

Handbook for Disaster Assessment

3rd Edition

Omar D. Bello, Ph.D.

Economic Affairs Officer

Disaster Risk Reduction and Response Unit

ECLAC Subregional Headquarters for the Caribbean



UNITED NATIONS

E C L A C

Disaster assessment methodology

Bangkok

February 18, 2015



Background

ECLAC has been a pioneer in the field of disaster assessment and in the development and dissemination of a disaster assessment methodology. Our history assessing disasters started in 1972 with the earthquake that struck Managua, Nicaragua.

Since then, ECLAC has taken part in more than 90 assessments of the social, environmental and economic effects and impacts of disasters in 28 countries in the region



Background

Those disasters include 15 of the 20 most devastating disasters to hit Latin America and the Caribbean in the past 40 years. It is worth to mention that it has been used in 40 countries on other continents, mainly Africa and Asia.

Disasters assessed by ECLAC which were responsible for around 310,000 deaths and affected the lives of 30 million people, and estimated cost of US\$ 213 billion (at 2000 prices).



Disasters

Disasters studied by ECLAC derive from a combination of two factors:

- (a) natural phenomena capable of unleashing processes that lead to physical damage and the loss of human lives and capital, and
- (b) the vulnerability of individuals and human settlements.

These events disrupt the living conditions of communities and individuals and the economic activity of countries.

All nations are exposed to extreme natural events to a greater or lesser degree. Their effects do not always result in a disaster, however. This happens when a natural event meets conditions of vulnerability.

LAC: Deadliest Disasters 1970-89

Year	Country	Type	Deaths	Aff. Population
1970	PER	Earthquake	66,794	3,216,240
1972	NIC	Earthquake	10,000	720,000
1973	HND	Mudslide	2,800	
1974	HND	Storm	8,000	600,000
1974	BRA	Epidemic	1,500	30,000
1976	GTM	Earthquake	23,000	4,993,000
1979	DOM	Storm	1,400	1,554,000
1985	COL	Volcanic eruption	21,800	12,700
1985	MEX	Earthquake	9,500	2,130,204
1987	ECU	Earthquake	5,000	150,000

LAC: Deadliest Disasters 1990-2010

Year	Country	Type	Deaths	Aff. Population
1991	PER	Epidemic	8,000	
1991	PER	Epidemic	1,726	283,353
1998	HND	Storm	14,600	2,112,000
1998	NIC	Storm	3,332	868,228
1999	VEN	Floods	30,000	483,635
2004	HTI	Storm	2,754	315,594
2004	HTI	Floods	2,665	31,283
2005	GTM	Storm	1,513	475,314
2010	HTI	Earthquake	222,570	3,700,000
2010	HTI	Epidemic	5,592	378,638



Conflicts as Disasters

Economic disaster corresponds to a downward jump in per capita GDP at any instant of time. (Barro 2006)

Actual and potential economic disasters could reflect

- 1) Economic events
- 2) Wartime destruction
- 3) Disasters of natural origin
- 4) Epidemics



Conflicts as Disasters

int of sizes of world economic disasters in the twentieth
as been more important than purely economic

ends on the extent of the destruction of physical capital
or the country wins or loses.

e the Civil War, wars that the United States participated
assive destruction of its production capacity.