

# INFORM

INDEX FOR RISK MANAGEMENT

## Composite Indicators and Scoreboards

### COMMUNITY of PRACTICE

08-09 November 2018

Joint Research Centre, Ispra

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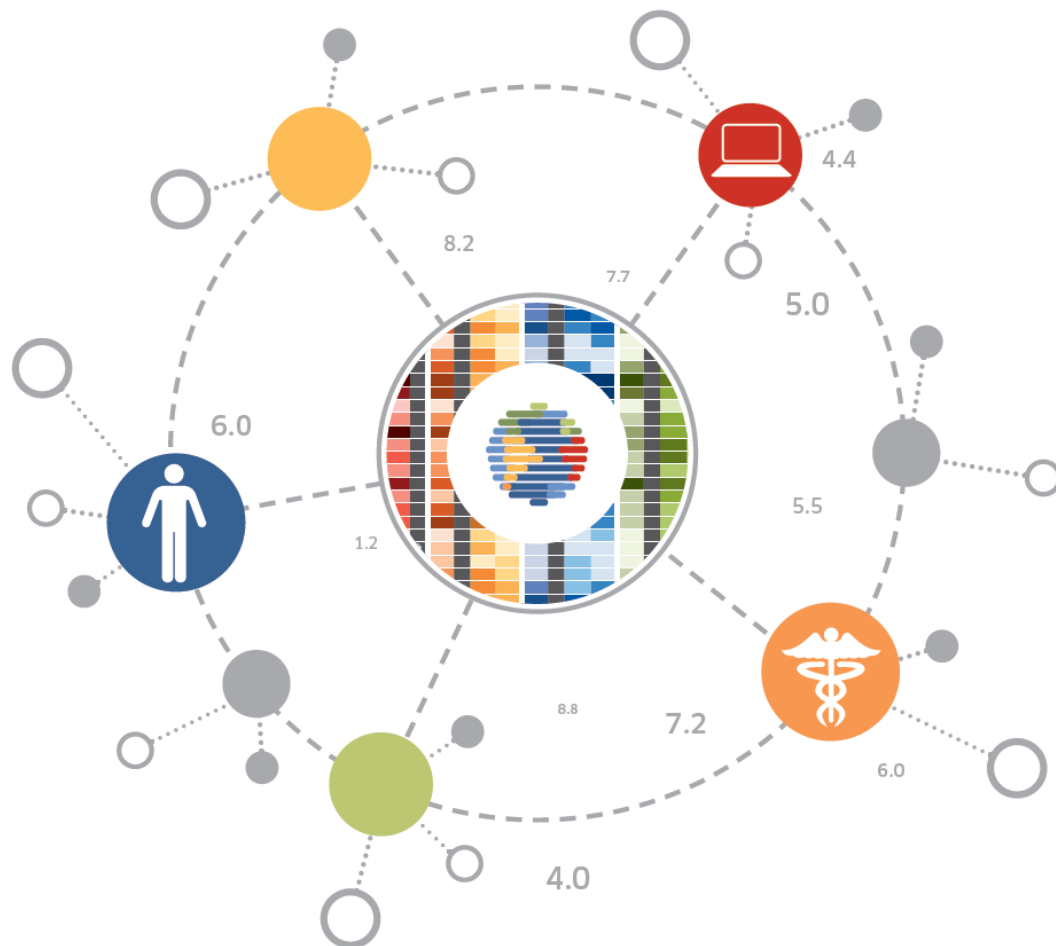
[karmen.poljansek@ec.europa.eu](mailto:karmen.poljansek@ec.europa.eu)

## Joint Research Centre

the European Commission's  
in-house science service



JRC Science Hub: [ec.europa.eu/jrc](https://ec.europa.eu/jrc)





INDEX FOR RISK MANAGEMENT

...is a **TOOL** to identify:

*“Countries or areas of countries at **risk from humanitarian emergencies** that could overwhelm national response capacity and lead to a need for international assistance”*

### purpose

- Support objective, risk-based decision to help prevent, prepare for and respond to crisis and disaster and build resilience

### users

- Governments, humanitarian, development and DRR sector and others

This year is the **5<sup>th</sup> annual release** of the global INFORM model

# 28

## PARTNERS

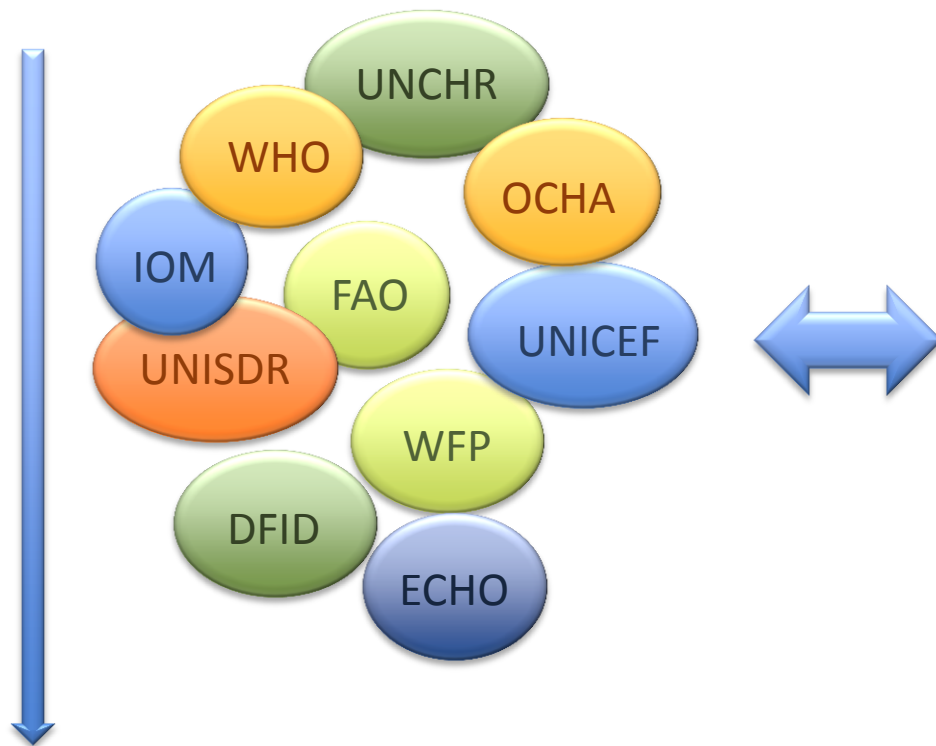
INFORM is a collaboration of the Inter-Agency Standing Committee Reference Group on Risk, Early Warning and Preparedness and the European Commission. INFORM partners include:



# BEGINNINGS

## USER DRIVEN MODEL....

**Partners** All trying to solve the same problem



**Data providers**

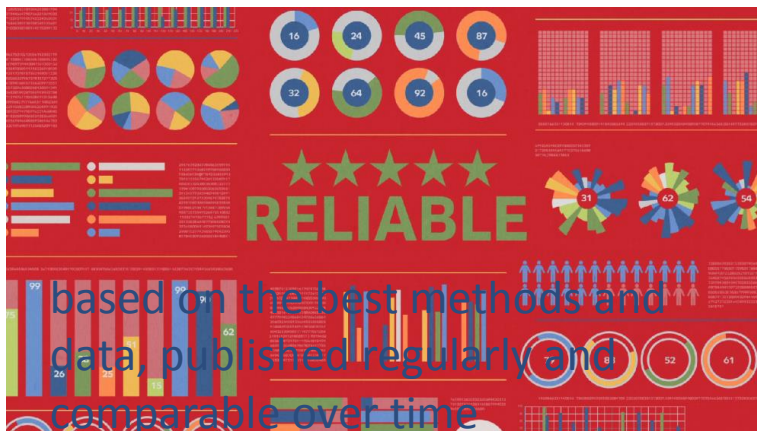
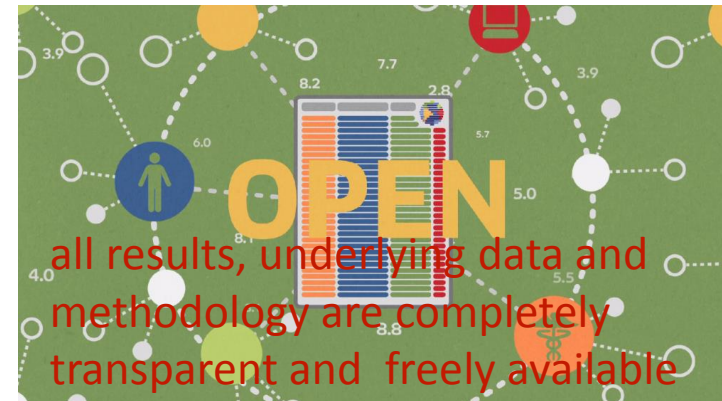
understand crisis in a way that it could help them  
prioritize their activities and allocate limited



## ....DATA DRIVEN MODEL

JRC has been leading the technical work on INFORM

# FEATURES



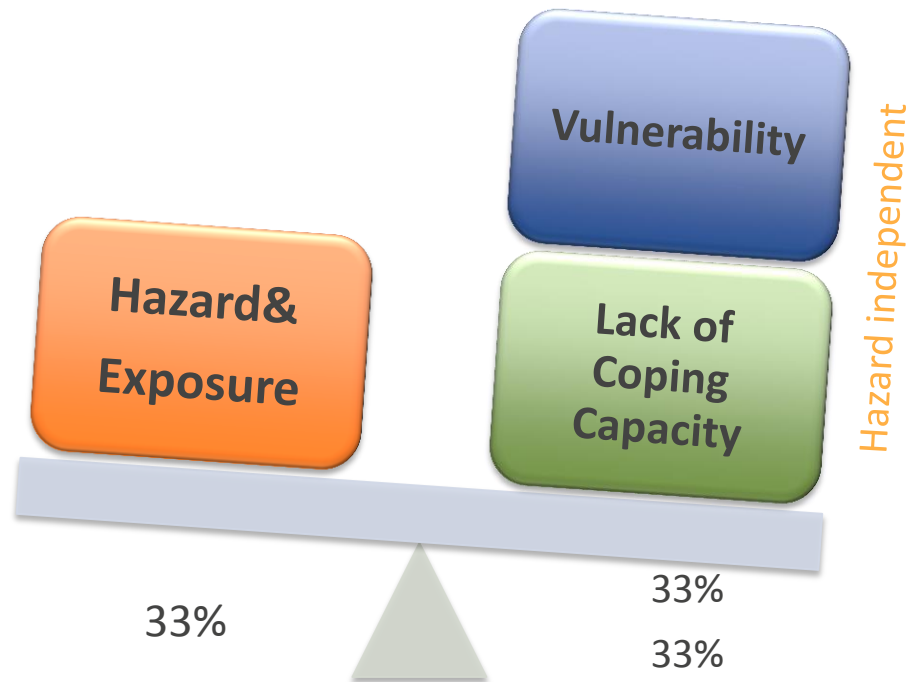
...and **OBJECTIVE** while  
using quantitative data

...as well as **FLEXIBLE** to meet  
specific needs of all users

Based on the **RISK CONCEPT**....

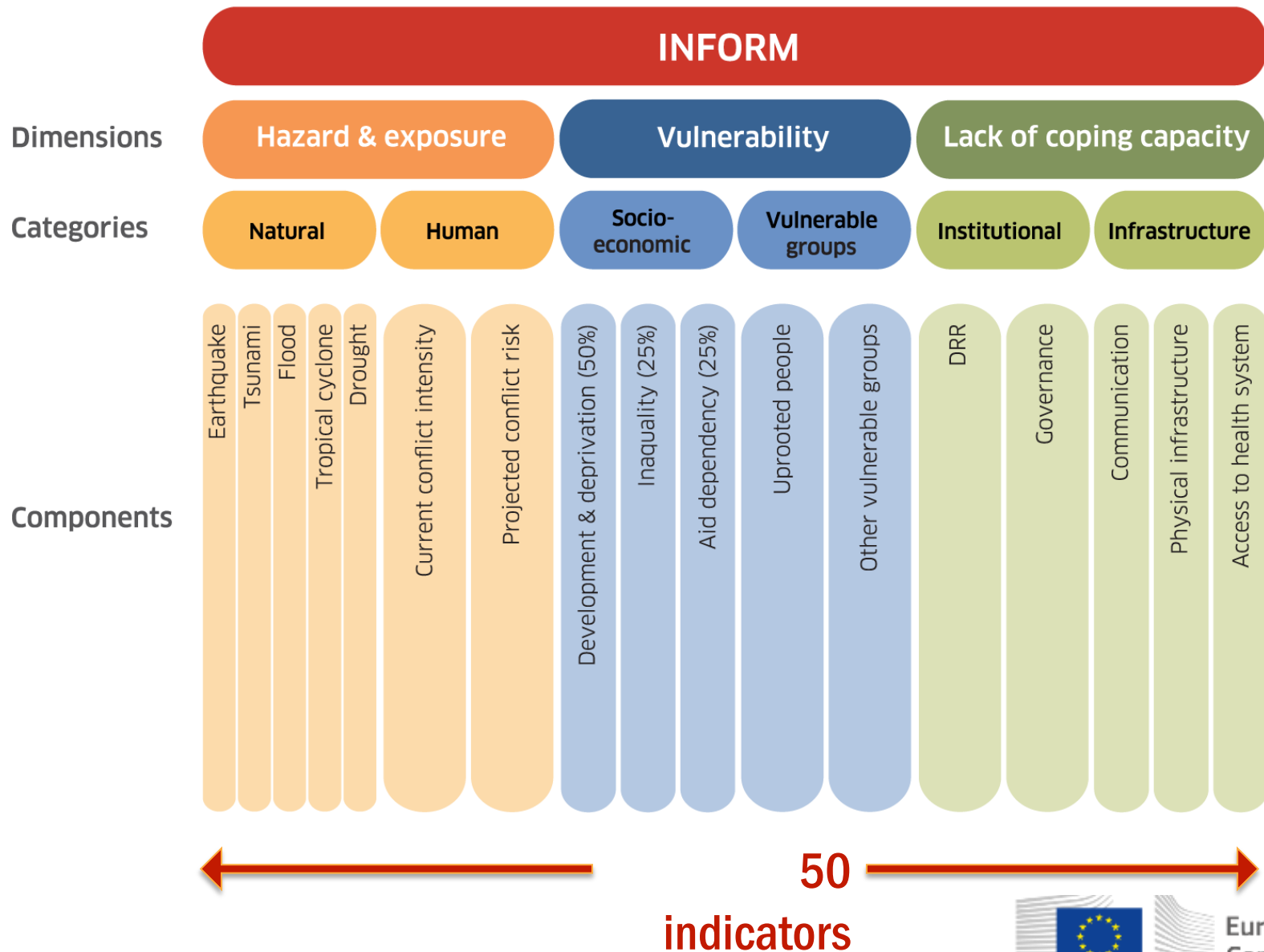
# RISK CONCEPT

$$\text{Risk} = \text{Hazard/Exposure} \times \text{Vulnerability} \times \text{Coping capacity}$$





# METHODOLOGY



European  
Commission

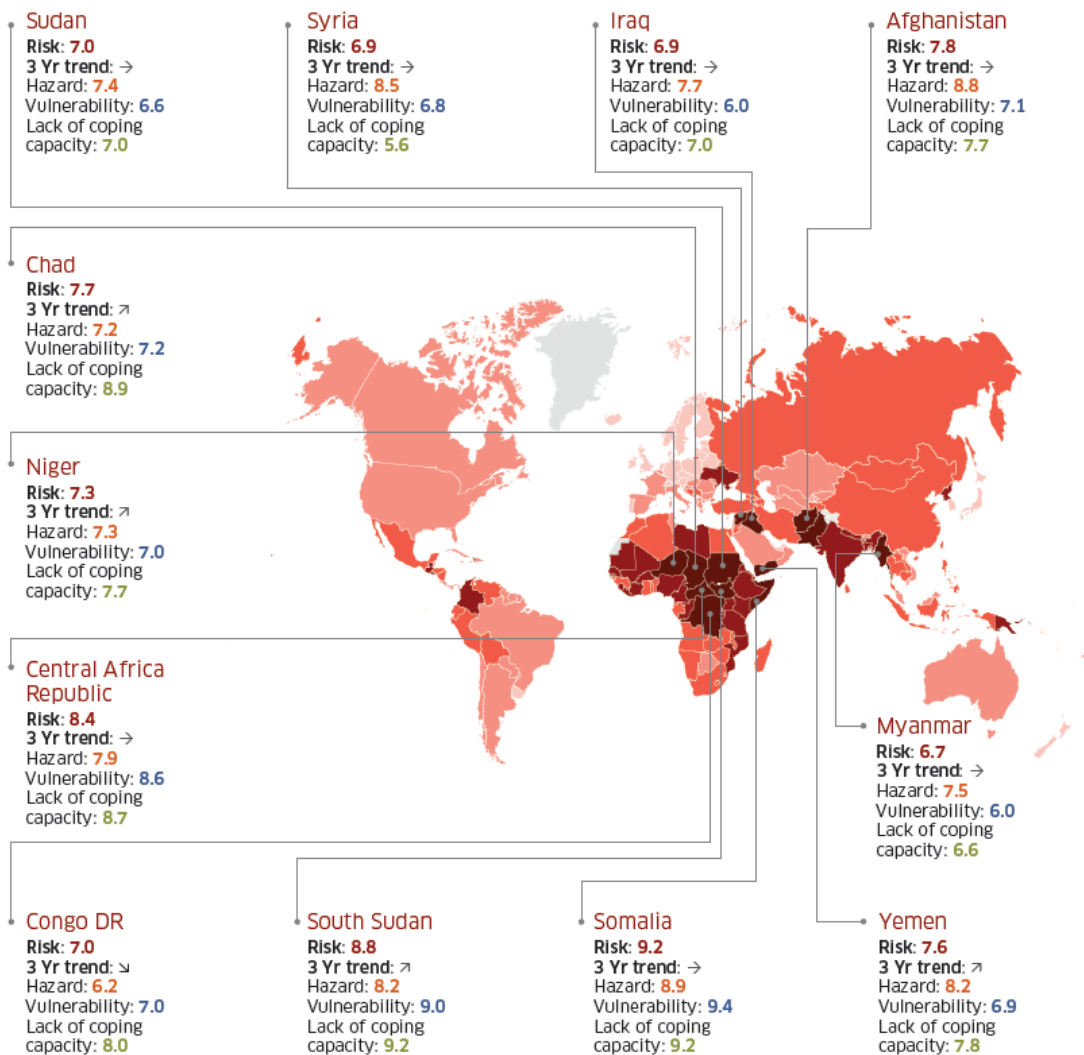
# GLOBAL LIST

COUNTRY	RANK	INFORM RISK	3 YR TREND	HAZARD & EXPOSURE	3 YR TREND	Natural	Human	VULNERABILITY	3 YR TREND	Socio-Economic Vulnerability	Vulnerable Groups	LACK OF COPING CAPACITY	3 YR TREND	Institutional	Infrastructure
Afghanistan	3	7.9	→	8.6	→	5.5	10.0	7.2	↘	6.9	7.4	8.0	→	7.4	8.5
Albania	111	2.9	→	3.0	→	5.1	0.3	1.7	→	2.3	1.0	4.8	→	6.2	3.1
Algeria	37	4.8	→	6.3	→	3.6	8.0	3.5	→	3.3	3.6	4.9	↗	4.9	4.9
Angola	62	4.2	→	2.3	→	2.0	2.6	4.6	↘	4.5	4.7	7.1	↗	6.6	7.5
Antigua and Barbuda	144	2.3	→	2.0	→	3.7	0.0	1.7	↘	2.0	1.3	3.5	→	4.7	2.1
Argentina	138	2.4	→	2.4	→	3.1	1.7	1.5	→	1.9	1.1	3.7	→	5.0	2.1
Armenia	100	3.2	→	2.1	→	3.8	0.1	3.0	→	2.4	3.6	5.0	→	6.6	2.7
Australia	144	2.3	→	3.4	→	5.7	0.1	1.7	→	0.6	2.7	2.1	→	2.2	1.9
Austria	167	1.7	→	1.3	→	2.3	0.1	2.2	→	0.8	3.4	1.7	→	2.2	1.2
Azerbaijan	80	3.8	↘	2.3	↘	3.8	0.5	4.6	→	1.8	6.5	5.0	↘	6.5	2.9
Bahamas	154	2.0	→	1.7	→	3.2	0.0	1.6	→	2.3	0.9	3.0	→	3.1	2.8
Bahrain	188	0.8	→	0.1	→	0.1	0.1	1.6	→	1.9	1.2	3.0	→	4.2	1.6
Bangladesh	20	5.9	↗	7.2	→	8.6	5.0	4.9	↗	3.9	5.7	5.7	→	5.1	6.3
Barbados	170	1.6	→	0.9	→	1.7	0.0	1.7	↗	2.6	0.8	2.6	↗	2.7	2.4
Belarus	161	1.9	→	1.6	→	1.8	1.3	1.2	→	1.0	1.3	3.4	↘	4.9	1.5
Belgium	180	1.2	→	0.7	→	1.4	0.0	1.8	→	0.8	2.7	1.5	↘	2.1	0.8
Belize	104	3.1	→	2.7	→	4.8	0.0	2.2	→	3.2	1.0	4.9	↘	5.4	4.4
Benin	89	3.5	→	1.3	→	1.2	1.3	4.6	→	6.4	2.2	7.2	→	5.8	8.3
Bhutan	111	2.9	→	1.5	→	2.8	0.1	3.3	→	4.9	1.2	5.0	↘	4.2	5.7
Bolivia	100	3.2	→	2.2	→	3.4	0.7	2.8	→	3.4	2.2	5.5	→	5.9	5.1
Bosnia and Herzegovina	70	4.0	↗	2.9	→	3.8	1.8	4.8	↗	2.6	6.5	4.6	→	6.0	2.8
Botswana	104	3.1	→	1.5	→	2.6	0.3	4.0	→	4.3	3.6	4.9	↗	4.9	4.9
Brazil	94	3.4	→	3.7	↘	3.7	3.6	2.5	↗	2.5	2.5	4.1	→	4.9	3.3
Brunei Darussalam	182	1.1	→	0.3	→	0.6	0.0	0.9	→	1.0	0.8	4.7	→	4.9	4.5
Bulgaria	134	2.5	→	2.2	→	3.1	1.1	2.3	↗	2.0	2.6	3.2	↘	4.2	2.0
Burkina Faso	37	4.8	↗	2.6	↗	2.4	2.7	6.8	↗	7.3	6.2	6.4	↘	4.7	7.7
Burundi	42	4.6	→	2.2	→	2.5	1.8	7.0	→	7.6	6.4	6.3	↘	6.1	6.5



# RISK MAP

INFORM 2017 RISK INDEX



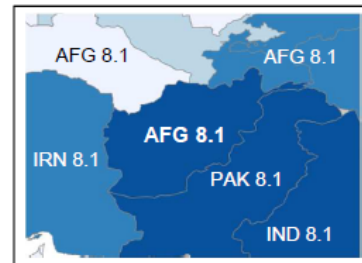
COUNTRY	RISK	3 YR TREND
Afghanistan	7.8	→
Albania	2.8	→
Algeria	4.4	↘
Angola	4.9	↘
Antigua and Barbuda	2.1	→
Argentina	2.5	→
Armenia	3.7	→
Australia	2.3	→
Austria	1.7	→
Azerbaijan	4.7	→
Bahamas	2.1	→
Bahrain	1.8	↗
Bangladesh	5.8	→
Barbados	1.6	→
Belarus	2.0	→
Belgium	2.1	→
Belize	3.3	→
Benin	4.4	↗
Bhutan	2.9	→
Bolivia	4.0	→
Bosnia and Herzegovina	4.1	→
Botswana	2.9	↘
Brazil	3.4	↘
Brunei Darussalam	1.7	→
Bulgaria	2.6	→
Burkina Faso	5.4	→
Burundi	6.3	↗
Cabo Verde	2.5	→
Cambodia	4.5	↘
Cameroon	6.2	↗
Canada	2.5	→
Central African Republic	8.4	→
Chad	7.7	↗
Chile	2.9	→
China	4.1	↘

# CONTRY PROFILES

## AFGHANISTAN

South Asia  
Low-income

	Value	Rank	Trend
<b>INFORM Risk</b>	<b>8.1</b>	<b>2</b>	→
<b>Hazard &amp; Exposure</b>	<b>8.8</b>	<b>4</b>	→
<b>Vulnerability</b>	<b>7.4</b>	<b>6</b>	↗
<b>Coping capacity</b>	<b>8.2</b>	<b>8</b>	→



EXAMPLE ONLY

### RISK PROFILE

#### INFORM

8.1

#### Hazard&Exposure

8.8

#### Vulnerability

7.4

#### Coping capacity

8.2

#### Natural

6.3

#### Human

9.9

#### Socio-economic

8.2

#### Vulnerable groups

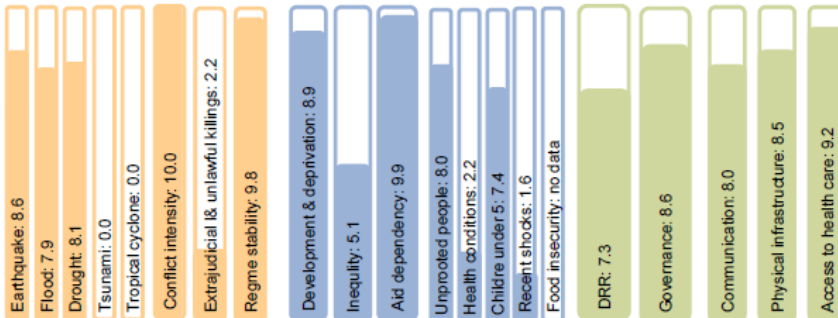
6.5

#### Institutional

7.9

#### Infrastructure

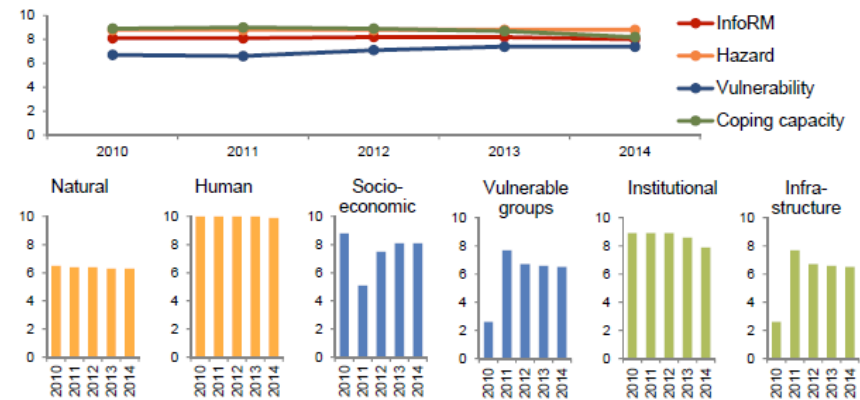
8.5



### RISK INDICATORS

Indicator	Component	Index
Physical exposure to earthquake	Natural Hazard	10.0
People affected by droughts	Natural Hazard	10.0
Conflict intensity	Human Hazard	10.0
Net ODA received (% of GNI)	Aid Dependency	10.0
Per capita public and private expenditure on health care	Access to health care	10.0
Intentional homicides	Extrajudicial and Unlawful killings	0.8
Gini index	Inequality	0.7
Prevalence of HIV-AIDS above 15 years	Health conditions	0.2
Natural Disasters % of total pop	Recent shocks	0.0
Malaria mortality rate	Health conditions	0.0

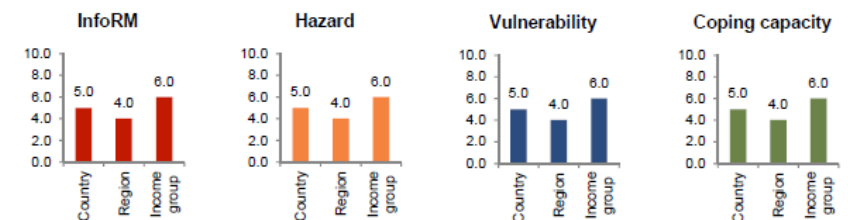
### TRENDS



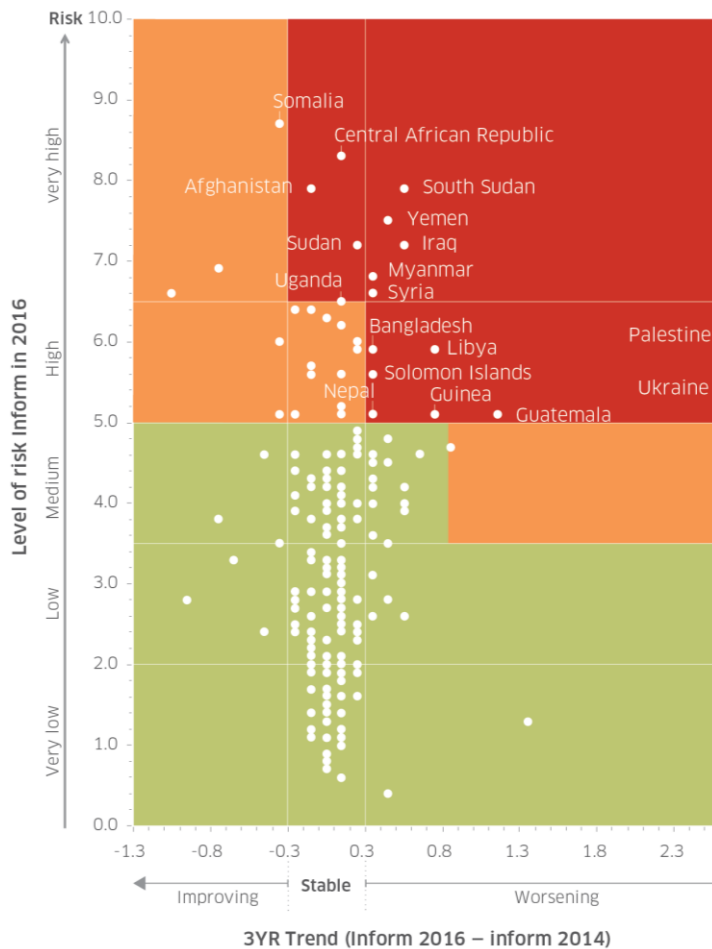
### GLOBAL PEERS

	InfoRM	Hazard & Exposure	Vulnerability	Lack of Coping capacity
Somalia	0.0	9.2	9.4	9.6
<b>Afghanistan</b>	<b>0.0</b>	<b>8.1</b>	<b>7.4</b>	<b>8.2</b>
Democratic Republic of the Congo	0.0	8.0	8.0	8.4
Mali	0.0	7.7	7.6	7.8
Sudan	0.0	7.6	7.4	7.2

### REGION AND INCOME GROUP CONTEXT



# TRENDS



## Very high and decreasing

Congo DR  
Mali  
Somalia

## Very high and stable

Afghanistan  
Central African Republic  
Sudan  
Uganda

## Very high and increasing

Iraq  
Myanmar  
South Sudan  
Syria  
Yemen

## High and decreasing

Haiti  
Mauritania

## High and stable

Chad  
Colombia  
Ethiopia  
India  
Kenya  
Lebanon  
Mozambique  
Niger  
Nigeria  
Pakistan  
Papua New Guinea  
Philippines

## High and increasing

Bangladesh  
Guatemala  
Guinea  
Libya  
Nepal  
Palestine  
Solomon Islands  
Ukraine

## Medium and decreasing

Azerbaijan  
Congo  
Egypt

## Medium and stable

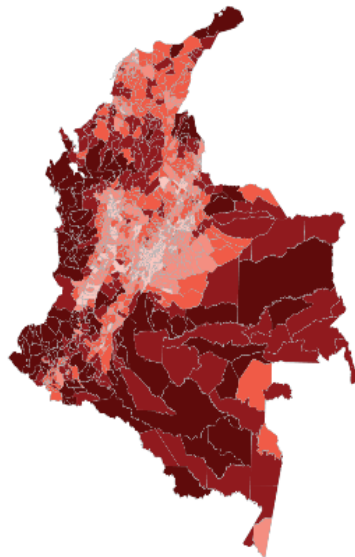
Algeria  
Angola  
Benin  
Burundi  
Cambodia  
China  
Côte d'Ivoire  
Djibouti  
Dominican Republic  
El Salvador  
Georgia  
Indonesia  
Iran  
Jordan  
Korea DPR  
Lao PDR  
Liberia  
Madagascar  
Mexico  
Micronesia  
Micronesia  
Namibia  
Nicaragua  
Panama  
Peru  
Rwanda  
Senegal  
Serbia  
Sierra Leone  
South Africa  
Tajikistan  
Tanzania  
Thailand  
Timor-Leste  
Togo  
Turkey  
Venezuela  
Viet Nam  
Zambia  
Zimbabwe

## Medium and increasing

Bosnia and Herzegovina  
Burkina Faso  
Cameroon  
Ecuador  
Eritrea  
Guinea-Bissau  
Honduras  
Kiribati  
Lesotho  
Malawi  
Malaysia  
Marshall Islands  
Morocco  
Russian Federation  
Sri Lanka  
Turkmenistan  
Vanuatu

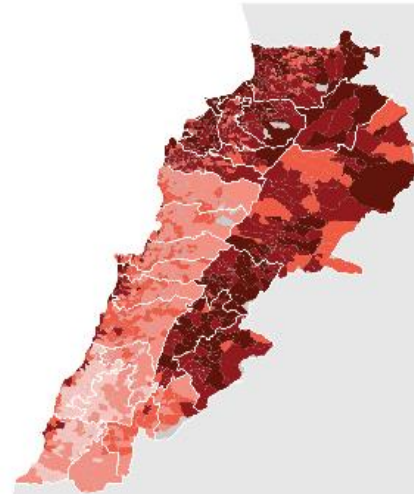
# SUBNATIONAL

Supporting local entities to develop their own INFORM tailored to the local context using national data to assess crisis and disaster risk within a county or region



## Colombia

The development of the INFORM Colombia model was initiated by OCHA and UNICEF. It is a municipal level risk index, which identifies threats, vulnerabilities and response capacities throughout the country. The results have been used in the Humanitarian Needs Overview 2016 and by UNICEF planners and donors. The model includes specific components to evaluate risk levels for children and adolescents. Partners are now investigating if the model can be extended to cover additional countries in the region.

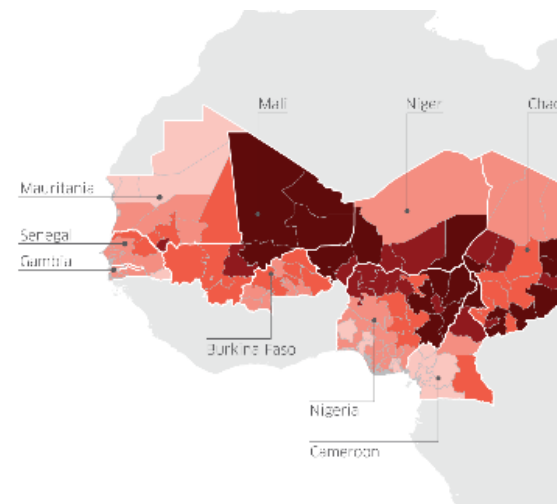
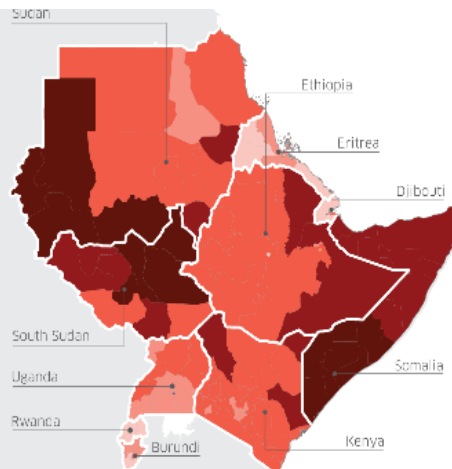


## Lebanon

INFORM Lebanon was developed by the Lebanon Joint Analysis Unit, which supports the Resident/ Humanitarian Coordinator and is a collaboration of humanitarian, development and governmental partners that supports cross sectoral planning at the national level. INFORM Lebanon is being embedded in regional processes and coordination mechanisms to help all partners identify and prioritise humanitarian and disaster risks in Lebanon in the context of the regional Syrian Crisis response.

## Greater Horn of Africa region

The INFORM Greater Horn of Africa model is part of an initiative of Intergovernmental Authority on Development (IGAD) and OCHA to improve IGAD's ability to analyse, visualise and disseminate information to support the prevention, preparedness and response to humanitarian crises in the region. The model will be updated regularly to support regional coordination and prior use humanitarian, development, risk management and resilience investments.



## Sahel region

The regional INFORM Sahel model was initiated by the Emergency Response and Preparedness Group of the regional Inter-Agency Standing Committee (IASC) and is managed by OCHA. The INFORM model is being used to support the Humanitarian Programme Cycle and coordinated preparedness actions. Partners hope to use the model to improve cooperation between humanitarian and development actors in managing risk and building resilience across the region.

# You can use INFORM to....

Decide how best to reduce risk



Monitor risk trends



Prioritise countries by risk, or any of its components



....or misuse if users are not aware of limitations of the methodology and data

# CHALLENGES

## Understanding and communicating the reliability

### INFORM LACK OF RELIABILITY INDEX

#### MISSING DATA

The total number of original indicators missing, including any that have been estimated (e.g. HDI derived from GDP per capita).

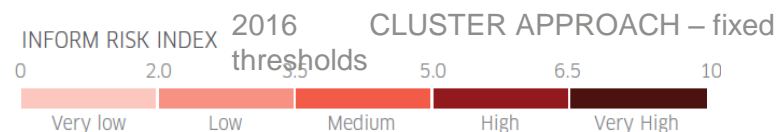
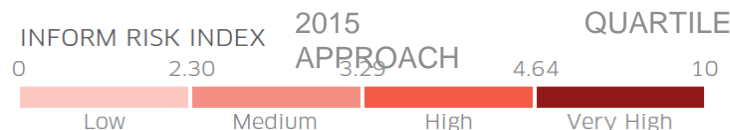
#### OUT OF DATE DATA

The average of the total number of years older than the reference year per indicator, to account for any older data used as a proxy for the most recent year.

#### CONFLICT STATUS

We define a country in conflict if the Conflict Barometer of Heidelberg Institute for International Conflict Research (HIK) sets a conflict intensity 4 or 5 (highly violent conflict), to account for the challenges of the data collection in a country affected by conflict.

## Classification of risk for visualisation

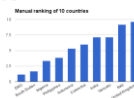


## Validation

1. Statistical coherence
2. Expert based
3. Outcomes

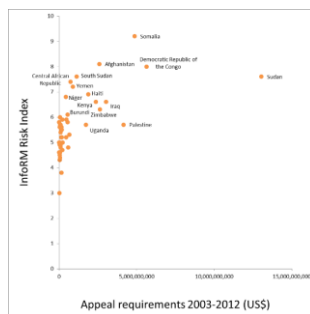
### Case studies: 10 countries

Country	OCHA	UNICEF	FAO	UNHCR	WFP	WFP
Algeria	1	1	1	1	1	2
Chad	2	2	2	2	1	1
Nigeria	3	3	3	4	3	4
Philippines	4	5	4	3	4	3
Indonesia	3	4	5	7	6	5
Colombia	6	7	6	4	5	8
India	7	6	7	8	8	7
Venezuela	8	8	8	6	7	6
Italy	9	10	9	9	9	9
United Kingdom	10	9	10	10	9	10



### NOMINAL WEIGHTS OF INFORM DIMENSIONS AND CATEGORIES VERSUS THEIR IMPLICIT WEIGHTS

INFORM		
HAZARD & EXPOSURE	33%	67%
VULNERABILITY	33%	80%
LACK OF COPING CAPACITY	33%	71%
HAZARD & EXPOSURE		
Natural	50%	50%
Human	50%	83%
VULNERABILITY		
Socio-Economic Vulnerability	50%	71%
Vulnerable Groups	50%	77%
LACK OF COPING CAPACITY		
Institutional	50%	81%
Infrastructure	50%	88%



## UNSOLVED

- **Methodological limitations** (No interactions among dimensions)
- **Conceptual limitations** (Risk related to **climate change** is not included)
- **Data limitation** (no real-time, proxy indicators, missing values, missing biological and technological hazard)

## DEVELOPING

- Making INFORM **hazard dependent**
- Introducing **SDG and SENDAI indicators**



# IMPACTS

More and more partners/users

## 1. Global INFORM

2018: 28 partners

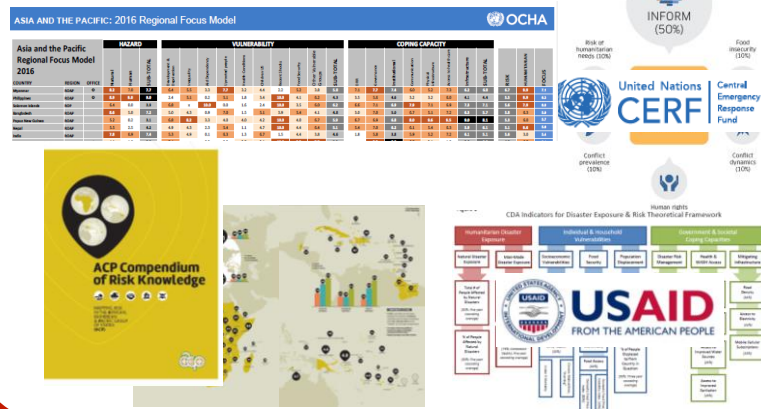


## 2. Subnational INFORM

2018 12 PARTNER GROUPS  
25 LOCAL/REGIONAL ORGANISATIONS



## Use and adaptation



## Publications by other organizations, featuring INFORM



## MEDIA



Annual release  
>2,000 download



>1,000 followers

[www.inform-index.org](http://www.inform-index.org)

[Nov 2016 – Nov 2017]

Sessions: 49,879

Users: 31,340

Page views: 114,653

# IMPACTS

## SURVEY

- Did INFORM succeed in introducing the risk approach in decision-making of the partner organizations?
- Is INFORM used to its full extent?

### who

- joint effort of
  - United Nations University (UNU-EHS)
  - European Commission (JRC).

### focus

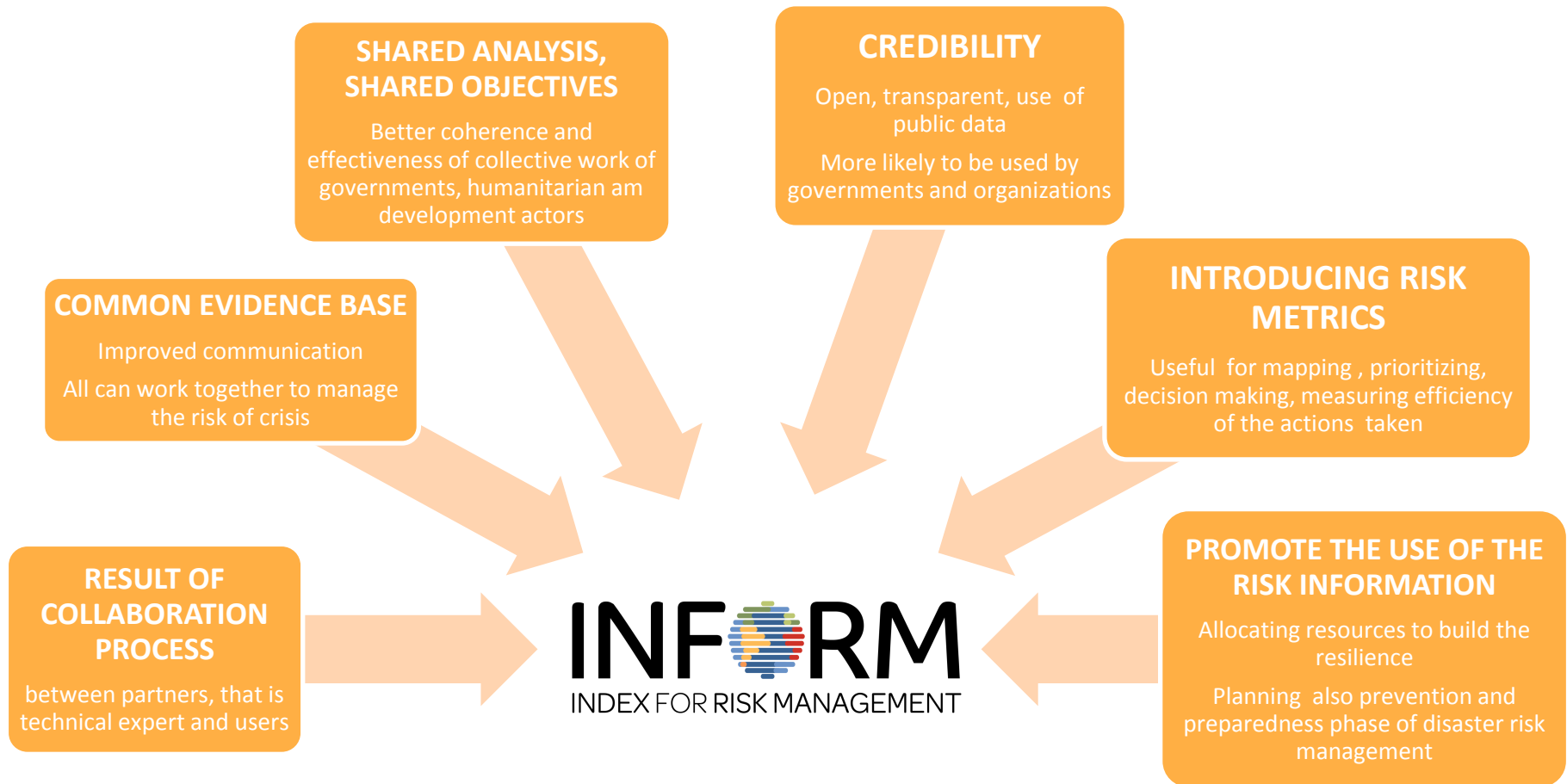
- synthesize expert knowledge on
  - awareness, usefulness and impact of global risk indices

### purpose

- Map the **use of INFORM**
- Understand the **current impact**
- Extract **best practices**
- Suggestions for **improvements** which could increase the impact of INFORM

.....goes online in mid-November 2018

# LESSONS LEARNT



**INFORM is not just a tool. It has become a platform for common understanding of disaster risk**

As such also an important contribution to global initiatives



# INFORM

INDEX FOR RISK MANAGEMENT

## Get the results...

INFORM results are available at [www.inform-index.org](http://www.inform-index.org), where you can: download a spreadsheet with all the results, calculations and source data; view and print country profiles; explore the data interactively; and find out more about how INFORM works and how you can use it.

