Disaster Loss Accounting in the Arab Region

2009 = problem identified
2010 = solution rolled out
2011 = results in GAR2011
2012 = More coming 😊

* In the Arab Strategy for Disaster Risk Reduction 2020 (LAS)

* In the Loss & Damage Work Programme under Cancun Adaptation Framework (UNFCCC)

Luna Abu-Swaireh, abu-swaireh@un.org
Beirut - 5 July 2012
Pre-Intervention Status

Information and Data
- Lack of Systematic Accountable recording of disaster data
- Lack of coordination between science, politics, disaster managers, the public
- Lack of practical, accessible, standardized approach to assessment of disaster losses and damages
- On Hazards, Risk, Disaster Events, Losses, Vulnerabilities, etc...

Advancing DRR @ Country Level

2 Policies & Legislations  Informed by Data

3 Public Awareness  Informed by public policy

4 Investments Public & Private  Resulting from more awareness

5 Implementation/Integration of DRR Measures  Resulting from increased investments
Using disaster databases and risk models to assess loss and damage associated with climate change impacts
An incomplete picture of disaster losses and impacts

- **EM–DAT**: Public domain coverage of large-scale mortality. Weak coverage of smaller disasters. Inconsistent reporting of economic loss.

- **NAT–CAT and SIGMA**: Re-insurance industry databases. Insured losses in developed markets. Restricted access.

- **ECLAC methodology evaluations**: comprehensive data for selected large disasters

- **National data**: heterogeneous, dispersed and inaccessible data held by governments, NGOs, universities and others.
National databases: Deconstructing disasters

EM-DAT: Global level of Observation, National level resolution

National database: Local level of Observation, municipality level resolution
A better picture of disaster losses and impacts

- Richer set of indicators
- Wider coverage of small and medium scale disasters.
- Disaggregation of data to usable units (county/municipality)
- Collected and validated locally within the country
Disaster loss data analysis and reporting

**ORISSA, INDIA**

*Multi-hazard spatial distribution of mortality 1970-2007*

**MULTI-HAZARD MORTALITY CHART FOR ORISSA, INDIA**

**MULTI-HAZARD COMPOSITION OF MORTALITY IN ORISSA, 1970-2007**

**Table: Disaster loss data analysis**

<table>
<thead>
<tr>
<th>Serial</th>
<th>Event</th>
<th>State</th>
<th>District</th>
<th>Block</th>
<th>Date</th>
<th>Location</th>
<th>Comments</th>
<th>Deaths Injured</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>CYCLONE</td>
<td>Orissa</td>
<td>Jagarpur</td>
<td>2016</td>
<td>04/21/2016</td>
<td>Jagarpur</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>STORM</td>
<td>Orissa</td>
<td>Balasore</td>
<td>2012</td>
<td>08/10/2012</td>
<td>Balasore</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>CYCLONE</td>
<td>Orissa</td>
<td>Mayurbhanj</td>
<td>2013</td>
<td>10/04/2013</td>
<td>Mayurbhanj</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

*Note: The table shows the frequency of natural disasters in Orissa, India, with details such as event type, date, location, and number of deaths.*
Typical contents of the dataset

Actual data capture screen.

**Standard Effects** (16 quantitative indicators, 12 qualitative).

Global databases: 3-5 indicators.

**Extension** (Sectorial detail information, unlimited additional indicators)

<table>
<thead>
<tr>
<th>EFFECTS</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Deaths:</td>
<td>578</td>
<td></td>
</tr>
<tr>
<td>Affected:</td>
<td>271,000</td>
<td></td>
</tr>
<tr>
<td>Evacuated:</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Missing:</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Injured:</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Houses Damaged:</td>
<td>1,198</td>
<td></td>
</tr>
<tr>
<td>Houses Destroyed:</td>
<td>3,430</td>
<td></td>
</tr>
</tbody>
</table>

**AFFECTED SECTORS**

- Transportation
- Communications
- Relief
- Agriculture
- Water supply
- Sewerage
- Power and Energy
- Industries
- Education
- Health sector
- Other sectors

**OTHER LOSSES**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Lat.</td>
<td>0</td>
</tr>
<tr>
<td>Long.</td>
<td>0</td>
</tr>
</tbody>
</table>

**COMMENTS**

DI19781123 DN19781216F1 20080806

By: SHANI Date: 2008-08-06
National databases: Trends and patterns of realized risk
Informing risk governance and population

Lightning is a disaster that has occurred throughout the period with a cyclical pattern. Seasonally, it has taken on a cyclical pattern. Although the number of people affected, damages to houses and agricultural loss are not very high, there have been relatively high levels of death due to lightning.

The Disaster Information Management System is a sustainable arrangement within an institution for the systematic collection, documentation and analysis of data about losses caused by natural and man made disasters.

Please click on Following link to Enter in to the Database:

This querying system will provide you with basic data about the effects of many types of natural disasters occurred in the country.

Disaster Information Management System in Sri Lanka from 1974 to Upto Date...

DISASTER PROFILE IN SRI LANKA

INTRODUCTION

2011 Jan 05

The disaster event profile of Sri Lanka presents how disaster events of different categories have been distributed chronologically, seasonally and spatially. Distribution wise, the overall disaster typology in Sri Lanka is not distributed evenly in terms of annual time series distribution.

Read More,...

PUBLICATIONS

SRI LANKA NATIONAL REPORT ON DISASTER RISK, POVERTY AND HUMAN DEVELOPMENT RELATIONSHIP

Read More

Partner Organisations
Addressing the challenges

• Disaster loss data informing risk assessment and investment in DRR

• Account for both intensive and extensive disaster losses

• National governments institutionalising disaster loss accounting systems

• Standardised criteria, definitions and identifiers to enable comparison

• A global picture built from the local level upwards
The direct impact of systematic disaster loss accounting

1. Defining baselines.
2. Assessing countries’ vulnerability (at national and local levels).
3. Understanding the full spectrum of economic loss risk.
5. Using a multi-purpose and comprehensive tool for both DRR and CCA actions.
Weather related disasters in S. America (1970 – 2009)

Frequency of extreme precipitation events

Mortality due to extreme precipitation events

Housing sector damage/destruction due to extreme precipitation events
Drought impacts in Mozambique (1990 – 2009)
Damages absorbed by governments and individuals

Housing damage by governorate in Jordan and the Syrian Arab Republic and by province in Yemen (1989-2009)
JORDAN (1981-2010, 454 data cards)

Key Findings:
1. Most ‘deadly’: flash floods, floods, snowstorms and cold waves.
2. Most ‘destructive’: Snowstorms and earthquakes
5. Most impacts on health: Forest fire, epidemics.
SYRIA (1980-2009, 7326 data cards)

Key findings:
1. Most ‘deadly’: Fires.
2. Most ‘destructive’: Rains, flash floods, fires.
3. Most ‘affected’ by: Drought and frost.
5. Most impacts on health: Strong winds, floods, frost.
YEMEN  (1971-2011, 8945 data cards)

Key Findings:

1. Most ‘deadly’: epidemics, liquefaction, earthquakes, floods.
5. Most impacts on health: Floods, epidemics.
6. Most impact on education: Epidemics, liquefaction, floods and rain.
Participation in GAR 11

Level disaster loss data in the Arab states, where until then, the absence of systematic information on disaster impacts had been a major obstacle to strengthening capacities for disaster risk reduction. Jordan, the Syrian Arab Republic and Yemen (Figure 2.23) have recently published national disaster inventories, included in GAR11, and it is expected that the other two countries will soon follow. Mozambique and the Arab states also plan to include age- and gender-enabled indicators when such information is available.
The PREVIEW Global Risk Data Platform is a multiple agencies effort to share spatial data information on global risk from natural hazards. Users can visualise, download or extract data on past hazardous events, human & economical hazard exposure and risk from natural hazards. It covers tropical cyclones and related storm surges, drought, earthquakes, biomass fires, floods, landslides, tsunamis and volcanic eruptions. The collection of data is made via a wide range of partners (see About for data sources). This was developed as a support to the Global Assessment Report on Disaster Risk Reduction (GAR) and replace the previous PREVIEW platform already available since 2000. Many improvements were made on the data and on the application.
Pakistan: Disaster risk - No possibility of floods in monsoon, says PMD

4 Jul 2012, Express Tribune, the 'We have requested the government to include disaster management as a subject in the syllabus till matriculation,' said DG National Disaster Management Authority at the 2-day Disaster-risk Reduction and Emergency Response event. 'Disasters, whether natural or technological occurrences, have an adverse effect on efforts aimed at sustainable development.'...

Climate change and cities
4 Jul 2012, AlertNet
With most of the world's population now urban and cities set to continue surging in size, climate change has become an urban problem. How will cities deal with the coming pressures? A Laurie Goering, AlertNet Climate editor package...

Is it time to reconsider appointing a humanitarian ombudsman?
4 Jul 2012, Guardian, the The Guardian analyzes the finding of ALNAP's State of the Humanitarian System 2012, highlighting that indeed, disaster-risk reduction-related investments amount to only 1% of the $150bn spent in 20 countries that received the most humanitarian aid in the past five years...
Climate Change

Adaptation: The adjustment in the use of natural and human systems in response to actual or expected changes in climate which moderates harm or takes advantage of beneficial opportunities.

Climate change and the city

With most of the world’s cities continuing to experience issues related to climate change, how will cities deal with this problem? How will cities deal with the challenge of increasing urbanization?

Laurie Goering, AlertNet Centre

HFA Progress Report

Excerpts of progress reports on the implementation of the Hyogo Framework for Action

- Indicator 4.1 [PDF, 10 kb]
- Disaster risk reduction is integrated into related policies and plans, including those on land use, urban and spatial planning, environmental management and adaptation.

Training & Events

- Understanding risk: Making it count
  02-06 Jul 2012, South Africa
- People centered, participatory risk reduction initiatives
  02-07 Jul 2012, India
- Integrated DRR/Community course
  03 Jul 2012 - 25 Feb 2013

IDRC Davos 2012: Call for abstracts

Deadline: 30 April 2012

Submit an abstract

DRR COP17 Coverage

COP17/CMP7
UNITED NATIONS 2011
DURBAN, SOUTH AFRICA