other*: Projects that used alternate methods or techniques that lessened the impact on climate change using the same technologies, versus upgrading or developing new technology. Examples include: landfill or livestock gas capture, carbon sequestering, avoided deforestation, reforestation, afforestation, agricultural mitigated tilling, air pollution enforcement, and protecting wetlands.

4 – *Adaptation studies and plans*: Projects that sought to develop policies, studies, national plans, laws, etc. that relate to adaptation to climate change. Examples include: studies, plans, policy development, laws, climate change fund, and climate change protection.

5 – *Adaptation action*: Projects that sought to take direct action to adapt to climate change, such as environmental monitoring, building seawalls (as a response to climate change), reducing vulnerability, and adaptation policy implementation.

6 – *Adaptation – natural disaster prevention*: Projects that took precautions to prevent the occurrence or mitigate the effects of natural disasters, such as flood / drought monitoring, flood / drought prevention, flood / drought precautions, and desertification.

The most debated issue in our categorization was the inclusion of hydropower projects under *Mitigation –renewable energy*. Hydropower plants are on the one hand a renewable and relatively clean energy source, releasing nearly zero carbon emissions while producing energy. However, they can negatively impact the environment if their construction alters the body of water’s ecosystem and riparian habitats, displacing resident populations, and releasing methane, a potent greenhouse gas (International Rivers 2004; World Commission on Dams 2000). In what follows we examine how our findings vary with and without the inclusion of hydropower projects.

Finally, we compared our categorization of projects with that submitted by donor nations into the OECD CRS database as "Rio Markers." The Rio Marker for climate change uses a scale of 0 for climate change “not targeted” for that project, 1 for “significant objective”, 2 for “principal objective”, and 3 for climate change as a principal objective and/or relating to desertification. Examination of the data showed that there has been very spotty use of the Rio Markers by donors over the period. In this section of the paper we took all of the projects that were not coded 0 by the OECD, and coded them using our codebook guidelines. Differences in OECD Rio Markers and PLAID Climate Coding could be the result of different definitions of what constitutes climate aid or greater access to detailed information by donors.

Our categorization does provide consistent and independent categorization across donors and year. However, our codes were based entirely on project title and descriptions provided for each project in the OECD CRS database. Many projects did not have enough information, or even did not have any project data at all, which hindered our ability to confidently and knowledgeably code projects in terms of their climate aid. Gauging the real impact of projects on climate change is difficult, and multifaceted projects including mitigation and adaptation were also difficult to code: we coded these projects in terms of the first climate aid component that was mentioned. Comparing summary project descriptions to full project documents and budgets confirms the priority of first-mentioned terms.

Finally, we are painfully aware that mitigation and adaptation are not mutually exclusive – sometimes a project could consist of both. Our research is a step in the direction of understanding how climate aid is given: there is a clear need for a more complete and comprehensive project-level database that allows for more descriptive information surrounding development assistance projects.

The Rise of Mitigation in Official Development Assistance

Categorizing a random sample set of 20,000 projects per year from 2000 to 2006, we found that the percentage of dollars spent on climate-related projects was below one billion dollars a year (below two percent of all foreign aid) until 2004, rising sharply in 2005 and 2006. In 2006, we estimated climate aid was over \$11 billion, about four percent of all OECD project funding in that year. There is a drastic difference between the amount of all climate-related aid when hydropower is included and without it.

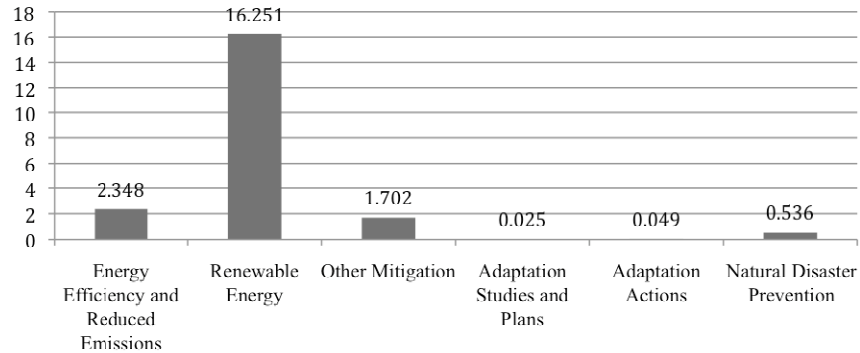


Figure 1. Estimated Climate Change Funding

We found that despite a large rhetorical focus on the future of adaptation to climate change, the vast majority of funding is funneled into mitigation projects, shown in Figure 1. Climate mitigation projects place priority on reducing or eliminating the causes of climate change while adaptation emphasizes the importance of creating solutions to living in a world altered by climate change. From 2000 to 2004, mitigation had a higher amount of funding as both mitigation and adaptation received less than two billion dollars a year during this period. After 2004, however, mitigation aid skyrocketed and reached above \$10 billion by 2006. Adaptation did not follow mitigation in this upward trend. As we look across the span of years, adaptation actually drops even further to around 2000 levels, never once breaking its peak in 2002, as mitigation rapidly increases.

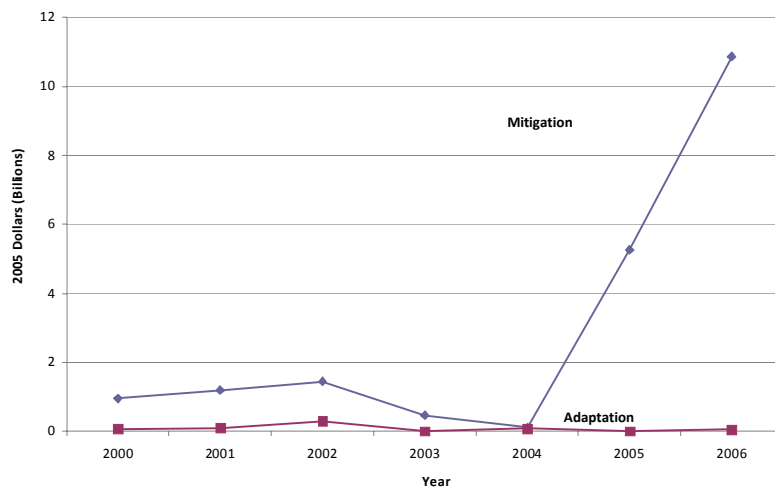


Figure 2. Estimated Climate Change Funding by Type (2000-2006), in 2005 US\$.

Figure 2 shows how climate aid has been allocated across our mitigation and adaptation categories over the period. Among the six, renewable energy receives by far the most aid, around \$16.5b total for the six years, while energy efficiency/reduced emissions received \$2.3b, and other mitigation received \$1.7b. Even the lowest-funded mitigation category dwarfs the total funding given to all adaptation projects, which we divided into three subcategories: adaptation studies and plans, adaptation action, and natural disaster prevention. Of these three, natural disaster prevention received the most funding,

perhaps because it is the broadest and most all-encompassing of the categories. That being said, very little attention is paid to adaptation projects. They received minimal aid, with not one category earning more than one billion dollars over the six year time period.

After coding the sample set using the PLAID-developed coding scheme, we compared our results to the 7,771 projects from the OECD sample set deemed climate-related by the OECD's Rio Climate Markers as designated by donor agencies. Figure 5 illustrates the disparity between the OECD donor agencies' reporting of projects with climate as having a significant or principal objective, versus the PLAID coded climate-related projects. The contrast is stark: our PLAID coding based on project titles and descriptions contained only 25 percent of the projects with Rio climate markers: seventy percent of the climate-related projects according to the OECD under our categorization were considered not directly beneficial on climate change.

Who are the major donors of climate aid so far this decade? The largest donor for climate aid was the Inter-American Development Bank, contributing 37 percent of the total climate aid reported to the OECD in our sample of 115,000 projects, or an estimated \$934m dollars for the full sample. Japan was the next highest, giving 26 percent of climate aid we uncovered, about \$626m. Combined with the World Bank's IDA and IBRD grant and loan arms (3rd and 5th places, respectively), these top donors accounted for four-fifths of climate aid dollars allocated during the period. The United States donated 4.3 percent of total climate aid, placing it behind two other bilateral funders, Japan and Germany.

Within the 115,000 projects we categorized, the largest recipients of climate change funding over these seven years were Venezuela and China. Together, these two recipients captured about half of all climate aid we uncovered. Most of Venezuela's funding was for hydroelectric dams funded by the Inter-American Development Bank. In spite of their being frequently cited as highly in need of adaptation funding, nearly all of Bangladesh, Vietnam and Columbia's climate aid so far has been allocated for mitigation, not adaptation.

Discussion/Conclusion: The Reality of Official Climate Aid

A crucial part of international efforts to address climate change is the money to assist developing countries in growing their economies without explosive increases in emissions, and in helping them to adapt to a changing climate which they did little to create. Market mechanisms like carbon trading may eventually deliver funding for some purposes to some areas of the world, but they will certainly fail to reach the neediest locations where the scale is too small or there is a lack of security which might hamper predictable and profitable investments. Aid also may not naturally flow to climate protection without vigilance and advocacy. PLAID categorization of a random sample of 115,000 aid projects found that a small percentage of projects appear to be addressing climate change—around one to two percent of aid through 2004 and reaching four percent in 2006. At the same time, critics have pointed to significant funding from the Bank and other aid agencies that is going to projects with starkly negative climate impacts.

The broadest result we found is that climate aid in the early 2000s followed the trend of the late 1990s of about one billion dollars a year, as we reported in *Greening Aid* (Hicks et al. 2008). Mitigation funding dropped in 2003 and 2004, but in 2005 took a sharp turn upward, and skyrocketed to an estimated five billion dollars in 2005 and nearly \$11b in 2006. Most of the increase in mitigation funding is large-scale hydroelectric projects, which many climate experts and activists do not believe should be part of a truly environmentally renewable solution to the problem of climate change because of methane emissions of dams, displacement of peoples, and major disruption of riparian ecosystems (World Commission on Dams 2000; McCully and Wong/International Rivers 2004). Without big hydro, our analysis suggests that climate projects summed only about 1.5 percent of all foreign aid, or an estimated two billion dollars a year. Readers may prefer to decide for themselves which way they would like to categorize hydro projects.

Second, adaptation funding is minuscule by comparison with mitigation aid (1/34th as much), and is inadequate when compared with the several estimates of how much is needed (World Bank 2006; Müller and Hepburn 2006; UNDP 2007; Oxfam 2007). Our total estimate over these seven years was

around US\$600m, compared with estimates of need ranging from eight to \$80b a year. That then is either one percent of the amount prescribed (by the lowest, Ian Noble/World Bank estimate) or 0.1 percent of the higher UNDP or Oxfam estimates. This suggests we need to find a way to raise the other 99.9 percent. Our sample of OECD donor projects also showed a heavy bias in adaptation funding to disaster prevention and management (over \$500m), as opposed to just \$25 and \$48m for adaptation studies and adaptation actions, respectively. These equal one-twentieth of the amount we estimate is being spent on natural disaster prevention.

Funding of the climate problem is highly concentrated: only five donors make up 80 percent of all the funding currently available. The IDB was far above the other donors, mostly because of the funding of some major hydroelectric projects under construction. Japan and Germany were the most generous bilateral climate donors until the creation of the CIF in the summer of 2008, which is being led by the United States and United Kingdom (World Bank 2008). Moreover, half of all the climate aid we uncovered was directed at just two countries, Venezuela and China. Our previous work explored how environmental aid followed many of the same patterns as other foreign aid, being driven by donor country trade interests, colonial legacies, but also recipient's "natural capital," population, and government effectiveness indicators (Hicks et al. 2008).

Above all else, this study shows the need for more careful attention to the status of official climate change assistance, and the need for standardized classifications for this aid. Upon comparing the PLAID categorization of these 115,000 aid projects with OECD members' self-reports, we see a stark difference: our system did not count 70 percent of projects OECD claimed were climate-related using the Rio Markers system. That level of potential over-counting by OECD donors was consistent over the seven years studied here.

While PLAID Climate Coding and the OECD Rio Climate Markers each has its own advantages and disadvantages, there is value in understanding the differences. A certain amount of the disparity must be attributed to the lack of transparency on both the project details and the OECD coding regulations. PLAID uses stricter and more standardized definitions of what constitutes a climate-related project across all donors and years. PLAID takes into consideration all of the consequences of a given project in a holistic manner, whereas the OECD coding scheme may have been adapted and changed over time as "significant objectives" of the same project may become more likely to include climate as the issue gains public attention. With Rio Markers being entirely self-reported, there is no way to examine the validity of donor claims. Redman (2008) similarly concludes that the World Bank, like the OECD, has much looser definitions and standards for what constitutes renewable energy or energy efficiency.

A crucial question is where the funding will come from for developing nations to adapt to climate change and build lower-carbon economies. To fulfill commitments made under the Kyoto and UN Framework Convention on Climate Change, such funds should come through UN-administered funds. Regardless of whether they come through World Bank-administered Climate Investment Funds, directly from other multilateral and bilateral donors, or through the GEF-administered Adaptation Fund, there needs to be a standard set of criteria for defining what projects are climate-related. These standards will be a key part of rich nations fulfilling their commitments under Article 4.3 of the UNFCCC for measurable, reportable, verifiably predictable, stable, and timely funding.

References

- Bird, Neil and Leo Peskett. 2008. "Recent bilateral initiatives for climate financing: Are they moving in the right direction?" *Overseas Development Institute Opinion 112*: September 2008, London.
- DANIDA. 2008. "Danish Climate and Development Action Programme: A Tool Kit for Climate Proofing Danish Development Cooperation." Ministry of Foreign Affairs of Denmark. Copenhagen.
- G-77 and China (Submitted by the Philippines). 2008 "Financial mechanism for meeting financial commitments under the Convention." Ideas and proposals on the elements contained in paragraph 1 of the Bali Action Plan. August 25.

- Hicks, Robert L., Bradley C. Parks, J. Timmons Roberts and Michael J. Tierney. 2008. *Greening Aid? Understanding the Environmental Impact of Development Assistance*. Oxford: Oxford University Press.
- IEA. 2008. *Energy Technology Perspectives 2008 -- Scenarios and Strategies to 2050*. International Energy Agency.
- IPCC 2007. *Climate Change 2007: The AR4 Synthesis Report*. Intergovernmental Panel on Climate Change.
- Patrick McCully and Susanne Wong, *Powering a Sustainable Future: The Role of Large Hydropower in Sustainable Development*. International Rivers Network, Prepared for the UN Symposium on Hydropower and Sustainable Development, Beijing, China, October 27-29, 2004.
- Müller, Benito. 2007. "Nairobi 2006: Trust and the Future of Adaptation Funding." Oxford Institute for Energy Studies EV38, January 2007.
- Müller, Benito. 2008. "To Earmark or Not to Earmark? A far-reaching debate on the use of auction revenue from (EU) Emissions Trading." Oxford Institute for Energy Studies, EV 43, November 2008.
- Müller, Benito and Cameron Hepburn. 2006. "IATAL — an outline proposal for an International Air Travel Adaptation Levy." EV36, Oxford: Oxford Institute for Energy Studies, October 2006.
- OECD (Richard Doornbosch and Eric Knight) 2008. "Discussion Paper: What Role for Public Finance in International Climate Change Mitigation?" Organisation for Economic Co-operation and Development, Round Table on Sustainable Development, SG/SD/RT(2008)3.
- Oxfam International. 2007. "Adapting to climate change." Oxfam Briefing Paper 104, Oxfam International.
- Redman, Janet. 2008a. *World Bank: Climate Profiteer*. Institute for Policy Studies. <http://www.ipsdc.org/getfile.php?id=181>
- Redman, Janet. 2008b. *Dirty is the New Clean: A Critique of the World Bank's Strategic Framework for Development and Climate Change*. Institute for Policy Studies. <http://www.ipsdc.org/getfile.php?id=287>
- Roberts, J. Timmons. 2007. "Urgent But Uncertain: The Dilemmas for Climate Change, Development, Adaptation and Justice for Development and Humanitarian Work." *Monday Developments: The Latest Issues and Trends in International Development and Humanitarian Assistance*. August, 2007: p.10-11.
- Roberts, J. Timmons and Bradley C. Parks. 2007. *A Climate of Injustice: Global Inequality, North-South Politics, and Climate Policy*. Cambridge, Mass.: MIT Press.
- Stern, Sir Nicolas. 2006, 2008. *The Stern Review of the Economics of Climate Change*. UK Treasury Department.
- Tearfund 2008. *Linking climate change adaptation and disaster risk reduction*. http://www.tearfund.org/webdocs/Website/Campaigning/CCA_and_DRR_web.pdf
- UNFCCC 2007. "Decision 1/CP.13: Bali Action Plan." FCCC/CP/2007/6/Add.1*
- UNFCCC. 2008. "Ideas and proposals on the elements contained in Paragraph 1 of the Bali Action Plan: Submissions from Parties." FCCC/AWGLCA/2008/MISC.2/Add.1
- UNDP 2007. *Human Development Report 2007/2008--Fighting climate change: Human solidarity in a divided world*. United Nations Development Programme.
- USAID 2007. *Adapting to Climate Variability and Change: A Guidance Manual for Development Planning*. Washington: US Agency for International Development.
- World Bank 2006. "Clean Energy And Development: Towards An Investment Framework" Development Committee (Joint Ministerial Committee of the Boards of Governors of the World Bank and the International Monetary Fund on the Transfer of Real Resources to Developing Countries), Washington D.C./USA: 5 April 2006
- World Bank 2008. *Climate Investment Funds website and presentations*: <http://www.worldbank.org/cif>
- World Commission on Dams 2000. *Dams and Development: A New Framework: The Report of the World Commission on Dams for Decision-Making*.