

# Notes

## Chapter 1

- 1 Diamond 2005.
- 2 Kennedy 1963.
- 3 Sen 1999.
- 4 UN 2007b.
- 5 World Bank 2007c.
- 6 UNDP 2006b.
- 7 Government of India 2007.
- 8 World Bank 2007c.
- 9 UNDP 2006b.
- 10 WHO 2006; WHO and UNICEF 2005.
- 11 Lopez 2006.
- 12 Wagstaff and Claeson 2004.
- 13 World Bank 2003.
- 14 Hansen et al. 2006.
- 15 ISSC 2005.
- 16 ISSC 2005; European Union 2007b; den Elzen and Meinshausen 2005; Schellnhuber 2006; Government of France 2006.
- 17 Warren et al. 2006.
- 18 Warren et al. 2006.
- 19 OFDA and CRED 2007.
- 20 Anthoff et al. 2006; Dasgupta et al. 2007.
- 21 IPCC 2007b, Chapter 4: Ecosystems, their Properties, Goods, and Services; Warren et al. 2006.
- 22 IPCC 2007b, Chapter 8: Human Health, Summary Table 8.2.
- 23 Sen 1999.
- 24 IPCC 2007d.
- 25 This correlation highlights carbon cycle feedbacks, with the biosphere losing carbon to the atmosphere in response to higher temperatures, which in turn drives temperatures upwards.
- 26 Lockwood and Fröhlich 2007.
- 27 IPCC 2007d.
- 28 The total radiative forcing effect of greenhouse gases is measured in terms of the equivalent concentration (in parts per million, or ppm) of CO<sub>2</sub>. There are six greenhouse gases recognized under the Kyoto Protocol. These are carbon dioxide, methane, nitrous dioxide, perfluorocarbons (PFCs), hydrofluorocarbons (HFCs) and sulphur hexafluoride (SF<sub>6</sub>).
- 29 Anthropogenic contributions to aerosols (mainly sulphate, organic carbon, black carbon, nitrates and dust) produce a cooling effect by blocking solar radiation.
- 30 The radiative forcing value for non-CO<sub>2</sub> long-lived greenhouse gases is 0.98 (Wm<sup>-2</sup>) and the cooling effect of aerosols is 1.2 (Wm<sup>-2</sup>) (IPCC 2007d).
- 31 ppm stands for parts per million and in this instance is the number of greenhouse gas molecules per million molecules of dry air.
- 32 IPCC 2007d.
- 33 Henderson 2006a.
- 34 Caldeira 2007; Caldeira, Jain and Hoffert 2003; Henderson 2006a.
- 35 IPCC 2007f.
- 36 Flannery 2005.
- 37 Stern 2006.
- 38 Preindustrial temperature refers to the average temperature for the period 1861-1890.
- 39 IPCC 2007a, Chapter 10: Global Climate Projections.
- 40 Meinshausen 2005.
- 41 Meinshausen 2005.
- 42 Personal correspondence with Dr Malte Meinshausen, Potsdam Institute for Climate Impact Research.
- 43 Personal correspondence with Dr Malte Meinshausen. The reference year period for the temperature increase is 1980 to 1999.
- 44 Schlesinger et al. 2005.
- 45 IPCC 2007d.
- 46 Hansen et al. 2007; Pritchard and Vaughn 2007.
- 47 Hansen 2007a, 2007b.
- 48 Schellnhuber and Lane 2006; Schellnhuber 2006.
- 49 Jones, Cox and Huntingford 2005.
- 50 CNA Corporation 2007.
- 51 Gullison et al. 2007.
- 52 IPCC 2007e.
- 53 WRI 2007a.
- 54 IEA 2006c.
- 55 Volpi 2007.
- 56 Volpi 2007.
- 57 PEACE 2007.
- 58 Modi et al. 2005.
- 59 IEA 2006c.
- 60 IEA 2006c.
- 61 The equivalent figure for a carbon equivalent budget covering all Kyoto greenhouse gases is around 600 Gt CO<sub>2</sub>e, or 6Gt CO<sub>2</sub>e annually. This translates into around 22 Gt CO<sub>2</sub>e. Current emissions are around double this level. In 2004, total greenhouse gas emissions were estimated by the IPCC at around 49 Gt CO<sub>2</sub>e annually (IPCC 2007c).
- 62 Stern 2006.
- 63 Barker and Jenkins 2007.
- 64 For example, the Stern Review examined a stabilization scenario set at 550 ppm. Research carried out for this year's HDR extrapolates from these models to derive the cost implications of keeping within a 2°C threshold, or around 450 CO<sub>2</sub>e.
- 65 HDRO calculations based on the annual cost expressed as percentage of GDP in Barker and Jenkins 2007. The calculation is the average yearly cost in the period 2000–2030 weighted by the size of the global economy over that period. Barker and Jenkins 2007 also present other scenarios with lower mitigation costs.
- 66 Stern (2006), on which these figures are based, discusses a wide range of estimates.
- 67 Barker and Jenkins (2007) project the cost of stabilization at 450ppm CO<sub>2</sub>e at 2–3% of GDP, falling to 1–2% with permit trading. If the policy framework also allows for the revenues from auctioning permits and carbon taxes to be recycled, these would entail tax reform. National and global economies could benefit by as much as 5% of GDP above the 2030 baseline.
- 68 The Kyoto Protocol was negotiated in Japan in 1997 within the framework of the UNFCCC. Under the terms of the Protocol, Annex I parties representing 55 percent of 1990 emissions were required to accept binding limits on emissions. Ratification by the Russian Federation in 2004 provided the critical mass to meet this condition.
- 69 Calculation based on data from IEA 2006c.
- 70 Annex I parties include the industrialized countries that were members of the OECD in 1992, plus countries with economies in transition (the EIT Parties), including the Baltic States, several Central and Eastern European States and the Russian Federation, Non-Annex I parties are mostly developing countries.
- 71 Roberts 2005.

- 72** Council on Foreign Relations 2006.
- 73** IEA 2006c.
- 74** Hansen 2007c.
- 75** UNDP 2006b; UNDP Ukraine 2006.
- 76** IEA 2006c.
- 77** IPCC 2007f.
- 78** Stern 2006; Nordhaus 2007.
- 79** IMF 2006.
- 80** Smith 1854.
- 81** World Commission on Environment and Development 1987.
- 82** Anand and Sen 1996.
- 83** Sen 2004.
- 84** Appiah 2006.
- 85** Nordhaus 2007.
- 86** Nordhaus 2006.
- 87** The discount rate that emerges from a very simple standard economic model considering only one infinitely lived representative agent and other simplifying assumptions can be expressed by:  $\rho = \delta + \eta g$ , where  $\delta$  is the social rate of time preference,  $g$  is the projected growth rate of consumption per capita, and  $\eta$  is the elasticity of the social weight—or marginal utility—attributed to a change in consumption. It is standard assumption that utility will decrease when consumption increases, making  $\eta$  always positive. In this simplifying framework, it is also considered constant.
- 88** In fact, the only justifiable reason for discounting the welfare of future generations, according to Stern (2006), was the possibility of extinction. He therefore allows for a very small rate of pure time preference of 0.1 percent.
- 89** Arrow 2007.
- 90** Ramsey 1928.
- 91** Stern and Taylor 2007.
- 92** However, the case does not rest on economics alone. Arrow (2007) has shown that if the costs and benefits of mitigation suggested in the Stern Review are accepted, then the case for early action now is only rejected with a rate of pure time preference above 8.5 percent—a value that not even the strongest critics of Stern would advocate.
- 93** Wolf 2006b; Weitzman 2007.
- 94** Schelling 2007.
- 95** Dasgupta 2001.
- 96** HSBC 2007.
- 97** Pew Center on Global Climatic Change 2006.
- 98** Pew Center on Global Climatic Change 2006.
- 99** Leiserowitz 2007.
- 100** Leiserowitz 2006.
- 101** Leiserowitz 2006.
- 102** European Commission, Directorate General for Energy and Transport 2006.
- 103** HSBC 2007; The Economist 2007a.
- 104** Bernstein 1998.
- 105** Boykoff and Roberts 2007.
- 106** Boykoff and Roberts 2007; Boykoff and Boykoff 2004.
- Chapter 2**
- 1** de Montesquiou 2005.
- 2** Itano 2002.
- 3** Personal interview with Kaseyitu Agumas, 22 March 2007, Ethiopia.
- 4** Raworth 2007b.
- 5** Personal interview with Instar Husain, 2 February 2007, Bangladesh.
- 6** Sen 1999.
- 7** OFDA and CRED 2007.
- 8** ABI 2005a.
- 9** WMO 2006.
- 10** OFDA and CRED 2007.
- 11** Reliefweb 2007; BBC News 2007.
- 12** IFRC 2006.
- 13** OFDA and CRED 2007.
- 14** Skutsch et al. 2004.
- 15** IPCC 2007e.
- 16** Dercon 2005; Chambers 2006.
- 17** Calvo and Dercon 2005.
- 18** Our framework for looking at risk and vulnerability differs in emphasis from the conceptual framework used by the disaster-risk community. The standard approach is based on the following formulae: risk=hazard exposure\*vulnerability (with hazard exposure a function of degree of hazard\*elements exposed) (Maskrey et al. 2007).
- 19** ADB 2001.
- 20** GSS, NMIMR and ORC Macro 2004; CBS, MOH and ORC Macro 2004.
- 21** Roberts and Parks 2007.
- 22** USAID FEWS NET 2006.
- 23** OFDA and CRED 2007.
- 24** WEDO 2007.
- 25** Watt-Cloutier 2006.
- 26** Chafe 2007.
- 27** Rosenzweig and Binswanger 1993.
- 28** Dercon 1996.
- 29** Elbers and Gunning 2003.
- 30** OECD 2006b.
- 31** GAO 2007.
- 32** Devereux 2002.
- 33** Dercon, Hoddinott and Woldehanna 2005.
- 34** Dercon 2005.
- 35** Carter et al. 2007.
- 36** WFP 2005; IFRC 2005b.
- 37** Behrman and Deolalikar 1990; Dercon and Krishnan 2000; Rose 1999.
- 38** Baez and Santos 2007; de Janvry et al. 2006a.
- 39** de la Fuente and Fuentes 2007.
- 40** Devereux 2006b.
- 41** Hoddinott and Kinsley 2001.
- 42** Banerjee Bénabou and Mookherjee 2006.
- 43** Carter and Barrett 2006.
- 44** IPCC 2007d, 2007e.
- 45** The IPCC uses two-sided confidence intervals of 90 percent.
- 46** IPCC 2007e.
- 47** Warren et al. 2006.
- 48** World Bank 2006b.
- 49** World Bank 2003.
- 50** World Bank 2003.
- 51** Delgado et al. 1998.
- 52** Cline 2007.
- 53** Fischer et al. 2005; Agoumi 2003 cited in IPCC 2007b, Chapter 9: Africa.
- 54** Kurukulasuriya and Mendelsohn 2006.
- 55** UNEP and GRID – Arendal 2001.
- 56** Carvajal 2007.
- 57** UNEP 2007a.
- 58** Vaid et al. 2006.
- 59** World Bank 2006f.
- 60** Stern 2006.
- 61** Government of India 2007.
- 62** Government of the People's Republic of Bangladesh 2005b.
- 63** Kelkar and Bhadwal 2007.
- 64** PEACE 2007.
- 65** Jones and Thornton 2003.
- 66** IPCC 2001.
- 67** FAO 2004.
- 68** Water stress is defined as a situation where the per capita availability of renewable fresh water is between 1,000 cubic metres and 1,667 cubic metres. Water scarcity refers to a situation of living with an annual per capita availability of renewable fresh water of 1,000 cubic metres or less.
- 69** Bou-Zeid and El-Fadel 2002.
- 70** IPCC 2007b, Chapter 9: Africa.
- 71** Bou-Zeid and El-Fadel 2002.
- 72** UNEP 2007b.
- 73** Carvajal 2007.
- 74** Khoday 2007.
- 75** UNEP 2007b.
- 76** Regmi and Adhikari 2007.
- 77** Khoday 2007.
- 78** UNDP 2006b; Rosegrant, Cai and Cline 2002.
- 79** Vergara et al. 2007.
- 80** Maskrey et al. 2007.
- 81** Emanuel 2005.
- 82** Pierce et al. 2005.
- 83** Maskrey et al. 2007.
- 84** Arnell 2004.
- 85** Anthoff et al. 2006; Dasgupta et al. 2007.
- 86** Hemming 2007.
- 87** Hemming 2007; Brown 2007.
- 88** Brown 2007.
- 89** Agrawala et al. 2003.
- 90** World Bank 2006c.
- 91** IPCC 2007b, Chapter 16: Small Islands; Dasgupta et al. 2007.
- 92** UN-HABITAT 2006.
- 93** Millennium Ecosystem Assessment 2005.
- 94** World Watch Institute 2005.
- 95** Finlayson and Spiers 2000.
- 96** Hansen 2006.
- 97** IPCC 2007b, Chapter 4: Ecosystems, their Properties, Goods, and Services.
- 98** ACIA 2004.
- 99** Government of the United States 2006b.
- 100** The United Nations Convention on the Law of the Sea entered into force in 1994. It is a set of rules for the use of the world's

- oceans, which cover 70 percent of the Earth's surface.
- 101** ACIA 2004; Perelet, Pegov and Yulkin 2007.
- 102** Hare 2005; Henderson 2007.
- 103** Henderson 2006b.
- 104** PEACE 2007.
- 105** Gardner et al. 2003.
- 106** Caldeira 2007.
- 107** Caldeira 2007.
- 108** Caldeira 2007.
- 109** Carvajal 2007.
- 110** McMichael et al. 2003.
- 111** WHO and UNICEF 2005; WHO 2006.
- 112** Tanser, Sharp and le Seur 2003.
- 113** van Lieshout et al. 2004.
- 114** Chretien et al. 2007.
- 115** Stern 2006.
- 116** PEACE 2007.
- 117** WMO 2006.
- 118** Epstein and Mills 2005.
- 119** Epstein and Rogers 2004.
- 120** New York Climate & Health Project 2004.
- 121** New York Climate & Health Project 2004.
- Chapter 3**
- 1** Government of the United Kingdom 2007a.
- 2** Government of France 2006.
- 3** Government of France 2006.
- 4** Government of Germany 2007.
- 5** G8 2007.
- 6** Hanemann and Farrell 2006.
- 7** These states include: Arizona, California, Connecticut, Florida, Hawaii, Illinois, Maine, Massachusetts, Minnesota, New Hampshire, New Jersey, New Mexico, New York, Oregon, Rhode Island, Vermont and Washington (Pew Center on Global Climate Change 2007c).
- 8** The Governors of Connecticut, Delaware, Maine, New Hampshire, New Jersey, New York, and Vermont established the RGGI in 2005. Maryland, Massachusetts and Rhode Island joined in 2007 (Pew Center on Global Climate Change 2007c).
- 9** Arroyo and Linguiti 2007.
- 10** Claussen 2007.
- 11** Brammer et al. 2006.
- 12** Pew Center on Global Climate Change 2007a.
- 13** USCAP 2007.
- 14** Arroyo and Linguiti 2007.
- 15** Arroyo and Linguiti 2007.
- 16** UNFCCC 2006.
- 17** EIA 2006; Arroyo and Linguiti 2007.
- 18** IPCC 2007c, Chapter 5: Transport and its infrastructure.
- 19** Cairns and Newson 2006.
- 20** Doniger, Herzog and Lashof 2006.
- 21** Sullivan 2007.
- 22** UNFCCC 2006.
- 23** Government of Australia 2007.
- 24** Henderson 2007.
- 25** Government of New South Wales 2007.
- 26** Acuiti Legal 2003.
- 27** Pederson 2007; Nippon Keidanren 2005.
- 28** Examples in this paragraph are taken from Pew Center on Global Climate Change 2007b.
- 29** Roosevelt 2006.
- 30** On the case for carbon taxation and the critique of cap-and-trade see Cooper 2000, 2005; Nordhaus 2005; Shapiro 2007.
- 31** Hanson and Hendricks 2006.
- 32** Nordhaus 2006.
- 33** HDR calculation based on data from Indicator Table 24; OECD emissions of CO<sub>2</sub> in 2004 were 13.3 Gt.
- 34** Stern 2006.
- 35** Shapiro 2007.
- 36** Shapiro 2007; EPA 2006.
- 37** IPCC 2007f. The global mitigation potential relative to the IPCC's SRES A1B non-mitigation scenario is estimated at 17–26 Gt CO<sub>2</sub>e/yr with a carbon price of US\$1/t CO<sub>2</sub>e, or 25–38 percent.
- 38** Toder 2007.
- 39** Sierra Club 2006.
- 40** EEA 2004.
- 41** International Network for Sustainable Energy 2006.
- 42** Cairns and Newson 2006.
- 43** During Phase II the scheme will cover 27 countries.
- 44** There are three flexibility mechanisms introduced by the Kyoto Protocol: Emissions Trading, the Clean Development Mechanism (CDM) and Joint Implementation (JI). Unlike the CDM that links mitigation efforts in developing and developed countries (Annex I and non-Annex I parties), through the Joint Implementation, Annex I parties may fund emission reducing projects in other Annex I parties, typically countries in Eastern Europe.
- 45** UNFCCC 2007e.
- 46** Point Carbon 2007.
- 47** Carbon Trust 2006.
- 48** Grubb and Neuhoff 2006.
- 49** Carbon Trust 2006.
- 50** Government of the United Kingdom 2006b.
- 51** Sijm, Neuhoff and Chen 2006.
- 52** EU 2007c.
- 53** Hoffmann 2006.
- 54** Hoffmann 2006.
- 55** WWF 2007a, 2007b.
- 56** Reece et al. 2006; WWF 2006b, 2007a.
- 57** WWF 2007a, 2007b.
- 58** IEA 2006c.
- 59** IEA 2006c.
- 60** Government of the United States 2007a.
- 61** IEA 2006c.
- 62** NEA 2006.
- 63** The Economist 2007b.
- 64** Greenpeace and GWEC 2006.
- 65** NCEP 2004a.
- 66** Philibert 2006.
- 67** Arroyo and Linguiti 2007.
- 68** Greenpeace and GWEC 2006.
- 69** NCEP 2004a.
- 70** NCEP 2004a.
- 71** Üрге-Vorsatz et al. 2007a; IEA 2006b.
- 72** Üрге-Vorsatz, Mirasgedis and Koeppel 2007b.
- 73** Üрге-Vorsatz, Mirasgedis and Koeppel 2007b; EC 2005a.
- 74** IEA 2003.
- 75** IEA 2003; World Bank 2007d.
- 76** IEA 2003, page 128.
- 77** IEA 2006b.
- 78** Üрге-Vorsatz, Mirasgedis and Koeppel 2007b.
- 79** IEA 2003, 2006a.
- 80** Üрге-Vorsatz, Mirasgedis and Koeppel 2007b.
- 81** EC 2006a.
- 82** IPCC 2007c, Chapter 5: Transport and its infrastructure.
- 83** Merrill Lynch and WRI 2005.
- 84** Merrill Lynch and WRI 2005; NCEP 2004a.
- 85** Arroyo and Linguiti 2007.
- 86** NCEP 2004a.
- 87** EFTA 2007.
- 88** CEC 2007c.
- 89** CEC 2007c.
- 90** EFTA 2007.
- 91** Baumert, Herzog and Pershing 2005.
- 92** Government of the United States 2007c.
- 93** EC 2007a.
- 94** Steenblik 2007.
- 95** Runnalls 2007.
- 96** Runge and Senauer 2007.
- 97** Runge and Senauer 2007.
- 98** EC 2007a.
- 99** Summa 2007.
- 100** The payment is currently set at €45 per hectare with a minimum guaranteed area of 1.5 million hectares (CEC 2005b).
- 101** IEA 2006c; IPCC 2007c, Chapter 5: Transport and its infrastructure.
- 102** CEC 2006c; Jank et al. 2007.
- 103** Elobeid and Tokgoz 2006.
- 104** Tolgfors, Eriandsson and Carlgren 2007.
- 105** Schnepf 2006.
- 106** NASA 2005; Smithsonian National Air and Space Museum 1999.
- 107** Stern 2006.
- 108** Thermal efficiency describes the rate at which fuel is transformed into energy.
- 109** Watson et al. 2007.
- 110** IEA 2006b.
- 111** Government of the United States 2007b.
- 112** Government of the United States 2007b.
- 113** Watson et al. 2007; Rubin 2007.
- 114** Government of the United States 2005.
- 115** Government of the United States 2006a.
- 116** European Technology Platform on Zero Emission Fossil Fuel Power Plants (ZEP) 2007.
- 117** EC 2005b.
- 118** European Technology Platform on Zero Emission Fossil Fuel Power Plants (ZEP) 2007.

- 119** Government of the United Kingdom 2006c.
- 120** Rubin 2007a; Claussen 2007.
- 121** CEC 2007d.
- 122** Government of the United States 2007a.
- 123** Watson 2007.
- 124** OECD 2005c.
- 125** Watson 2007.
- 126** OECD 2005c.
- 127** Watson et al. 2007.
- 128** Data in this section is derived from tables in Annex A of IEA 2006c.
- 129** Winkler and Marquard 2007.
- 130** Watson et al. 2007.
- 131** Davidson et al. 2006.
- 132** Government of India 2006a, 2006b.
- 133** Watson et al. 2007.
- 134** Winkler and Marquard 2007.
- 135** IEA 2006c.
- 136** IEA 2006c.
- 137** Watson 2007.
- 138** Watson 2007.
- 139** Victor 2001.
- 140** UNFCCC 2007c.
- 141** World Bank 2007f.
- 142** World Bank 2007b.
- 143** FAO 2007b.
- 144** This value refers to the change in carbon stocks above and below ground biomass. To convert the reported values from carbon to carbon dioxide, a conversion factor of 3.664 has been applied (FAO 2007b).
- 145** PEACE 2007.
- 146** There are wide variations in estimates of CO<sub>2</sub> emissions linked to changes in forest areas. FAO Forest Resources Assessment data on carbon stocks in forests 1990–2005 suggests that approximately 1.1 Gt CO<sub>2</sub> are released a year from Brazilian forests—only from living biomass (above and below ground) (FAO 2007b).
- 147** Butler 2006.
- 148** The values used in this example are drawn from Chomitz et al. 2007.
- 149** Chomitz et al. 2007.
- 150** Pearce 2001.
- 151** Volpi 2007.
- 152** Chomitz et al. 2007.
- 153** Tauli-Corpuz and Tamang 2007.
- 154** INPE 2007.
- Chapter 4**
- 1** ABI 2007b.
- 2** IPCC 2007b, Chapter 12: Europe.
- 3** Linklater 2007.
- 4** CEC 2007b.
- 5** Huisman 2002; EEA 2007.
- 6** UKCIP 2007; The Economist 2007c; ABI 2007b.
- 7** Hulme and Sheard 1999b; British Oceanographic Data Centre 2007; Government of Japan 2002; EEA 2007.
- 8** EEA 2007; WWF 2002; Schröter, Zebisch and Grothmann 2005.
- 9** California Public Utilities Commission 2005; California Department of Water Resources 2006; Franco 2005; Government of California 2006; Cayan et al. 2005.
- 10** National Audit Office 2001.
- 11** CEC 2007b.
- 12** Branosky 2006; EPA 2006.
- 13** NFU 2005.
- 14** Practical Action 2006a.
- 15** Rahman et al. 2007; Raworth 2007b.
- 16** Chaudhry and Rysschaert 2007.
- 17** Cornejo 2007.
- 18** WRI, UNEP, and World Bank 2005; Narain 2006.
- 19** Practical Action 2006b.
- 20** Birch and Grahn 2007.
- 21** Glemarec 2007a.
- 22** Glemarec 2007b.
- 23** Washington et al. 2006.
- 24** Washington et al. 2006; Intsiful et al. 2007.
- 25** Meteo France 2007.
- 26** Regional Hunger and Vulnerability Programme 2007.
- 27** Intsiful et al. 2007.
- 28** IRI 2007.
- 29** G8 2005.
- 30** Intsiful et al. 2007.
- 31** Global Climate Observing System, UN Economic Commission for Africa and African Union Commission 2006.
- 32** OECD 2007a.
- 33** Nguyen 2007.
- 34** Jha 2007.
- 35** DFID 2006.
- 36** IFRC 2002.
- 37** Tanner et al. 2007.
- 38** The conversion factor is around 15 percent.
- 39** Ethiopia, for example, has a harvesting potential of 11,800m<sup>3</sup> per capita compared to 1,600m<sup>3</sup> per capita of renewable river and groundwater. Similarly for Kenya: 12,300m<sup>3</sup> compared to 600m<sup>3</sup> per capita, and Tanzania: 24,700m<sup>3</sup> compared to 2,200m<sup>3</sup> per capita for water harvesting potential, and renewable river and groundwater potential, respectively (UNEP 2005).
- 40** Narain 2006.
- 41** Devereux 2006b.
- 42** Grinspun 2005.
- 43** de Janvry and Sadoulet 2004.
- 44** de Janvry et al. 2006b; Barrientos and Holmes 2006.
- 45** Schubert 2005; Barrientos and Holmes 2006; Randel 2007. Calculations based on data in Indicator Tables 14 and 18.
- 46** ISDR 2007a.
- 47** de la Fuente 2007a.
- 48** ISDR 2007b.
- 49** IFRCa 2005; Catholic Relief Services 2004; Carvajal 2007; OFDA and CRED 2007.
- 50** Thompson and Gviria 2004; IFRC 2005a. By comparison, there were 36 deaths in Florida.
- 51** IFRC 2006.
- 52** The UNFCCC deals with adaptation in several articles. Under Article 4.1(f): All Parties shall “take climate change considerations into account, to the extent feasible, in their relevant social, economic and environmental policies and actions, and employ appropriate methods, for example impact assessments, formulated and determined nationally, with a view to minimizing adverse effects on the economy, on public health and on the quality of the environment, of projects or measures undertaken by them to mitigate or adapt to climate change.” Under Article 4.4: “The developed country Parties and other developed Parties included in Annex II shall also assist the developing country Parties that are particularly vulnerable to the adverse effects of climate change in meeting costs of adaptation to those adverse effects.”
- 53** Heimann and Bernstein 2007.
- 54** Alaska Oil Spill Commission 1990.
- 55** Gurría and Manning 2007.
- 56** Gurría and Manning 2007.
- 57** As of April 30th 2007, see GEF 2007a. Corporate costs and administrative expenses and fees paid to the three implementing agencies—the World Bank, UNDP and UNEP—accounts for another US\$2 million, or around 20 percent of total disbursements to date.
- 58** Proposals already in advanced stages, such as Bangladesh, Bhutan, Malawi, Mauritania and Niger are expected to receive an average of US\$3–3.5 million each to start implementing the first priorities of their NAPA.
- 59** The fund also covers technology transfer.
- 60** GEF 2007a, 2007c.
- 61** GEF 2007b.
- 62** Müller and Hepburn 2006.
- 63** Abbott 2004.
- 64** Frankel-Reed 2006. The sample included projects where climate change risks and vulnerability were explicit considerations. Business-as-usual development activities (e.g. increased water provision, public health capacity) that may have reduced vulnerability to climate change but were not designed intentionally to support adaptation were not considered.
- 65** World Bank 2007g.
- 66** Agrawala 2005.
- 67** For a summary of the methodology and list of DAC sector and purpose codes used, see Agrawala 2005.
- 68** The World Bank estimates costs of adaptation as 5–20 percent of development investment sensitive to climate. For 2005 ODA, this amounts to between US\$1.0 billion and US\$8.1 billion, with US\$4.5 billion as the mid-range value.

- 69** Gurría and Manning 2007.
- 70** OCHA Financial Tracking System [www.reliefweb.int/fts.] cited in Oxfam International 2005.
- 71** Müller and Hepburn 2006; Oxfam International 2007.
- 72** Oxfam International 2007.
- 73** This figure is based on the assumption that adaptation financing requirements in developing countries will represent around 0.1 percent of developed country GDP (the approximate level in 2005 based on World Bank methodology).
- 74** This figure would represent around 0.5 percent GDP for low income and lower-middle income countries.
- 75** SIPRI 2007.
- 76** Landau 2004.
- 77** Müller and Hepburn 2006.
- 78** Bouwer and Aerts 2006.
- 79** Oxfam International 2007.
- 80** OECD 2005b, 2006e.
- 81** Barrientos and Holmes 2006.
- 82** Government of the People's Republic of Bangladesh 2005a; UNDP 2005; Rahman et al. 2007; Mallick et al. 2005.
- 83** Government of the People's Republic of Bangladesh, mimeo.
- 84** ISDR 2007c.
- 85** ISDR and the World Bank GFDRR 2006, 2007.
- 86** Initial financial arrangements are given for 2006-2016 (ISDR and the World Bank GFDRR 2006). The mainstreaming track, projected to cost some US\$350 million is to be met through a multi-donor trust fund, of which some US\$42 million has been pledged as of August 2007. See: <http://siteresources.worldbank.org/EXTDISMGMT/Resources/GfdrDonorPledgesAugust7.pdf>

## Bibliography

### Background Papers

- Arroyo, Vicki and Peter Linguiti.** 2007. "Current Directions in the Climate Change Debate in the United States."
- Barker, Terry and Katie Jenkins.** 2007. "The Costs of Avoiding Dangerous Climate Change: Estimates Derived from a Meta-Analysis of the Literature."
- Boykoff, Maxwell T. and J. Timmons Roberts.** 2007. "Media Coverage of Climate Change: Current Trends, Strengths, Weaknesses."
- de la Fuente, Alejandro and Ricardo Fuentes.** 2007. "The Impact of Natural Disasters on Children Morbidity in Rural Mexico."
- Fuentes, Ricardo and Papa Seck.** 2007. "The Short and Long-term Human Development Effects of Climate-Related Shocks: Some Empirical Evidence."
- Helm, Dieter.** 2007. "Climate Change: Sustainable Growth, Markets, and Institutions."
- Henderson, Caspar.** 2007. "Carbon Budget—the Agenda for Mitigation. Australia, Canada, the European Union and Japan."
- IGAD (Intergovernmental Authority on Development) Climate Prediction and Applications Centre (ICPAC).** 2007. "Climate Change and Human Development in Africa: Assessing the Risks and Vulnerability of Climate Change in Kenya, Malawi and Ethiopia."
- O'Brien, Karen and Robin Leichenko.** 2007. "Human Security, Vulnerability and Sustainable Adaptation."
- Osbahr, Henny.** 2007. "Building Resilience: Adaptation Mechanisms and Mainstreaming for the Poor."
- Perelet, Renat.** 2007. "Central Asia: Background Paper on Climate Change."
- Perelet, Renat, Serguey Pegov and Mikhail Yulkin.** 2007. "Climate Change. Russia Country Paper. Perelet, Renat, Serguey Pegov and Mikhail Yulkin. 2007. "Climate Change. Russia Country Paper."
- Rahman, Atiq, Mozaharul Alam, Sarder Shafiqul Alam, Md. Rabi Uzzaman, Mariam Rashid and Golam Rabbani.** 2007. "Risks, Vulnerability and Adaptation in Bangladesh."
- Reid, Hannah and Saleemul Huq.** 2007. "International and National Mechanisms and Politics of Adaptation: An Agenda for Reform."
- Seck, Papa.** 2007a. "Links between Natural Disasters, Humanitarian Assistance and Disaster Risk Reduction: A Critical Perspective."
- Watson, Jim, Gordon MacKerron, David Ockwell and Tao Wang.** 2007. "Technology and Carbon Mitigation in Developing Countries: Are Cleaner Coal Technologies a Viable Option?"
- de la Fuente, Alejandro.** 2007a. "Private and Public Responses to Climate Shocks."
- . 2007b. "Climate Shocks and their Impact on Assets."
- Dobie, Philip, Barry Shapiro, Patrick Webb and Mark Winslow.** 2007. "How do Poor People Adapt to Weather Variability and Natural Disasters Today?"
- Gaye, Amie.** 2007. "Access to Energy and Human Development."
- Intsiful, Joseph D, Richard Jones, Philip Beauvais and Vicky Pope.** 2007. "Meteorological Capacity in Africa."
- Kelkar, Ulka and Suruchi Bhadwal.** 2007. "South Asian Regional Study on Climate Change Impacts and Adaptation: Implications for Human Development."
- Khoday, Kishan.** 2007. "Climate Change and the Right to Development. Himalayan Glacial Melting and the Future of Development on the Tibetan Plateau."
- Krznicar, Roman.** 2007. "For God's Sake, Do Something! How Religions Can Find Unexpected Unity Around Climate Change."
- Kuonqui, Christopher.** 2007. "Responding to Clear and Present Dangers: A New Manhattan Project for Climate Change?"
- Leiserowitz, Anthony.** 2007. "Public Perception, Opinion and Understanding of Climate Change—Current Patterns, Trends and Limitations."
- Li, Junfeng.** 2007. "Mitigation Country Study—China."
- Mathur, Ritu and Preety Bhandari.** 2007. "Living Within a Carbon Budget—the Agenda for Mitigation."
- Matus Kramer, Arnoldo.** 2007. "Adaptation to Climate Change in Poverty Reduction Strategies."
- Menon, Roshni.** 2007a. "Famine in Malawi: Causes and Consequences."
- . 2007b. "Managing Disaster, Mitigating Vulnerability: Social Safety Nets in Ethiopia."
- Newell, Peter.** 2007. "The Kyoto Protocol and Beyond: The World After 2012."
- Tolan, Sandy.** 2007. "Coverage of Climate Change in Chinese Media."
- Volpi, Giulio.** 2007. "Climate Mitigation, Deforestation and Human Development in Brazil."
- Winkler, Harald and Andrew Marquard.** 2007. "Energy Development and Climate Change: Decarbonising Growth in South Africa."
- Yue, Li, Lin Erda and Li Yan.** 2007. "Impacts of, and Vulnerability and Adaptation to, Climate Change in Water Resources and Agricultural Sectors in China."

### Issue Notes

### Thematic Papers

- Brown, Oli.** 2007. "Climate Change and Forced Migration: Observations, Projections and Implications."
- Carvajal, Liliana.** 2007. "Impacts of Climate Change on Human Development."
- Conceição, P., Y. Zhang and R. Bandura.** 2007. "Brief on Discounting in the Context of Climate Change Economics."
- Conde, Cecilia, Sergio Saldaña and Víctor Magaña.** 2007. "Thematic Regional Papers. Latin America."
- de Buen, Odón.** 2007. "Decarbonizing Growth in Mexico."
- Arredondo Brun, Juan Carlos.** 2007. "Adapting to Impacts of Climate Change on Water Supply in Mexico City."
- Bambaige, Albertina.** 2007. "National Adaptation Strategies to Climate Change Impacts. A Case Study of Mozambique."
- Bhadwal, Suruchi and Sreeja Nair.** 2007. "India Case Study." Tata Energy Resources Institute (TERI), Mumbai.
- Birch, Isobel and Richard Grahn.** 2007. "Pastoralism—Managing Multiple Stressors and the Threat of Climate Variability and Change."
- Chaudhry, Peter and Greet Ruyschaert.** 2007. "Climate Change and Human Development in Viet Nam."

- Canales Davila, Caridad and Alberto Carrillo Pineda. 2007.** "Spain Country Study."
- Cornejo, Pilar. 2007.** "Ecuador Case Study: Climate Change Impact on Fisheries."
- Donner, Simon D. 2007.** "Canada Country Study."
- Lemos, Maria Carmen. 2007.** "Drought, Governance and Adaptive Capacity in North East Brazil: a Case Study of Ceará."
- Meinshausen, Malte. 2007.** "Stylized Emission Path."
- Nangoma, Everhart. 2007.** "National Adaptation Strategy to Climate Change Impacts: A Case Study of Malawi."
- Nguyen, Huu Ninh. 2007.** "Flooding in Mekong River Delta, Viet Nam."
- Orindi, Victor A., Anthony Nyong and Mario Herrero. 2007.** "Pastoral Livelihood Adaptation to Drought and Institutional Interventions in Kenya."
- Painter, James. 2007.** "Deglaciation in the Andean Region."
- Pederson, Peter D. 2007.** "Japan—Country Study."
- Regmi, Bimal R. and Adhikari, A. 2007.** "Climate Change and Human Development—Risk and Vulnerability in a Warming World. Country Case Study Nepal."
- Salem, Boshra. 2007.** "Sustainable Management of the North African Marginal Drylands."
- Schmid, Jürgen. 2007.** "Mitigation Country Study for Germany."
- Seck, Papa. 2007b.** "The Rural Energy challenge in Senegal: A Mission Report."
- Sullivan, Rory. 2007.** "Australia Country Study."
- Trigoso Rubio, Erika. 2007.** "Climate Change Impacts and Adaptation in Peru: the Case of Puno and Piura."

## References

- ABI (Association of British Insurers). 2004.** "A Changing Climate for Insurance. A Summary Report for Chief Executives and Policymakers." Association of British Insurers, London. [[http://www.abi.org.uk/Display/File/Child/552/A\\_Changing\\_Climate\\_for\\_Insurance\\_2004.pdf](http://www.abi.org.uk/Display/File/Child/552/A_Changing_Climate_for_Insurance_2004.pdf)]. July 2007.
- . **2005a.** "Financial Risks of Climate Change." Summary Report. Association of British Insurers, London.
- . **2005b.** "A Changing Climate for Risk Insurance." [[http://www.abi.org.uk/Display/File/Child/552/A\\_Changing\\_Climate\\_for\\_Insurance\\_2004.pdf](http://www.abi.org.uk/Display/File/Child/552/A_Changing_Climate_for_Insurance_2004.pdf)]. August 2007.
- . **2007a.** "Adapting to Our Changing Climate: A Manifesto for Business, Government and the Public." Association of British Insurers, London.
- . **2007b.** "Flooding and Insurance." Association of British Insurers. London. [[http://www.abi.org.uk/Display/Display\\_Popup/default.asp?Menu\\_ID=1090&Menu\\_All=1,1088,1090&Child\\_ID=553](http://www.abi.org.uk/Display/Display_Popup/default.asp?Menu_ID=1090&Menu_All=1,1088,1090&Child_ID=553)]. July 2007.
- Abbott, Alison. 2004.** "Saving Venice." *Nature*. London. [<http://www.nature.com/news/2004/040112/full/040112-8.html;jsessionid=26CC93DEBA2BEDF8762546E0413759D5>]. January 2007.
- ACIA (Arctic Climate Impacts Assessment). 2004.** *Impacts of a Warming Arctic—Arctic Climate Impacts Assessment*. Cambridge University Press, Cambridge.
- ActionAid. 2006.** "Climate Change and Smallholder Farmers in Malawi. Understanding Poor People's Experiences in Climate Change Adaptation." ActionAid International, London and Johannesburg.
- Acuiti Legal. 2003.** "Overview of the NSW Greenhouse Gas Abatement Scheme." Research Paper No. 20. Independent Pricing and Regulatory Tribunal of New South Wales, Sydney.
- Adan, Mohamud and Ruto Pkalya. 2005.** "Closed to Progress: An Assessment of the Socio-Economic Impacts of Conflict on Pastoral and Semi Pastoral Economies in Kenya and Uganda." Practical Action—Eastern Africa, Nairobi.
- ADB (Asian Development Bank). 2001.** "Technical Assistance to the Republic of the Philippines for preparing the Metro-Manila Urban Services for the Poor Project." Manila.
- Agoumi, A. 2003.** "Vulnerability of North African Countries to Climatic Changes, Adaptation and Implementation Strategies for Climatic Change." International Institute for Sustainable Development (IISD), Winnipeg.
- Agrawala, Shardul (ed). 2005.** "Bridge Over Troubled Waters. Linking Climate Change and Development." OECD (Organisation for Economic Co-operation and Development), Paris.
- Agrawala, Shardul, Tomoko Ota, Ahsan Uddin Ahmed, Joel Smith and Maarten van Aalst. 2003.** "Development and Climate Change in Bangladesh: Focus on Coastal Flooding and the Sundarbans." OECD (Organisation for Economic Co-operation and Development), Paris.
- Alaska Oil Spill Commission. 1990.** "Spill, the Wreck of the Exxon Valdez: Implications for Safe Transportation of Oil." Final Report. Alaska Oil Spill Commission, Juneau, Alaska.
- Anand, Sudhir and Amartya K. Sen. 1996.** "Sustainable Human Development: Concepts and Priorities." Discussion Paper Series No.1. Office of Development Studies, United Nations Development Programme, New York.
- Anderson, Kevin and Alice Bows. 2007.** "A Response to the Draft Climate Change Bill's Carbon Reduction Targets." Tyndall Briefing Note 17. March 2007. Tyndall Centre for Climate Change Research, University of Manchester, Manchester.
- Anthoff, David, Robert J. Nichols, Richard S.J. Tol and Athanasios T. Vafeidis. 2006.** "Global and Regional Exposure to Large Rises in Sea-level: A Sensitivity Analysis." Working Paper No. 96. Tyndall Centre for Climate Change Research, University of East Anglia, Norwich.
- Appiah, Kwame Anthony. 2006.** *Cosmopolitanism: Ethics in a World of Strangers*. W.W. Norton, New York.
- Arnell, N.W. 2004.** "Climate Change and Global Water Resources: SRES Emissions and Socio-Economic Scenarios." *Global Environmental Change* 14: 31–52.
- . **2006.** "Climate Change and Water Resources: A Global Perspective. Avoiding Dangerous Climate Change." Symposium on Stabilization of Greenhouse Gases, 1–3 February 2005, Met Office Hadley Centre for Climate Change, Exeter, UK. Department for Environment, Food and Rural Affairs, London.
- Arrhenius, Svante. 1896.** "On the Influence of Carbonic Acid in the Air upon the Temperature of the Ground." *London, Edinburgh and Dublin Philosophical Magazine and Journal of Science*. [Fifth series]. April 1896. 41: 237–275.
- Arrow, Kenneth. 2007.** "Global Climate Change: A Challenge to Policy." *Economists' Voice* 4(3), Article 2. [<http://www.bepress.com/ev/vol4/iss3/art2>]. September 2007.
- Baez, Javier Eduardo and Indhira Vanessa Santos. 2007.** "Children's Vulnerability to Weather Shocks: A Natural Disaster as a Natural Experiment." Social Science Research Network, New York.
- BBC News. 2007.** "Devastating Floods hit South Asia." 3 August 2007. [[http://news.bbc.co.uk/2/hi/south\\_asia/6927389.stm](http://news.bbc.co.uk/2/hi/south_asia/6927389.stm)]. August 2007.
- Banerjee, Abhijit Vinayak, Roland Bénabou and Dilip Mookherjee, eds. 2006.** *Understanding Poverty*. Oxford University Press, Oxford.
- Barrientos, Armando and Rebecca Holmes. 2006.** "Social Assistance in Developing Countries Database." Institute of Development Studies, University of Sussex, Brighton.
- Baumert, Kevin, Timothy Herzog and Jonathan Pershing. 2005.** *Navigating the Numbers: Greenhouse Gas Data and International Climate Policy*. World Resources Institute, Washington, DC.
- Behrman, Jere R. and Anil Deolalikar. 1990.** "The Intra-Household Demand for Nutrients in Rural South India: Individual Estimates, Fixed Effects and Permanent Income." *Journal of Human Resources* 24(4): 655–96.
- Bernstein, Carl. 1998.** "The Best Obtainable Version of the Truth." Speech to the Annual Convention of the Radio and Television News Directors Association, 26 September. San Antonio, Texas.

- Bouwer, L.M. and J.C. Aerts. 2006.** "Financing Climate Change Adaptation." *Disasters* 30(1): 49–63.
- Bou-Zeid, E. and M. El-Fadel. 2002.** "Climate Change and Water Resources in Lebanon and the Middle East." *Journal of Water Resources Planning and Management* 128(5): 343–355.
- Boykoff, M. T. and J. M. Boykoff. 2004.** "Bias as Balance: Global Warming and the U.S. Prestige Press." *Global Environmental Change* 14(2): 125–136.
- Brammer, Marc, Dan Miner, Jeff Perlman, Richard Klein, Dick Koral and John Nettleton. 2006.** "New York City Energy Policy for 2006 and Beyond." The American Lung Association, Bright Power Inc., Clean Air Cool Planet, The Long Island City Business Development Council, Natural Resources Defense Council, New York Climate Rescue, NYPIRG and Quixotic Systems, Inc., New York. [<http://www.climate-rescue.org/New%20York%20Energy%20Policy%20Proposal-2006%20Exec%20Sum.pdf>]. August 2007.
- Bramley, Matthew. 2005.** "The Case for Deep Reductions: Canada's Role in Preventing Dangerous Climate Change." David Suzuki Foundation and the Pembina Institute. Vancouver. 24 November 2005. [<http://www.pembina.org/climate-change/pubs/doc.php?id=536>]. August 2007.
- Branosky, Evan. 2006.** "Agriculture and Climate Change: The Policy Context." World Resources Institute Policy Note, Climate: Agriculture No.1. World Resources Institute, Washington, DC.
- Brieger, T., T. Fleck and D. Macdonald. 2001.** "Political Action by the Canadian Insurance Industry on Climate Change." *Environmental Politics* 10: 111–126.
- British Antarctic Survey. 2006.** "Climate Change – Our View." [[http://www.antarctica.ac.uk/bas\\_research/our\\_views/climate\\_change.php](http://www.antarctica.ac.uk/bas_research/our_views/climate_change.php)]. September 2007.
- British Oceanographic Data Centre. 2007.** "GLOSS Station Handbook: Station Information Sheet for Kuchiro." [[http://www.bodc.ac.uk/data/information\\_and\\_inventories/gloss\\_handbook/stations/89/](http://www.bodc.ac.uk/data/information_and_inventories/gloss_handbook/stations/89/)]. September 2007.
- Broome, John. 2006a.** "Should We Value Population." *The Journal of Political Philosophy* 13(4): 399–413.
- . **2006b.** "Valuing Policies in Response to Climate Change: Some Ethical Issues." A Contribution to the Work of the Stern Review on the Economics of Climate Change. Cambridge University Press, Cambridge.
- Brundtland, Gro Harlem. 2007.** "UN Special Envoy for Climate Change Gro Harlem Brundtland addresses the 15<sup>th</sup> Session of the UN Commission on Sustainable Development." Speech at the UN Commission on Sustainable Development. 9 May 2007. [[http://www.regjeringen.no/en/dep/ud/selected-topics/un/Brundtland\\_speech\\_CSD.html?id=465906](http://www.regjeringen.no/en/dep/ud/selected-topics/un/Brundtland_speech_CSD.html?id=465906)]. September 2007.
- Burke, Tom. 2007.** "Is Nuclear Inevitable? Policy and Politics in a Carbon Constrained World." The Professor David Hall Memorial Lecture, 17 May. The Law Society, London.
- Butler, Rhett A. 2006.** "A World Imperiled: Forces Behind Forest Loss." Mongabay.com / A Place Out of Time: Tropical Rainforests and the Perils They Face. [<http://rainforests.mongabay.com/0801.htm>]. January 2007.
- Butler, Lucy and Karsten Neuhoff. 2005.** "Comparison of Feed in Tariff, Quota and Auction Mechanisms to Support Wind Power Development." CMI Working Paper 70. Department of Applied Economics, University of Cambridge.
- Cafiero, Carlo and Renos Vakis. 2006.** "Risk and Vulnerability Considerations in Poverty Analysis: Recent Advances and Future Directions." Social Protection Discussion Paper No. 0610. World Bank, Washington, DC.
- Cai, Ximing. 2006.** "Water Stress, Water Transfer and Social Equity in Northern China: Implications for Policy Reforms." Issue note for the *Human Development Report 2006: Beyond Scarcity: Power, Poverty and the Global Water Crisis*. Palgrave Macmillan, New York.
- Cairns, Sally and Carey Newson with Brenda Boardman and Jillian Anable. 2006.** "Predict and Decide. Aviation, Climate Change and UK Policy." Final Report. Environmental Change Institute, University of Oxford.
- Caldeira, Ken. 2007.** "Climate Change and Acidification Are Affecting Our Oceans." Written testimony to *Wildlife and Oceans in a Changing Climate*, Subcommittee on Fisheries, Wildlife and Oceans, House Committee on Natural Resources, 17 April 2007, Washington, DC.
- Caldeira Ken, A.K. Jain and M.I. Hoffert. 2003.** "Climate Sensitivity Uncertainty and the Need for Energy without CO<sub>2</sub> Emission." *Science* 299 (5615): 2052–4.
- Calvo, Cesar and Stefan Dercon. 2005.** "Measuring Individual Vulnerability." Department of Economics Working Paper Series No. 229. University of Oxford.
- California Department of Water Resources. 2006.** "Progress on Incorporating Climate Change into Planning and Management of California's Water Resources." Technical Memorandum Report. San Francisco, July 2006.
- California Public Utilities Commission. 2005.** "Water Action Plan." San Francisco, 15 December 2005. [[http://www.cpuc.ca.gov/Static/hottopics/3water/water\\_action\\_plan\\_final\\_12\\_27\\_05.pdf](http://www.cpuc.ca.gov/Static/hottopics/3water/water_action_plan_final_12_27_05.pdf)]. September 2007.
- Carbon Trust. 2006.** "Allocation and Competitiveness in the EU Emissions Trading Scheme. Options for Phase II and Beyond." Carbon Trust, London.
- Carter, Michael and Christopher Barrett. 2006.** "The Economics of Poverty Traps and Persistent Poverty: An Asset-Based Approach." *The Journal of Development Studies*. 42(2): 178–199.
- Carter, Michael, R., Peter D. Little, Tewodaj Mogues and Workneh Negatu. 2005.** "Shocks, Sensitivity and Resilience: Tracking the Economic Impacts of Environmental Disaster on Assets in Ethiopia and Honduras." Staff Paper No. 489. Department of Agricultural and Applied Economics, University of Wisconsin–Madison.
- Carter, Michael, Peter Little, Tewodaj Mogues and Workneh Negatu. 2007.** "Poverty Traps and Natural Disasters in Ethiopia and Honduras." *World Development* 35(5): 835–856.
- CASS (Chinese Academy of Social Sciences). 2006.** "Understanding China's Energy Policy: Economic Growth and Energy Use, Fuel Diversity, Energy/Carbon Intensity, and International Cooperation." Background Paper Prepared for Stern Review on the Economics of Climate Change. Research Centre for Sustainable Development, Beijing.
- Catholic Relief Services. 2004.** "CRS Allocates \$200,000 for Relief Efforts in Haiti and the Dominican Republic." InterAction. 28 May. [<http://www.interaction.org/newswire/detail.php?id=2938>]. September 2007.
- Cayan, Dan, Ed Maurer, Mike Dettinger, Mary Tyree, Katharine Hayhoe, Celine Bonfils, Phil Duffy and Ben Santer. 2005.** "Climate Scenarios for California." Draft White Paper. California Climate Change Centre, Sacramento.
- CBS (Central Bureau of Statistics, Kenya) MOH (Ministry of Health, Kenya) and ORC Macro. 2004.** "Kenya Demographic and Health Survey 2003." Calverton, Maryland.
- CDIAC (Carbon Dioxide Information Analysis Center). 2007.** Correspondence on carbon dioxide emissions. US Department of Energy, Oak Ridge National Laboratory, Tennessee.
- CEC (Commission of the European Communities). 2005a.** "Winning the Battle Against Global Climate Change." Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions. COM. 2005. 35 final. Brussels.
- . **2005b.** "Biomass Action Plan." Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions, COM. 2005. 628 Final. Brussels.



- . **2006a.** "Building a Global Carbon Market—Report Pursuant to Article 30 of Directive 2003/87/EC." Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions, COM. 2006. 676 Final. Brussels.
- . **2006b.** *Green Paper: A European Strategy for Sustainable, Competitive and Secure Energy.* COM. 2006. 105 Final. Brussels.
- . **2006c.** "An EU Strategy for Biofuels." Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions, COM. 2006. 34 Final. Brussels.
- . **2007a.** "Renewable Energy Road Map. Renewable Energies in the 21<sup>st</sup> Century: Building a More Sustainable Future." COM. 2006. 848 Final. Brussels.
- . **2007b.** "Green Paper from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Region. Adapting to Climate Change in Europe—Options for EU Action." COM. 2007. 354 Final. Brussels.
- . **2007c.** "On the Review of the Community Strategy to Reduce CO<sub>2</sub> Emissions and Improve Fuel Efficiency from Passenger Cars." Communication from the Commission to the European Parliament and Council, SEC 200760. Brussels.
- . **2007d.** "Sustainable power generation from fossil fuels: aiming for near zero emissions from coal after 2020." Communication from the Commission to the Council and the European Parliament, COM.2006. 843 Final. Brussels.
- CEI (Committee of European Insurers). 2005.** "Climate Change. Insurers Present Risk Management Recommendations for a Safer, Unpolluted World." Press Release. 9 November. Brussels. [<http://www.cea.assur.org/cea/v1.1/actu/pdf/uk/communiqu239.pdf>]. July 2007.
- Chafe, Zoë. 2007.** "Reducing Natural Disaster Risk in Cities." In Linda Stark, (ed.) *State of the World 2007: Our Urban Future.* 24<sup>th</sup> edition. A Worldwatch Institute Report on Progress Toward a Sustainable Society. Earthscan, London.
- Chambers, Robert. 2006.** "Editorial Introduction: Vulnerability, Coping and Policy." *IDS Bulletin* 37(4): 33–40.
- Chen, Dorothée and Nicolas Meisel. 2006.** "The Integration of Food Aid Programmes in Niger's Development Policies: the 2004–2005 food crisis." Working Paper 26. Agence Française de Développement, Paris.
- Chhibber, Ajay and Rachid Laajaj. 2006.** "Disasters, Climate Change, and Economic Development in sub-Saharan Africa: Lessons and Directions." Independent Evaluation Group, World Bank, Washington, DC.
- Chomitz, Kenneth M. with Piet Buys, Giacomo de Luca, Timothy S. Thoas and Sheila Wertz-Kanounnikoff. 2007.** *At Loggerheads? Agricultural Expansion, Poverty Reduction, and Environment in the Tropical Forests.* A World Bank Policy Research Report. World Bank, Washington, DC.
- Chretien, Jean-Paul, Assaf Anyamba, Sheryl A. Bedno, Robert F. Breiman, Rosemary Sang, Kibet Sergon, Ann M. Powers, Clayton O. Onyango, Jennifer Small, Compton J. Tucker and Kenneth J. Linthicum. 2007.** "Drought-Associated Chikungunya Emergence Along Coastal East Africa." *American Journal of Tropical Medicine and Hygiene* 76(3): 405–407.
- Claussen, Eileen. 2007a.** "Speech by Eileen Claussen, President, Pew Center on Global Climate Change." American College and University Presidents Climate Commitment Summit. 12 June 2007. Washington, DC. [[http://www.pewclimate.org/press\\_room/speech\\_transcripts/ec\\_acupcc](http://www.pewclimate.org/press_room/speech_transcripts/ec_acupcc)]. August 2007.
- . **2007b.** "Can Technology Transform the Climate Debate?" Remarks by Eileen Claussen, President, Pew Center on Global Climate Change at the Exxonmobil Longer Range Research Meeting, 16 May 2007. Paulboro, New Jersey.
- Climate Institute, The. 2006.** "Common Belief. Australia's Faith Communities on Climate Change." The Climate Institute (Australia), Sydney.
- Cline, William. 2007.** *Global Warming and Agriculture: Impact Estimates by Country.* Center for Global Development, Peterson Institute for International Economics, Washington, DC.
- CNA (Center for Naval Analyses) Corporation. 2007.** *National Security and the Threat of Climate Change.* Center for Naval Analyses, Alexandria, Virginia. [<http://securityandclimate.cna.org/report/National%20Security%20and%20the%20Threat%20%20Climate%20Change.pdf>]. August 2007.
- Coal Industry Advisory Board, International Energy Agency. 2006.** *Case Studies in Sustainable Development in the Coal Industry.* OECD/IEA, Paris.
- Colchester, Marcus, Norman Jiwon, Andiko, Martua Sirait, Asep Yunan Firdaus, A. Surambo and Herbert Pane. 2006a.** "Promised Land: Palm Oil and Land Acquisition in Indonesia." Forest Peoples Programme, Perkumpulan Sawit Watch, HuMa and the World Agroforestry Centre, Moreton-in-the-Marsh and West Java.
- Colchester, Marcus with Nalua Silva Monterrey, Ramon Tomedes, Henry Zaalman, Georgette Kumanajare, Louis Biswana, Grace Watalmaleo, Michel Barend, Sylvia Oeloekanamoe, Steven Majarawai, Harold Galgren, Ellen-Rose Kambel, Caroline de Jong, Belmont Tchoumba, John Nelson, George Thierry Handja, Stephen Nounah, Emmanuel Minsolo, Beryl David, Percival Isaacs, Angelbert Johnny, Larry Johnson, Maxi Pugsley, Claudine Ramacindo, Gavin Winter and Yolanda Winter, Peter Poole, Tom Griffiths, Fergus MacKay and Maurizio Farhan Ferrari. 2006b.** "Forest Peoples, Customary Use and State Forests: The Case for Reform." Draft paper to be presented to the 11<sup>th</sup> Biennial Congress of the International Association for the Study of Common Property, Bali, Indonesia, 19–23 June 2006. Forest Peoples Programme, Moreton-in-the-Marsh.
- Commission for Africa. 2005.** "Our Common Interest: Report of the Commission for Africa." London. [<http://www.commissionforafrica.org/english/report/introduction.html#report>]. September 2007.
- CONAM (Consejo Nacional del Ambiente). 2004.** "Estado del Ambiente de Cusco y el Cambio Climático a Nivel Nacional." Reporte Ambiental No. 4. [<http://www.conam.gob.pe/Modulos/home/reportes.asp>]. September 2007.
- Cooper, Richard N. 2000.** "International Approaches to Global Climate Change." *The World Bank Research Observer* 15: 2 (August): 145–72.
- . **2005.** "Alternative to Kyoto: the Case for a Carbon Tax." [<http://www.economics.harvard.edu/faculty/cooper/papers.html>]. July 2007.
- Coudrain, Anne, Bernard Francou and Zbifniew Kundzewicz. 2005.** "Glacial shrinkage in the Andes and consequences for water resources – Editorial" *Hydrological Sciences—Journal des Sciences Hydrologiques* 50(6) December: 925–932.
- Council of the European Union. 2007.** "Presidency Conclusions 8/9 March 2007." 7224/1/07 REV 1. 2 May. Brussels.
- Council on Foreign Relations. 2006.** "National Security Consequences of US Oil Dependency." Independent Task Force Report No. 58. Council on Foreign Relations, New York.
- Dasgupta, Partha. 2001.** *Human Well-Being and the Natural Environment.* Oxford University Press, Oxford.
- Dasgupta, Nandini with Mitra Associates. 2005** "Chars Baseline Survey 2005: Volume I. Household." Chars Livelihoods Programme. [[http://www.livelihoods.org/lessons/project\\_summaries/comdev7\\_projsun.html](http://www.livelihoods.org/lessons/project_summaries/comdev7_projsun.html)]. May 2007.
- Dasgupta, Susmita, Benoit Laplante, Craig Meisner, David Wheeler and Jinping Yan. 2007.** "The Impact of Sea Level Rise on Developing Countries: A Comparative Analysis." Policy Research Working Paper 4136. World Bank, Washington, DC.

- Davidson, Ogunlade, Harald Winkler, Andrew Kenny, Gisela Prasad, Jabavu Nkomo, Debbie Sparks, Mark Howells and Thomas Alfstad with Stanford Mwakasonda, Bill Cowan and Eugene Visagie.** 2006. *Energy Policies for Sustainable Development in South Africa: Options for the Future.* (Harald Winkler, ed.). Energy Research Centre, University of Cape Town.
- de Janvry, Alain and Elisabeth Sadoulet.** 2004. "Conditional Cash Transfer Programs: Are They Really Magic Bullets?" Department of Agricultural and Resource Economics, University of California, Berkeley.
- de Janvry, Alain, Elisabeth Sadoulet, Pantelis Solomon and Renos Vakis.** 2006a. "Uninsured Risk and Asset Protection: Can Conditional Transfer Programs Serve as Safety Nets?" Social Protection Discussion Paper No. 0604. World Bank, Washington, DC.
- . 2006b. "Can Conditional Cash Transfer Programs Serve as Safety Nets in Keeping Children at School and from Working when Exposed to Shocks?" *Journal of Development Economics* 79: 349–373.
- . 2006c. "Evaluating Brazil's Bolsa Escola Program: Impact on Schooling and Municipal Roles." University of California, Berkeley.
- de Montesquiou, Alfred.** 2005. "Haitian Town Struggles to Recover One Year after Devastating Floods." *The Associated Press*. 19 September.
- Deaton, Angus.** 2001. "Health, inequality and economic development." Based on a paper prepared for the Working Group 1 of the WHO Commission on Macroeconomics and Health. Princeton University.
- DEFRA (Department for Environment, Food and Rural Affairs).** 2007. "New Bill and Strategy Lay Foundations for Tackling Climate Change – Miliband." News Release. 13 March. London. [http://www.defra.gov.uk/news/2007/070313a.htm]. July 2007.
- Delgado, Christopher L., Jane Hopkins, and Valerie A. Kelly with Peter Hazell, Anna A. McKenna, Peter Gruhn, Behjat Hojjati, Jayashree Sil, and Claude Courbois.** 1998. "Agricultural Growth Linkages in sub-Saharan Africa." IFPRI Research Report No. 107. International Food Policy Research Institute, Washington, DC.
- del Ninno, Carlo, and Lisa C. Smith.** 2003. "Public Policy, Markets and Household Coping Strategies in Bangladesh: Avoiding a Food Security Crisis Following the 1998 Floods." *World Development* 31(7): 1221–1238.
- den Elzen, M. G. J. and M. Meinshausen.** 2005. "Meeting the EU 2°C Climate Target: Global and Regional Emission Implications." Report 728001031/2005. Netherlands Environmental Assessment Agency, Amsterdam.
- Denning, Glenn and Jeffrey Sachs.** 2007. "How the Rich World Can Help Africa Help Itself." *The Financial Times*. May 29. [http://www.ft.com/cms/s/2/81059fb4-0e02-11dc-8219-000b5df10621,dwp\_uuid=8806bae8-0dc4-11dc-8219-000b5df10621.html]. August 2007.
- Dercon, Stefan.** 1996. "Risk, Crop Choice and Savings: Evidence from Tanzania." *Economic Development Cultural Change*. 44(3): 385–514.
- . 2004. "Growth and Shocks: Evidence from Rural Ethiopia." *Journal of Development Economics* 74: 309–329.
- . 2005. "Vulnerability: A Micro-perspective." Paper presented at the Annual Bank Conference on Development Economics (ABCDE) Conference. Amsterdam, May 2005. World Bank, Washington, DC.
- Dercon, Stefan and Pramila Krishnan.** 2000. "In Sickness and in Health: Risk Sharing within Households in Rural Ethiopia." *Journal of Political Economy* 108(4): 668–727.
- Dercon, Stefan, John Hoddinott and Tassew Woldehanna.** 2005. "Shocks and Consumption in 15 Ethiopian Villages, 1999–2004." International Food Policy Research Institute, Washington, DC.
- Devereux, Stephen.** 1999. "Making Less Last Longer. Informal Safety Nets in Malawi." IDS Discussion Paper No. 373. Institute of Development Studies, University of Sussex, Brighton.
- . 2002. "State of Disaster. Causes, Consequences and Policy Lessons from Malawi." ActionAid Malawi, Lilongwe.
- . 2006a. "Vulnerable Livelihoods in Somali Region, Ethiopia." Institute of Development Studies, University of Sussex, Brighton.
- . 2006b. "Cash Transfers and Social Protection." Paper prepared for the regional workshop on "Cash Transfer Activities in Southern Africa", 9–10 October 2006, Johannesburg, South Africa. Southern African Regional Poverty Network (SARPN), Regional Hunger and Vulnerability Programme (RHVP) and Oxfam GB. Johannesburg.
- . 2006c. "The Impacts of Droughts and Floods on Food Security and Policy Options to Alleviate Negative Effects." Paper submitted for plenary session on "Economics of Natural Disasters" International Association of Agricultural Economists (IAAE) conference. Gold Coast Convention and Exhibition Center, Queensland, Australia. 12–18 August. Institute of Development Studies, University of Sussex, Brighton.
- Devereux, Stephen, Rachel Sabates-Wheeler, Mulugeta Tefera and Hailemichael Taye.** 2006. "Ethiopia's Productive Safety Net Programme (PSNP): Trends in PSNP Transfers Within Targeted Households." Final Report for the Department for International Development. DFID, Ethiopia and the Institute of Development Studies (IDS), University of Sussex. Brighton and Addis Ababa.
- Devereux, Stephen and Zoltan Tiba.** 2007. "Malawi's First Famine, 2001–2002." In Stephen Devereux (ed.), *The New Famines. Why Famines Persist in an Era of Globalization*. Routledge, London.
- DFID (Department for International Development).** 2002. "Bangladesh. Chars Livelihood Programme." London.
- . 2004. "Adaptation to Climate Change: Can Insurance Reduce Vulnerability of the Poor?" Key Sheet No. 8, London.
- . 2006. "Natural Disaster and Disaster Risk Reduction Measures—A Desk Review of Costs and Benefits." Environmental Resources Management, DFID, London.
- . 2007. "A Record Maize Harvest in Malawi." Case Studies. [http://www.dfid.gov.uk/casestudies/fi/ies/africa%5Cmalawiharvest.asp]. July 2007.
- Diamond, Jared.** 2005. *Collapse: How Societies Choose to Fail or Succeed*. Viking, New York.
- Doniger, David D., Antonia V. Herzog and Daniel A. Lashof.** 2006. "Climate Change: An Ambitious, Centrist Approach to Global Warming Legislation." *Science* 314: 764.
- EEA (European Environment Agency).** 2004. "Energy Subsidies in the European Union: A Brief Overview." DEA Technical Report 1/2004. Brussels.
- . 2006. "Greenhouse Gas Emission Trends and Projections in Europe 2006." EEA Report No. 9/2006. Copenhagen.
- . 2007. "Climate Change and Water Adaptation Issues." EEA Technical Report No. 2/2007. Office for Official Publications of the European Communities, Luxembourg. [http://reports.eea.europa.eu/technical\_report\_2007\_2/en/eea\_technical\_report\_2\_2007.pdf]. July 2007.
- EFTA (European Federation for Transport and Environment).** 2007. "Regulating Fuel Efficiency of New Cars." Background Briefing. January 2007. Brussels.
- Elbers, Chris and Jan Willem Gunning.** 2003. "Growth and Risk: Methodology and Micro-Evidence." Tinbergen Institute Discussion Papers 03-068/2. University of Amsterdam.
- Elobeid, Amani and Simla Tokgoz.** 2006. "Removal of US Ethanol Domestic and Trade Distortions: Impact on US and Brazilian Ethanol Markets." Working Paper 06-WP 427. Center for Agricultural and Rural Development, Iowa University, Ames.
- Emanuel, Kerry.** 2005. "Increasing Destructiveness of Tropical Cyclones over the Past 30 Years." *Nature* 436: 686–688.
- EIA (Energy Information Administration).** 2006. "Emission of Greenhouse Gases in the United States 2005." Washington, DC.

- EPA (Environment Protection Agency). 2006.** "Clean Air Markets — Data and Publications." [www.epa.gov/airmarkets/auctions/index.html]. August 2007.
- Epstein, Paul R. and Christine Rogers. 2004.** *Inside the Greenhouse. The Impacts of CO<sub>2</sub> and Climate Change on Public Health in the Inner City.* Center for Health and the Global Environment, Boston, Massachusetts.
- Epstein, Paul R. and Evan Mills (eds.). 2005.** *Climate Change Futures: Health, Ecological and Economic Dimensions.* The Center for Health and the Global Environment, Harvard Medical School, Cambridge, Massachusetts.
- EC (European Commission). 2005a.** "Doing More With Less." Green Paper on Energy Efficiency. Brussels.
- . **2005b.** "Zero emissions technology platform: Commission Fosters CO<sub>2</sub>-free Energy in the Future." IP/05/1512. Information and Communication Unit, Research DG, Brussels.
- . **2006a.** "Action Plan for Energy Efficiency: Realizing the Potential." Communication from the Commission. Brussels. [http://ec.europa.eu/energy/action\_plan\_energy\_efficiency/doc/com\_2006\_0545\_en.pdf]. September 2007.
- . **2006b.** "Clean Coal Technology." EUROPA, Brussels. [http://ec.europa.eu/energy/coal/clean\_coal/index\_en.htm]. September 2007.
- . **2006c.** EU Greenhouse Gas Emission Trends and Projections. [http://reports.eea.europa.eu/eea\_report\_2006\_9/en/eea\_report\_9\_2006.pdf]. September 2007.
- . **2007a.** "The Impact of a Minimum 10% Obligation for Biofuel Use in the EU-27 in 2020 on Agricultural Markets." Directorate-General for Agriculture and Rural Development, Brussels. [http://ec.europa.eu/agriculture/analysis/markets/biofuel/impact042007/text\_en.pdf]. August 2007.
- . **2007b.** "Commission Proposes an Integrated Energy and Climate Change Package to Cut Emissions for the 21<sup>st</sup> Century." Press Release, 10 January. EUROPA, Brussels.
- . **2007b.** "Energy for a Changing World." EUROPA. On President José Manuel Barroso. [http://ec.europa.eu/commission\_barroso/president/focus/energy\_en.htm]. July 2007.
- . **2007c.** "Commission Reports on the Application of State Aid Rules to the Coal Industry in the EU." Press Release. EUROPA, Brussels.
- EC (European Commission), Directorate General for Energy and Transport. 2006.** "European Survey—Attitude on Issues Related to EU Energy Policy." Press Release. EUROPA. Brussels.
- . **2007.** "Energy for a Changing World. An Energy Policy for Europe—the Need for Action." Brussels.
- EFTA (European Federation for Transport and Environment). 2007.** "Regulating Fuel Efficiency of New Cars." Background Briefing January 2007. Brussels. [http://www.transportenvironment.org/docs/Publications/2007/2007-01\_background\_briefing\_cars\_co2\_regulation.pdf]. August 2007.
- European Technology Platform on Zero Emission Fossil Fuel Power Plants (ZEP). 2007.** "European Technology Platform for Zero Emission Fossil Fuel Power Plants (ZEP): Strategic Overview." ZEP Secretariat, Brussels.
- . **2006a.** *Green Paper: A European Strategy for Sustainable, Competitive and Secure Energy.* European Union, Brussels.
- . **2006b.** "An EU Strategy for Bio-fuels" Communication from the Commission." COM. 2006. 34 Final. Brussels.
- EU (European Union). 2007a.** "EU almost On Track in Reaching its 2010 Renewable Electricity Target." Press Release. 10 January. MEMO/07/12. EUROPA. Brussels.
- . **2007b.** "Limiting Global Climate Change to 2 degrees Celsius." Press Release. 10 January. MEMO/07/16. EUROPA. Brussels.
- . **2007c.** "Emissions Trading: Commission Adopts Decision on Finland's National Allocation Plan for 2008–2012." Press Release. 4 June. [IP/07/749]. EUROPA. Brussels. 3 53
- EWEA (European Wind Energy Association). 2006.** "Large Scale Integration of Wind Energy in the European Power Supply: Analysis, Issues and Recommendations." EWEA Grid Report. Brussels.
- FAO (Food and Agriculture Organization of the United Nations). 2004.** 28ava Conferencia regional de la FAO para América Latina y el Caribe. Seguridad Alimentaria como estrategia de Desarrollo rural. Ciudad de Guatemala (Guatemala), 26 al 30 de abril de 2004.
- . **2007a.** *State of the Worlds Forests 2007.* Forestry Department, Rome.
- . **2007b.** "Forest Resources Assessment." Correspondence on carbon stocks in forests. Extract from database. August 2007. Forestry Department, Rome.
- Finlayson, C.M. and A.G. Spiers. 2000.** "Global Review of Wetland Resources." In *World Resources 2000–2001.* World Resources Institute, Washington, DC.
- Fischer, G., M. Shah, N. Tubiello and H. van Velthuisen. 2005.** "Socio-economic and Climate Change Impacts on Agriculture: An Integrated Assessment, 1990–2000." *Philosophical Transactions of the Royal Society* 360: 2067–2083.
- Flannery, Tim. 2005.** *The Weather Makers: The History and Future Impact of Climate Change.* Penguin, London.
- Franco, Guido. 2005.** "Climate Change Impacts and Adaptation in California." Support document to the 2005 Integrated Energy Policy Report. Staff Paper. California Energy Commission, Sacramento.
- Frankel-Reed, Jenny. 2006.** "Adaptation Through Development: A Review of Bilateral Development Agency Programmes, Methods and Projects." Global Environment Fund (GEF), New York.
- Friends of the Earth Middle East. 2007.** "Climate Change May Further Erode Political Stability in the Middle East." [http://www.foeme.org/press.php?ind=49]. June 2007.
- GAO (US Government Accountability Office). 2007.** "Climate Change: Financial Risks to Federal and Private Insurers in Coming Decades are Potentially Significant." March 2007. GAO-07-285. Report to the Committee on Homeland Security and Government Affairs, US Senate. Washington, DC.
- G8 (Group of Eight). 2005.** "Geneagles Plan of Action. Climate Change, Clean Energy and Sustainable Development." Geneagles.
- . **2007.** "Growth and Responsibility in the World Economy." Summit Declaration Heiligendamm. [http://www.whitehouse.gov/g8/2007/g8agenda.pdf]. September 2007.
- Gardner, T.A., Isabelle M. Côté, Jennifer A. Gill, Alastair Grant and Andrew R. Watkinson. 2003.** "Long Term Region-wide Declines in Caribbean Corals." *Science* 301(5635): 958–960. 15 August.
- GCOS (Global Climate Observing System), UN Economic Commission for Africa and African Union Commission. 2006.** "Climate Information for Development Needs: An Action Plan for Africa. Report and Implementation Strategy." 18-21 April, Addis Ababa.
- GEF (Global Environment Facility). 2007a.** "Status Report on the Climate Change Funds as of April 30, 2007." Report of the Trustee. GEF Secretariat, Washington, DC.
- . **2007b.** "SPA (Strategic Priority on Adaptation) Status Report June 2007." GEF Secretariat, Washington, DC.
- . **2007c.** "Pledging Meeting for Climate Change Funds 15 June 2007." GEF Secretariat, Washington, DC.
- Glemarec, Yannick. 2007a.** "Embedding climate resilience thinking into national planning in Egypt." Internal Communication.
- . **2007b.** "The impacts of climate change: creating an uncertain future for fisheries in Namibia." Internal Communication.
- Global Representation for the Wind Energy Sector and Greenpeace. 2006.** *Global Wind Energy Outlook 2006.* Greenpeace and Global Wind Energy Council, London. [http://www.greenpeace.org/raw/content/international/press/reports/globalwindenergyoutlook.pdf]. August 2007.

- Government of Australia. 2007.** *National Greenhouse Gas Inventory 2005*. Canberra: Australian Greenhouse Office, Department of the Environment and Water Resources. [http://www.greenhouse.gov.au/inventory/2005/index.html]. March 2007.
- Government of California. 2006.** "Proposition 1E. Disaster Preparedness and Flood Prevention Bond Act of 2006." Legislative Analyst's Office, Sacramento, California. [http://www.lao.ca.gov/ballot/2006/1E\_11\_2006.htm]. September 2007.
- Government of Canada. 2005.** "Canada's Greenhouse Gas Inventory, 1990–2003." Greenhouse Gas Division, Environment Canada, Ottawa. [http://www.ec.gc.ca/pdb/ghg/inventory\_report/2003\_report/sum\_e.cfm]. September 2007.
- . **2006.** "Canada's Greenhouse Gas Emissions Reporting Program. Overview of the Reported 2005 Facility Level GHG Emissions." Environment Canada, Ottawa. [http://www.ec.gc.ca/pdb/ghg]. August 2007.
- . **2007.** "Regulatory Framework for Air Emissions." Ministry of Environment, Ottawa.
- Government of the Federal Democratic Republic of Ethiopia. 2006.** "Productive Safety Net Programme: Programme Implementation Manual." Ministry of Agriculture and Rural development, Addis Ababa.
- Government of France. 2006.** "Report from the Working Group on Achieving a fourfold reduction in greenhouse gas emissions in France by 2050." Chaired by Christian de Boisseau. Ministère de l'économie des finances et de l'industrie and Ministère de l'écologie et du développement durable, Paris.
- . **2007.** "Actions futures et facteur 4." Ministère de l'écologie, du développement et de l'aménagement, Paris. [http://www.ecologie.gouv.fr/-Actions-futures-et-facteur-4-.html]. August 2007.
- Government of Germany. 2007.** "Sigmar Gabriel: Klimaschutz nutzt auch Verbrauchern und Wirtschaft." Pressemitteilungen Nr. 224/07. 24 August. Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit, Berlin.
- Government of India. 2006a.** *Integrated Energy Policy. Report of the Expert Committee*. New Delhi: Planning Commission.
- . **2006b.** *Towards Faster and More Inclusive Growth. An Approach to the 11<sup>th</sup> Five Year Plan (2007–2012)*. Planning Commission, New Delhi.
- Government of India. 2007.** "2005–2006 National Family Health Survey (NFHS-3)." Ministry of Health and Family Welfare, International Institute for Population Sciences, Mumbai.
- Government of Japan. 2002.** "Japan's Third National Communication under the United Nations Framework Convention on Climate Change." [http://unfccc.int/resource/docs/natc/japnc3.pdf]. July 2007.
- Government of New South Wales. 2007.** "Greenhouse Gas Abatement Scheme (GGAS)." Sydney. [http://www.greenhousegas.nsw.gov.au/overview/scheme\_overview/overview.asp]. September 2007.
- Government of Norway. 2007.** "The Prime Minister sets New Climate Goals." Office of the Prime Minister, Oslo.
- Government of Pakistan. 2005.** Annual Report 2005–06. Oil and Gas Regulatory Authority, Islamabad.
- Government of the People's Republic of Bangladesh. 2005a.** *Bangladesh. Unlocking the Potential. National Strategy for Accelerated Poverty Reduction*. Dhaka: General Economics Division.
- . **2005b.** *National Adaptation Plan of Action. Final Report*. Dhaka: Ministry of Environment and Forests.
- . **Mimeo.** "Comprehensive Disaster Management Bangladesh Experience." Comprehensive Disaster Management Programme, Ministry of Food and Disaster Management, Dhaka.
- Government of Sweden. 2006.** "Making Sweden an OIL-FREE Society." Commission on Oil Independence, Stockholm.
- . **2007.** "Regeringens proposition 2005/06: 172. Nationell klimatpolitik i global samverkan." Harpsund. [http://www.regeringen.se/content/1/c6/06/07/78/a096b1c8.pdf]. September 2007.
- Government of the United Kingdom. 2006a.** *Climate Change. The UK Programme 2006*. Presented to Parliament by the Secretary of State for the Environment, Food and Rural Affairs. Her Majesty's Stationery Office, Norwich.
- . **2006b.** "UK Energy and CO<sub>2</sub> Emissions Projections. Updated Projections to 2020." Department of Trade and Industry, London.
- . **2006c.** *The Energy Challenge: Energy Review Report 2006*. London: Department of Trade and Industry.
- . **2007a.** *Draft Climate Change Bill*. Presented to Parliament by the Secretary of State for Environment, Food and Rural Affairs. Her Majesty's Stationery Office, Norwich.
- . **2007b.** *Draft Climate Change Bill. Partial Regulatory Impact Assessment*. London: Department for Environment, Food and Rural Affairs. [http://www.defra.gov.uk/corporate/consult/climatechange-bill/ria.pdf]. September 2007.
- . **2007c.** *Energy Trends and Quarterly Energy Prices*. Department of Trade and Industry, London. [http://www.dti.gov.uk/energy/statistics/publications/dukes/page29812.html]. March 2007.
- . **2007d.** "Funding UK Flood Management." Department for Environment, Food and Rural Affairs, London. [http://www.defra.gov.uk/enviro/fcd/policy/funding.htm]. July 2007.
- . **2007e.** *Meeting the Energy Challenge: A White Paper on Energy*. London: Department of Trade and Industry. [http://www.berr.gov.uk/files/file39387.pdf]. May 2007.
- Government of the United States. 2005.** "Regional Carbon Sequestration Partnerships: Phase I Accomplishments." Department of Energy, NETL (National Energy Technology Laboratory), Pittsburgh, Pennsylvania.
- . **2006a.** "FutureGen—A Sequestration and Hydrogen Initiative." Project Update: December 2006. Department of Energy, Office of Fossil Energy, Washington, DC. [http://www.fossil.energy.gov/programs/powersystems/futuregen/index.html]. August 2007.
- . **2006b.** "Interior Secretary Kempthorne Announces Proposal to List Polar Bears as Threatened Under Endangered Species Act." Department of the Interior. Press Release. [http://www.doi.gov/news/06\_News\_Releases/061227.html]. December 2006.
- . **2007a.** "Tracking New Coal-Fired Power Plants. Coal's Resurgence in Electric Power Generation." Department of Energy, NETL (National Energy Technology Laboratory), Pittsburgh, Pennsylvania. [http://www.netl.doe.gov/coal/refshelf/ncc.pdf]. September 2007.
- . **2007b.** "Carbon Sequestration Technology; Roadmap and Program Plan 2007. Ensuring the Future of Fossil Energy Systems through the Successful Deployment of Carbon Capture and Storage Technologies." Department of Energy, NETL (National Energy Technology Laboratory), Pittsburgh, Pennsylvania.
- . **2007c.** "President Bush Delivers State of the Union Address." United States Capitol, Washington, DC. [http://www.whitehouse.gov/news/releases/2007/01/20070123-2.html]. August 2007.
- Greenpeace and GWEC (Global Wind Energy Council). 2006.** *Global Wind Energy Outlook 2006*. GWEC and Greenpeace, Brussels and Amsterdam.
- Grinspun, Alejandro. 2005.** "Three models of social protection." One Pager No. 17. UNDP-International Poverty Agenda, Brasilia.
- Grubb, Michael and Karsten Neuhoff. 2006.** "Allocation and Competitiveness in the EU Emissions Trading Scheme: Policy Overview." *Climate Policy* 6: 7–30.
- GSS (Ghana Statistical Service), NMIMR (Noguchi Memorial Institute for Medical Research), and ORC Macro. 2004.** "Ghana Demographic and Health Survey 2003." Calverton, Maryland.
- Gurriá, Angel, and Richard Manning. 2007.** "Statement by Angel Gurriá, OECD Secretary-General, and Richard Manning, Chairman,

- OECD Development Assistance Committee (DAC).” Meeting. Washington, 15 April 2007. OECD, Washington, DC.
- Główny Urząd Statystyczny (GUS) [Central Statistical Office, Poland]. 2006.** *Energy Consumption Efficiency, 1994–2004*. Warsaw.
- Hanemann, Michael and A. Farrel. 2006.** Managing Greenhouse Gas Emissions in California. The California Climate Change Center at University of California, Berkeley. [[http://calclimate.berkeley.edu/managing\\_GHG\\_in\\_CA.html](http://calclimate.berkeley.edu/managing_GHG_in_CA.html)]. January 2006.
- Hansen, James. 2006.** “The Threat to the Planet.” *New York Review of Books* 55 (12). [<http://www.nybooks.com/articles/19131>]. July 2007.
- . **2007a.** “Scientific Reticence and Sea Level Rise.” *Environmental Research Letters* 2 024002 (6pp). [[http://www.iop.org/EJ/article/1748-9326/2/2/024002/erl7\\_2\\_024002.html](http://www.iop.org/EJ/article/1748-9326/2/2/024002/erl7_2_024002.html)]. March 2007.
- . **2007b.** “Why We Can’t Wait.” *The Nation*. 7 May. New York.
- . **2007c.** “Dangerous Human-Made Interference with Climate.” Testimony to Select Committee on Energy Independence and Global Warming, United States House of Representatives, 26 April, Washington, DC.
- Hansen, James, Makiko Sato, Reto Ruedy, Ken Lo, David W. Lea and Martin Medina-Elizade. 2006.** “Global Temperature Change.” *Proceedings of the National Academy of Sciences* 103 (39): 14288–14293.
- Hansen, J., Mki Sato, R. Ruedy, P. Kharecha, A. Lacis, R.L. Miller, L. Nazarenko, K. Lo, G.A. Schmidt, G. Russell, I. Aleinov, S. Bauer, E. Baum, B. Cairns, V. Canuto, M. Chandler, Y. Cheng, A. Cohen, A. Del Genio, G. Faluvegi, E. Fleming, A. Friend, T. Hall, C. Jackman, J. Jonas, M. Kelley, N.Y. Kiang, D. Koch, G. Labow, J. Lerner, S. Menon, T. Novakov, V. Oinas, Ja. Perlwitz, Ju. Perlwitz, D. Rind, A. Romanou, R. Schmunk, D. Shindell, P. Stone, S. Sun, D. Streets, N. Tausnev, D. Thresher, N. Unger, M. Yao, and S. Zhang. 2007.** Dangerous Human-made Interference with Climate: A GISS modelE study. *Atmospheric Chemistry and Physics* 7: 2287–2312.
- Hanson, Craig and James R. Hendricks Jr. 2006.** “Taxing Carbon to Finance Tax Reform.” Issue Brief. Duke Energy and World Resources Institute. Charlotte, North Carolina and Washington, DC.
- Hare, William. 2005.** “Relationship Between Increases in Global Mean Temperature and Impacts on Ecosystems, Food Production, Water and Socio-Economic Systems.” In *Avoiding Dangerous Climate Change*. Conference Report for Symposium on Stabilization of Greenhouse Gases, 1–3 February, 2005. Hadley Centre, Exeter, Department for Environment, Food and Rural Affairs, London.
- Heimann, Lief Cabraser and L.L.P. Bernstein. 2007.** “Tobacco and Smokers Litigation.” [<http://www.lieffcabraser.com/tobacco.htm>]. April 2007.
- Hemming, D. 2007.** “Impacts of Mean Sea Level Rise Based on Current State-of-the-Art Modelling.” Hadley Centre, Exeter University.
- Henderson, Caspar. 2006a.** “Ocean acidification: The Other CO<sub>2</sub> Problem.” NewScientist.com news service. 5 August 2006. [<http://environment.newscientist.com/channel/earth/mg19125631.200-ocean-acidification-the-iotheri-cosub2sub-problem.html>]. September 2007.
- . **2006b.** “Paradise Lost,” *New Scientist* 191 (2563): 28–33. 5 August 2006.
- High-Level Task Force on UK Energy Security, Climate Change and Development Assistance. 2007.** *Energy, Politics, and Poverty: A Strategy for Energy Security, Climate Change and Development Assistance*. University of Oxford.
- Hoddinott, John and Bill Kinsley. 2000.** “Adult Health in the Time of Drought.” Food Consumption and Nutrition Division (FCND) Discussion Paper No. 79. International Food Policy Research Institute, Washington, DC.
- . **2001.** “Child Growth in the Times of Drought.” *Oxford Bulletin of Economics and Statistics* 63(4):0305–0949.
- Hoffmann, Yvonne. 2006.** “Auctioning of CO<sub>2</sub> Emission Allowances in the EU ETS.” Report under the project “Review of EU Emissions Trading Scheme.” European Commission Directorate General for Environment, Brussels.
- Houghton, R.A. 2005.** “Tropical Deforestation as a Source of Greenhouse Gas Emission.” In *Tropical Deforestation and Climate Change* (P. Mutinoh and S. Schwartzman eds). Belém: Instituto de Pesquisa Ambiental da Amazônia (IPAM). Environmental Defense, Washington, DC.
- Hoyois, P., J.-M. Scheuren, R. Below and D. Guha-Sapir. 2007.** *Annual Disaster Statistical Review: Numbers and Trends 2006*. Centre for Research on the Epidemiology of Disasters (CRED). Brussels.
- HSBC (Hong Kong Shanghai Bank of Commerce). 2007.** “HSBC Climate Confidence Index 2007.” HSBC Holdings plc.
- Huisman, Pieter. 2002.** “How the Netherlands Finance Public Water Management.” European Water Management Online. Official Publication of the European Water Association. [[http://www.ewaonline.de/journal/2002\\_03.pdf](http://www.ewaonline.de/journal/2002_03.pdf)]. May 2007.
- Hulme, Mike and Nicola Sheard. 1999a.** “Climate Change Scenarios for Australia.” Climatic Research Unit, Norwich. [<http://www.cru.uea.ac.uk/~mikeh/research/australia.pdf>]. August 2007.
- . **1999b.** “Climate Change Scenarios for Japan.” Climate Research Unit, Norwich. [<http://www.cru.uea.ac.uk/~mikeh/research/wwf.japan.pdf>]. September 2007.
- Ikkatai, Seiji. 2007.** “Current Status of Japanese Climate Change Policy and Issues on Emission Trading Scheme in Japan.” The Research Center for Advanced Policy Studies Institute of Economic Research, Kyoto University, Kyoto.
- IEA (International Energy Agency). 2003.** “Cool Appliances: Policy Strategies for Energy-Efficient Homes.” Energy Efficiency Policy Profiles. OECD (Organisation for Economic Co-operation and Development)/IEA, Paris.
- . **2006a.** “Energy Policies of IEA Countries. 2006 Review.” OECD (Organisation for Economic Co-operation and Development)/IEA, Paris.
- . **2006b.** *Energy Technology Perspectives. Scenarios and Strategies to 2050*. OECD (Organisation for Economic Co-operation and Development)/IEA, Paris.
- . **2006c.** *World Energy Outlook*. OECD (Organisation for Economic Co-operation and Development)/IEA, Paris.
- IFEES (Islamic Foundation for Ecology and Environmental Sciences). 2006.** “Ecolslam.” Newsletter. Issue No.02. [[http://ifees.org.uk/newsletter\\_2\\_small.pdf](http://ifees.org.uk/newsletter_2_small.pdf)]. August 2007.
- IFRC (International Federation of the Red Cross and Red Crescent Societies). 2002.** *World Disasters Report 2002*. Geneva.
- . **2005a.** *World Disasters Report 2005: Focus on Information in Disasters*. Geneva.
- . **2005b.** Operations Update No 3. Kenya: Drought. 4 February. [[www.reliefweb.int/library/documents/2005/IFRC/ifrc-drought-04feb.pdf](http://www.reliefweb.int/library/documents/2005/IFRC/ifrc-drought-04feb.pdf)]. July 2007.
- . **2006.** *World Disasters Report 2006: Focus on Neglected Crises*. Geneva.
- IMF (International Monetary Fund). 2006.** *World Economic Outlook Report 2006: Financial Systems and Economic Cycles*. September. Washington, DC.
- . **2007.** *World Economic Outlook Database*. April 2007. Washington, DC.
- International Network for Sustainable Energy – Europe. 2006.** “Subsidies and Public Support for Energy.” [<http://www.inforse.org/europe/subsidies.htm>]. August 2007.
- INPE (Instituto Nacional de Pesquisas Espaciais). 2007.** “Sistema de Detecção do Desmatamento em Tempo Real (DETER).” Database. São José dos Campos.

- International Network for Sustainable Energy. 2006.** "Subsidies and Public Support for Energy." [http://www.inforse.org/europe/subsidies.htm]. August 2007.
- IRI (International Research Institute for Climate and Society). 2007.** "Climate Risk Management in Africa: Learning from Practice." *Climate and Society* No 1. The Earth Institute, Columbia University, New York.
- ISSC (International Scientific Steering Committee). 2005.** *Report of the International Scientific Steering Committee. International Symposium on Stabilization on Greenhouse Gas Concentrations—Avoiding Dangerous Climate Change, 1–3 February, 2005 Met-Office Hadley Centre for Climate Change, Exeter, UK.* Department for Environment, Food and Rural Affairs, London.
- IPCC (Intergovernmental Panel on Climate Change). 1999.** "Summary for Policymakers. Aviation and the Global Atmosphere." A Special Report of IPCC Working Groups I and III in collaboration with the Scientific Assessment Panel to the Montreal Protocol on Substances that Deplete the Ozone Layer. (Joyce E. Penner, David H. Lister, David J. Griggs, David J. Dokken and Mack McFarland, eds.). Cambridge University Press, Cambridge and New York.
- . **2001.** "Technical Summary." In *Climate Change 2001: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Third Assessment Report of the Intergovernmental Panel on Climate Change* (James J. McCarthy, Osvaldo F. Canziani, Neil A. Leary, David J. Dokken and Kasey S. White, eds.). Cambridge University Press, Cambridge and New York.
- . **2007a.** *Climate Change 2007—The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change.* (S. Solomon, D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor and H.L. Miller, eds.). Cambridge University Press, Cambridge and New York.
- . **2007b.** *Climate Change 2007: Climate Change Impacts, Adaptation and Vulnerability. Working Group II Contribution to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change.* (S. Solomon, D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor and H.L. Miller, eds.). Cambridge University Press, Cambridge and New York.
- . **2007c.** *Climate Change 2007: Mitigation of Climate Change. Working Group III Contribution to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change.* (S. Solomon, D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor and H.L. Miller, eds.). Cambridge University Press, Cambridge and New York.
- . **2007d.** "Summary for Policymakers." In *Climate Change 2007—The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change.* (S. Solomon, D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor and H.L. Miller, eds.). Cambridge University Press, Cambridge and New York.
- . **2007e.** "Summary for Policymakers." In *Climate Change 2007: Climate Change Impacts, Adaptation and Vulnerability. Working Group II Contribution to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change.* (S. Solomon, D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor and H.L. Miller, eds.). Cambridge University Press, Cambridge and New York.
- . **2007f.** "Summary for Policymakers." In *Climate Change 2007: Mitigation of Climate Change. Working Group III Contribution to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change.* (S. Solomon, D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor and H.L. Miller, eds.). Cambridge University Press, Cambridge and New York.
- . **2007g.** "Technical Summary." In *Climate Change 2007: Climate Change Impacts, Adaptation and Vulnerability. Working Group II Contribution to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change.* (S. Solomon, D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor and H.L. Miller, eds.). Cambridge University Press, Cambridge and New York.
- IRI (International Research Institute for Climate and Society). 2007.** "Climate Risk Management in Africa: Learning from Practice." *Climate and Society* No 1. The Earth Institute, Columbia University, New York.
- ISDR (International Strategy for Disaster Reduction). 2007a.** "Drought Risk Reduction Framework and Practices: Contributing to the Implementation of the Hyogo Framework for Action." Geneva.
- . **2007b.** "Building Disaster Resilient Communities. Good Practices and Lessons Learned." Geneva.
- . **2007c.** "Words into Action: A Guide for Implementing the Hyogo Framework. Hyogo Framework for Action 2005–2015: Building the Resilience of Nations and Communities to Disasters." Geneva.
- ISDR (International Strategy for Disaster Reduction) and World Bank GFDRR (Global Facility for Disaster Reduction and Recovery). 2006.** "A Partnership for Mainstreaming Disaster Mitigation in Poverty Reduction Strategies." Geneva and Washington, DC.
- . **2007.** "Committed to Reducing Vulnerabilities to Hazards by Mainstreaming Disaster Reduction and Recovery in Development. Progress Report 1." Geneva and Washington, DC.
- Itano, Nicole. 2002.** "Famine, AIDS Devastating Malawi Women." WOMENSENEWS. 26 February. [http://www.sahims.net/doclibrary/2004/02\_February/11%20Wed/Regional%20abstract/Famine,%20AIDS%20Devastating%20Malawi%20Women.pdf]. August 2007.
- Jank, Marcos J., Géraldine Kutas, Luiz Fernando do Amaral and André M. Nassar. 2007.** "EU and US Policies on Biofuels: Potential Impacts on Developing Countries." The German Marshall Fund of the United States, Washington, DC.
- Jacquet, Pierre and Laurence Tubiana (eds.) 2007.** *Regards sur la terre: L'annuel du développement durable. 2007. Energie et changements climatiques.* Presses de Sciences Po, Paris.
- Jha, Saroj Kumar. 2007.** "GFDRR. Track II. Multi-donor Trust Fund for Mainstreaming Disaster Reduction for Sustainable Poverty Reduction." ISDR and the Global Facility for Disaster Reduction and Recovery, The World Bank Group. Washington, DC. [http://www.unisdr.org/eng/partner-netw/wb-isdr/Twb-isdr-rackII-ApproachPaper-Results-CG-comments.doc]. August 2007.
- Jones, P. and P.K. Thornton. 2003.** "The Potential Impacts of Climate Change on Maize Production in Africa and Latin America in 2055." *Global Environmental Change* 13: 51–59.
- Jones, Chris, Peter Cox and Chris Huntingford. 2005.** "Impact of climate-carbon cycle feedbacks on emissions scenarios to achieve stabilization." In *Avoiding Dangerous Climate Change.* Conference Report for Symposium on Stabilization of Greenhouse Gases, 1–3 February, 2005 Met Office Hadley Centre for Climate Change, Exeter, UK. Department for Environment, Food and Rural Affairs, London.
- Kennedy, John F. 1963.** Address before the Irish Parliament, June 28, 1963. [http://www.jfklibrary.org/Asset+Tree/Asset+Viewers/Audio+Video+Asset+Viewer.htm?guid={D8A7601E-F3DA-451F-86B4-43B3EE316F64}&type=Audio]. August 2007.
- Klein, R.J.T., S.E.H.Eriksen, L.O. Naess, A. Hammill, C. Robledo, K.L.O. Brien and T.M.Tanner. 2007.** "Portfolio Screening to Support the Mainstreaming of Adaptation to Climate Change into Development Assistance." Working Paper 102. Tyndall Centre for Climate Change Research, University of East Anglia, Norwich.
- Kurukulasuriya, Pradeep and Robert Mendelsohn. 2006.** "A Ricardian Analysis of the Impact of Climate Change on African Cropland." CEEPA Discussion Paper No. 8. Centre for Environmental Economics and Policy in Africa (CEEPA), University of Pretoria.

- Landau, J.P. 2004.** "Rapport à Monsieur Jacques Chirac, Président de la République, Group de travail sur les nouvelles contributions financières internationales." [http://www.diplomatie.gouv.fr/en/IMG/pdf/LandauENG1.pdf]. August 2007.
- Leiserowitz, Anthony. 2006.** "Climate Change, Risk Perception and Policy Preferences." *Climate Change* 77 (Spring): 45–72.
- Lindert, Kathy, Anja Linder, Jason Hobbs and Bénédicte de la Brière. 2007.** "The Nuts and Bolts of Brazil's Bolsa Familia Program: Implementing Conditional Cash Transfers in a Decentralized Context". Social Protection Discussion Paper 0709. World Bank, Washington, DC.
- Linklater, Magnus. 2007.** "A Brilliantly Swiss Scheme to Ignore Global Warming." *The Times*. London. 18 July. [http://www.timesonline.co.uk/tol/comment/columnists/magnus\_linklater/article2093516.ece]. September 2007.
- Lockwood, Mike and Claus Fröhlich. 2007.** "Recent Oppositely Directed Trends in Solar Climate Forcings and the Global Mean Surface Air Temperature." *Proceedings of the Royal Society A* 463 (2086): 2447–2460. [http://www.journals.royalsoc.ac.uk/content/h844264320314105/]. August 2007.
- Lopez, Humberto. 2006.** "Did Growth Become Less Pro-Poor in the 1990s?" World Bank Policy Research Working Paper Series No. 3931. World Bank, Washington, DC. [http://econ.worldbank.org]. June 2006.
- Mallick, Dwijendra Lal, Atiq Rahman, Mozaharul Alam, Abu Saleh Md Juel, Azra N. Ahmad and Sarder Shafiqul Alam. 2005.** "Floods in Bangladesh: A Shift from Disaster Management Towards Disaster Preparedness." *IDS Bulletin* 36(4): 53–70.
- Maskrey, A., Gabriella Buescher, Pascal Peduzzi and Carolin Schaerpf. 2007.** Disaster Risk Reduction: 2007 Global Review. Consultation Edition. Prepared for the Global Platform for Disaster Risk Reduction First Session, Geneva, Switzerland, 5–7 June 2007. Geneva.
- McMichael, A.J., D.H. Campbell-Lendrum, C.F. Corvalán, K.L. Ebi, A. Githeko, J.D. Scheraga and A. Woodward. 2003.** "Chapter 1: Global Climate Change and Health: An Old Story Writ Large." In: *Climate Change and Human Health—Risks and Responses*. Geneva: World Health Organization.
- Mechler, Reinhard, Joanne Linnerooth-Bayer and David Peppiatt. 2006.** Disaster Insurance for the Poor? A Review of Micro-Insurance for Natural Disaster Risks in Developing Countries." Provention/IIASA Study. Provention Consortium, Geneva.
- Meinshausen, Malte. 2005.** "On the Risk of Overshooting 2°C." Paper presented at Scientific Symposium: *Avoiding Dangerous Climate Change*. Symposium on Stabilisation of Greenhouse Gases, 1–3 February, 2005. MetOffice Hadley Centre Exeter, UK. London: Department for Environment, Food and Rural Affairs.
- Mendonca, Miguel. 2007.** *Feed-in Tariffs – Accelerating the Development of Renewable Energy*. Earthscan, London.
- Merrill Lynch and WRI (World Resources Institute). 2005.** "Energy Security and Climate Change. Investing in the Clean Car Revolution." Washington, DC.
- Meteo France. 2007.** "L'établissement Météo-France." [http://www.meteofrance.com/FR/qui\_sommes\_nous/enbref/enbref.jsp]. September 2007.
- Met Office. 2006.** "Effects of Climate Change in Developing Countries. Met Office Hadley Centre for Climate Change." Exeter.
- Millennium Ecosystem Assessment. 2005.** *Ecosystems and Human Well-being—Synthesis*. Island Press, Washington, DC. [http://www.millenniumassessment.org/documents/document.356.aspx.pdf]. September 2007.
- Mills, Evan. 2006.** "The Role of NAIC in Responding to Climate Change." Testimony to the National Association of Insurance Commissioners. University of California, Berkeley.
- Mills, E., R.J. Roth and E. Lecomte. 2005.** "Availability and Affordability of Insurance Under Climate Change. A Growing Challenge for the U.S." Prepared for The National Association of Insurance Commissioners. University of California, Berkeley.
- MIT (Massachusetts Institute of Technology). 2007.** *The Future of Coal: Options for a Carbon Constrained World*. Boston.
- Modi, Vijay, Susan McDade, Dominique Lallemand and Jamal Saghir. 2005.** "Energy Services for the Millennium Development Goals." Energy Sector Management Assistance Programme, UN Millennium Project, United Nations Development Programme and World Bank, New York.
- Monbiot, George. 2006.** *Heat*. Penguin Books, London.
- Morris, S., O. Neidecker-Gonzales, C. Carletto, M. Munguia, J.M. Medina and Q. Wodon. 2001.** "Hurricane Mitch and Livelihoods of the Rural Poor in Honduras." *World Development* 30(1): 39–60.
- Mosley, P. 2000.** "Insurance Against Poverty? Design and Impact of "New Generation" Agricultural Micro-Insurance Schemes." University of Sheffield.
- Mousseau, Frederic and Anuradha Mittal. 2006.** *Sahel: A Prisoner of Starvation? A case study of the 2005 food crisis in Niger*. The Oakland Institute, California.
- Müller, Benito and Cameron Hepburn. 2006.** "IATAL – an Outline Proposal for an International Air Travel Adaptation Levy." Oxford Institute for Energy Studies, Oxford.
- Narain, Sunita. 2006.** "Community-led Alternatives to Water Management: India Case Study. Paper commissioned for *Human Development Report 2006: Beyond Scarcity: Power, Poverty and the Global Water Crisis*. Palgrave Macmillan, New York.
- National Audit Office. 2001.** "Inland Flood Defence." Report by the Comptroller and Auditor General, London.
- NASA (North American Space Agency). 2005.** "NASA History — Human Space Flight." [http://spaceflight.nasa.gov/history/]. September 2007.
- NCEP (National Commission on Energy Policy). 2004a.** "Ending the Energy Stalemate. A Bipartisan Strategy to Meet America's Energy Challenges. Summary of Recommendations." National Commission on Energy Policy, Washington, DC.
- . **2004b.** "Taking Climate Change into Account in US Transportation." In *Innovative Policy Solutions to Global Climate Change*, Brief No.6, National Commission on Energy Policy, Washington, DC.
- NEA (Nuclear Energy Authority). 2006.** *Annual Report*. OECD (Organisation for Economic Co-operation and Development), Paris.
- NERC (Natural Environment Research Council) British Antarctic Survey. 2000.** "Future Changes in the Size of the Antarctic Ice Sheet." [http://www.antarctica.ac.uk/Key\_Topics/IceSheet\_SeaLevel/ice\_sheet\_change.html]. August 2007.
- NETL (National Energy Technology Laboratory). 2007.** "Tracking New Coal-fired Power Plants." United States Department of Energy, Pittsburgh, Pennsylvania. [http://www.netl.doe.gov/coal/refshelf/ncp.pdf]. August 2007.
- New York Climate & Health Project. 2004.** "Assessing Potential Public Health and Air Quality Impacts of Changing Climate and Land Use in Metropolitan New York." Columbia University, New York.
- NFU (National Farmers Union). 2005.** *Agriculture and Climate Change*. London. [http://www.nfuonline.com/documents/Policy%20Services/Environment/Climate%20Change/NFU%20Climate%20Change.pdf]. May 2007.
- Nippon Keidanren. 2005.** "Results of the Fiscal 2005 Follow-up to the Keidanren Voluntary Action Plan on the Environment (Summary)." Section on Global Warming Measures—Performance in Fiscal 2004. Tokyo. [http://www.keidanren.or.jp/english/policy/2005/086.pdf]. September 2007.
- Nobre, Carlos. 2007.** "Climate Policy: It's Good to be in the "RED." News Release. 10 May. Carnegie Institution, Washington, DC.
- Nordhaus, William D. 2005.** "Life after Kyoto: Alternative Approaches to Global Warming Policies." National Bureau of Economic Research, Working Paper 11889. Cambridge, Massachusetts.

- . **2006.** "The Stern Review on the Economics of Climate Change." National Bureau of Economic Research, Working Paper 12741. Cambridge, Massachusetts. [http://papers.ssrn.com/sol3/papers.cfm?abstract\_id=948654]. December 2006.
- . **2007.** "Critical Assumptions in the Stern Review on Climate Change." *Science* 317 (5835): 203–204. 13 July.
- NREL (National Renewable Energy Laboratory) Energy Analysis Office.** **2005a.** Renewable Energy Cost Trends. Presentation. [http://www.nrel.gov/analysis/docs/cost\_curves\_2005.ppt]. November 2005.
- . **2005b.** Global Competitiveness in Fuel Economy and Greenhouse Gas Emission Standards for Vehicles. Presentation by Amanda Sauer, 10 February. World Resources Institute, Washington, DC. [http://www.nrel.gov/analysis/seminar/docs/2005/ea\_seminar\_feb\_10.ppt]. September 2007.
- OECD (Organisation for Economic Co-operation and Development).** **2005b.** "Harmonisation, Alignment, Results: Report on Progress, Challenges and Opportunities." Paris.
- . **2005c.** "Reducing Greenhouse Gas Emissions: the Potential of Coal." Paris. [http://www.iea.org/Textbase/work/2006/gb/publications/ciab\_ghg.pdf]. September 2007.
- . **2006a.** *Declaration on Integrating Climate Change Adaptation into Development Cooperation.* Paris.
- . **2006b.** *Agricultural Policies in OECD Countries: At a Glance,* 2006 Edition. Paris.
- . **2006c.** "DAC Members' net ODA 1990–2005 and SAC Secretariat Simulation of net ODA in 2006 and 2010." [http://www.oecd.org/dac/stats]. March 2007.
- . **2006d.** "Japan Floods." OECD Studies in Risk Management. Paris.
- . **2006e.** "Survey on Harmonisation and Alignment of Donor Practices." Paris.
- . **2007a.** "Climate Change and Africa." Paper prepared by the AFP Support Unit and NEPAD Secretariat for the 8<sup>th</sup> Meeting of the Africa Partnership Forum. 22–23 May, Berlin.
- . **2007b.** "International Development Statistics (CRS)." Online Database on Aid and Other Resource Flows. Paris [http://www.oecd.org/dac/stats/idsonline]. July 2007.
- OFDA (Office of US Foreign Disaster Assistance) and CRED (Collaborating Centre for Research on the Epidemiology of Disasters).** **2007.** *Emergency Events Database (EM-DAT).* Database. Brussels. [http://www.em-dat.net/who.htm]. September 2007.
- Olshanskaya, Marina.** **2007.** "Russia and the Kyoto Protocol: Global and National Human Development Perspectives." UNDP Bratislava Regional Centre, Bratislava.
- Oxfam International.** **2005.** "Predictable Funding for Humanitarian Emergencies: a Challenge to Donors." Oxfam Briefing Note. [http://www.oxfam.org/en/files/bn051024\_CERF\_predictablefunding/download]. October 2005.
- . **2007.** "Adapting to Climate Change. What's Needed in Poor Countries, and Who Should Pay." Oxfam Briefing Paper 104. Oxford.
- Page, Edward A.** **2006.** *Climate Change, Justice and Future Generations.* Cheltenham: Edward Elgar. [http://www2.warwick.ac.uk/fac/soc/pais/staff/page/publications/]. July 2007.
- PEACE (Pelangi Energi Abadi Citra Enviro).** **2007.** "Indonesia and Climate Change." Working Paper on Current Status and Policies. Department for International Development, World Bank, and State Ministry of Environment in Indonesia, Jakarta.
- Pearce, David.** **2001.** "The Economic Value of Forest Ecosystems." CSERGE—Economics, University College London, London. [http://www.cserge.ucl.ac.uk/web-pa\_1.HTM]. September 2007.
- Pembina Institute.** **2007a.** "Canada's Implementation of the Kyoto Protocol." Gatineau. [http://www.pembina.org/climate-change/work-kyoto.php]. April 2007.
- . **2007b.** "Future Greenhouse Gas Emission Reductions." Gatineau. [http://www.pembina.org/climate-change/work-future.php]. April 2007.
- People's Republic of China.** **2007.** *China's National Climate Change Programme.* People's Republic of China: National Development Reform Commission.
- Perry, Michael, Adrianne Dulio, Samantha Artiga, Adele Shartzer and David Rousseau.** **2006.** "Voices of the Storm. Health Experiences of Low-Income Katrina Survivors." Henry J. Kaiser Foundation, California.
- Pew Center on Global Climate Change.** **2006.** "Little Consensus on Global Warming. Partisanship Drives Opinion." Survey Report. Arlington, Virginia.
- . **2007a.** "Senate Greenhouse Gas Cap-And-Trade Proposals in the 110<sup>th</sup> Congress." Washington, DC. [http://www.earthscape.org/12/ES17454/PEW\_SenateGreenHouse.pdf]. September 2007.
- . **2007b.** "What's Being Done in the Business Community." [http://www.pewclimate.org/what\_s\_being\_done/in\_the\_business\_community/]. August 2007.
- . **2007c.** "A Look at Emission Targets." [http://www.pewclimate.org/what\_s\_being\_done/targets]. September 2007.
- Philibert, Cedric.** **2006.** "Barriers to Technology Diffusion. The Case of Solar Thermal Technologies." OECD/IEA (Organisation for Economic Co-operation and Development/International Energy Authority), Paris.
- Philibert, Cédric and Jacek Podkanski.** **2005.** "International Energy Technology Collaboration and Climate Change Mitigation. Case Study 4: Clean Coal Technologies." OECD/IEA (Organisation for Economic Co-operation and Development/International Energy Authority), Paris.
- Phiri, Frank.** **2006.** "Challenges 2005–2006: A Difficult Year Ahead for Famine-Hit Malawi." IPS Terraviva Online. [http://www.ipsterraviva.net/Africa/print.asp?idnews=484]. January 2006.
- Pierce, David W., Tim P. Barnett, Krishna M. AchutaRao, Peter J. Gleckler, Jonathan M. Gregory and Warren M. Washington.** **2005.** "Anthropogenic Warming of the Oceans: Observations and Model Results." (Version 2). Scripps Institution of Oceanography, San Diego, California.
- Point Carbon.** **2007.** "Carbon 2007—A New Climate for Carbon Trading." K. Roine and H. Hasselknippe (eds.). Report published at Point Carbon's 4<sup>th</sup> Annual Conference, Carbon Market Insights 2007. Copenhagen, 13–15 March.
- Practical Action.** **2006a.** "Shouldering the burden. Adapting to climate change in Kenya." [http://practicalaction.org/?id=climatechange\_panners]. August 2007.
- . **2006b.** "Rainwater harvesting." [http://practicalaction.org/?id=rainwater\_case\_study]. October 2007.
- Pritchard, H. D., and D. G. Vaughan.** **2007.** "Widespread Acceleration of Tidewater Glaciers on the Antarctic Peninsula." *Journal of Geophysical Research* 112 online (F03S29, doi:10.1029/2006JF000597). September 2007.
- Ramsey, Frank.** **1928.** "A Mathematical Theory of Saving." *The Economic Journal* 38(152) December: 543–559.
- Randel, Judith.** **2007.** "Social Protection in Zambia, Bangladesh, Nicaragua, Ethiopia, Viet Nam and Uganda." Development Initiatives, Somerton, Somerset.
- Raworth, Kate.** **2007a.** "Adapting to Climate Change. What's Needed in Poor Countries and Who Should Pay." Oxfam Briefing Paper No.104. Oxfam International, Oxford.
- . **2007b.** "West Bengal River Basin Programme. Climate Change Research Visit Note." Oxfam—GB, Oxford.
- Reece, Gemma, Dian Phylipsen, Max Rathmann, Max Horstink and Tana Angelini.** **2006.** "Use of JI/CDM Credits by Participants in Phase II of the EU Emissions Trading Scheme." Final report. Ecofys UK, London.



- Regional Hunger and Vulnerability Programme. 2007.** "Malawi: Summary of Information Systems." [http://www.wahenga.net/uploads/documents/nationalsp/Malawi\_SP\_Info\_systems\_Jan2007.pdf]. September 2007.
- Reliefweb. 2007.** Information on Complex Emergencies and Natural Disasters. [http://www.reliefweb.int/]. September 2007.
- Republic of Malawi. 2006.** *Malawi's National Adaptation Programmes of Action*. Ministry of Mines, Natural Resources and Environment, Lilongwe.
- Republic of Niger. 2006.** *National Adaptation Programme of Action*. Cabinet of Prime Minister, Niamey.
- RGGI (Regional Greenhouse Gas Initiative). 2005.** "Memorandum of Understanding." [http://www.rggi.org/docs/mou\_12\_20\_05.pdf]. September 2007.
- Roberts, Paul. 2005.** *The End of Oil: On the Edge of a Perilous New World*. Houghton Mifflin, Boston.
- Roberts, Timmons and Bradley C. Parks. 2007.** *A Climate of Injustice: Global Inequality, North-South Politics and Climate Policy*. MIT Press, Cambridge, Massachusetts.
- Roosevelt, Theodore IV. 2006.** "Solutions Testimony at the US House of Representatives Committee on Government Reform regarding Climate Change: Understanding the Degree of the Problem—and the Nature of its Solutions." Pew Center on Global Climate Change, Washington DC. [http://www.pewclimate.org/what\_s\_being\_done/in\_the\_congress/roosevelt\_7\_20\_06.cfm]. August 2007.
- Rose, Elaine. 1999.** "Consumption Smoothing and Excess Female Mortality in Rural India." *Review of Economics and Statistics*. 81(1): 41–49.
- Rosegrant, Mark W., Ximing Cai and Sarah A. Cline. 2002.** "Global Water Outlook 2025: Dealing with Scarcity." International Food Policy Research Institute, Washington, DC.
- Rosenzweig, Mark, R. and Hans P. Binswagner. 1993.** "Wealth, Weather Risk and the Composition and Profitability of Agricultural Investments." *The Economic Journal* 103:56–78.
- Rowland, Diane. 2007.** "Health Care: Squeezing the Middle Class with More Costs and Less Coverage." Testimony before the US House of Representatives, Ways and Means Committee: *Economic Challenges Facing Middle Class Families*. January 2007. Washington, DC.
- Royal Government of Cambodia. 2006.** *National Adaptation Programme of Action to Climate Change (NAPA)*. Ministry of Environment, Phnom Penh.
- Rubin, Edward S. 2007.** "Accelerating Deployment of CCS at US Coal-Based Power Plants." Presentation to the Sixth Annual Carbon Capture and Sequestration Conference. 8 May 2007. Department of Engineering and Public Policy, Carnegie Mellon University, Pittsburgh, Pennsylvania.
- Runge, C. Ford and Benjamin Senauer. 2007.** "How Biofuels Could Starve the Poor." *Foreign Affairs* 86(3). [http://www.foreignaffairs.org/20070501faessay86305/c-ford-runge-benjamin-senauer/how-biofuels-could-starve-the-poor.html]. June 2007.
- Runnalls, David. 2007.** "Subsidizing Biofuels Backfires." IISD Commentary. International Institute for Sustainable Development, Winnipeg.
- Scheer, Hermann. 2001.** *A Solar Manifesto*. Second Edition. James and James (Science Publishers), London.
- Schelling, Thomas. 2007.** "Climate Change: The Uncertainties, the Certainties, and What They Imply About Action." *Economists' Voice* 4(3): Article 3. [http://www.bepress.com/ev/vol4/iss3/art3/]. September 2007.
- Schellnhuber, John. 2006.** "The Irregular Side of Climate Change". Presentation made at the Cambridge University Business and Environment Programme Climate Science Meeting. 15 December. London. Mimeo.
- Schellnhuber, John and Janica Lane. 2006.** In *Avoiding Dangerous Climate Change*. Conference Report for Symposium on Stabilization of Greenhouse Gases, 1–3 February, 2005 Met Office Hadley Centre for Climate Change, Exeter. Department for Environment, Food and Rural Affairs, London. [http://www.stabilisation2005.com/outcomes.html]. August 2007.
- Schlesinger, Michael E., Jianjun Yin, Gary Yohe, Natalia G. Andronova, Sergey Malyshev and Bin Li. 2005.** "Assessing the Risk of a Collapse of the Atlantic Thermohaline Circulation." In *Avoiding Dangerous Climate Change*. Conference Report for Symposium on Stabilization of Greenhouse Gases, 1–3 February, 2005. Met Office Hadley Centre for Climate Change, Exeter. Department for Environment, Food and Rural Affairs, London.
- Schnepf, Randy. 2006.** "European Union Biofuels Policy and Agriculture: An Overview." Congressional Research Service (CRS) Report for Congress, Washington, DC.
- Schröter, D., M. Zebisch and T. Grothmann. 2005.** "Climate Change in Germany - Vulnerability and Adaptation of Climate-Sensitive Sectors." Klimastatusbericht. [http://www.schroeter-patt.net/Schroeter-et-al-KSB06.pdf]. July 2007.
- Schubert, Bernd. 2005.** "The Pilot Social Cash Transfer Scheme. Kalomo District, Zambia." CPRC Working Paper 52. Chronic Poverty Research Centre, Institute for Development Policy and Management, University of Manchester.
- Seager, Ashley and Mark Milner. 2007.** "No Policies, no Cash: The Result: Missed Targets." *The Guardian*, London. 13 August. [http://www.guardian.co.uk/environment/2007/aug/13/renewableenergy.climatechange]. September 2007.
- Sen, Amartya. 1999.** *Development as Freedom*. Anchor Books, New York.
- . 2004. "Why We Should Preserve the Spotted Owl." *London Review of Books* 26(3). [http://www.lrb.co.uk/v26/n03/sen\_01\_.html]. August 2007.
- Shapiro, Robert J. 2007.** "Addressing the Risks of Climate Change: The Environmental Effectiveness and Economic Efficiency of Emissions Caps and Tradeable Permits, Compared to Carbon Taxes." February. [http://www.theamericanconsumer.org/shapiro.pdf]. August 2007.
- Sharp, Kay, Taylor Brown and Amdissa Teshome. 2006.** "Targeting Ethiopia's Productive Safety Net Programme (PSNP)." Overseas Development Institute, London and the IDL Group Ltd., Bristol.
- Shen, Dajun and Ruiju Liang. 2003.** "State of China's Water." Research Report. Third World Centre for Water Management with the Nippon Foundation. [www.thirdworldcentre.org/epubli.html]. August 2007.
- Sierra Club. 2006.** "Dirty Coal Power—Clean Air." [http://www.sierraclub.org/cleanair/factsheets/power.asp]. August 2007.
- Sijm, Jos, Karsten Neuhoﬀ and Yihsu Chen. 2006.** "CO<sub>2</sub> Cost Pass-through and Windfall Profits in the Power Sector." *Climate Policy* 6: 49–72.
- Singer, Peter. 1993.** *Practical Ethics*. 2<sup>nd</sup> Edition. Cambridge University Press, Cambridge.
- . 2002. *One World: The Ethics of Globalization*. 2<sup>nd</sup> Edition. Yale University Press, New Haven, Connecticut.
- SIPRI (Stockholm International Peace Research Institute). 2007.** "World and regional military expenditure estimates 1988-2006." [http://www.sipri.org/contents/milap/milex/mex\_wnr\_table.html]. June 2007.
- Skutsch, Margaret, Ulrike Roehr, Gotelind Alber, Joanne Rose and Roselyne van der Heul. 2004.** "Mainstreaming Gender into the Climate Change Regime." *Gender and Climate Change*. [http://www.gencc.interconnection.org/Gender&CCCOP10.pdf]. August 2007.
- Slater, Rachel, Steve Ashley, Mulugeta Tefera, Mengistu Buta and Deleagne Esubalew. 2006.** Ethiopia Productive Safety Net Programme (PSNP). Policy, Programme and Institutional

- Linkages. Final Report. Overseas Development Institute, London; the IDL Group Ltd., Bristol; and Indak International Pvt., Addis Ababa.
- Smale, Robin, Murray Hartley, Cameron Hepburn, John Ward and Michael Grubb. 2006.** "The Impact of CO<sub>2</sub> Emissions Trading on Firm Profits and Market Prices." *Climate Policy* 6: 29–46.
- Smith, Adam. 1854.** *The Theory of Moral Sentiments*. Paperback edition 2004. Kessinger Publishing, Oxford.
- Smith, Joseph and David Shearman. 2006.** *Climate Change Litigation. Analysing the Law, Scientific Evidence and Impacts on the Environment, Health and Property*. Presidian Legal Publications, Adelaide.
- Smithsonian National Air and Space Museum. 1999.** "Apollo to the Moon." [http://www.nasm.si.edu/exhibitions/atm/atm.html]. September 2007.
- Solórzano, Raúl, Ronnie de Camino, Richard Woodward, Joseph Tosi, Vicente Watson, Alexis Vásquez, Carlos Villalobos, Jorge Jiménez, Roberth Repetto and Wilfrido Cruz. 1991.** *Accounts Overdue: Natural Resource Depreciation in Costa Rica*. World Resources Institute, Washington, DC.
- Sperling, Daniel and James S. Cannon. 2007.** *Driving Climate Change. Cutting Carbon from Transportation*. Elsevier, New York.
- State of California. 2005.** "Executive Order S-3-05 by the Governor of the State of California." Executive Department. Sacramento, California.
- State of California. 2006.** *Chapter 488, Assembly Bill No. 32*. 27 September.
- Steenblik, Ronald. 2007.** "Born Subsidized: Biofuel Production in the USA." Global Subsidies Initiative. International Institute for Sustainable Development, Winnipeg.
- Stern, Nicholas. 2006.** *The Economics of Climate Change. The Stern Review*. Cambridge University Press, Cambridge and New York.
- Stern, Nicholas and Chris Taylor. 2007.** "Climate Change: Risk, Ethics and the Stern Review." *Science* 317 (5835): 203–204.
- Sumaila, Ussif R. and Carl Walters. 2005.** "Intergenerational Discounting: a New Intuitive Approach." *Ecological Economics* 52: 135–142.
- Sumaila, Ussif R. and Kevin Stephanus. 2006.** "Declines in Namibia's Pilchard Catch: the Reasons and Consequences." In *Climate Change and the Economics of the World's Fisheries*. (R. Hannesson, Manuel Barange and Samuel Herrick Jr., eds.) Edward Elgar Publishing, Cheltenham.
- Summa, Hilka. 2007.** "Energy Crops and the Common Agricultural Policy." Speech for the Third International European Conference on GMO-free Regions, Biodiversity and Rural Development. European Commission, Directorate-General Agriculture and Rural Development. 19–20 April 2007. Brussels.
- Tanner T.M., A. Hassan, K.M.N. Islam, D. Conway, R. Mechler, A.U. Ahmed and M. Alam. 2007.** "ORCHID: Piloting Climate Risk Screening in DFID Bangladesh." Research Report. Institute of Development Studies, University of Sussex, Brighton.
- Tanser, F.C., B. Sharp and D. le Sueur. 2003.** "Potential Effect of Climate Change on Malaria Transmission in Africa." *Lancet Infectious Diseases* 362: 1792–1798.
- Tauli-Corpuz, Victor and Parshuram Tamang. 2007.** "Oil Palm and Other Commercial Tree Plantations, Monocropping: Impacts on Indigenous People's Land Tenure and Resource Management Systems and Livelihoods." Paper presented to the Sixth Session, United Nations Permanent Forum on Indigenous Issues, 14–25 May 2007, New York.
- TERI (The Energy and Resources Institute). 2006.** "Modeling a Low Carbon Pathway for India." Presentation at CoP 12/MoP2. November.
- . **2007.** "Adaptation to Climate Change in the Context of Sustainable Development." Background Paper No.9. Mumbai.
- The Economist. 2007a.** "Losing Sleep over Climate Change." 16 July. London.
- . **2007b.** "Cleaning up." 31 May. London.
- . **2007c.** "Double Deluge." 26 July. London.
- The Japan Times. 2007.** "Japan to Seek 50% Global Emission Cut at G-8 Meet." 9 May. Tokyo. [http://search.japantimes.co.jp/print/nn20070509a.html]. August 2007.
- The Spectator. 2007.** "The Leader: Climate of Opinion". 2007. I The Spectator. 10 March 2007. Pg. 5. London. [http://www.spectator.co.uk/archive/the-week/28377/climate-of-opinion.thtml]. August 2007.
- Thompson, Martha and Izaskun Gaviria. 2004.** "Cuba, Weathering the Storm. Lessons in Risk Reduction from Cuba." Oxfam America, Boston.
- Thorpe, Donald. 2007.** "Broader, Deeper—and Less Risky?" *Environmental Finance*. February print edition: 20–21.
- Time Magazine. 1962.** "The Thalidomide Disaster." Friday, 10 August. [http://www.time.com/time/magazine/article/0,9171,873697,00.html]. August 2007.
- Toder, Eric. 2007.** "Eliminating Tax Expenditures with Adverse Environmental Effects." Tax Reform, Energy and the Environment Policy Brief. The Brookings Institute and World Resources Institute, Washington, DC.
- Tolgfors, Sten, Eskil Eriandsson and Andreas Carlgren. 2007.** "The EU Should Scrap High Tariffs on Ethanol." Government Offices of Sweden, Stockholm.
- Turner, Margery Austin and Sheila R. Zedlewski. 2006.** "After Katrina. Rebuilding Opportunity and Equity into the New New Orleans." The Urban Institute, Washington, DC.
- UKCIP (United Kingdom Climate Information Programme). 2007.** "UKCIP Climate Digest: April." [http://www.ukcip.org.uk/news\_releases/38.pdf]. May 2007.
- UN (United Nations). 2005a.** "In Larger Freedom: Towards Development, Security and Human Rights for All." Report of the Secretary-General. A/59/2005. UN General Assembly, Fifty-ninth session. Agenda items 45 and 55. New York.
- . **2005b.** *Report on the World Conference on Disaster Reduction*. 18–22 January, Kobe, Hyogo, Japan 2005. UN, New York.
- . **2007a.** "Press Conference by Security Council President." 4 April 2007. Department of Public Information, News and Media Division, New York. [http://www.un.org/News/briefings/docs/2007/070404\_Parry.doc.htm]. October 2007.
- . **2007b.** *The Millennium Development Goals Report*. New York.
- . **2007c.** *Energy Statistics Year book 2004*. DESA (Department of Economic and Social Affairs) Statistics Division, New York.
- UNDP (United Nations Development Programme). 2005.** *Human Development Report 2005. International Cooperation at a Crossroads: Aid, Trade and Security in an Unequal World*. Palgrave Macmillan, New York.
- . **2006a.** "Human Security and Human Development: A Deliberate Choice." National Human Development Report for Kenya 2006. Nairobi.
- . **2006b.** *Human Development Report 2006. Beyond Scarcity: Power, Poverty and the Global Water Crisis*. Palgrave Macmillan, New York.
- . **2007.** "MDG Carbon Facility: Leveraging carbon finance for Sustainable Development." New York. [http://www.undp.org/mdgcarbonfacility/docs/brochure-eng-29may07.pdf]. September 2007.
- UNDP (United Nations Development Programme)-Dryland Development Centre/Bureau for Conflict Prevention and Recovery and UN (United Nations)-International Strategy for Disaster Reduction. 2005.** "Drought Risk and Development Policy." Discussion paper prepared for the UNDP-DDC/BCPR and UN-ISDR Expert Workshop *Drought Risk and Development Policy*, 31 January–2 February, 2005, Nairobi.
- UNDP and AusAID 2004.** "The Regional Poverty Assessment Mekong River Region." UNDP and AusAID. [http://siteresources.worldbank.org/INTVIETNAM/Resources/Mekong\_PPA\_English.pdf]. September 2007.

- UNDP (United Nations Development Programme)–Global Environment Facility (GEF). 2003.** "The Adaptation Policy Framework. User's Guidebook." UNDP, New York.
- UNDP (United Nations Development Programme) Ukraine. 2005.** "The New Wave of Reform : On Track to Succeed. Analysis of policy developments in January – June 2005 and further recommendations." The Blue Ribbon Commission for Ukraine, Kiev. [http://www.un.org.ua/brc/brci/docs/BRC2Final190705Eng.pdf?id=1123140007&cm=doc&fn=brc2final190705eng.pdf&l=e]. September 2007.
- . 2006. "The State and the Citizen: Delivering on Promises." Blue Ribbon Commission Report for Ukraine, Kiev. [http://www.un.org.ua/files/BRC3\_Eng.pdf]. September 2007.
- UNESCO (United Nations Educational, Scientific and Cultural Organization). 2006.** *EFA Global Monitoring Report 2006: Education for All, Literacy for Life.* Paris.
- UN–E (United Nations – Energy). 2005.** "The Energy Challenge for Achieving the Millennium Development Goals." [http://es.un.org/un-energy]. August 2007.
- UNEP (United Nations Environment Programme). 2005.** "Potential for Rainwater Harvesting in Africa. A GIS Overview." Nairobi.
- . 2007a. *Sudan. Post-Conflict Environmental Assessment.* Nairobi. [http://sudanreport.unep.ch/UNEP\_Sudan.pdf]. September 2007.
- . 2007b. "Global Outlook for Ice and Snow." DEWA (Division of Early Warning and Assessment), Nairobi.
- UNEP (United Nations Environment Programme) and GRID (Global Resource Information Database)–Arendal. 2001.** "Vital Climate Graphics." Arendal, Norway. [http://www.grida.no/climate/vital/36.htm]. May 2007.
- UNFCCC (United Nations Framework Convention on Climate Change). 1998.** "Kyoto Protocol to the United Nations Framework Convention on Climate Change." Climate Change Secretariat, Bonn. [http://unfccc.int/resource/docs/convkp/kpeng.pdf]. September 2007.
- . 2006. "National Greenhouse Gas Inventory Data for the Period 1990 to 2004 and Status of Reporting." Document number FCCC/SPI/2006/26. Note by the Secretariat. Bonn.
- . 2007a. "Vulnerability and Adaptation to Climate Change in Small Island Developing States. Background paper for Expert Meeting on Adaptation for Small Island Developing States, 5–7 February Jamaica and 26–28 February Cook Islands." Climate Change Secretariat, Bonn.
- . 2007b. "Registered Project Activities by Host Party". [http://cdm.unfccc.int/Statistics/Issuance/CERsIssuedByHostPartyPieChart.html]. July 2007.
- . 2007c. "Report on the analysis of existing and potential investment and financial flows relevant to the development of an effective and appropriate international response to climate change." Dialogue on Long term Cooperative Action to Address Climate Change by Enhancing Implementation of the Convention. Dialogue Working Paper 8. Bonn.
- . 2007d. "Clean Development Mechanism (CDM)." Webpage. [http://cdm.unfccc.int/index.html]. September 2007.
- . 2007e. "CDM Statistics." [http://cdm.unfccc.int/Statistics/index.html]. September 2007.
- UN-HABITAT (United Nations Human Settlements Programme). 2006.** *The State of the World's Cities Report 2006/07.* Nairobi.
- UNICEF (United Nations Children's Fund). 2006.** "Schools Empty as Drought Effects Linger in Ethiopia." Press Report. New York. [http://www.unicef.org.uk/press/news\_detail.asp?news\_id=724]. January 2007.
- Urban Institute. 2005.** "Katrina: Demographics of a Disaster." The Urban Institute, Washington, DC.
- USAID FEWS NET (United States Agency for International Development Famine Early Warning Systems Network). 2006.** "Guatemala Food Security Update." [http://www.fews.net/centers/innerSections.aspx]. April 2006.
- . 2007. "Hurricane Stan Affecting Household Stocks." [http://www.fews.net/centers/innerSections.aspx]. August 2007.
- USCAP (United States Climate Action Partnership). 2007.** "A Call for Action." [www.us-cap.org/uscap/callforaction.pdf]. September 2007.
- Ürge-Vorsatz, Diana, Gergana Miladinova and László Paizs. 2006.** "Energy in Transition: From the Iron Curtain to the European Union." *Energy Policy* 34(15): 2279–2297.
- Ürge-Vorsatz, Diana, L.D. Danny Harvey, Sevastianos Mirasgedis and Mark Levine. 2007a.** "Mitigating CO<sub>2</sub> Emissions from Energy Use in the World's Buildings." *Building Research and Information* 35(4) 370–398.
- Ürge-Vorsatz, Diana, Sebastian Mirasgedis and Sojia Koepfel. 2007b.** "Appraisal of Policy Instruments for Reducing Buildings' CO<sub>2</sub> Emissions." *Building Research and Information* 35(4): 458–477.
- Vaid, B.H., C. Gnanaseelan, P.S. Polito and P.S. Salvekar. 2006.** *Influence of El Nino on the Biennial and Annual Rossby Waves Propagation in the Indian Ocean with Special Emphasis on Indian Ocean Dipole.* Indian Institute of Tropical Meteorology, Pune.
- Vakis, Renos. 2006.** "Complementing Natural Disasters Management: The Role of Social Protection." Social Protection Discussion Paper No. 0543. World Bank, Washington, DC.
- Van Lieshout, M., R.S. Kovats, M.T.J. Livermore and P. Martens. 2004.** "Climate Change and Malaria: Analysis of the SRES Climate and Socio-Economic Scenarios." *Global Environmental Change* 14: 87–99.
- Vergara, W., A. M. Deeb, A. M. Valencia, R. S. Bradley, B. Francou, A. Zarzar, A. Grünwaldt and S. M. Haeussling. 2007.** "Economic Impacts of Rapid Glacier Retreat in the Andes, Eos." *Transactions of the American Geophysical Union*, 88(25): 261.
- Victor, David G. 2001.** *The Collapse of the Kyoto Protocol and the Struggle to Slow Global Warming.* A Council on Foreign Relations Book. Princeton University Press, Princeton and Oxford.
- Wagstaff, Adam and Mariam Claeson. 2004.** *The Millennium Development Goals for Health. Rising to the Challenges.* World Bank, Washington, DC.
- Warren, Rachel, Nigel Arnell, Robert Nicholls, Peter Levy and Jeff Price. 2006.** "Understanding the Regional Impacts of Climate Change. Research Report Prepared for the Stern Review on the Economics of Climate Change." Research Working Paper No. 90. Tyndall Centre for Climate Change, Norwich.
- Washington, Richard, Mike Harrison, Declan Conway, Emily Black, Andrew Challinor, David Grimes, Richard Jones, Andy Morse, Gillian Kay and Martin Todd. 2006.** "African Climate Change. Taking the Shorter Route." *Bulletin of the American Meteorological Society* 87(10): 1355–1366.
- Watson, Robert. 2007.** "Financing the Transition to a Low Carbon Economy. Beyond Stern: Financing International Investment in Low Carbon." World Bank, Washington, DC.
- Watt-Cloutier, Sheila. 2006.** "The Canadian Environment Awards Citation of Lifetime Achievement. Remarks by Sheila Watt-Cloutier." Inuit Circumpolar Conference, Canada. 5 June. Vancouver. [http://www.inuitcircumpolar.com/index.php?auto\_slide=&ID=357&Lang=En&Parent\_ID=&current\_slide\_num=]. August 2007.
- Watt-Cloutier, Sheila, Terry Fenge and Paul Crowley. 2004.** "Responding to Global Climate Change: The Perspective of the Inuit Circumpolar Conference on the Arctic Climate Impact Assessment." Inuit Circumpolar Conference. Ontario.
- WEDO (Women's Environment and Development Organization). 2007.** "Changing the Climate: Why Women's Perspectives Matter." New York.
- Weitzman, Martin L. 2007.** "The Stern Review of the Economics of Climate Change." Book review for *Journal of Economic Literature (JEL)*. Harvard University, Cambridge, Massachusetts. [http://www.

- economics.harvard.edu/faculty/Weitzman/papers/JELSternReport.pdf]. July 2007.
- Wolf, Martin. 2006a.** "Curbs on Emissions Will Take a Change of Political Climate." *Financial Times*. 7 November 2006. London. [http://www.ft.com/cms/s/cb25e5a4-6e7f-11db-b5c4-0000779e2340.html]. August 2007.
- Wolf, Martin. 2006b.** "Figures Still Justify Swift Climate Action." *Financial Times*. 14 November 2006. London. [http://www.ft.com/cms/s/8dc6191a-740e-11db-8dd7-0000779e2340.html]. July 2007.
- World Bank. 2003.** *Reaching the Rural Poor: A Renewed Strategy for Rural Development*. Washington, DC.
- . **2004a.** *Saving Fish and Fishers: Toward Sustainable and Equitable Governance of the Global Fishing Sector*. Agriculture and Rural Development Department, Washington, DC.
- . **2004b.** "Coral Reef Targeted Research and Capacity Building for Management Project." Project Appraisal Document. World Bank, Washington, DC. and East Asia Environment and Social Development Unit (EASES), Environment Department, University of Queensland, Brisbane.
- . **2005a.** "World Bank Group Progress on Renewable Energy and Energy Efficiency: Fiscal Year 2005." The Energy and Mining Sector Board, Washington, DC.
- . **2005b.** "Learning the Lessons from Disasters Recovery, The Case of Mozambique." Disaster Risk Management Working Paper Series No.12, Hazard Management Unit, Washington, DC.
- . **2006a.** *Hazards of Nature, Risks to Development: An IEG (Independent Evaluation Group) Evaluation of World Bank Assistance for Natural Disasters*. Washington, DC.
- . **2006b.** *Re-engaging in Agricultural Water Management. Challenges and Options*. Washington, DC.
- . **2006c.** "Not If, But When: Adapting to Natural Hazards in the Pacific Islands Region, A Policy Note." Washington, DC.
- . **2006d.** *Clean Energy and Development: Towards an Investment Framework*. Washington, DC.
- . **2006e.** *Global Monitoring Report 2006*. Washington, DC.
- . **2006f.** "Overcoming Drought: Adaptation Strategies for Andhra Pradesh." Washington, DC.
- . **2006g.** *World Development Report 2006: Equity and Development*. Washington, DC.
- . **2007a.** "An Investment Framework for Clean Energy and Development. A Platform for Convergence of Public and Private Investments." Washington, DC.
- . **2007b.** "Clean Energy for Development Investment Framework: World Bank Group Action Plan." Development Committee (Joint Ministerial Committee of the Boards of Governors of the Bank and the Fund On the Transfer of Real Resources to Developing Countries), Washington, DC.
- . **2007c.** *Global Monitoring Report 2007: Confronting the Challenges of Gender Equality and Fragile States*. Washington, DC.
- . **2007d.** *World Development Indicators*. CD-ROM. Washington, DC.
- . **2007e.** *Global Economic Prospects 2007: Managing the Next Wave of Globalization*. Washington, DC.
- . **2007f.** State and Trends of the Carbon Market 2007. Washington, DC.
- . **2007g.** "Climate Change. Frequently Asked Questions." [http://web.worldbank.org/WBSITE/EXTERNAL/EXTSITETOOLS/0,,contentMDK:20205607~menuPK:435332~pagePK:98400~piPK:98424~theSitePK:95474,00.html]. August 2007.
- World Commission on Environment and Development. 1987.** *Our Common Future*. Oxford University Press, Oxford.
- WFP (World Food Programme). 2005a.** "Emergency Assessment Brief: Niger." August. Rome.
- . **2005b.** "Emergency Report No. 18, 29 April 2005." [http://www.wfp.org/english/?ModuleID=78&Key=631#404]. July 2007.
- . **2007.** "Mozambique Emergency Situation Report." 30 March. WFP, Rome.
- WHO (World Health Organization). 2006.** *The World Health Report 2006 – Working Together for Health*. Geneva.
- WHO (World Health Organization) and UNICEF (United Nations Children's Fund). 2005.** *World Malaria Report 2005*. WHO and UNICEF, Geneva and New York. [http://www.rbm.who.int/wmr2005/index.html]. March 2007.
- WMO (World Meteorological Organization). 2006.** *Statement on the Status of the Global Climate in 2005*. Geneva.
- . **2007.** "Observing Stations." Publication No. 9, Volume A, (9 July 2007). [http://www.wmo.int/pages/prog/www/ois/volume-a/vola-home.htm]. September 2007.
- WRI (World Resources Institute). 2007a.** "Climate Analysis Indicators Tool (CAIT)." [http://www.wri.org/climate/project\_description2.cfm?pid=93]. July 2007.
- . **2007b.** *Earth Trends, the Environmental Information Portal*. Online database. Accessed July 2007.
- WRI (World Resources Institute), UNEP (United Nations Environment Programme) and World Bank in collaboration with United Nations Development Programme (UNDP). 2005.** *World Resources 2005: The Wealth of the Poor – Managing Ecosystems to Fight Poverty*. World Resources Institute, Washington, DC.
- World Watch Institute. 2005.** *Vital Signs*. [http://www.amazon.com/Vital-Signs-2006-2007-Trends-Shaping/dp/0393328724]. August 2007.
- WWF (World Wide Fund for Nature). 2002.** "Managing Floods in Europe: The Answers Already Exist." WWF Danube-Carpathian Programme and WWF Loving Waters Programme-Europe. [http://assets.panda.org/downloads/managingfloodingbriefingpaper.pdf]. August 2007.
- . **2006a.** "Including aviation into the EU Emissions Trading Scheme—WWF Position Statement." London.
- . **2006b.** "Use of CDM/JI Project Credits by Participant in Phase II of the EU Emissions Trading Scheme—A WWF Summary of the Ecofys UK Report." London.
- . **2007a.** "Emission Impossible: access to JI/CDM credits in Phase II of the EU Emissions Trading Scheme WWF—UK." London. [http://www.panda.org/about\_wwf/where\_we\_work/europe/what\_we\_do/epo/initiatives/climate/eu\_emissions\_trading/index.cfm]. August 2007.
- . **2007b.** "The EU Emissions Trading Scheme." London.
- World Wind Energy Association. 2007.** "New World Record in Wind Power Capacity: 14,9 GW added in 2006 – Worldwide Capacity at 73,9 GW." 29 January. [http://www.wwindea.org/home/index.php?option=com\_content&task=view&id=167&Itemid=43]. August 2007.
- Wu, Zongxin, Pat de la Quil, Eric D. Larson, Chen Wenying and Gao Pengfei. 2001.** "Future Implications of China's Energy-Technology Choices." Prepared for the Working Group on Energy Strategies and Technologies. China Council for International Cooperation on Environment and Development (CCICED), Beijing.
- Zeitlin, June. 2007.** "Statement by June Zeitlin, Women's Environment and Development Organization in informal thematic debate on Climate Change as a Global Challenge. United Nations General Assembly." UNDP (United Nations Development Programme), Washington, DC.
- Zero Emissions Fossil Fuel Power Plants Technology Platform. 2006.** "A Vision for Zero Emission Fossil Fuel Power Plants." EUR 22043. European Commission, Luxembourg.



# Human development indicators



## Readers guide and notes to tables

### Human development indicator tables

The human development indicator tables provide a global assessment of country achievements in different areas of human development. The main tables are organized thematically, as described by their titles. The tables include data for 175 UN member states—those for which the human development index (HDI) could be calculated—along with Hong Kong Special Administrative Region of China, and the Occupied Palestinian Territories. Because of insufficient cross-nationally comparable data of good quality, the HDI has not been calculated for the remaining 17 UN member countries. Instead a set of basic human development indicators for these countries is presented in Table 1a.

In the tables, countries and areas are ranked by their HDI value. To locate a country in the tables, refer to the *Key to countries* on the back cover flap where countries with their HDI ranks are listed alphabetically. Most of the data in the tables are for 2005 and are those available to the Human Development Report Office (HDRO) as of 1 July 2007, unless otherwise specified.

### Sources and definitions

HDRO is primarily a user, not a producer, of statistics. It relies on international data agencies with the mandate, resources and expertise to collect and compile international data on specific statistical indicators. Sources for all data used in compiling the indicator tables are given in short citations at the end of each table. These correspond to full references in *Statistical references*. When an agency provides data that it has collected from another source, both sources are

credited in the table notes. But when an agency has built on the work of many other contributors, only that agency is given as the source. In order to ensure that all calculations can be easily replicated the source notes also show the original data components used in any calculations by HDRO. Indicators for which short, meaningful definitions can be given are included in *Definitions of statistical terms*. Other relevant information appears in the notes at the end of each table. For more detailed technical information about these indicators, please consult the relevant websites of the source agencies through the *Human Development Report* website at <http://hdr.undp.org/statistics/>.

### Inconsistencies between national and international estimates

When compiling international data series, international data agencies often apply international standards and harmonization procedures to improve comparability across countries. When international data are based on national statistics, as they usually are, national data may need to be adjusted. When data for a country are missing, an international agency may produce an estimate if other relevant information can be used. And because of the difficulties in coordination between national and international data agencies, international data series may not incorporate the most recent national data. All these factors can lead to substantial differences between national and international estimates.

This Report has often brought such inconsistencies to light. When data inconsistencies have arisen, HDRO has helped to link national and international data authorities to address those inconsistencies. In many cases this has led to better statistics in the Report. HDRO con-

tinues to advocate improving international data and plays an active role in supporting efforts to enhance data quality. It works with national agencies and international bodies to improve data consistency through more systematic reporting and monitoring of data quality.

### Comparability over time

Statistics presented in different editions of the Report may not be comparable, due to revisions to data or changes in methodology. For this reason HDRO strongly advises against trend analysis based on data from different editions. Similarly, HDI values and ranks are not comparable across editions of the Report. For HDI trend analysis based on consistent data and methodology, refer to Table 2 (Human development index trends).

### Country classifications

Countries are classified in four ways: by human development level, by income, by major world aggregates and by region (see the *Classification of countries*). These designations do not necessarily express a judgement about the development stage of a particular country or area. The term *country* as used in the text and tables refers, as appropriate, to territories or areas.

*Human development classifications.* All countries included in the HDI are classified into one of three clusters of achievement in human development: high human development (with an HDI of 0.800 or above), medium human development (HDI of 0.500–0.799) and low human development (HDI of less than 0.500).

*Income classifications.* All countries are grouped by income using World Bank classifications: high income (gross national income per capita of US\$10,726 or more in 2005), middle income (US\$876–\$10,725) and low income (US\$875 or less).

*Major world classifications.* The three global groups are *developing countries*, *Central and Eastern Europe and the Commonwealth of Independent States (CIS)* and the *Organization for Economic Co-operation and Development (OECD)*. These groups are not mutually ex-

clusive. (Replacing the OECD group with the high-income OECD group and excluding the Republic of Korea would produce mutually exclusive groups). Unless otherwise specified, the classification *world* represents the universe of 194 countries and areas covered—192 UN member countries plus Hong Kong Special Administrative Region of China, and the Occupied Palestinian Territories.

*Regional classifications.* Developing countries are further classified into regions: *Arab States*, *East Asia and the Pacific*, *Latin America and the Caribbean (including Mexico)*, *South Asia*, *Southern Europe and Sub-Saharan Africa*. These regional classifications are consistent with the Regional Bureaux of the United Nations Development Programme. An additional classification is *least developed countries*, as defined by the United Nations (UN-OHRLLS 2007).

### Aggregates and growth rates

*Aggregates.* Aggregates for the classifications described above are presented at the end of tables when it is analytically meaningful to do so and sufficient data are available. Aggregates that are the total for the classification (such as for population) are indicated by a T. All other aggregates are weighted averages.

In general, an aggregate is shown for a country grouping only when data are available for at least half the countries and represent at least two-thirds of the available weight in that classification. HDRO does not supply missing data for the purpose of aggregation. Therefore, unless otherwise specified, aggregates for each classification represent only the countries: for which data are available; refer to the year or period specified; and refer only to data from the primary sources listed. Aggregates are not shown where appropriate weighting procedures are unavailable.

Aggregates for indices, growth rates and indicators covering more than one point in time are based only on countries for which data exist for all necessary points in time. When no aggregate is shown for one or more regions, aggregates are not always shown for the world clas-



sification, which refers only to the universe of 194 countries and areas.

Aggregates in this Report will not always conform to those in other publications because of differences in country classifications and methodology. Where indicated, aggregates are calculated by the statistical agency providing the data for the indicator.

*Growth rates.* Multiyear growth rates are expressed as average annual rates of change. In calculating growth rates, HDRO uses only the beginning and end points. Year-to-year growth rates are expressed as annual percentage changes.

### Country notes

Unless otherwise noted, data for China do not include Hong Kong Special Administrative Region of China, Macao Special Administrative Region of China, or Taiwan Province of China. In most cases data for Eritrea before 1992 are included in the data for Ethiopia. Data for Germany refer to the unified Germany, unless otherwise noted. Data for Indonesia include Timor-Leste through 1999, unless otherwise noted. Data for Jordan refer to the East Bank only. Economic data for the United Republic of Tanzania cover the mainland only. Data for Sudan are often based on information collected from the northern part of the country. While Serbia and Montenegro became two independent States in June 2006, data for the union of the two States have been used where data do not yet exist separately for the independent States. Where this is the case, a note has been included to that effect. And data for Yemen refer to that country from 1990 onwards, while data for earlier years refer to aggregated data for the former People's Democratic Republic of Yemen and the former Yemen Arab Republic.

### Changes to existing indicator tables and introduction of new tables

This year, a number of changes have been introduced into some existing indicator tables and three new tables have been included. This

is with a view to making the indicator tables more policy-relevant and also to make a link to the theme of this year's Report. New indicators have also been introduced in response to some of the recommendations of the GDI-GEM review held in 2006. As a consequence, some tables do not correspond to the indicator table bearing that number in HDR 2006.

### Changes to existing tables

The 'Energy and environment' table (formerly Table 21 in HDR 2006) has been extended and split into four tables: energy and the environment (Table 22), energy sources (Table 23), carbon dioxide (CO<sub>2</sub>) emissions and stocks (Table 24) and status of major international environmental treaties (Table 25).

The following new indicators have been introduced in the 'Energy and the environment' table (Table 22);

- Percentage change in electricity consumption between 1990 and 2004
- Electrification rate
- Population without access to electricity
- Change in GDP per capita per unit of energy use between 1990 and 2004
- Forest as a percentage of total land.
- Total area of forest cover in 2005
- Absolute change in area of forest cover between 1990 and 2005
- Average annual percentage change in forest cover between 1990 and 2005.

These indicators can be used: to monitor progress in improving access to modern energy; in reducing energy intensity of GDP growth; and to assess rates of deforestation or afforestation in countries.

The 'Energy sources' table (Table 23) is an entirely new table describing the share of total primary energy supply from different sources: fossil fuels (coal, oil and natural gas), renewable energy (from hydro, solar, wind, geothermal as well as biomass and waste) and other sources (nuclear). The total primary energy supply is also given in this table.

The 'Carbon dioxide emissions and stocks' table (Table 24) brings together indicators on CO<sub>2</sub> emissions previously contained in the orig-

inal energy and environment table and introduces a number of new indicators including:

- Total CO<sub>2</sub> emissions and the average annual percentage change between 1990 and 2004
- Countries' share of the world's total CO<sub>2</sub> emissions
- CO<sub>2</sub> emissions per capita (carbon footprints)
- CO<sub>2</sub> emissions per unit of energy use (carbon intensity of energy)
- CO<sub>2</sub> emissions per unit of GDP (carbon intensity of growth)
- CO<sub>2</sub> emissions from forest biomass and total carbon stocks in forests.

The 'Status of major environmental treaties' table (Table 25) extends the range of environmental treaties covered in the original table on energy and environment and presents them all in a single table.

The 'Victims of Crime' table (formerly Table 23 in HDR 2006) has been dropped for this Report in the absence of a new round of the International Crime Victims Survey on which the table was based since 2000–01. It has been replaced by a table on crime and justice (Table 27) which presents information on homicide rates, prison populations and the abolition or retention of capital punishment.

### **Tables introduced in response to some of the GDI-GEM review recommendations**

Cross-nationally comparable gender disaggregated statistics are a major challenge to assessing progress towards the elimination of all forms of discrimination against women and men. In response to some of the recommendations from the GDI-GEM review, new gender disaggregated indicators of labour force participation in non-OECD countries have been introduced and an existing indicator table was also modified to provide more information.

Previously, unemployment information was presented for OECD countries only because of insufficient comparable data for other countries. In the new Table 21, in addition to data for men and women, such labour force statistics as total employment and unemploy-

ment, the distribution of employment by economic activity and participation in the informal sector are presented.

Table 32 'Gender work and time allocation' is a modification of Table 28 in HDR 2006, which provides information on how women and men share their time between market and nonmarket activities. Nonmarket activities have been broken down further to provide information on how much time women and men spend daily on cooking and cleaning, caring for children, on such other activities as personal care, and on free time for leisure and other social activities.

HDRO will continue to work with national, regional and international agencies towards improving availability and quality of gender-disaggregated data.

### **Currency conversion**

Throughout the Report, for currency units that were originally reported in currencies other than US dollars (US\$), the estimated equivalent value in US\$ has been provided right next to them. The exchange rates used for these conversions are the 'average period' rates for the specific year, while for currencies with no specified year, the yearly rate for the most recently available 'average period' was used, as reported in the September 2007 International Monetary Fund's *International Financial Statistics* report.

### **Symbols**

In the absence of the words *annual*, *annual rate* or *growth rate*, a dash between two years, such as in 1995–2000, indicates that the data were collected during one of the years shown. A slash between two years, such as in 1998/2001, indicates an average for the years shown unless otherwise specified. The following symbols are used:

- .. Data not available
- (.) Greater (or less) than zero but small enough to be rounded off to zero at the displayed number of decimal points
- < Less than
- Not applicable
- T Total.

## Note to Table 1: about this year's human development index

The human development index (HDI) is a composite index that measures the average achievements in a country in three basic dimensions of human development: a long and healthy life; access to knowledge; and a decent standard of living. These basic dimensions are measured by life expectancy at birth, adult literacy and combined gross enrolment in primary, secondary and tertiary level education, and gross domestic product (GDP) per capita in Purchasing Power Parity US dollars (PPP US\$), respectively. The index is constructed from indicators that are available globally using a methodology that is simple and transparent (see *Technical note 1*).

While the concept of human development is much broader than any single composite index can measure, the HDI offers a powerful alternative to GDP per capita as a summary measure of human well-being. It provides a useful entry point into the rich information contained in the subsequent indicator tables on different aspects of human development.

### Data availability determines HDI country coverage

The HDI in this Report refers to 2005. It covers 175 UN member countries, along with Hong Kong Special Administrative Region of China, and the Occupied Palestinian Territories.

To enable cross-country comparisons, the HDI is, to the extent possible, calculated based on data from leading international data agencies available at the time the Report was prepared (see *Primary international data sources* below). But, for a number of countries, data are missing from these agencies for one or more of the four HDI components. For this reason, 17 UN member countries cannot be included in the HDI ranking this year. Instead a set of basic HDIs for these countries is presented in Table 1a.

In very rare cases, HDRO has made special efforts to obtain estimates from other international, regional or national sources when the

primary international data agencies lack data for one or two HDI components of a country. In a very few cases HDRO has produced an estimate. These estimates from sources other than the primary international agencies are clearly documented in the footnotes to Table 1. They are of varying quality and reliability and are not presented in other indicator tables showing similar data.

### Primary international data sources

*Life expectancy at birth.* The life expectancy at birth estimates are taken from *World Population Prospects 1950–2050: The 2006 Revision* (UN 2007e) the official source of UN population estimates and projections. They are prepared biennially by the United Nations Department of Economic and Social Affairs Population Division (UNPD) using data from national vital registration systems, population censuses and surveys.

In *The 2006 Revision* UNPD incorporated available national data through the end of 2006. For assessing the impact of HIV/AIDS, the latest HIV prevalence estimates prepared by the Joint United Nations Programme on HIV/AIDS (UNAIDS) are combined with a series of assumptions about the demographic trends and mortality of both infected and non-infected people in each of the 62 countries for which the impact of the disease is explicitly modelled.

The availability of new empirical evidence on the HIV/AIDS epidemic and demographic trends often requires adjustments to earlier estimates. Recent UNAIDS estimates indicate a decline in the rate of transition of new individuals into the high risk group. Based on these and other factors, *World Population Prospects 1950–2050: The 2006 Revision* made several methodological changes, which resulted in significant increases in estimates of life expectancy at birth for some of the countries. Firstly, *The 2006 Revision* incorporates a longer survival for infected persons receiving treatment. Secondly, the rate of mother to child transmission is also projected to decline at varying rates depending on the progress made by each country in increasing access to treatment. The life

expectancy estimates published by UNPD are usually five-year averages although it does also produce annual life expectancy estimates interpolated from the five-year averages. The life expectancy estimates for 2005 shown in Table 1 and those underlying Table 2 are from these interpolated data. For details on *World Population Prospects 1950–2050: The 2006 Revision* see [www.un.org/esa/population/unpop.htm](http://www.un.org/esa/population/unpop.htm).

*Adult literacy rate.* This Report uses data on adult literacy rates from the United Nations Educational, Scientific and Cultural Organization (UNESCO) Institute for Statistics (UIS) April 2007 Assessment (UNESCO Institute for Statistics 2007a), that combines direct national estimates with recent estimates based on its Global age-specific literacy projections model developed in 2007. The national estimates, made available through targeted efforts by UIS to collect recent literacy data from countries, are obtained from national censuses or surveys between 1995 and 2005. Where recent estimates are not available, older UIS estimates, produced in July 2002 and based mainly on national data collected before 1995, have been used instead.

Many high-income countries, having attained high levels of literacy, no longer collect basic literacy statistics and thus are not included in the UIS data. In calculating the HDI, a literacy rate of 99.0% is assumed for high-income countries that do not report adult literacy information.

In collecting literacy data, many countries estimate the number of literate people based on self-reported data. Some use educational attainment data as a proxy, but measures of school attendance or grade completion may differ. Because definitions and data collection methods vary across countries, literacy estimates should be used with caution.

The UIS, in collaboration with partner agencies, is actively pursuing an alternative methodology for measuring literacy, the Literacy Assessment and Monitoring Programme (LAMP). LAMP seeks to go beyond the current simple categories of literate and illiterate by providing information on a continuum of literacy skills. It is hoped that literacy rates

from LAMP will eventually provide more reliable estimates.

*Combined gross enrolment ratios in primary, secondary and tertiary education.* Gross enrolment ratios are produced by the UIS (UNESCO Institute for Statistics 2007c) based on enrolment data collected from national governments (usually from administrative sources) and population data from the *World Population Prospects 1950–2040: The 2004 Revision*. The ratios are calculated by dividing the number of students enrolled in primary, secondary and tertiary levels of education by the total population in the theoretical age group corresponding to these levels. The theoretical age group for tertiary education is assumed to be the five-year age group immediately following on the end of upper secondary school in all countries.

Although intended as a proxy for educational attainment, combined gross enrolment ratios do not reflect the quality of educational outcomes. Even when used to capture access to educational opportunities, combined gross enrolment ratios can hide important differences among countries because of differences in the age range corresponding to a level of education and in the duration of education programmes. Grade repetition and dropout rates can also distort the data. Measures such as the mean years of schooling of a population or school life expectancy could more adequately capture educational attainment and should ideally supplant the gross enrolment ratio in the HDI. However, such data are not yet regularly available for a sufficient number of countries.

As currently defined, the combined gross enrolment ratio measures enrolment in the country of study and therefore excludes students studying abroad from the enrolment ratio of their home country. Current data for many smaller countries, for which pursuit of a tertiary education abroad is common, could substantially under estimate access to education or educational attainment of the population and thus lead to a lower HDI value.

*GDP per capita (PPP US\$).* In comparing standards of living across countries, economic statistics must be converted into purchasing power parity (PPP) terms to eliminate differ-

ences in national price levels. The GDP per capita (PPP US\$) data for the HDI are provided by the World Bank (World Bank 2007b) for 168 countries based on price data from the last International Comparison Program (ICP surveys and GDP in local currency from national accounts data. The last round of ICP surveys conducted between 1993 and 1996 covered 118 countries. PPPs for these countries are estimated directly by extrapolating from the latest benchmark results. For countries not included in the ICP surveys, estimates are derived through econometric regression. For countries not covered by the World Bank, PPP estimates provided by the Penn World Tables of the University of Pennsylvania (Heston, Summers and Aten 2006) are used.

Though much progress has been made in recent decades, the current PPP data set suffers from several deficiencies, including lack of universal coverage, of timeliness of the data and of uniformity in the quality of results from different regions and countries. Filling gaps in country coverage with econometric regression requires strong assumptions, while extrapolation over time implies that the results become weaker as the distance lengthens between the reference survey year and the current year. The importance of PPPs in economic analysis underlines the need for improvement in PPP data. A new Millennium Round of the ICP has been launched and promises much improved PPP data for economic policy analysis. First results are expected to be published in late 2007 or early 2008. For details on the ICP and the PPP methodology, see the ICP website at [www.worldbank.org/data/icp](http://www.worldbank.org/data/icp).

### **Comparisons over time and across editions of the Report**

The HDI is an important tool for monitoring long-term trends in human development. To facilitate trend analyses across countries, the HDI is calculated at five-year intervals for the period 1975–2005. These estimates, presented in Table 2, are based on a consistent method-

ology and on comparable trend data available when the Report is prepared.

As international data agencies continually improve their data series, including updating historical data periodically, the year to year changes in the HDI values and rankings across editions of the *Human Development Report* often reflect revisions to data—both specific to a country and relative to other countries—rather than real changes in a country. In addition, occasional changes in country coverage could also affect the HDI ranking of a country, even when consistent methodology is used to calculate the HDI. As a result, a country's HDI rank could drop considerably between two consecutive Reports. But when comparable, revised data are used to reconstruct the HDI for recent years, the HDI rank and value may actually show an improvement.

For these reasons HDI trend analysis should not be based on data from different editions of the Report. Table 2 provides up-to-date HDI trend data based on consistent data and methodology.

### **HDI for high human development countries**

The HDI in this Report is constructed to compare country achievements across the most basic dimensions of human development. Thus, the indicators chosen are not necessarily those that best differentiate between rich countries. The indicators currently used in the index yield very small differences among the top HDI countries, and thus the top of the HDI ranking often reflects only very small differences in these underlying indicators. For these high-income countries, an alternative index—the human poverty index (shown in Table 4)—can better reflect the extent of human deprivation that still exists among the populations of these countries and can help direct the focus of public policies.

For further discussions on the use and limitations of the HDI and its component indicators, see <http://hdr.undp.org/statistics>.

## Acronyms and abbreviations

CDIAC	Carbon Dioxide Information Analysis Center	ISCO	International Standard Classification of Occupations
CIS	Commonwealth of Independent States	ISIC	International Standard Industrial Classification
CO <sub>2</sub>	Carbon dioxide	ITU	International Telecommunication Union
CO <sub>2</sub> e	Carbon dioxide equivalent	LIS	Luxembourg Income Studies
DAC	Development Assistance Committee (of OECD)	MDG	Millennium Development Goals
DHS	Demographic and Health Survey	MICS	Multiple Indicator Cluster Survey
DOTS	Directly Observed Treatment Short courses (method of detection and treatment of tuberculosis)	Mt	Megatonne (one million tonnes)
EM-DAT	Emergency disasters database	ODA	Official development assistance
FAO	Food and Agriculture Organization	OECD	Organization for Economic Co-operation and Development
GDI	Gender-related development index	PPP	Purchasing power parity
GDP	Gross domestic product	R&D	Research and development
GEM	Gender empowerment measure	SAR	Special Administrative Region (of China)
GER	Gross enrolment ratio	SIPRI	Stockholm International Peace Research Institute
GNI	Gross national income	SITC	Standard International Trade Classification
Gt	Gigatonne (one billion tonnes)	TFYR	The former Yugoslav Republic (of Macedonia)
HDI	Human development index	UN	United Nations
HDRO	Human Development Report Office	UNAIDS	Joint United Nations Programme on HIV/AIDS
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome	UNCTAD	United Nations Conference on Trade and Development
HPI-1	Human poverty index (for developing countries)	UNODC	United Nations Office on Drugs and Crime
HPI-2	Human poverty index (for OECD countries, Central and Eastern Europe and the CIS)	UNESCO	United Nations Educational, Scientific and Cultural Organization
IALS	International Adult Literacy Survey	UNDP	United Nations Development Programme
ICPS	International Centre for Prison Studies	UNFPA	United Nations Population Fund
ICSE	International Classification of Status in Employment	UNHCR	Office of the United Nations High Commissioner for Refugees
IDMC	Internal Displacement Monitoring Centre	UNICEF	United Nations Children's Fund
IEA	International Energy Agency	UN-ORHLLS	United Nations Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States
IISS	International Institute for Strategic Studies	WHO	World Health Organization
ILO	International Labour Organization	WIPO	World Intellectual Property Organization
ILOLEX	ILO database on International Labour Standards		
IPU	Inter-Parliamentary Union		
ISCED	International Standard Classification of Education		