



# Global Crisis Data Bank

EM-DAT STAG MEETING

20-21 March 2023



# History: Reviving an old IFRC initiative

Cinquième année. — N° 52.

Avril 1923.

## REVUE INTERNATIONALE de la Croix-Rouge

**RAOUL MONTANDON,**

*Président de la Société de géographie de Genève.*

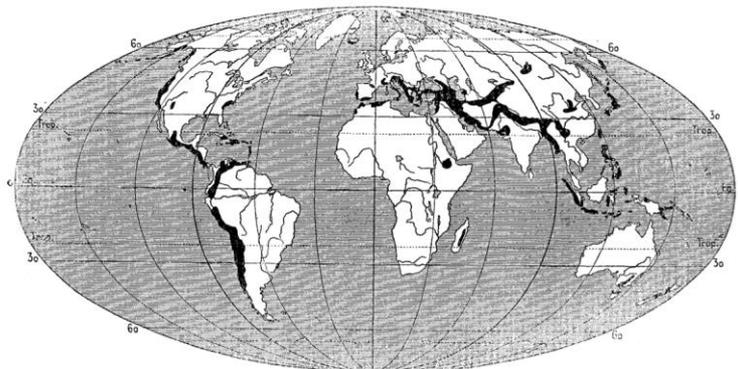
**A propos du projet Ciruolo.**

**Une carte mondiale de distribution géographique  
des calamités.**



Raoul Montandon

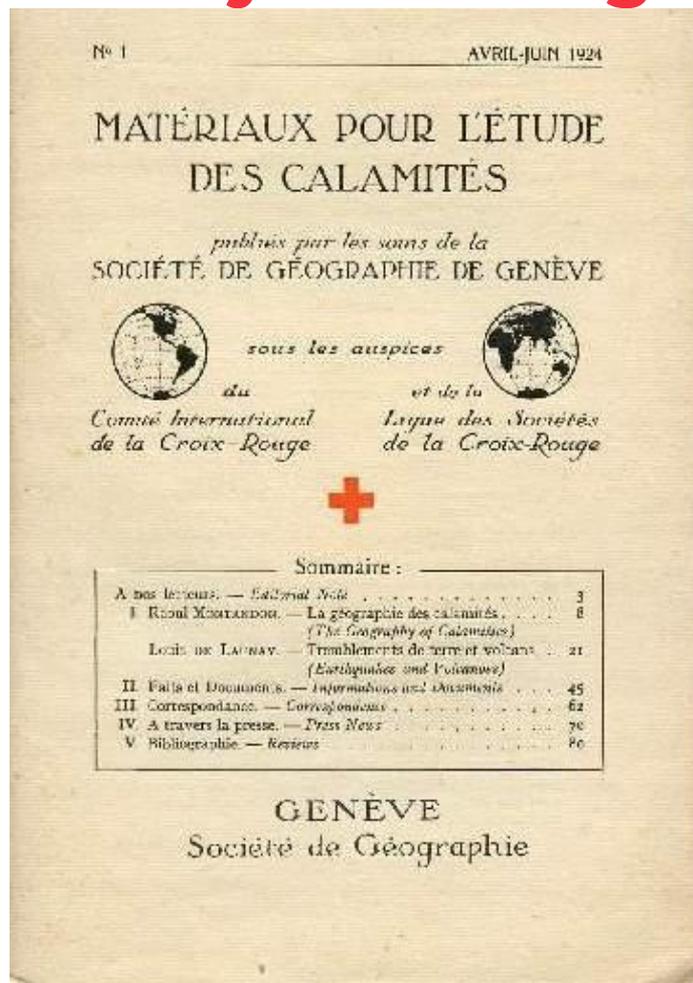
Tremblements de terre. Giovanni Ciruolo



Répartition de la sismicité (F. de Montessus de Ballore).

D'après le Traité de géographie physique de M. Emmanuel de Martonne, Paris, 1909.

# History: Reviving an old IFRC initiative



## MATÉRIAUX POUR L'ÉTUDE DES CALAMITÉS

A la suite de la proposition faite par M. Raoul Montandon, en date du 23 novembre 1923, au Comité international de la Croix-Rouge, il a été constitué à Genève, le 15 février 1924, une « Commission pour l'étude des calamités » qui a approuvé la création d'un périodique scientifique trimestriel intitulé : *Matériaux pour l'étude des calamités*, lequel sera publié par les soins de la Société de géographie de Genève, sous les auspices du Comité international de la Croix-Rouge et de la Ligue des Sociétés de la Croix-Rouge. Notre collègue, M. Raoul Montandon, a été nommé rédacteur en chef de cette publication et M. K. de Watteville, rédacteur adjoint.

Afin de mettre les lecteurs du *Globe* au courant de l'œuvre envisagée et du but poursuivi par les trois organisations précitées, nous reproduisons ici l'introduction insérée en tête du premier numéro des *Matériaux* sous le titre « A nos lecteurs ».

« La création de ce périodique scientifique est étroitement liée au projet d'atlas mondial de distribution géographique des calamités, dont le Comité international de la Croix-Rouge s'est fait le promoteur à la suite de la suggestion de M. le sénateur Ciraiolo, président de la Croix-Rouge italienne.

Dans une étude, parue en avril 1923,<sup>1</sup> M. Raoul Montandon répondant à un vœu exprimé par le Comité international, attirait l'attention du monde savant sur la nécessité qu'il y aurait à déterminer, aussi exactement que possible, la répartition géographique des grandes catastrophes, des grands malheurs publics, et l'intérêt que présenterait pour la science un document de cette nature.

# Partners (as of March 2023)



And 192 Red Cross/Red Crescent National Societies

# The Global Crisis Data Bank: What is it?

## Inputs: Three kinds of data

### 1. Data on hazards

- Type
- Location(s)
- Date(s)
- Intensity

**Sources include:** Nat'l met services, regional orgs, WMO, USGS, NOAA, academia

### 2. Data on (modeled) impacts

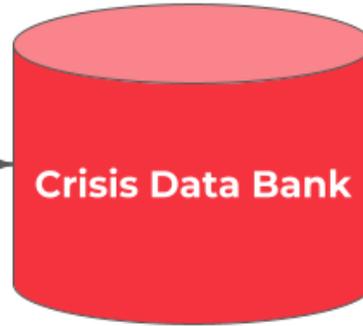
- # of people affected
- # of people displaced
- \$ losses
- damage to schools, hospitals, crops, roads

**Sources include:** IFRC, RC/RC NS, UN, governments (e.g., DesInventar), academia (e.g., EM-DAT), NGOs (e.g., IDMC)

### 3. Data on (anticipatory) actions

- Anticipatory/response measures taken
- Impacts of those interventions over time

**Sources include:** RC/RC NS, partners

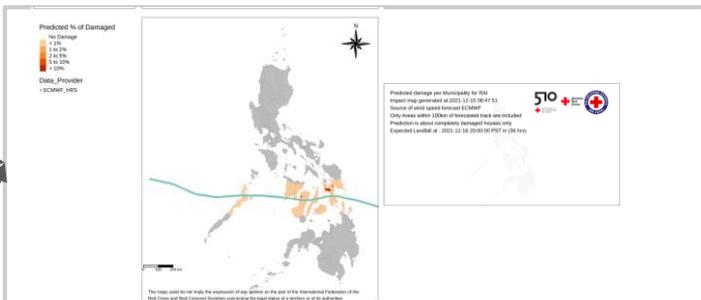
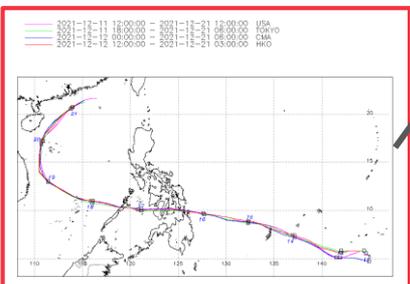
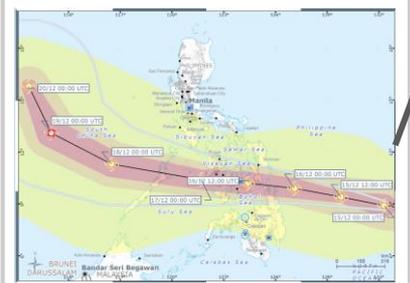
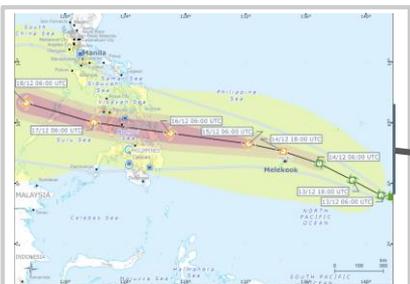


# Example based on Typhoon Rai ("Odette")

## Actions taken (what actions, by whom, to what effect)

## Hazard: forecast and observed

## Impacts: modeled and observed



SECTOR	PHILIPPINE RED CROSS SUMMARY OF ACTIONS as of 25 DECEMBER 2021
HEALTH AND SAFETY	<ul style="list-style-type: none"> <li>• <b>MONITORING:</b> 1,330 individuals (Sorsogon-31, Iloilo-2, Northern Samar-20, Southern Leyte-14, Cebu-4, Bohol-177, Lapu-Lapu/Cordova-560, Boracay/Malay-27, Negros Occidental-22, Cagay-77, Aklan-50, Surigao Del Sur-43, Surigao del Norte-172, Agusan del Norte-34)</li> <li>• <b>FA SATION:</b> 13 families (Cebu-5, Lapu-Lapu-5, Negros Occidental-2)</li> <li>• <b>FACE MASKS:</b> 2,053 individuals (Bohol-1,428, Negros Occidental-115, Negros Oriental-620, Surigao del Norte-30)</li> </ul>
WELFARE	<ul style="list-style-type: none"> <li>• <b>HOT MEALS:</b> 35,542 individuals (Sorsogon-721, Maguigan-23, Palawan-823, Iloilo-987, Cebu-900, Eastern Samar-1,362, Northern Samar-400, Southern Leyte-6,155, Cebu-2,250, Bohol-1,674, Biliran-300, Guimaras-533, Lapu-Lapu/Cordova-213, Boracay/Malay-775, Negros Occidental-1,082, Negros Oriental-483, Western Samar-876, Cebu-Bigo-351, Ormoc-GZA, Panay-A24, Aklan-353, Gingoog City-54, Surigao Del Sur-3,793, Surigao Del Norte-1,624, Sargao Island-95, Misamis Occidental-Croqueta-109, Misamis Oriental-CDO-2,678, Davao del Oro-704, Agusan del Norte-1,889)</li> <li>• <b>BREAD:</b> 880 individuals (Lapu-Lapu/Cordova-705, Agusan del Norte-180)</li> <li>• <b>BBQ:</b> 31 packs (Lapu-Lapu/Cordova)</li> </ul>
RELIEF	<ul style="list-style-type: none"> <li>• <b>CLOTHING:</b> 251 families (Guimaras-88, Negros Occidental-20)</li> <li>• <b>STANDARD FOOD ITEMS:</b> 783 individuals (Agusan del Norte-194, Surigao Del Sur-88, Palawan-300, Negros Oriental-150, Misamis Oriental-51)</li> <li>• <b>NON-STANDARD FOOD ITEMS:</b> 811 individuals (Palawan-50, Negros Oriental-290, Surigao-11, Misamis Oriental-120)</li> <li>• <b>HYGIENE KITS:</b> 399 individuals (Palawan-50, Negros Occidental-154, Hingoo-195)</li> <li>• <b>SOOY BAGS:</b> 54 units (Negros Oriental-Palawan-55)</li> </ul>
WASH	<ul style="list-style-type: none"> <li>• <b>HYGIENE PROMOTION:</b> 10,800 individuals (Cagay-321, Northern Samar-1,411, Southern Leyte-5,740, Bohol-340, Negros Occidental-290, Ormoc-265, Aklan-30, Gingoog-54, Surigao Del Norte-123, Misamis Occidental - Croqueta-109)</li> <li>• <b>WATER DISTRIBUTED:</b> 263,624 l (Total individuals served: 16,982 individuals; Total water tankers deployed: 5) (Cebu-140,760, Agusan del Norte-5,340, Negros Occidental-37,800, Larian del Norte-15,810, Sibo-24,000)</li> </ul>
SRR	<ul style="list-style-type: none"> <li>• <b>ASSEMBLED:</b> 10 individuals (Cebu-Bigo)</li> <li>• <b>RETIRED:</b> 3 individuals (Palawan)</li> <li>• <b>TRANSPORTED:</b> 15 individuals (Palawan-5, Southern Leyte-5, Cebu-1, Bohol-1, Gingoog-1)</li> <li>• <b>CLEANING:</b> 16 sq. m of Area (Cebu)</li> <li>• <b>FIRST AID:</b> 71 individuals (Palawan-27, Iloilo-1, Southern Leyte-10, Cebu-4, Bohol-1, Lapu-Lapu/Cordova-7, Negros Occidental-17, Gingoog City-1, Agusan del Norte-3)</li> </ul>
PSS	<ul style="list-style-type: none"> <li>• <b>CRS:</b> 1,007 stations (Sorsogon-40, Bohol-744, Aklan-30, Negros Occidental-147, Misamis Occidental-Croqueta-46)</li> <li>• <b>RF TRACKING:</b> 47 successful saves (Sargao Island-5, Cebu-4, Palawan-36)</li> <li>• <b>PPA:</b> 1,440 individuals (Sorsogon-470, Cebu-120, Bohol-693, Negros Oriental-100, Pazu City-41, Surigao del Norte-58, Misamis Occidental-Croqueta-8, Guimaras-3, Agusan del Norte-46)</li> <li>• <b>WELFARE DESK:</b> 18 stations (Cebu-5, Lapu-Lapu-5, Negros Occidental-3, Negros Oriental-2)</li> </ul>
BLOOD	<ul style="list-style-type: none"> <li>• <b>BLOOD UNITS:</b> 15 units of blood deployed from Iloilo to Negros Oriental</li> </ul>
PERSONNEL	<ul style="list-style-type: none"> <li>• <b>VOLUNTEERS MOBILIZED:</b> 775 volunteers (Palawan-22, Romblon-187, Capiz-454, Southern Leyte-48, Cebu-31, Pasig-2, Agusan del Norte-6, Siga City-4)</li> <li>• <b>STAFF MOBILIZED:</b> 43 staff (Cebu-Bigo-10, Agusan del Norte-5)</li> </ul>

# Lowering barriers to entry for National Societies

## Event name/unique ID

### 1. Authoritative data on hazard(s)

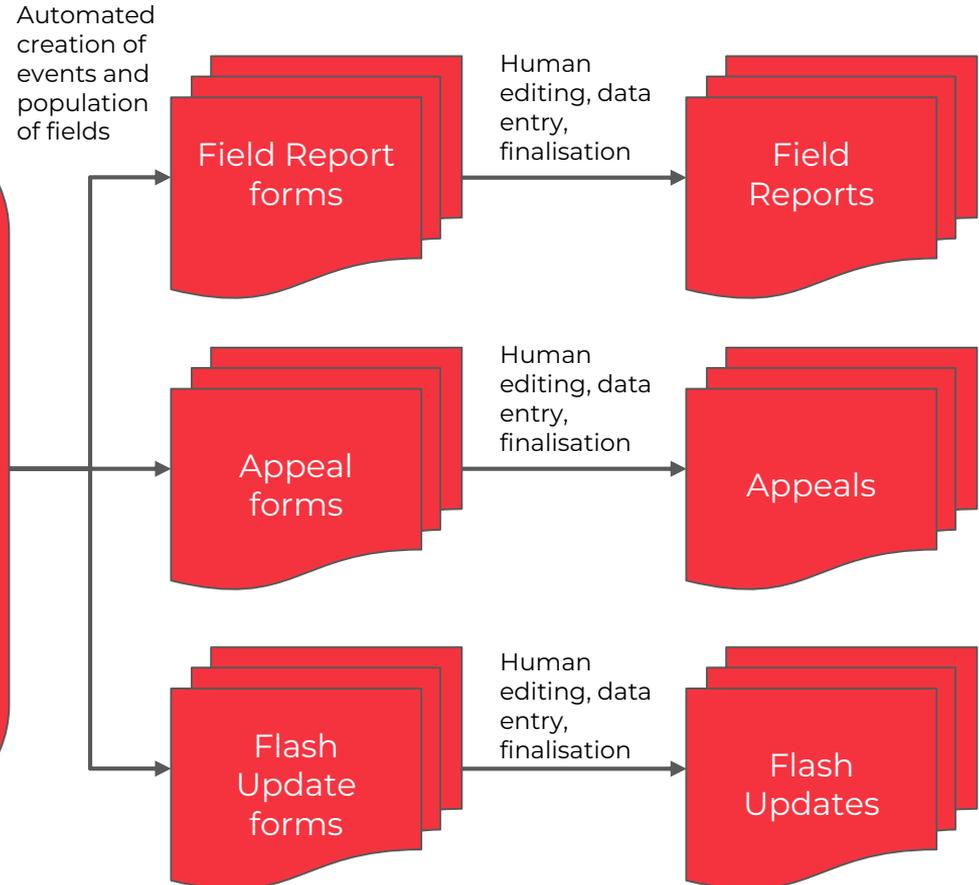
- Type
- Location
- Intensity

### 2. Data on impacts

- # of people affected
- # of people displaced
- \$ losses
- damage to schools, hospitals, crops, roads

### 3. Data on responses

- Anticipatory/response measures taken
- Impacts of those interventions over time

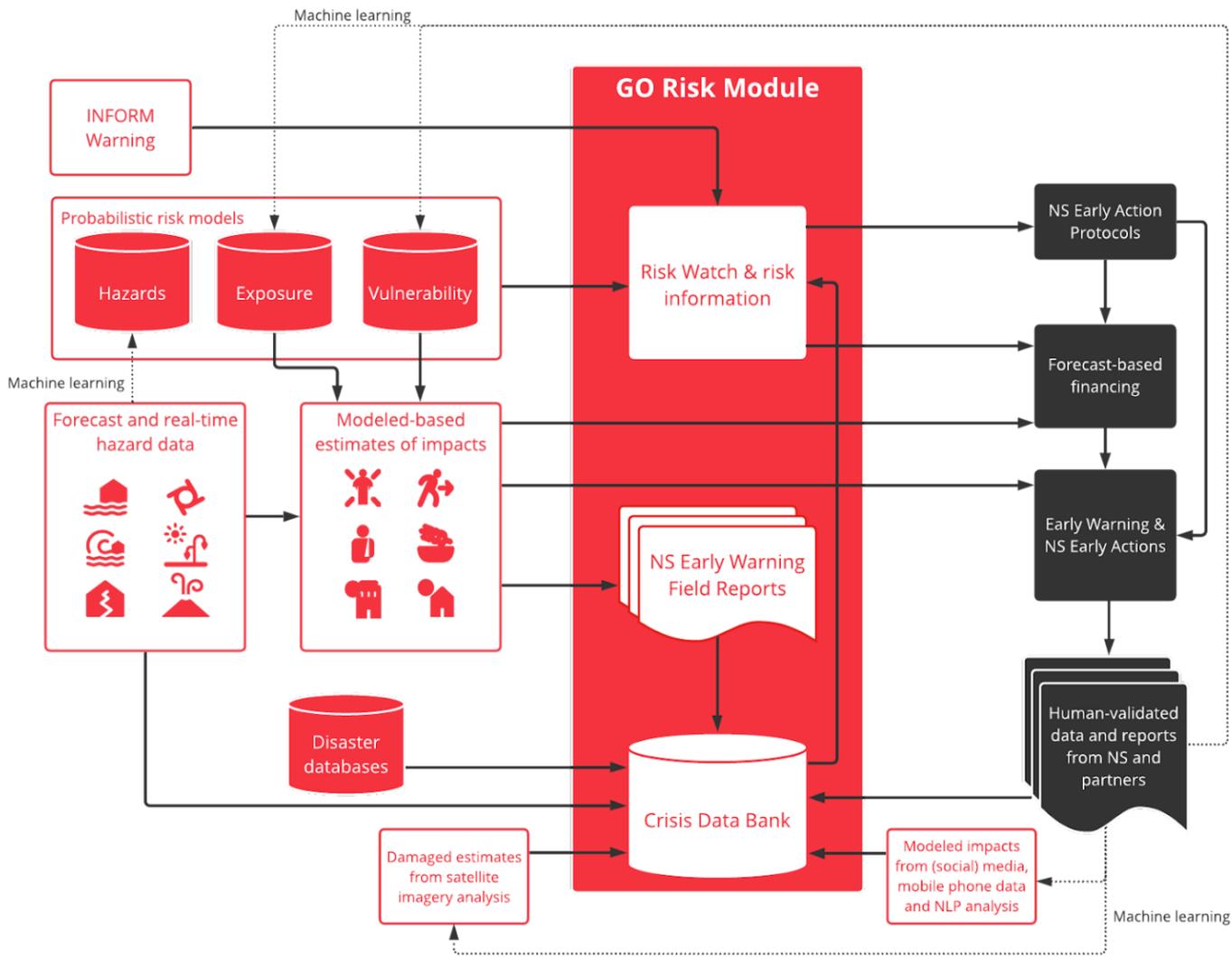


# Simplified database schema (excerpt)

Event ID	Event name							Hazard				# People Affected							# People displaced					
Unique event ID	Glide Event Number	DesInventar Event Name	EM-DAT Event Name	IDMC Event Name	ADRC Event Name	IFRC/NS Event Name	Alerting Authority Event Name (CAP)	Hazard type	Intensity footprint 1	Intensity footprint 2	Intensity footprint n	IFRC/NS Affected	EM-DAT Affected	DesInventar Affected (1)	DesInventar Affected (2)	Glide Affected	DEEP Affected	ADRC Affected	PDC Exposed	IFRC/NS Displaced	EM-DAT Homeless	DesInventar Displaced	IDMC Displaced	DEEP Displaced

# People killed						Economic losses					Damaged dwellings					Destroyed dwellings					Destroyed or damaged health facilities		Destroyed or damaged educational facilities			
IFRC/NS Killed	EM-DAT Killed	DesInventar Killed	ADRC Killed	DEEP Killed	USGS Killed	EM-DAT economic losses	DesInventar economic losses	PDC economic exposure (modeled)	MetesSwis economic losses (modeled)	USGS economic losses	DesInventar damaged dwellings	Google damaged dwellings	USGS damaged dwellings	UNOSAT damaged dwellings	IDMC damaged dwellings	Oxford/ODDRIN damaged dwellings	DesInventar destroyed dwellings	Google destroyed dwellings	USGS destroyed dwellings	UNOSAT destroyed dwellings	IDMC destroyed dwellings	Oxford/ODDRIN destroyed dwellings	DesInventar destroyed or damaged health facilities	Other destroyed or damaged health facilities	DesInventar destroyed or damaged educational facilities	Other destroyed or damaged educational facilities

# Part of a larger data analysis and decision-support ecosystem



# Benefits of the Global Crisis Data Bank

## For National Societies:

1. Access to **historical crisis data** and tools to support both risk and needs analysis
2. Operational and peer-to-peer learning: Identify and plan effective **anticipatory actions and responses**
3. More information and evidence to access **funds for forecast-based action (FbA)**
4. Easier **to access funding**
5. **ENhance capacity** to populate crisis data bank, analyze data and use evidence to support decision-making

## For IFRC:

1. **More complete and accurate understanding of disasters** to which the 192 National Societies respond
2. Improved **funding application and approval process** that supports more evidence-based and more transparent decision-making
3. **Prioritise support to National Societies** facing significant risks but having gaps in knowledge, capacities and resources

## For the humanitarian, DRR, development & climate change communities:

1. Aggregated data and analysis of past responses to share **evidence on effective practices to reduce risks**, prepare for and respond to disasters
2. Enhanced **understanding of spatial/temporal risk trends** and ability to assess and **attribute loss and damage due to impacts of climate change**
3. Validation and updating of hazard forecasts and risk models

# Links to EM-DAT



## Event identification:

- Identify events – past or future – which potentially meet EM-DAT inclusion criteria, but which are not yet in EM-DAT

## Data validation:

- Compare indicator values from EM-DAT with those from other databases for those same events
- Enhanced traceability to data sources

## Extension:

- Help EM-DAT extend its coverage to include additional indicators by linking to the Global Crisis Data Bank API

**Thank you!**