
ENDNOTES

Chapter 1

1. John MacKinlay and Randolph Kent, "A New Approach to Complex Emergencies," *International Peacekeeping* 4: 31-49.

2. ABC news report, October 16, 2005, quoting Prime Minister Shaukat Aziz.

3. Official development assistance equaled \$5.154 billion (OECD data). Bank lending, based on approvals for 38 projects over 1996–2006, equaled \$5.277 billion.

4. Bank research (World Bank 1998) has shown evidence that increases in development may initially lead to increases in vulnerability before declining as an economy becomes more developed.

Chapter 2

1. The treatment of reallocations in the several Bank databases is inconsistent. A small amount of double counting may have occurred where reallocated loan proceeds are reported twice, in the original ICR and as part of new emergency loans.

2. This amount includes grants. Also taken into account are 11 Bank-administered projects using resources from the Global Environment Fund and trust funds. In the absence of a completion report, appraisal estimates of activity costs were used. If no amount could be found for the disaster activity, but it was included in a larger activity at the subcomponent level, the only available amount was used.

3. Thirty-four drought projects had activities related to other types of disasters as well.

4. For this reason, when classifying disaster types, loans are sometimes double counted, and the number of projects is greater than 528.

5. The OPN referred to them as "reconstruction projects."

6. This does not include damage assessments or Board Reports.

7. Since Bank documents and databases do not always include information on the amount reallocated,

the total amount of reallocations is actually higher. The \$3.0 billion does not include information on 29 percent of the 217 reallocation projects.

8. A Hazard Risk Management steering committee, jointly chaired by the directors of the Financial Sector Operations and Policy Department (OPD) and the Transport and Urban Development Department (TUD), was constituted in fiscal 2006 to advise the thematic group and to facilitate better coordination among various units across the World Bank Group that work on disaster-related issues. The steering committee will meet quarterly and communicate electronically as necessary. It is expected that the steering committee will improve synergy through information sharing and provide strategic guidance to the thematic group.

9. Surveys were sent to 219 task managers, 34 of whom responded (a 16 percent response rate).

Chapter 3

1. United Nations Division for the Advancement of Women (DAW), Inter-Agency Secretariat of the International Strategy for Disaster Reduction (UN/ISDR), "Environmental Management and the Mitigation of Natural Disasters: A Gender Perspective," Report of the Expert Group Meeting, Ankara, Turkey, 6-9 November 2001. <http://www.crid.or.cr/digitalizacion/doc/eng/doc13987.doc>.

2. The four disaster types were tropical cyclones, floods, earthquakes, and drought.

3. The predominant concerns were environmental degradation, particularly of watersheds in rural areas, and the effects of rapid and uncontrolled urbanization.

4. The six natural hazards were drought, floods, wind storms, earthquakes, landslides, and volcanoes.

5. A first step in such a strategic approach may be wider adoption of the "five pillars" currently used in Europe and Central Asia, Latin America and the

Caribbean, and South Asia: risk assessment, risk mitigation, institution building, emergency preparedness, and risk financing.

6. Eleven of them are interim PRSPs (IPRSPs). For a full list, see: [http:// web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTPOVERTY/EXTIPRS/0,,menuPK:384207~pagePK:149018~piPK:149093~theSitePK:384201,00.html](http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTPOVERTY/EXTIPRS/0,,menuPK:384207~pagePK:149018~piPK:149093~theSitePK:384201,00.html).

7. According to the Hazard Risk Management Team, those PRSPs are Cambodia (2003), Ghana (2003), Honduras (2001), Malawi (2002), Mongolia (2003), Mozambique (2001), Nicaragua (2001), Tajikistan (2002), and Vietnam (2002).

8. IEG-World Bank, in consultation with the Hazard Risk Management Team of the Urban Unit, started with the list of hotspot countries that are borrowers from the Bank and divided them into three groups according to levels of vulnerability (high, medium, and low), based on to the percentage of a country's GDP at risk from two or more natural hazards. The countries in the high- and medium-risk groups are listed in Appendix E, tables E.2a and E.2b. This was deemed suitable because an approach based on economic risk is in line with the Bank's work as a financial institution. It needs to be stressed that the proposed categorization is offered for the purpose of stimulating discussion. It is not IEG's role to be the arbiter of borrower risk. Bank management may choose to categorize countries with a more complex system (including mortality risk, for example) that takes more account of issues such as Africa's high susceptibility to drought but lower economic vulnerabilities. Only three African countries currently figure in the proposed high- and medium-risk groups.

Chapter 4

1. <http://web.worldbank.org/WBSITE/EXTERNAL/EXTABOUTUS/EXTARCHIVES/0,,contentMDK:20485265~pagePK:36726~piPK:437378~theSitePK:29506,00.html>

2. See the balance of payment background paper (IEG 2004b; informal, available on request).

3. Such countries would include many of the least-developed countries.

4. See the balance of payment background paper (IEG 2004b; informal, available on request).

5. That so many ERLs are planned to take longer than three years indicates that practice often departs from policy. Some task managers of disaster projects

have admitted that they did not even realize that ERLs had a three-year limit.

6. The analysis included 459 ongoing and completed disaster projects for which data were available.

7. Twenty-seven percent equates to 125 ongoing and completed projects, out of a total of 459 projects.

8. The analysis examined 303 completed projects.

9. The analysis examined 4,503 projects approved after fiscal year 1984 and completed by 2004.

10. The lower average may be explained by the structural adjustment projects, which typically take less time than most projects. Without structural adjustment projects, the average implementation time goes up to 6.76 years (2,467 days). These findings would still suggest that natural disaster projects do not take less time to implement than other projects, on average.

11. Fifty-nine completed ERLs were analyzed.

Chapter 5

1. Asian Disaster Reduction Center http://www.adrc.or.jp/LWR/LWR_abridged/definitions.pdf

2. Another 30 projects mentioned participation in connection with labor, 21 mentioned consultation, 11 mentioned self-help construction, and 47 mentioned participation in other contexts.

3. The countries were Bangladesh, Honduras, India (Gujarat), Mozambique, and Turkey.

4. Social vulnerability is reflected by the degree to which a socioeconomic system or physical assets are either susceptible or resilient to the impact of natural hazards and environmental changes. This vulnerability is determined by a combination of several issues, according to DAW and the UN/ISDR Secretariat: 1) hazard awareness; 2) the condition of human settlements and infrastructure; 3) public policy and administration; 4) the wealth/poverty of a given society; 5) organized abilities in all fields of disaster and risk management; 6) inequalities—gender relations, economic patterns, and ethnic or racial divisions; and 7) development practices that do not take into account susceptibility to natural hazards (United Nations Division for the Advancement of Women [DAW], Inter-Agency Secretariat of the International Strategy for Disaster Reduction [UN/ISDR] 2001. <http://www.crid.or.cr/digitalizacion/doc/eng/doc13987.doc>)

5. Albala-Bertrand, as cited in Freeman and others 2002.

6. The Bank began flagging projects with specific poverty objectives in 1992, and recently discontin-

ued the practice. The average of the project ratings of these 44 completed disaster PTI interventions was 91 percent satisfactory—much higher than the Bank average of 72 percent.

7. Of these, 65 were completed and rated, with 80 percent having satisfactory outcomes.

8. According to the Center of Studies in Social Science (CSSS) 1999 study, the male-female ratio of the surveyed population in Maharashtra was significantly higher than the ratio of the earthquake-devastated districts. It was 942 and 937 for Latur and Osmanabad and 926 for the surveyed population affected by the earthquake. According to the survey, the larger number of women who died in the earthquake may be one of the reasons for this phenomenon.

9. See study background paper on this topic for more detail and relevant references to literature (IEGB 2005e; informal, available on request).

10. For the purpose of this discussion, only projects with at least one full disaster component were considered.

Chapter 6

1. 2005 Tsunami Economic Recovery Project (P094205).

2. 2005 Post-Tsunami Recovery and Reconstruction Project (P094193).

3. 2003 Fourth Social Investment Fund Project (P048651).

4. 2003 Emergency Drought Recovery Project (P080612).

5. 1999 Emergency Flood Reconstruction Project (P063089).

6. 1995 Basic Education (P007399).

7. 1999 OECS: Emergency Disaster and Reconstruction (P062668).

8. At the regional trade talks in Argentina in November 2005, a proposal was made to establish an emergency relief fund for Latin America and the Caribbean. A \$500 million revolving fund also has been proposed for the UN.

9. *1994 Morocco National Rural Finance (L3662)*—This project used the National Guarantee Fund as a drought insurance mechanism. *2001 Mexico Natural Disaster Management Project (L7038)*—This project prepared a contingent earthquake-triggered facility (a facility that would allow deployment of pre-arranged funding to cover risks in the event of natural catastrophes) and a catastrophe bond as a market-based in-

surance mechanism. *2001 Organization of Eastern Caribbean States Emergency Recovery and Disaster Management Program (L4418)*—This project set up a contingent facility with allowance for post-catastrophe mitigation work that could be called upon in the event of a natural disaster during project implementation.

10. This issue is discussed in some detail in recent project evaluations: El Salvador Earthquake Reconstruction Project (Loan 2873-ES), Report No. 28389; Maharashtra Emergency Earthquake Rehabilitation Project (Credit 2594-IN), Report No. 32515; Erzincan Earthquake Rehabilitation and Reconstruction Project (Loan 3511-TR); Turkey Emergency Flood and Earthquake Recovery Project (Loan 4388-TR); and Emergency Earthquake Recovery Project (Loan 4518-TR), Report No. 32676-TR.

11. Several ongoing projects put mitigation measures as their first priority: *the OECS Emergency Recovery and Disaster Management Project* covering St. Kitts & Nevis, St. Lucia, Dominica, Grenada, and St. Vincent & the Grenadines (P062668, approval year 1998—financed lending operations in each of the five mentioned countries with the objects of fortifying, or reconstructing and rehabilitating key economic and social infrastructure and facilities and strengthening the countries' institutional capacities to prepare for and respond to disaster emergencies); *the Honduras Natural Disaster Mitigation Project* (P064913, approval year 2000—supports capacity building to reduce vulnerability to natural disasters at the municipal level); *the Nicaragua Natural Disaster Vulnerability Reduction Project* (P064916, approval year 2001—aims to improve Nicaragua's disaster management capacity); *OECS Catastrophe Risk Management and Insurance Reform Project* (P070658, approval year 2002); *the Colombia Natural Disaster Vulnerability Reduction Project Adaptable Program Loan phases 1 and 2* (P082429, approval year 2005—aims at reducing the fiscal vulnerability of the state to adverse natural events by strengthening national capacity to manage disaster risk and by reducing vulnerability in key municipalities that combine high exposure to disaster risk and high contributions to national income and productivity); *the Romania Hazard Risk Mitigation and Emergency Preparedness Project* (P075163, approval year 2004—aims to assist the government in reducing the environmental, social, and economic vulnerability to natural disasters, and catastrophic mining accidental spills of pollutants); and *the Vietnam Natural Disaster Risk Management Project* (P073361, approval year 2005—adopts an innovative ap-

proach, providing support primarily for disaster prevention and mitigation measures, including at the community level where vulnerability is often greatest, to reduce the impact of natural hazards on Vietnam's development process).

12. For the remaining 3 percent, no information was available.

13. Storms wash soil and debris into rivers, reducing channel capacity and increasing the risk of flooding. River training, the only solution other than addressing the root causes of the problem, consists of a series of works that modify or constrain the behavior of rivers, typically including the creation of new embankments and the upgrading of existing ones, the planting of certain varieties of trees and grasses to hold soil in place, and stabilizing the outer edge of river bends using stones or other inorganic material to lessen erosion and to keep the river to its course. Once rivers leave their channels due to flooding, they can abandon them for good. River training returns waterways to alignments from which they have departed. River training also protects bridges, drainage infrastructures, and roads by the creation of guide bunds (sometimes referred to as hard points).

14. No information was available for 4 percent of projects.

15. The largest proportion occurs in African projects. However, among the 138 projects that consist wholly of disaster-related activities, 49 mention working with other donors, and the South Asia Region has the largest proportion. Curiously, project documents have mentioned other donors less and less as the years have gone by. This may simply be a reporting phenomenon.

Appendix A

1. Two-thirds of the 40 projects referenced dealt with reconstruction after natural disasters, and one-third dealt with reconstruction after civil wars.

2. These are the earliest natural disaster projects adequately documented in currently accessible files.

3. Though ERL procedures already were laid down in the OPN, the use of that term occurred only later in the OD, which stipulated that every ERL should have the term "emergency," "recovery," or "reconstruction" in the title, to be more easily recognizable. Conversely, however, not every loan with these words in its title is an ERL.

Appendix B

1. Project concept date (PCD) was used for the analysis of the timing of the all Bank projects, and that figure is compared with all disaster projects in the background paper. The analysis of timing from event date only looks at projects for which that date is available.

2. The effectiveness time is defined as the time between Board approval and the time when the project can start disbursing funds.

3. Balance of payment/budget support was examined separately because it is considered one of the quickest forms of Bank lending.

4. Balance of payment projects had already been identified in a previous analysis of the component activities of completed projects.

Appendix G

1. TURKEY: For more information, see the Turkey Emergency Earthquake Recovery Project PPAR (*Project Performance Assessment Report, Turkey, Erzin-can Earthquake Rehabilitation and Reconstruction Project [L3511-TR]*; *Turkey Emergency Flood and Earthquake Recovery Project [L4388-TR]*; and *Emergency Earthquake Recovery Project [L4518-TR]*).

Appendix J

1. The ISDR aims at building disaster resilient communities by promoting increased awareness of the importance of disaster reduction as an integral component of sustainable development, with the goal of reducing human, social, economic, and environmental losses due to natural hazards and related technological and environmental disasters. See <http://www.unisdr.org>

2. The World Conference on Disaster Reduction, which was held in Kobe (Hyogo, Japan) on January 18-22, 2005, adopted the Hyogo Framework for Action 2005-15: Building the Resilience of Nations and Communities to Disasters.

3. See the joint IBRD/IDA/IFC Country Assistance Strategy for the Organization of Eastern Caribbean States (Report No. 22205-LAC), which was discussed by the Executive Directors on September 6, 2005. A note describing the proposal, which was presented to the 2005 Small States Forum held in Washington, DC on September 24, 2005, is available at www.worldbank.org/smallstates.