Natural disasters 1994-2013: Trends for OSCE countries

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OVERVIEW

EM-DAT
- 1900 – 2014
- 184 countries
- All natural and technological disasters
- Systematic methods and definition

Moving forward
- Mapping the footprint
- Using standardise indicators and not absolute numbers
- Evidence on cross border events
- Community based risk profiles
Natural disasters
World: 1994 – 2013

Death and affected due to disasters
World: 1994 – 2013

Source: EM-DAT
**Affected by disasters**  
**OSCE: 1994 – 2013**

Source: EM-DAT

<table>
<thead>
<tr>
<th>Year</th>
<th>ID</th>
<th>Country Name</th>
<th>Location</th>
<th>Adm0 code</th>
<th>Adm1 code</th>
<th>Adm2 code</th>
<th>Adm3 code</th>
<th>Data source</th>
<th>Last admin</th>
<th>Lat_centroide_lastadmin</th>
<th>Long_centroide_lastadmin</th>
<th>Precision</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>656</td>
<td>Japan</td>
<td>Tottori, Simane, Okayama, Saihaku (Saihakutyo-Tottori district), Miiokuchi (Saihakutyo-Tottori)</td>
<td>126</td>
<td>1691</td>
<td>1680</td>
<td>-</td>
<td>GAUL2013</td>
<td>35,362362</td>
<td>133,849460</td>
<td>132,564290</td>
<td>133,814475</td>
<td>0.01</td>
</tr>
<tr>
<td>2000</td>
<td>743</td>
<td>Tajikistan</td>
<td>Khassanov village (Farkhor region, Khatlon province)</td>
<td>239</td>
<td>2848</td>
<td>3795</td>
<td>-</td>
<td>GAUL2013</td>
<td>37,40766</td>
<td>69,257375</td>
<td>69,257375</td>
<td>69,257375</td>
<td>1.00</td>
</tr>
<tr>
<td>2000</td>
<td>749</td>
<td>Papua New Guinea</td>
<td>East New Britain, New Ireland, Bougainville (Northern Solomons)</td>
<td>192</td>
<td>2202</td>
<td>2302</td>
<td>2304</td>
<td>-</td>
<td>GAUL2013</td>
<td>6,344605</td>
<td>151,573451</td>
<td>151,572852</td>
<td>155,256827</td>
</tr>
<tr>
<td>2000</td>
<td>761</td>
<td>Indonesia</td>
<td>Pandelang, Lebak, Serang</td>
<td>116</td>
<td>73610</td>
<td>18020</td>
<td>18022</td>
<td>18024</td>
<td>GAUL2013</td>
<td>6,642323</td>
<td>106,213431</td>
<td>105,742202</td>
<td>106,146727</td>
</tr>
</tbody>
</table>

**Georeferencing disaster impact for footprints**

Data added to EM-DAT (Excel):
- admin code
- centroid coordinates
- precision of the georeferencing and details of the location
FRANCE: mapping repeat events

20 events

Calculated PPE (2012) = 25 million in 33 departments

Standardized indicator: disasters by land area

OSCE*: 1994 – 2013

Number of disasters per 100 000 km²

*except USA and Canada
Standardized indicator: affected per population
OSCE*: 1994 – 2013

Crude Affected Rate (per 1 million habitants)
- 74 - 990
- 1547 - 1973
- 10764 - 112843
- No data

Source: EM-DAT

Standardized indicator: total killed population
OSCE: 1994 – 2013

Crude Mortality Rate (per 1 million habitants)
- 1 - 7
- 8 - 45
- 46 - 110
- 111 - 420
- No data

Source: EM-DAT
FRANCE: where is the greatest concentration of affected individuals?

Distribution of the cumulative affected over exposed population (2000 - 2011).

\[
\sum_{y=2000}^{2011} \frac{\text{Tot. af f. pop.}_i \times \text{PPE dpt}_n}{\sum_{i=1}^{n} \text{PPE}_i}
\]

\(n = \text{department affected by flood}\)
\(i = \text{event}\)

Standardized indicator: economic losses as % GDP
OSCE: 1994 – 2013
**CONCLUSION**

**Solidarity**
Co-operating generally pays dividends

**Incidents with cross border impact**
Toxic or other forms of pollution; common watersheds planning; migration

**Rationalising resources**
Identify disaster types that cause most damage

**Economic impact**
Most relevant in OSCE region

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**Thank you ...**

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Natural disasters (by country)
World: 1994-2013

Source: EM-DAT