Beyond Disasters: Creating Opportunities for Peace

Michael Renner and Zoë Chafe
Worldwatch Institute

Woodrow Wilson Center for International Scholars
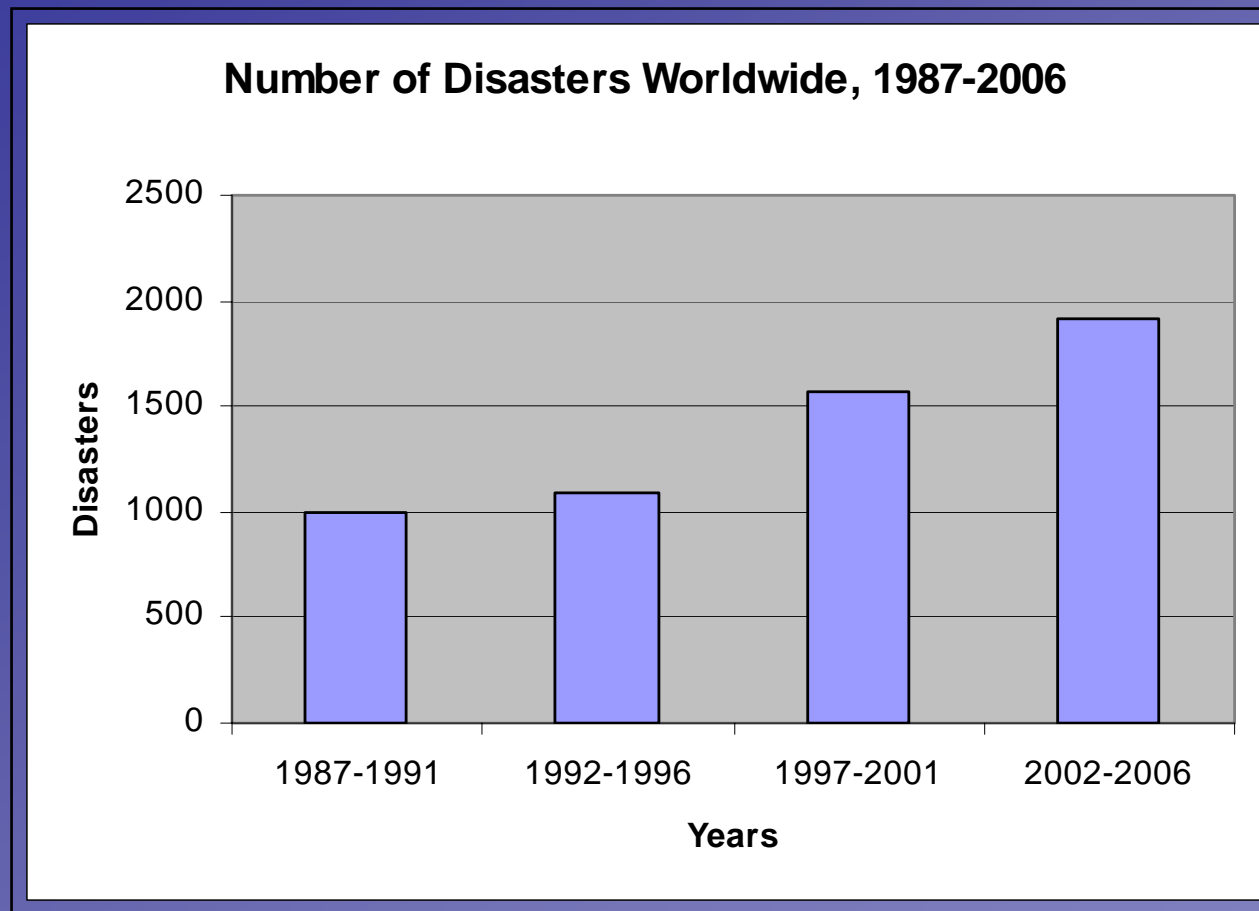**Environmental Change and Security Program**

June 28, 2007

WORLDWATCH INSTITUTE
www.worldwatch.org

WORLDWATCH REPORT

Beyond Disasters

Creating Opportunities for Peace

MICHAEL RENNER AND ZOË CHAFE

WORLDWATCH INSTITUTE
www.worldwatch.org

Number of Disasters 1987–2006

Number of Disasters Worldwide, 1987-2006

WORLDWATCH INSTITUTE
www.worldwatch.org

Disaster Toll, 1987–2006

Total Affected and Killed by Natural Disasters, 1987-2006

Source: EM-DAT

WORLDWATCH INSTITUTE
www.worldwatch.org
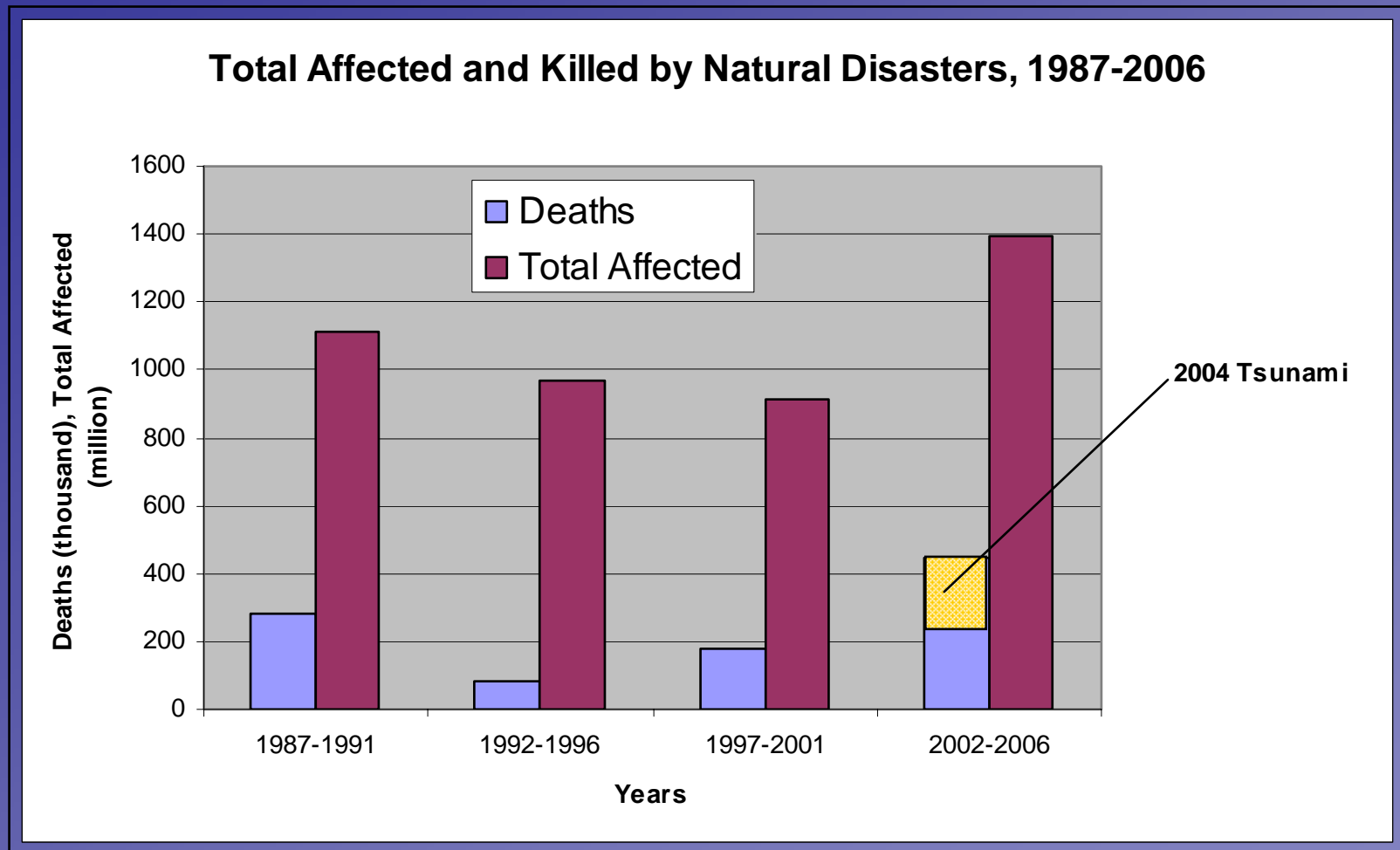
Comparing Recent Disasters

Table 1. The Impact of Selected Major Disasters, 2004–2006

Year	Event	Deaths	Total People Affected	Deaths	Total People Affected
		(Number)		(Percent of all disasters during year)	
2006	Yogyakarta Earthquake	5,778	2,340,745	27.1	1.7
2005	Kashmir Earthquake	74,648	3,026,265	84.4	2.1
2005	Hurricane Katrina	1,833	500,000	2.1	0.3
2004	Indian Ocean Tsunami	226,408	2,431,807	93.3	1.4

Natural or Un-natural Disasters?

- Environmental degradation
- Climate change
- Population and housing
- Poverty and inequality
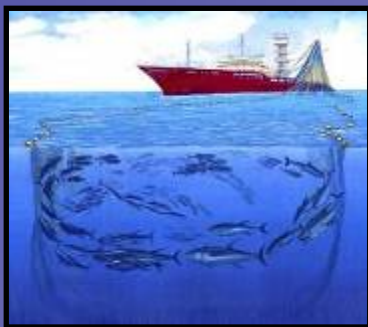
Urban Disaster Risk

Table 6–1. Ten Most Populous Cities in 2005 and Associated Disaster Risk

City	Population (million)	Disaster Risk					
		Earthquake	Volcano	Storms	Tornado	Flood	Storm Surge
Tokyo	35.2	x		x	x	x	x
Mexico City	19.4	x	x	x			
New York	18.7	x		x			x
São Paulo	18.3			x		x	
Mumbai	18.2	x		x		x	x
Delhi	15.0	x		x		x	
Shanghai	14.5	x		x		x	x
Kolkata	14.3	x		x	x	x	x
Jakarta	13.2	x				x	
Buenos Aires	12.6			x		x	x

Landslides in Sri Lanka

Vulnerability

- <u>Women</u>: disproportionate fatalities; contend with social roles, harassment

- <u>Elderly</u>: may have impaired mobility; often dependent on families

- <u>Children</u>: schools often unsafe; may face exploitation, economic hardship
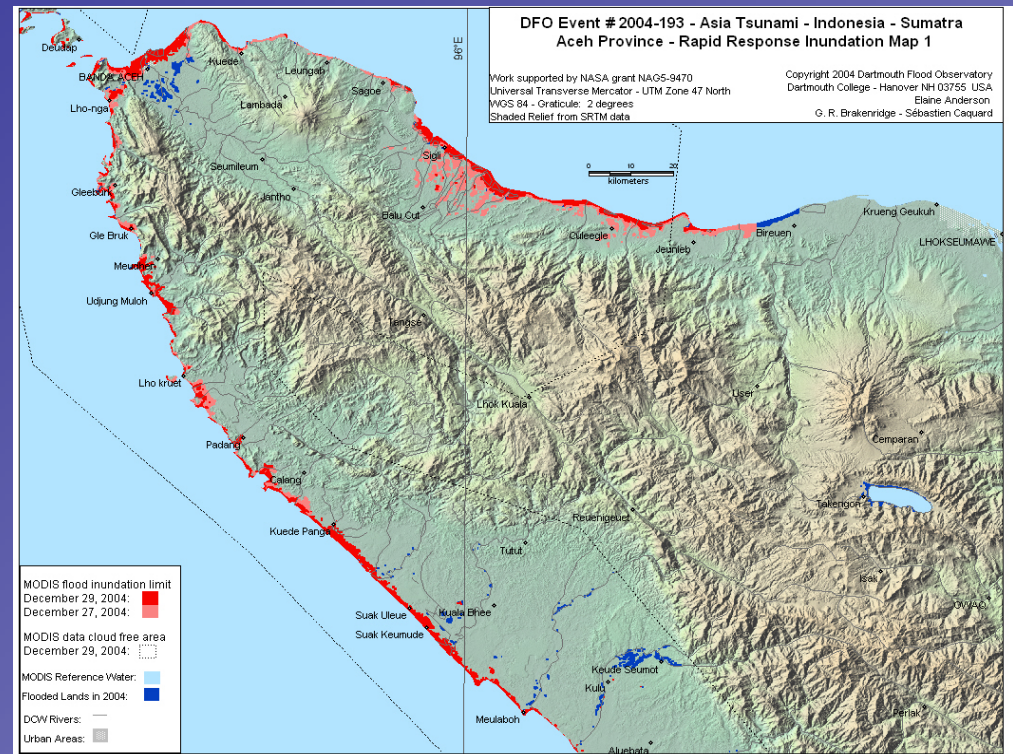
Disaster and Conflict Impacts

	Aceh	**Sri Lanka**	**Kashmir**
Population	4 million	20 million	16 million
Conflict Impacts			
Killed/Missing	13,000 +	81,000	42,000 +
Displaced	150,000[1]	447,000[2]	480,000[3]
Disaster Impacts			
Killed/Missing	167,000	35,000	74,000
Displaced	500,000	516,000	3.5 million

[1] 2002-03 (peak: 1.4 million in 1992-2002).
[2] Jan 2006, prior to new conflict (peak: 800,000).
[3] As of 2005 (peak in 2002: up to 625,000)

WORLDWATCH INSTITUTE
www.worldwatch.org

Province of Aceh / Indonesia

DFO Event # 2004-193 - Asia Tsunami - Indonesia - Sumatra
Aceh Province - Rapid Response Inundation Map 1

Work supported by NASA grant NAG5-9470
Universal Transverse Mercator - UTM Zone 47 North
WGS 84 - Graticule: 2 degrees
Shaded Relief from SRTM data

Copyright 2004 Dartmouth Flood Observatory
Dartmouth College - Hanover NH 03755 USA
Elaine Anderson
G. R. Brakenridge - Sébastien Caquard

MODIS flood inundation limit
December 29, 2004:
December 27, 2004:

MODIS data cloud free area
December 29, 2004:

MODIS Reference Water:
Flooded Lands in 2004:

DCW Rivers:
Urban Areas:

Incidents of Conflict in Aceh:
2005-2007
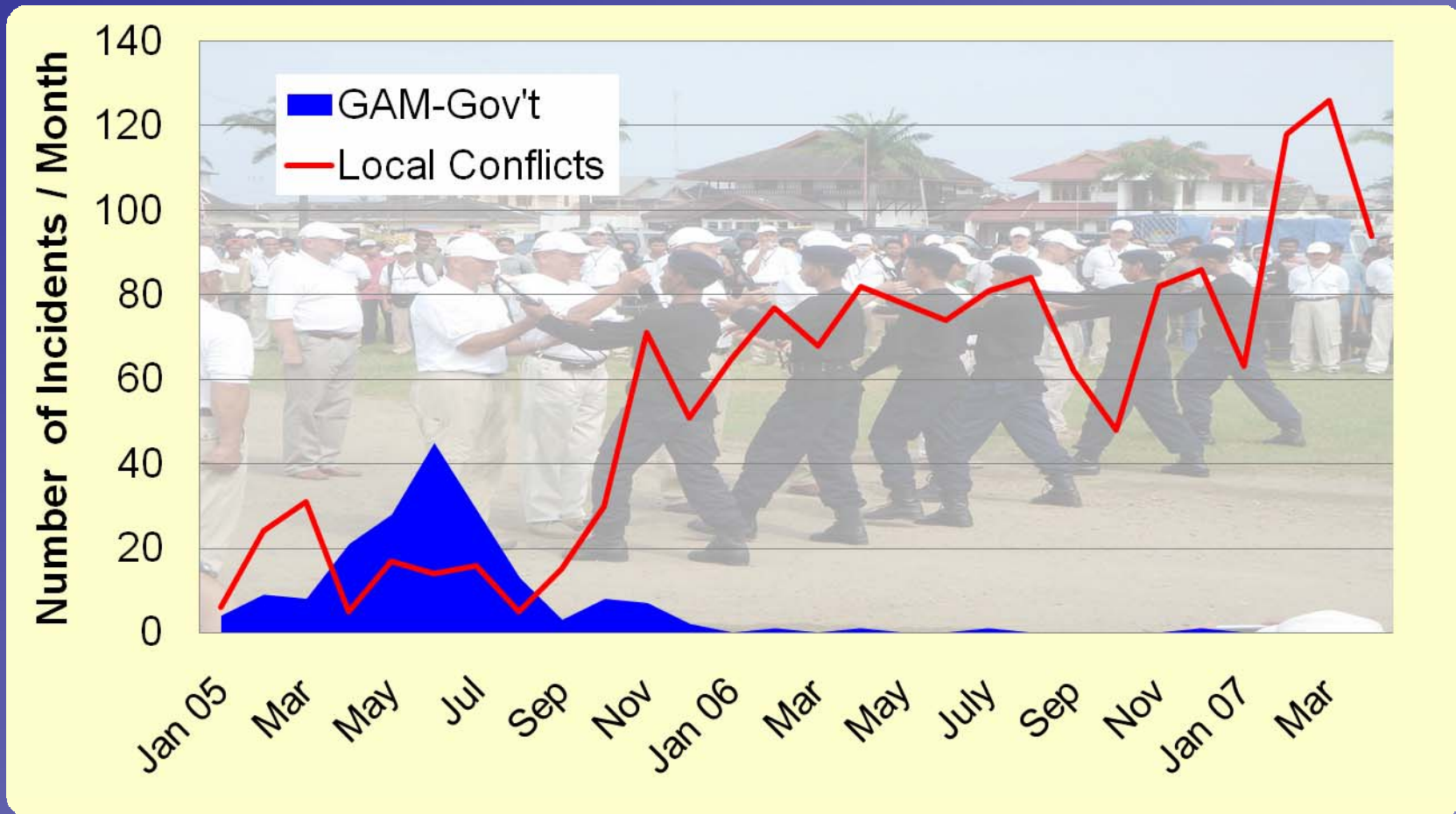
Source: World Bank

Sri Lanka Displacements:
Tsunami   -   Conflict
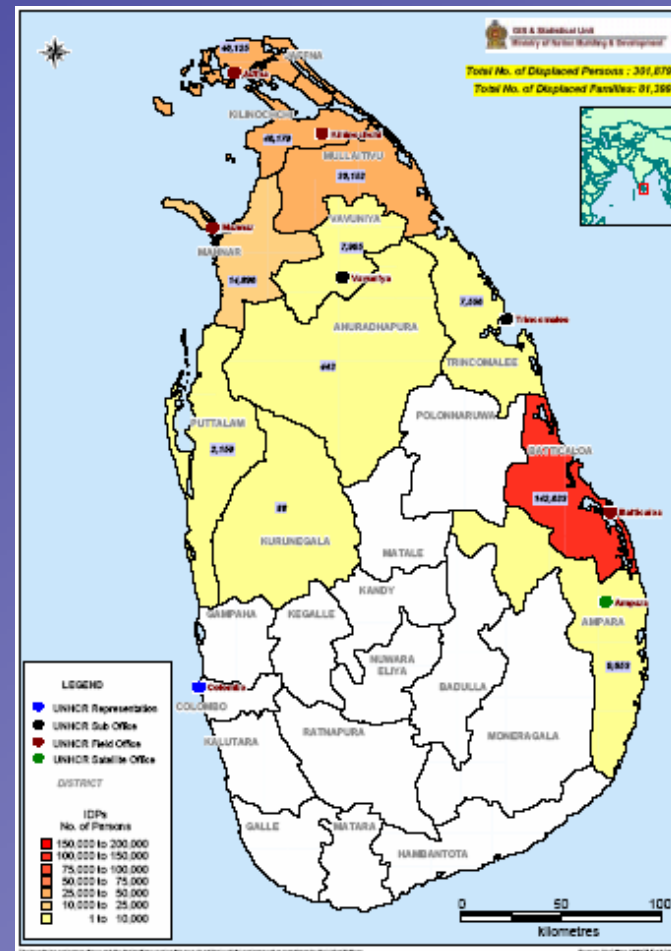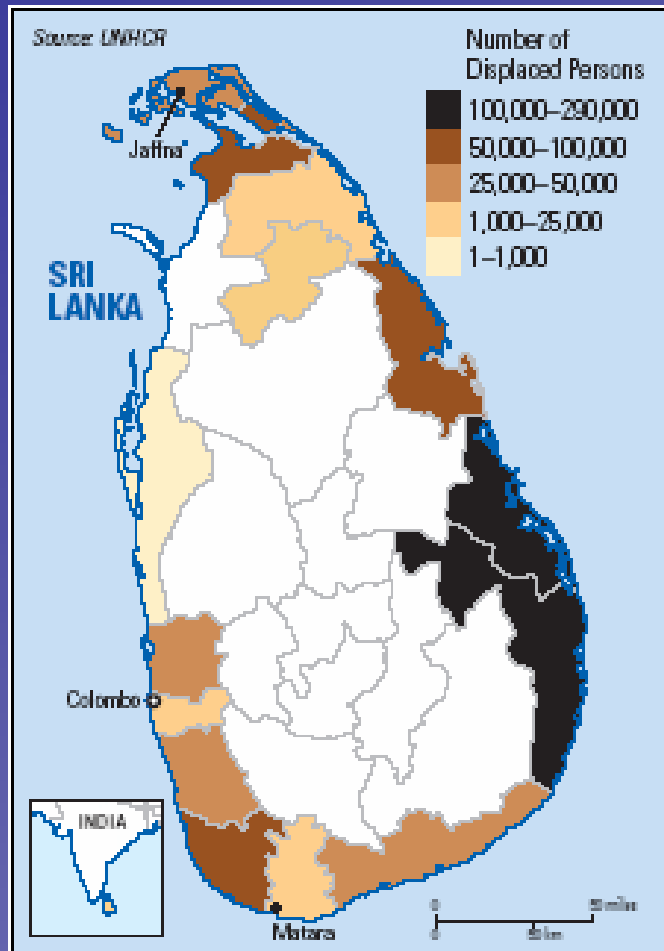
Deaths in Sri Lanka's Civil War, 2000-2007
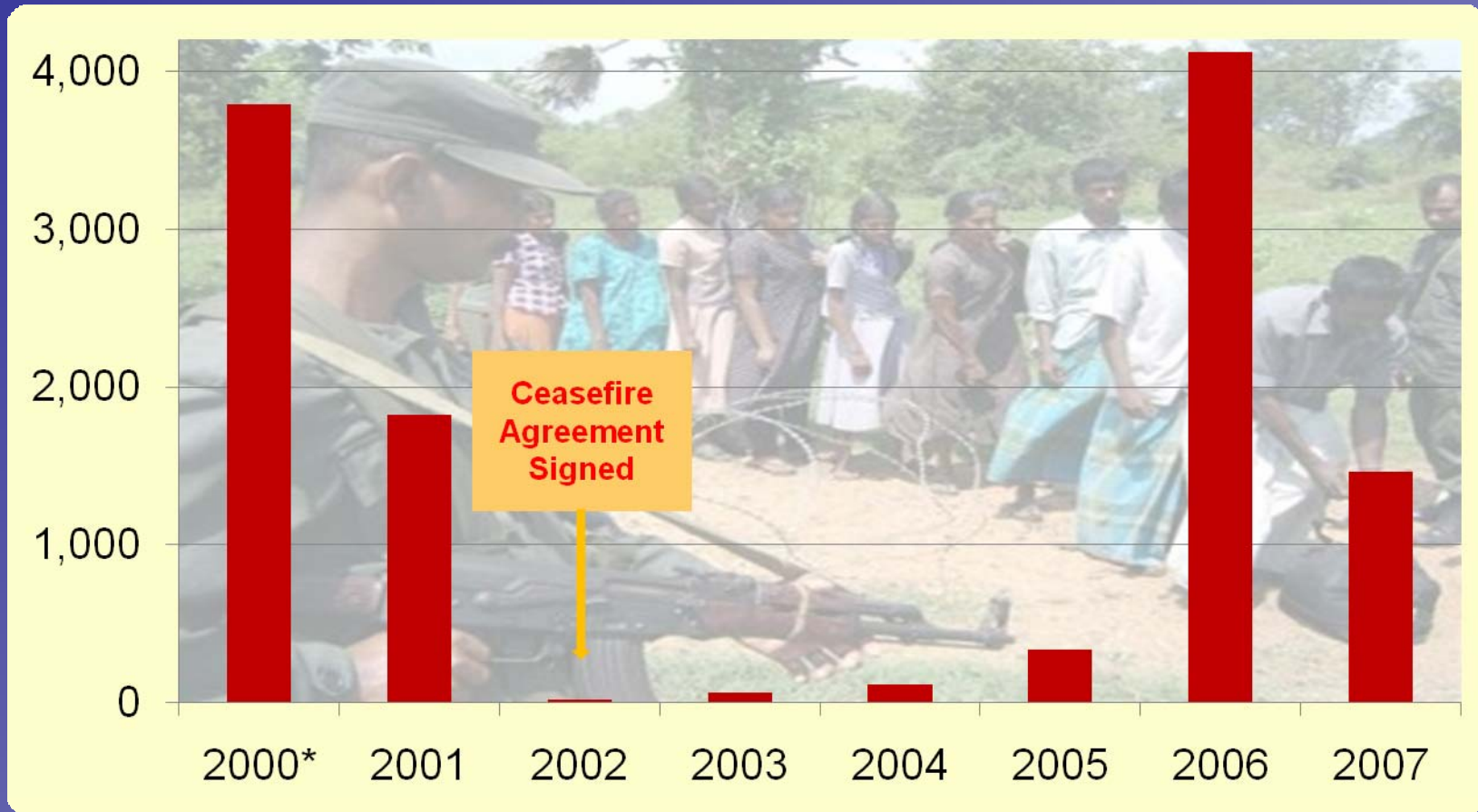
Source: South Asia Terrorism Portal

Kashmir: Political Division and Earthquake Zone

Killings in
Jammu and Kashmir

Source: South Asia Terrorism Portal

WORLDWATCH INSTITUTE
www.worldwatch.org
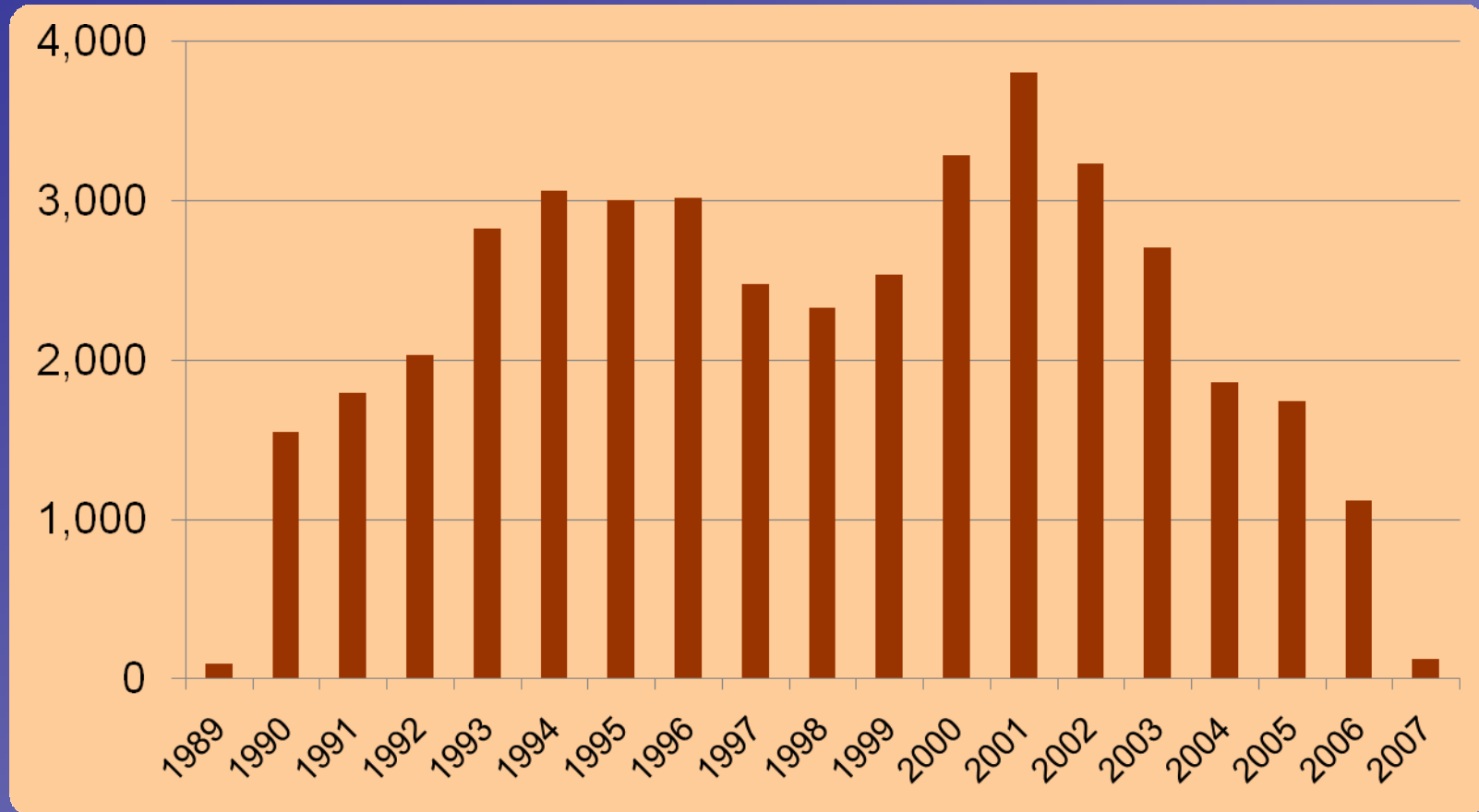
Recommendations

For donor governments and disaster relief agencies:

- Integrate conflict-sensitive strategies into disaster relief plans, and implement the lessons of the Do No Harm Project.
- Promote ongoing collaboration among aid organizations to avoid "turf wars" and duplication of effort.
- Minimize relief inequities between disaster- and conflict-affected communities, and ensure that both are adequately represented in all decision-making.
- Conduct assessments of the opportunities and problems associated with using aid to encourage peacemaking.

Recommendations

For conflict resolution groups:

- Use post-disaster relief as an <u>opportunity</u> for conflict resolution; analyze and learn from previous cases.
- <u>Raise awareness</u> among diplomats of unconventional factors that can trigger or worsen conflicts, such as livelihood loss, environmental degradation, and climate change.
- Ensure strong international support for <u>mediation and monitoring</u> efforts, and create multi-disciplinary training programs.

Recommendations

Opportunities for collaboration:

- Undertake a comprehensive study of lessons emerging from disaster-conflict interfaces; generate recommendations for all actors concerned (akin to the Tsunami Evaluation Coalition reports).
- Establish a forum where these recommendations and their implementation can be discussed, bringing together the perspectives and expertise of various fields (including disaster mitigation, development, environment, and conflict resolution).
- Create plans for aid-sharing scenarios in advance of disaster.

Online Portal

www.worldwatch.org/features/disasters

www.worldwatch.org