United Nations
International Strategy for Disaster Reduction

DesInventar: Disaster Loss Databases

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Expert Group Meeting on Geo-reference Disaster Risk Management Information System in Asia-Pacific Region

15-17 February 2012
UN Conference Centre, MR#G
Bangkok, Thailand

Sujit Mohanty
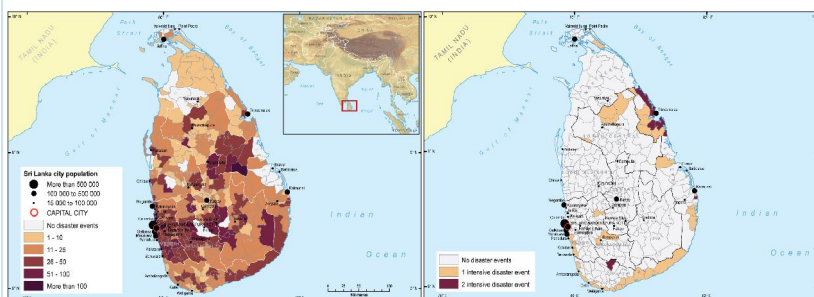**UNISDR, Regional Office for Asia Pacific**

Disaster Loss databases

- A database of disasters impacts to understand trends and patterns at sub-national level.

- A systematic geo-referenced inventory of <u>small, medium</u> and large-scale disasters.

- A statistical evidence base for vulnerability assessment and priority setting in risk reduction investments.

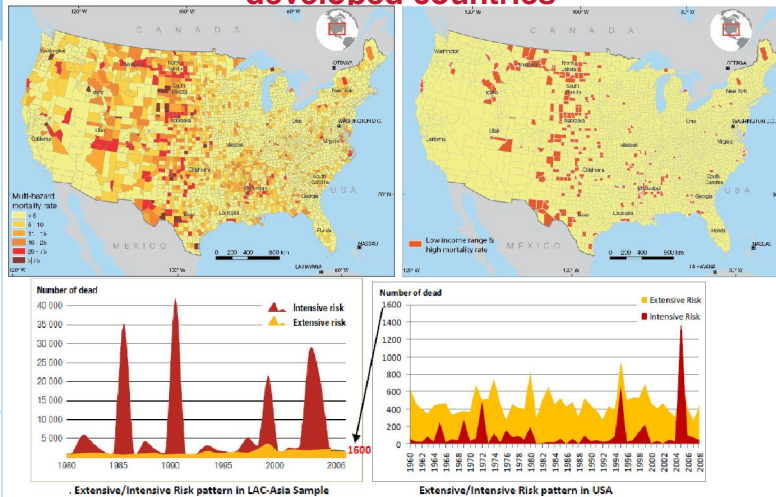www.unisdr.org

Two different spatial footprints

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Extensive =
frequently occurring,
low and medium
intensity disasters

Intensive= those
infrequent, high
intensity and very
concentrated spatially

Intensive mortality – Extensive damage

Risk type	Hazard type	Loss reports	%	Deaths	%	Houses destroyed	%	Houses damaged	%
Extensive	Weather-related	121,373	95.9	48,392	15.5	739,002	24.1	3,654,596	48.3
Extensive	Geological	4,259	3.4	2,406	0.8	40,684	1.3	226,545	3.0
Intensive	Weather-related	801	0.6	58,559	18.7	1,618,682	52.7	3,235,176	42.7
Intensive	Geological	187	0.1	203,524	65.0	671,980	21.9	453,094	6.0
TOTAL		126,620	100.0	312,881	100.0	3,070,348	100.0	7,569,411	100.0

Extensive Risk is also the major contributor to mortality in developed countries

. Extensive/Intensive Risk pattern in LAC-Asia Sample

Extensive/Intensive Risk pattern in USA

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What is DesInventar?

- A data collection methodology
- A set of analysis methodologies for Extensive Risks
- A set of fully tested, used and open source software tools
- A disaggregated process of analysis
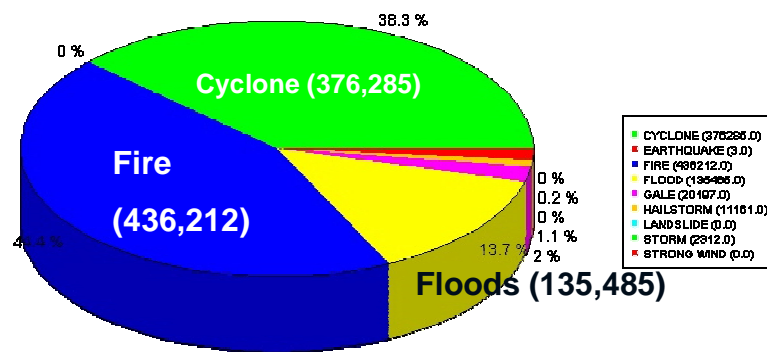- As a Historical Disaster database
- As a Post-disaster damage & loss data collection tool

DesInventar records and analyzes the occurrence and effects of natural disasters
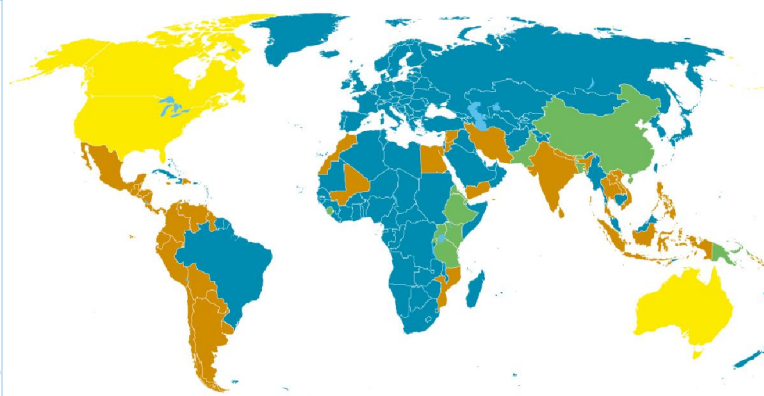
Key features

- Simple methodology and easy to set up
- Simple yet powerful visualization tools
- Open Source
- Disaggregated data (sub-national and local level)
- Customizability
- And so on…

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India (Orissa)

No of houses destroyed (1970 – 2000)

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Systematically account for disaster losses

Completed   Under construction   Completed - (not DesInventar)

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Status of Progress in building National Disaster Datasets
June 2011

DesInventar in the region

Country/Region		Period	Institution	
East Timor	Profile	2000 - 2011	Indonesian National Board for Disaster Management (BNPB), supported by UNDP Indonesia	More Info
Indonesia [open in original server]	Profile	1970 - 2009	Indonesian National Board for Disaster Management (BNPB), supported by UNDP Indonesia	More Info
I.R. Iran جمهوری اسلامی ایران	Profile	1970 - 2011	Ministry of Interior Iran - supported by UNDP Iran	More Info
Maldives	Profile	1980 - 2007	Ministry of Defense, supported by UNDP	More Info
Nepal	Profile	1970 - 2009	National Society for Earthquake Technology NSET, supported by UNDP Nepal	More Info
Laos	Profile	1970 - 2009	ODM - ADPC	More Info
Mizoran(India)	Profile	1970-2009	State Disaster Management Authority, supported by UNDP India, UNISDR	More Info
Orissa (India)	Profile	1970-2009	Orissa State Disaster Management Authority OSDMA, supported by UNDP India, UNISDR	More Info
Solomon Islands	Profile	1976 - 2009	SOPAC	More Info
Sri Lanka [open in original server]	Profile	1974 - 2009	Ministry of Disaster Management, DMC Sri Lanka - supported by UNDP Sri Lanka	More Info
Tamil Nadu (India)	Profile	1976 - 2009	State Commissioner of Tamil-Nadu, supported by UNDP India, UNISDR	More Info
Uttar Pradesh (India)	Profile	1976 - 2004	State Commissioner, supported by UNDP India, UNISDR	More Info
Vanuatu	Profile	1976 - 2009	SOPAC	More Info
Viet Nam	Profile	1976 - 2009	MARD - FSCC, supported by UNDP	More Info
Myanmar NARGIS (Household Survey)		2008	supported by UNDP	More Info
Indonesia TSUNAMI		2004	supported by UNDP	More Info
Maldives TSUNAMI		2004	supported by UNDP	More Info
Sri Lanka TSUNAMI		2004	supported by UNDP	More Info
Philippines				
Brunei				

Typical contents of a DesInventar Disaster database
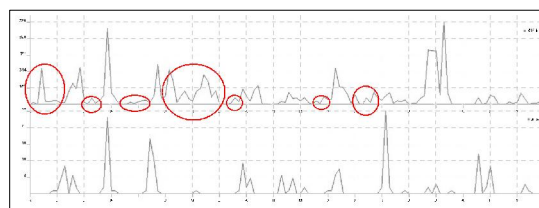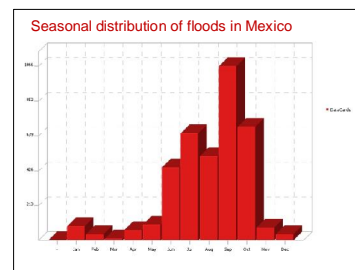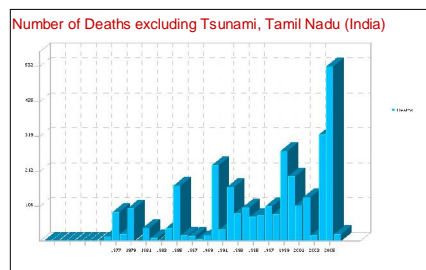

The actual screen for data capture.

It can be customized by users.

Standard Effects (killed, injured, affected, etc.)

Extension (Sectorial detail information)

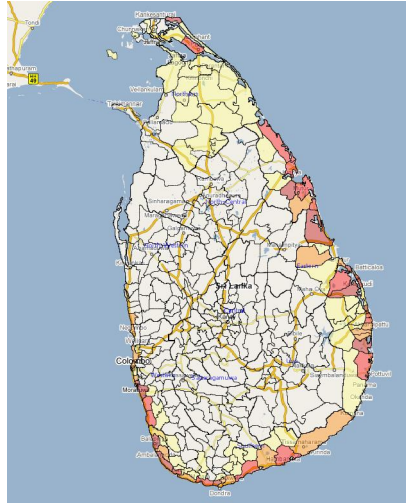## Temporal Analysis (Trends): distribution of losses over time

Behaviour of disaster losses is key in understanding trends and essential for monitoring the effectiveness of DRR

Number of Deaths excluding Tsunami, Tamil Nadu (India)
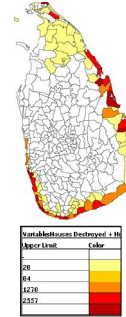

Seasonal distribution of floods in Mexico

Number of reports of floods and people killed by epidemics in Orissa, India 11 years, showing a high correlation between floods and epidemics.
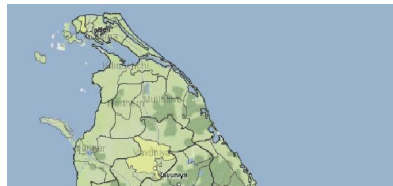
Ovals show non-related epidemic events.

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Spatial Analysis (patterns): distribution of losses over space

Spatial distribution of houses destroyed in Sri Lanka after Tsumani 2004

Spatial Analysis (patterns): distribution of losses over space

Spatial distribution of Landslides (1970-2007)

预览已结束，完整报告链接和二维码如下：

https://www.yunbaogao.cn/report/index/report?reportId=5_7750