



# **RISK ACCELERATORS: INSIGHTS FROM TYPHOON HAIYAN FOR HUMANITARIAN INFORMATION AND SYSTEMS**

Bartel Van de Walle, Tilburg University

**THE DISASTER  
RESILIENCE LAB**



This presentation is based on joint work with Tina Comes, Agder University Norway



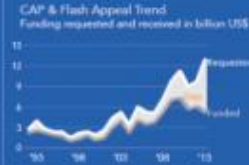
# AN OVERVIEW OF GLOBAL HUMANITARIAN RESPONSE 2014

 **52 MILLION**  
people to receive aid

 **17** affected countries

 **12.9 BILLION**  
total funding requested

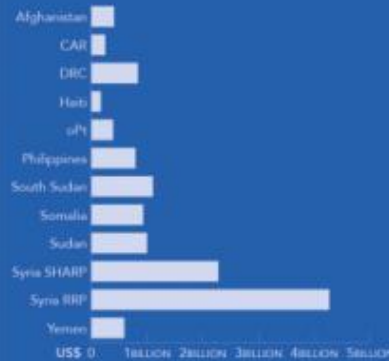
 **568** aid organizations participating



## HOW MANY PEOPLE TO RECEIVE AID

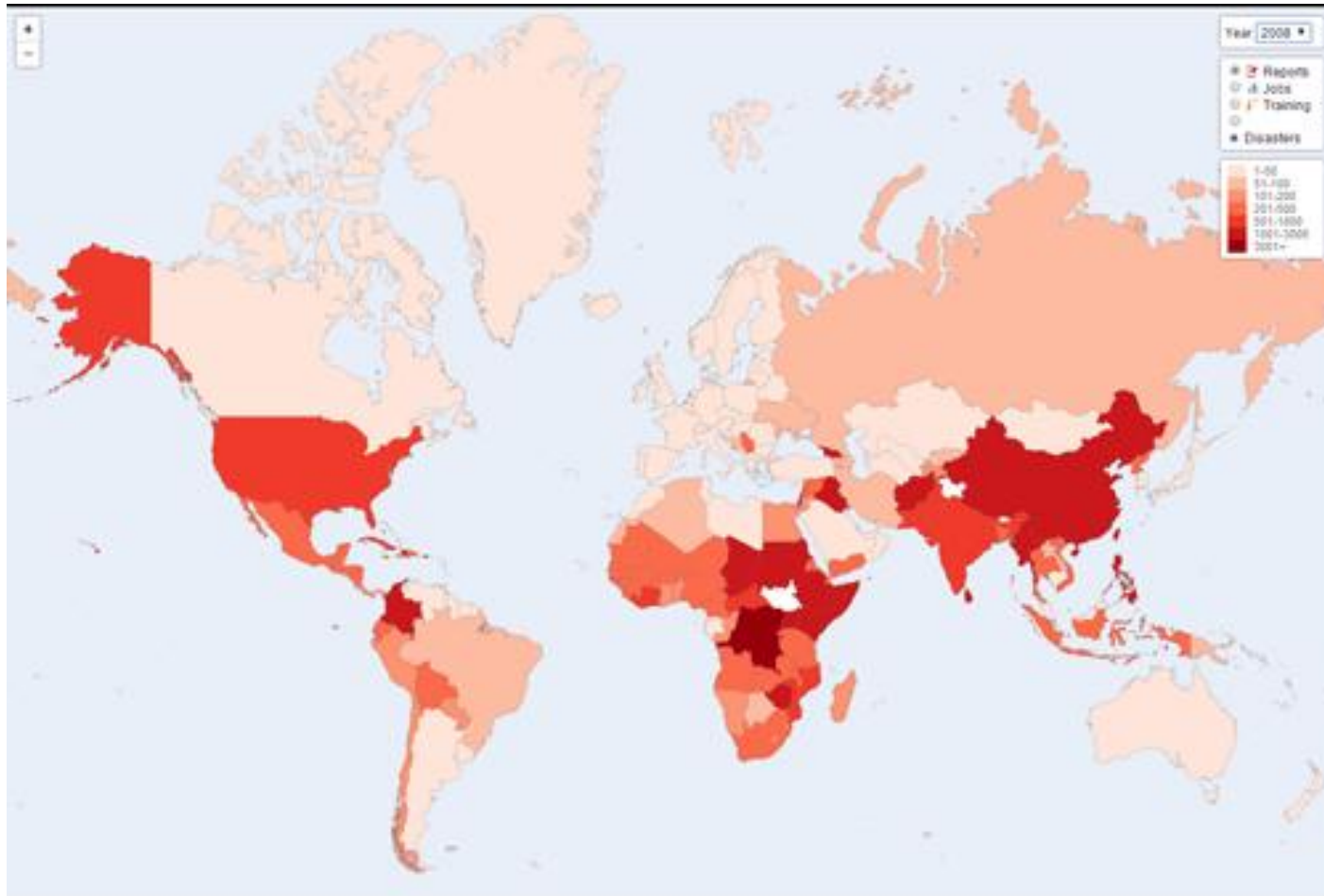


## HOW MUCH FUNDING NEEDED



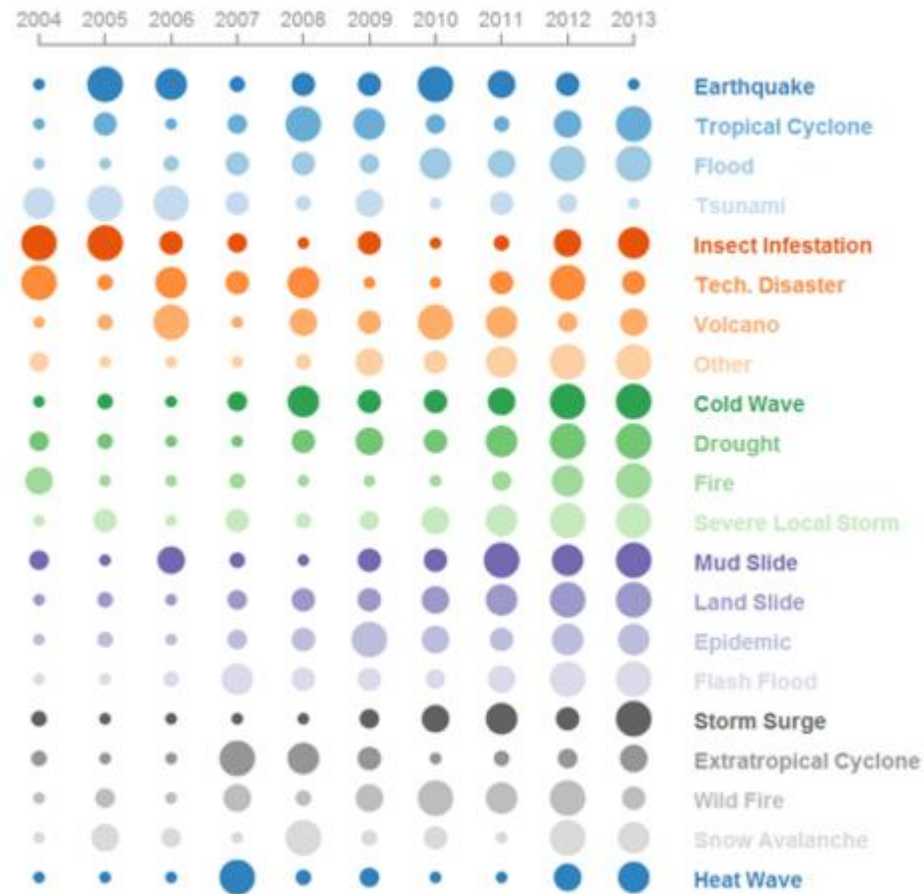
## COUNTRIES WITH STRATEGIC RESPONSE PLANS





<http://trends.rwllabs.org/>

## Disaster Types (past 10 years)



<http://trends.rwllabs.org/>



# 4 June 2014: Bosnia and Herzegovina – Flood situation & UCPM and bilateral assistance



# 6 June 2014: World - ECHO Flash Events



## U.S.A. – Severe Weather

- Strong winds and rain caused floods and damage in parts of Arkansas, Tennessee, Alabama and Georgia over 4-5 June. Two people have died in Arkansas and one in Tennessee, while 30 000 people were left without electricity in Shelby county, Tennessee. (NOAA, Media)



## South Sudan – Cholera outbreak

- By 4 June, a total of 1 306 cholera cases, including 29 deaths, had been reported in Juba since the onset of the outbreak on 23 April. 48 new cases were admitted to medical facilities in Juba on 3 June alone. Some cholera alerts outside Juba County were linked to people travelling from Juba.
- The majority of deaths reported in hospital died on arrival, hence the urgent need to strengthen community surveillance activities and community engagement, including the need to raise awareness (on risk factors, etc.) through community volunteers. (WHO, Government of South Sudan)

## Somalia – Crisis

- The humanitarian situation in Somalia continues deteriorating, influenced further by the ongoing military offensive as well as the new Al-Shabaab tactic of blocking major supply routes and encirclement of newly recovered areas.
- Major NGOs are noting that existing life-saving programs were presently being cut and are at high risk of closure without additional financial support. WASH activities in IDP camps in Mogadishu were already discontinued recently.
- Currently, an estimated number of 857 000 people continue to depend on life-saving assistance, with another two million people on the margin of food insecurity. More than one million people remain internally displaced. Moreover, a below-average harvest is expected in July and August, partly due to two poor rainy seasons. (UIV, ECHO)

## Mexico – Severe Weather

- After landfall, Tropical Cyclone BORIS has been reduced to a low pressure area which may interact with a second low pressure system that formed in the Gulf of Mexico. As a result, heavy rainfall is expected to continue affecting the southern states of Mexico. (GDACS, NASA, NOAA, CONAGUA, Media)

## Vietnam – Severe Weather

- Heavy rain and winds affected parts of northern Vietnam in the past few days, causing power outages and minor flooding in the area of the capital Ha Noi as well as the death of three people. (COPSC, Media)

## Kenya

### Refugees

- The Kenyan authorities have deported 359 Somalis, including at least three registered refugees, since the start of their security crackdown in early April 2014.
- Since the beginning of these operations, UNHCR has had only very limited access to the detainees. (UNHCR, ECHO)

### Ethnic tensions

- The latest weeks have seen an increasing number of armed inter-ethnic clashes inside Wajir and Mandera counties between the Garre and the Degodia tribes.
- On 29 May, an unknown number of Garre armed men conducted an attack against Degodia militias. Reports indicate that 12 Degodia were killed, seven injured and six Garre were killed (unknown number of injuries) as a result of the attack. (IRIS, ECHO)



● Capital City

**Affected Countries**

- Disease
- Conflict
- Severe Weather

**Other Icons:**

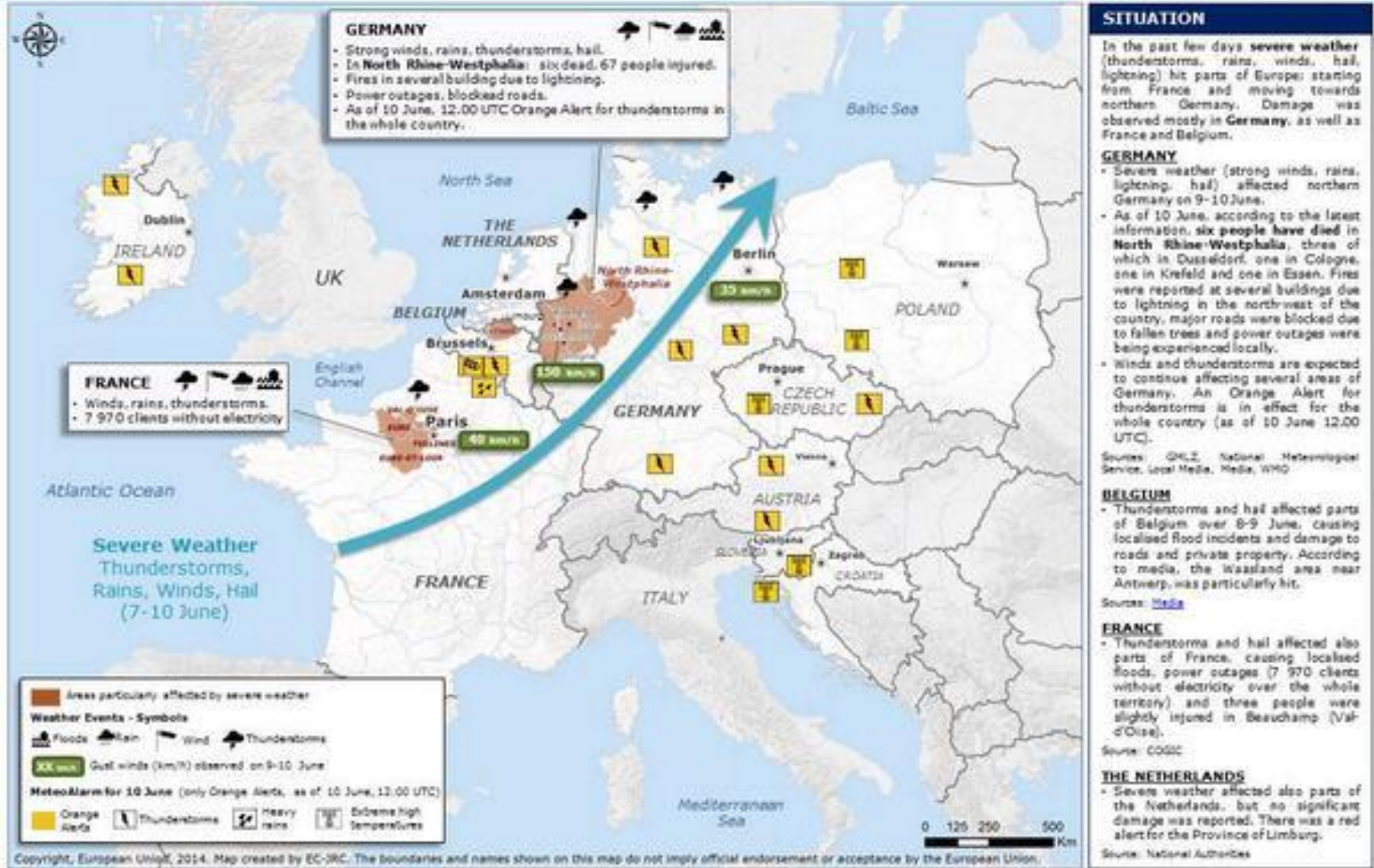
- Conflict
- Population displacement
- Humanitarian access
- Disease outbreak
- Heavy rainfall
- Tropical Cyclone
- Strong wind

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[http://ec.europa.eu/echo/news/echo-flash/latestflash\\_en.htm](http://ec.europa.eu/echo/news/echo-flash/latestflash_en.htm)

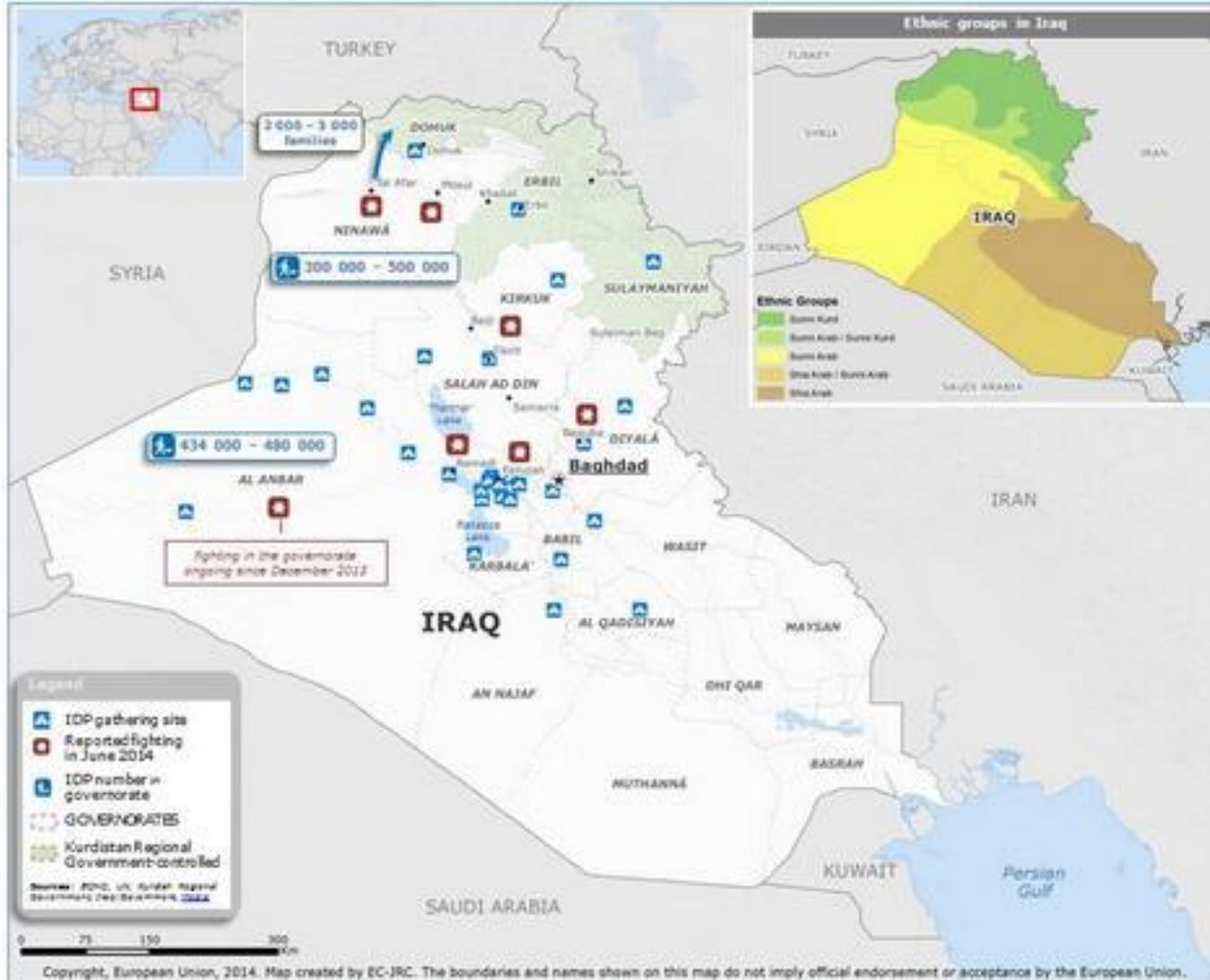


# 10 June 2014: Europe – Severe Weather





# 17 June 2014: Iraq - Conflict and humanitarian situation



## SITUATION

- New waves of **population displacement** have taken place in the northwest of **Ninewa governorate** as armed opposition groups (AOGs) took control of **Tal Afar**. Reportedly some 2 000 - 3 000 families fled Tal Afar northwards towards the **Kurdish region**.
- **Humanitarian agencies** continue working to organize the provision of **assistance** to internally displaced families who are dispersed in a number of locations with host families or rented accommodation in the Kurdish governorates. Although **conditions for IDPs** hosted by local communities are **stable** for the moment, there are **concerns** about the capacities of **Kurdish families** and communities who already host a large number of IDPs from **Al-Anbar** and **Syrian refugees**.
- On the **disputed borders** between **Ninewa** and the **Kurdish governorates**, food shortages on the local markets as well as the disruption of electricity and water services are being reported. **Humanitarian agencies** continue working on the establishment of **temporary sheltering** in Shikan and Khabat, and the distribution of food and non-food items. The restoration and strengthening of health services in the areas where IDPs are concentrating is a priority.

Sources: ECHO, UN, NGO's

# #ISIS

لا إله إلا الله  
رسول الله  
محمد

ولاية صلاح الدين  
@w\_salahadden

الناتس الإعلامي الرسمي

Tweet to ولاية صلاح الدين

30 followers you know

10 Photos and videos

TWEETS 951 PHOTOS/VIDEOS 10 FOLLOWING 13 FOLLOWERS 25.9K FAVORITES 1 More ▾

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@w\_salahadden · 15h  
#الفتوحات\_العمرية\_في\_صلاح\_الدين\_الأبية/فقد تم العفو عنهم  
بناءً على أوامر أمير المؤمنين الشيخ أبي بكر البغدادي (حفظه  
الله) بالعفو عن مرتدي السنة  
395 152

@w\_salahadden · 15h  
#الفتوحات\_العمرية\_في\_صلاح\_الدين\_الأبية/  
تصفية (1700) عنصر رافضي في الجيش من أصل  
(2500)، أما الباقي ... (يتبع)  
408 143

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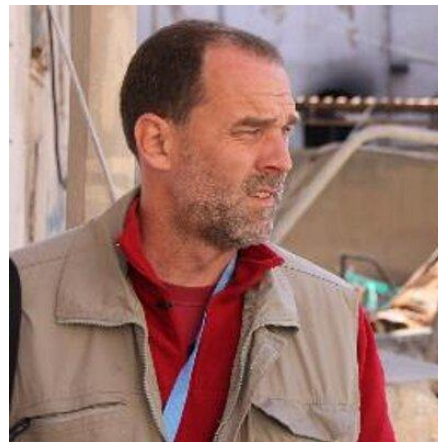
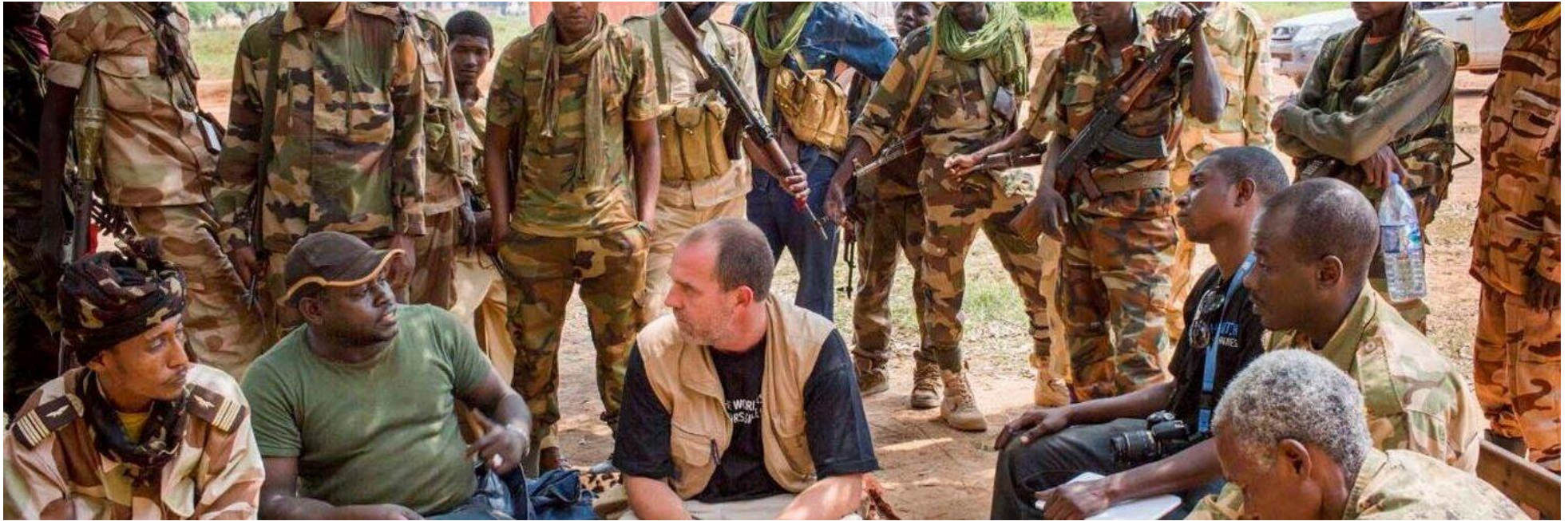
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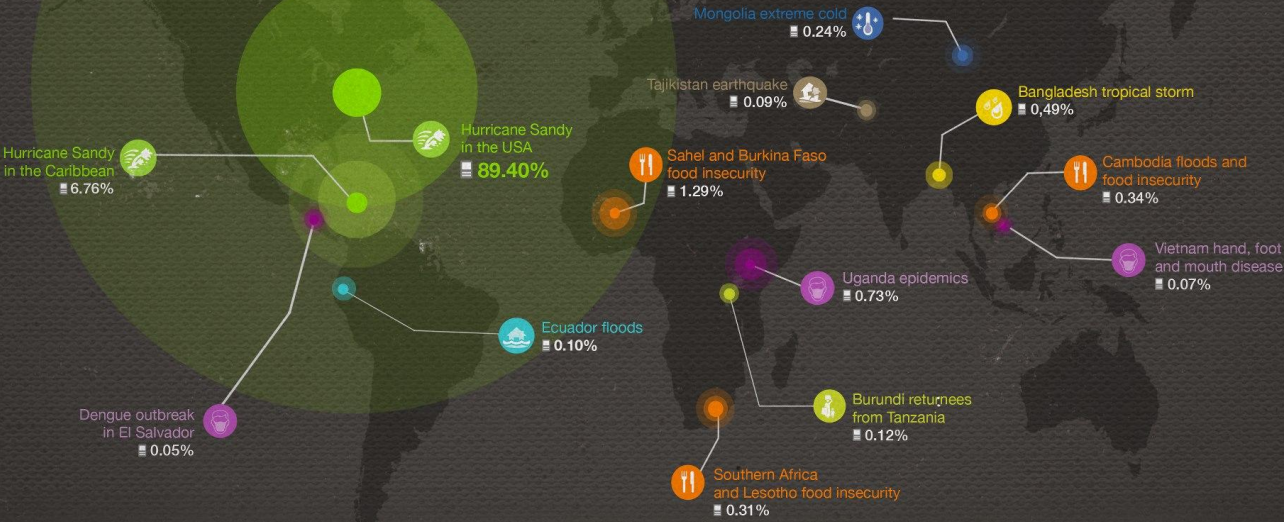


 @bouckap



# The passage of Hurricane Sandy in the USA received nine times the media coverage of all 12 silent disasters combined

■ Proportion, for that disaster, of the combined media coverage of the passage of Hurricane Sandy in the USA and of the 12 silent disasters



International Federation of Red Cross and Red Crescent Societies



croix-rouge française  
Humanizans ja vie



Finnish Red Cross



Cruz Roja Española



CRUZ VERMELHA PORTUGUESA



Red Cross / EU Office  
Bureau Croix-Rouge / UE



Deutsches Rotes Kreuz  
Aus Liebe zum Menschen.



ÖSTERREICHISCHES ROTES KREUZ  
Aus Liebe zum Menschen.



CROIX-ROUGE de Belgique



BULGARIAN RED CROSS



CRUZ VERMELHA DE PORTUGAL

influence  
influencecommunication.com



# CONFLICT IN Syria

Now in its 4<sup>th</sup> year, the conflict in Syria has devastated the lives of children and their families throughout the entire region.

**10,000**   
**KILLED,**  
MANY THOUSANDS  
MORE WOUNDED

**5.7 MILLION**  
CHILDREN'S LIVES  
HAVE BEEN AFFECTED

**4.3 MILLION**  
CHILDREN WITHIN SYRIA

**1.4 MILLION**  
CHILDREN HAVE BECOME  
REFUGEES OUTSIDE OF  
SYRIA

Nearly  
**8,000**

**UNACCOMPANIED CHILDREN**  
REGISTERED IN HOST COUNTRIES.



Syrian children  
deserve a future  
to look forward to.

**UNICEF • EU**  
are working hard  
to reach them with  
support and access  
to safe drinking water.



Since 2011, more than

**2.9 MILLION** CHILDREN  
FORCED TO LEAVE SCHOOL.

**4,000** SCHOOLS WITHIN SYRIA  
DESTROYED

**#voicesofchildren**





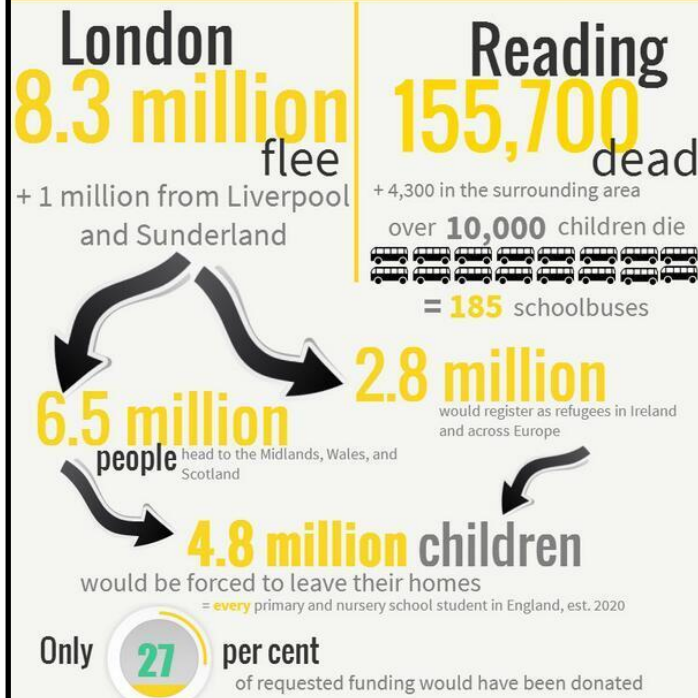




# If The UK Were Syria...

EVERYONE IN READING WOULD BE DEAD.  
LONDON WOULD BE DESERTED.

If the United Kingdom were Syria, everyone in Reading would have been killed. Every single person. That's in addition to nearly 5,000 people from neighbouring villages—they'd all be dead too. Everyone living in London would have abandoned their townhouses, condos, suburban homes, lofts, and flats, and fled. Everyone in Liverpool too. And Sunderland. The cities would be ghost towns.



The UK would expect better.

[ifweweresyria.org](http://ifweweresyria.org)

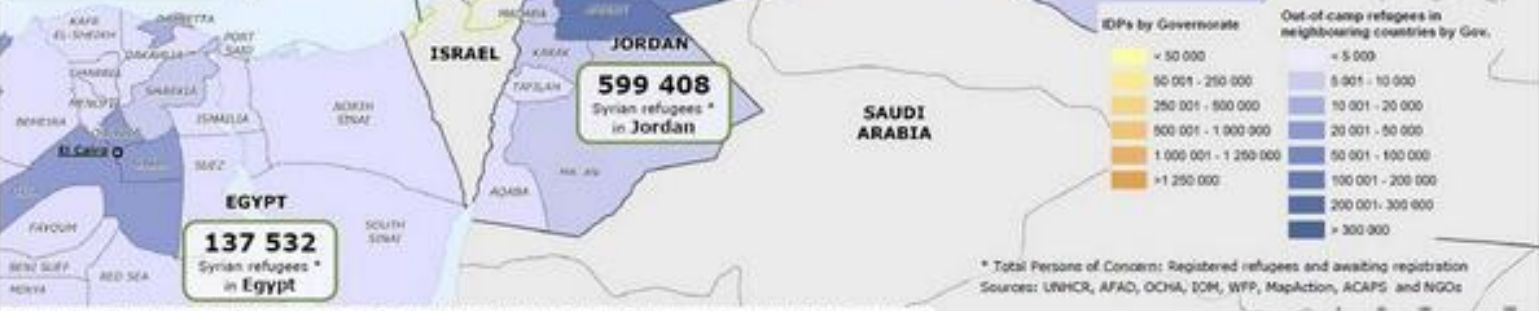
# 2 June 2014: Syria Crisis – Regional refugee situation and internal displacement



**Syrian refugees**  
**2 839 285**  
 (including those registered in North African countries)

**IDPs**  
**4 254 500**  
 countrywide (UN estimate, mid-2013)

- National Capital
- Governorate Capital
- Other Cities
- Major roads
- Governorate boundary
- International border
- Disputed areas
- Syrian refugee camps
- Border Crossing



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Water is getting scarce info mural @AptART



Encouraging children to dream through art @AptART

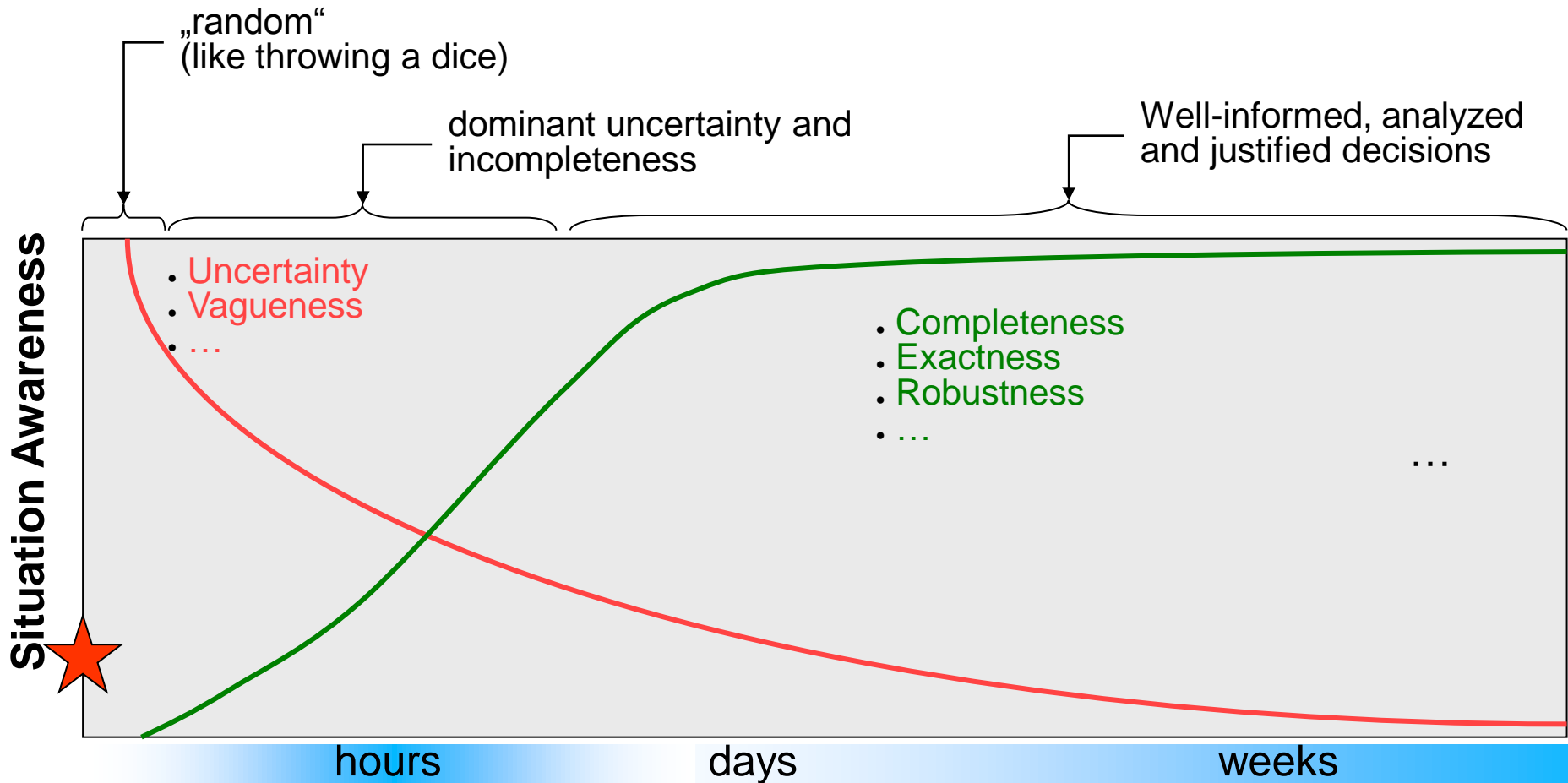


" Timely information can save lives...Aid organizations must recognize that accurate, timely information is a form of disaster response in its own right."

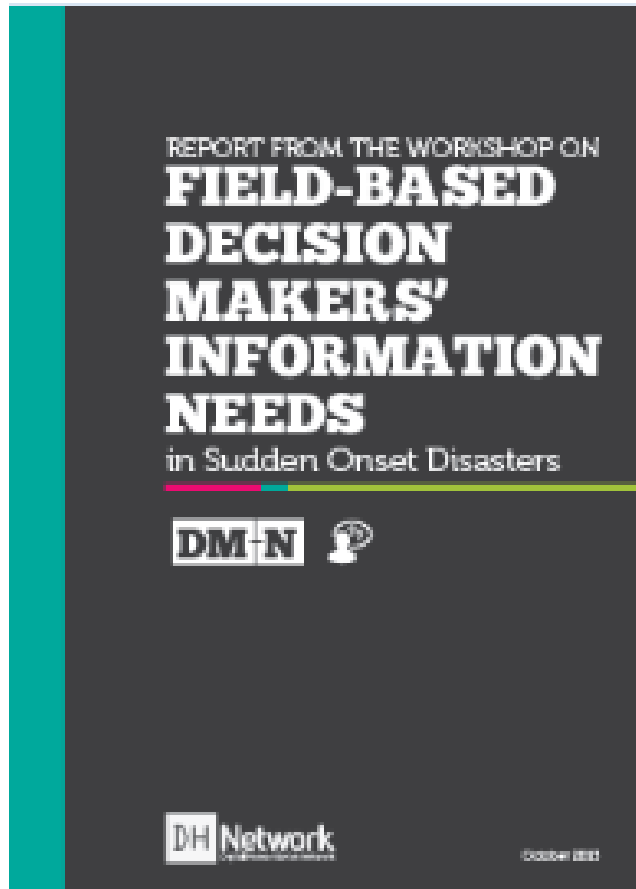
*- M. Niskala, Secretary-General of the IFRC, World Disasters Report 2005*



# The Information Challenge in Crisis Response







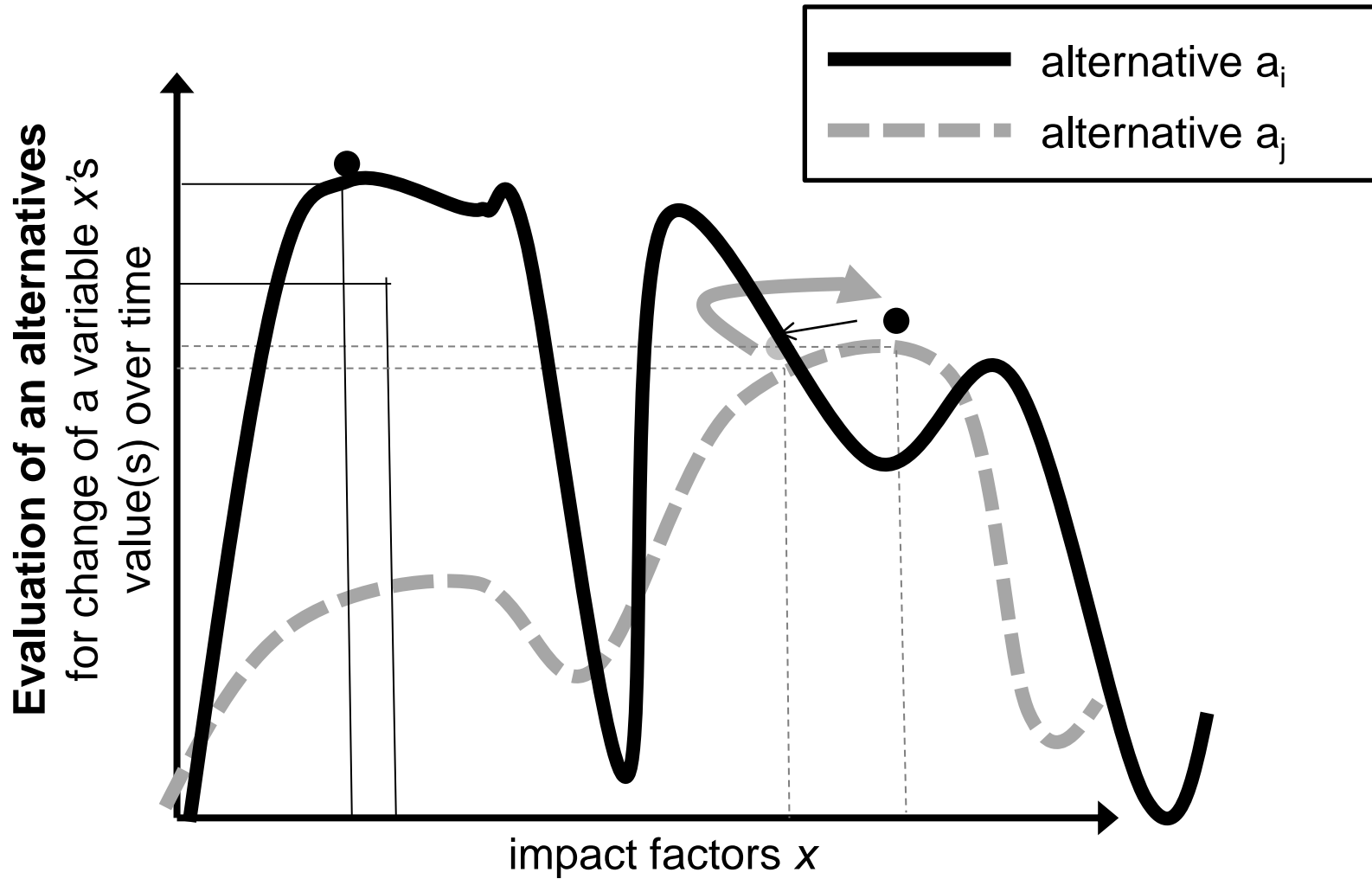
<http://digitalhumanitarians.com/content/decision-makers-needs>

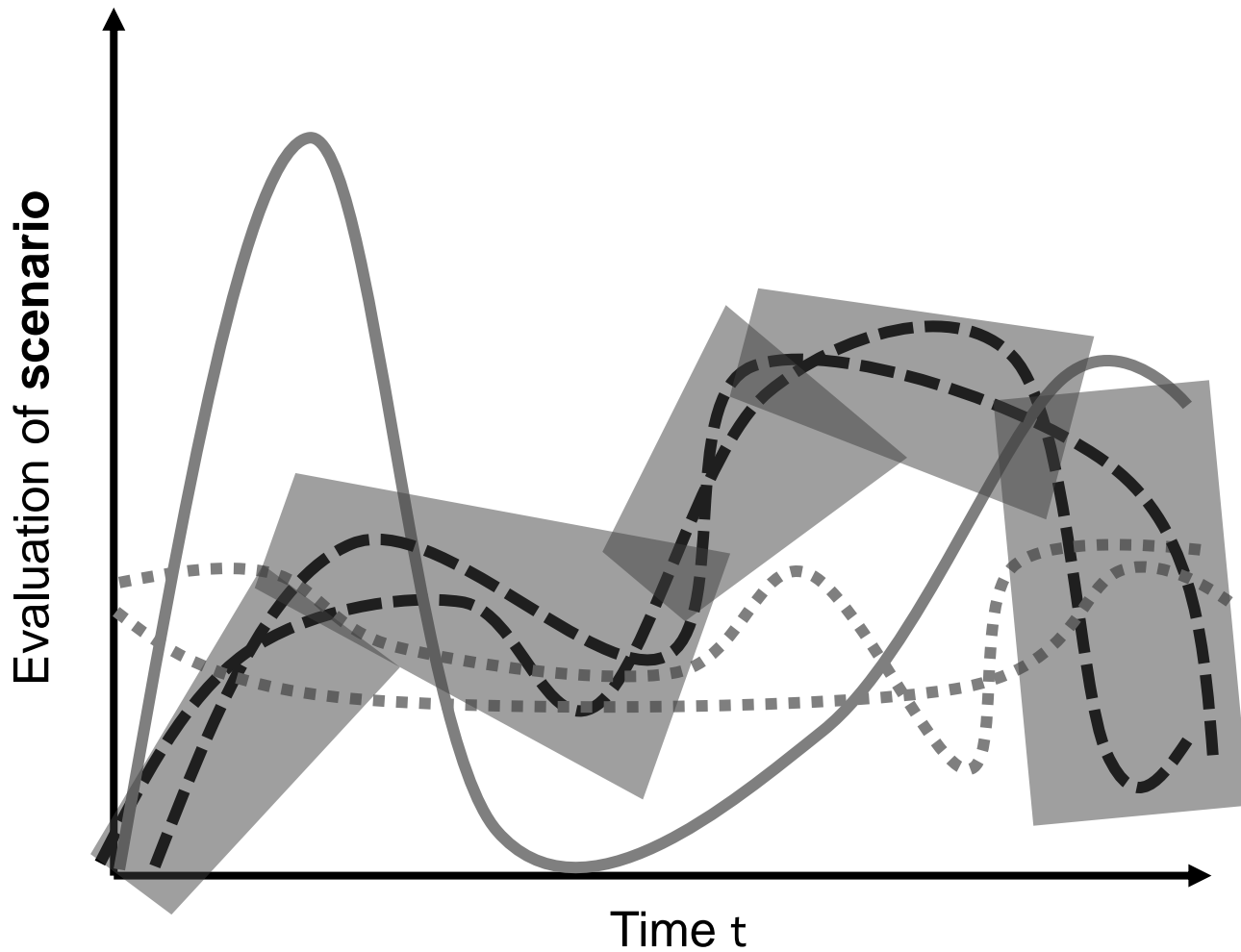
"What are the turning points in a disaster? The risk accelerators? They change throughout the disaster."

*- Jesper Lund, Head of OCHA Operations, Tacloban, December 2013*











# DRL FIELD RESEARCH IN THE PHILIPPINES

DECEMBER 2013

## A journey into the information typhoon



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# TYPHOON HAIYAN IN NUMBERS

- Wind speeds over 315 km/h
- Landfall on the Philippines  
November 8<sup>th</sup> 2013
- 6,201 Fatalities
- 1.9 million homeless
- \$ 878,860,457 economic losses



From: UNOSAT / Satellite image: Google

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# SUPER TYPHOON HAIYAN

locally known  
as Yolanda

Haiyan hit the Philippines on November 8th as a category five storm with maximum sustained winds of 235 kilometres an hour as well as wind gusts at 275 km/h - one of the most powerful ever recorded anywhere in the world.

**9.8**  
MILLION



PEOPLE  
AFFECTED



**659,268**  
DISPLACED



**394,494** people  
inside



**1,316** evacuation  
centres



**10+**  
THOUSAND  
FEARED  
DEAD

# AGENCIES RESPONDING TO HAIYAN



Response activities on November 27<sup>th</sup> 2013 (UN OCHA)

***What are requirements for sense-making and decision support?***

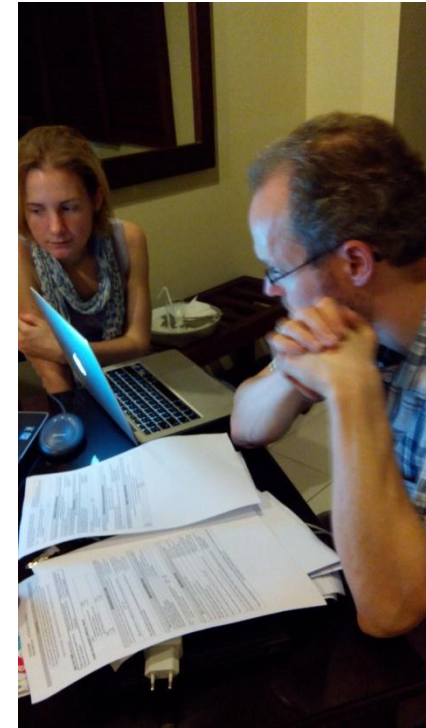
***How are communication and coordination organized?***



# DRL FIELD RESEARCH



# GETTING TO THE FIELD



- The challenges:**
- Get funding
  - Design research method
  - Do logistics - from travels to making appointments  
... and all that in just two weeks!



# THANK YOU, CROWD-FUNDERS!

Disaster Research for the Philippines Project

Campaign Home Updates / 5 Comments / 1 Funders / 44



€3,394<sup>EUR</sup>

Raised of €2,500 Goal

0 time left

Flexible Funding  
This campaign has ended and will receive all funds raised. Funding duration: November 29, 2013 - January 07, 2014 (11:59pm PT).

Select a Perk for your contribution



Elena Rapisardi • **Jan Pehrsson: PDC-ARGOS** • **Frada Burstein** • **Gisli Olafsson: NetHope, Inc.** • Anonymous • Anonymous • Victor Banlus • Janie Desjardins • Lizy Meesters • Johan Blondelle • **Geert Gijs: B-FAST and Campus Vesta** • **Jaap van den Herik** • Anonymous • Nicolas Waern • Anonymous Contributor • Simon French • B Padjé • Frank Fiedrich • Razvan Bot • **Matthieu Lauras & Frédéric Benaben: Ecole de Mines Albi** • Undisclosed • Andy Vidan • NXT Generation • S Scherr • **S.E Bjorling** • **Clusters Bvba** • Roxanne Hiltz • Bert Bruggemans • Lieven Rijckaert • **Safety Centre Europe (SCE)** • **Sarto LeBlanc** • W Jong • P Holemans • **Kees Nieuwenhuis** • Anonymous • Kenny Meesters • **Massimo Mecella: Sapienza, Roma** • Louiqa • Jonas Landgren • Jozef Ristvej • W Kleijer • Luc Bruggemans • **O. Vybornova** • Anonymous

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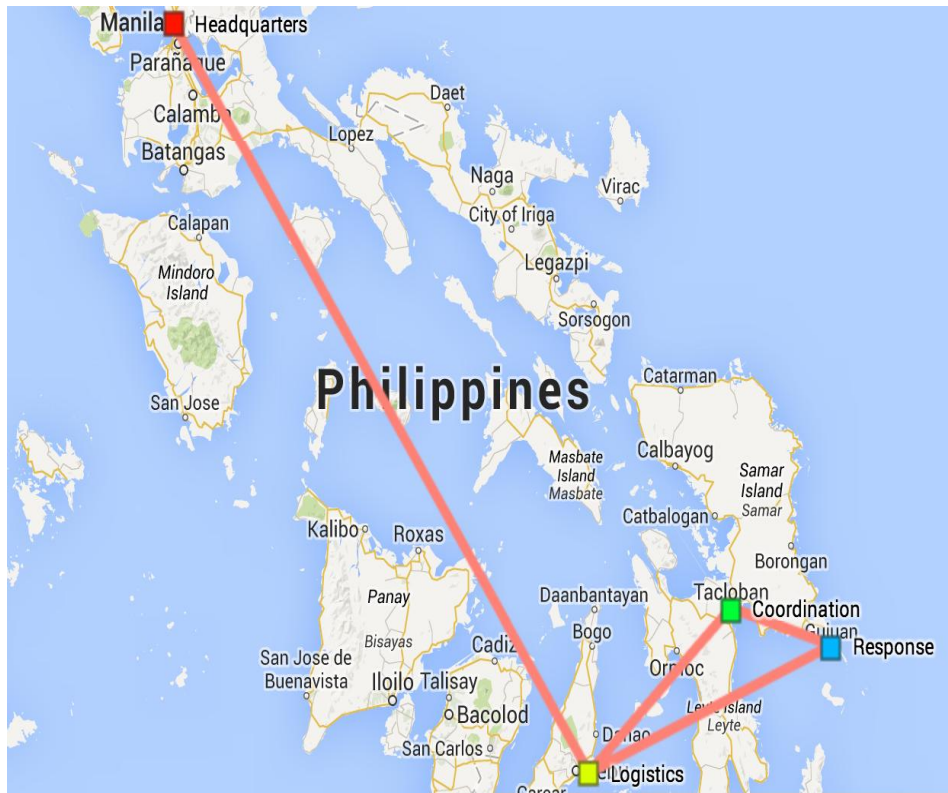
# THANKS, SUPPORTING ORGANIZATIONS



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# FIELD ITINERARY: OUR PATH TO HAIYAN



**Manila** (Dec 12-15)

*Headquarters and the political dimension*

**Cebu** (Dec 15-17)

Logistics and the way to recovery

**Tacloban** (Dec 17-19)

*Coordination in the field*

**Guiuan** (Dec 19-21)

*Ongoing response*

# DRL FIELD TEAM

**Dr. Bartel Van de Walle: Team Lead**

Research in Humanitarian Information Systems for Sensemaking and Decision Support

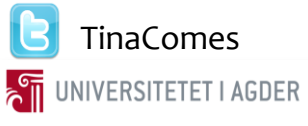


 bvdwalle




**Dr. Tina Comes: Communication and Scientific Coordination**

Research in Decision Support for Risk Management and Logistics



**Kenny Meesters, MSc**  
Research in Impact Evaluation

 K\_Meesters



**Dr. Marc van den Homberg**  
Research focus on the NGO and beneficiary perspective



 MarcvdHomberg





# DRL REACHBACK SUPPORT



## **Dr. Jennifer Chan: Reachback Lead**

Research Design, Spot Analyses and Support in Logistics and Communication

 JenniferChan7



## **Helen Campbell: Responder Involvement**


Spot Analysis and data curation

 MapAction



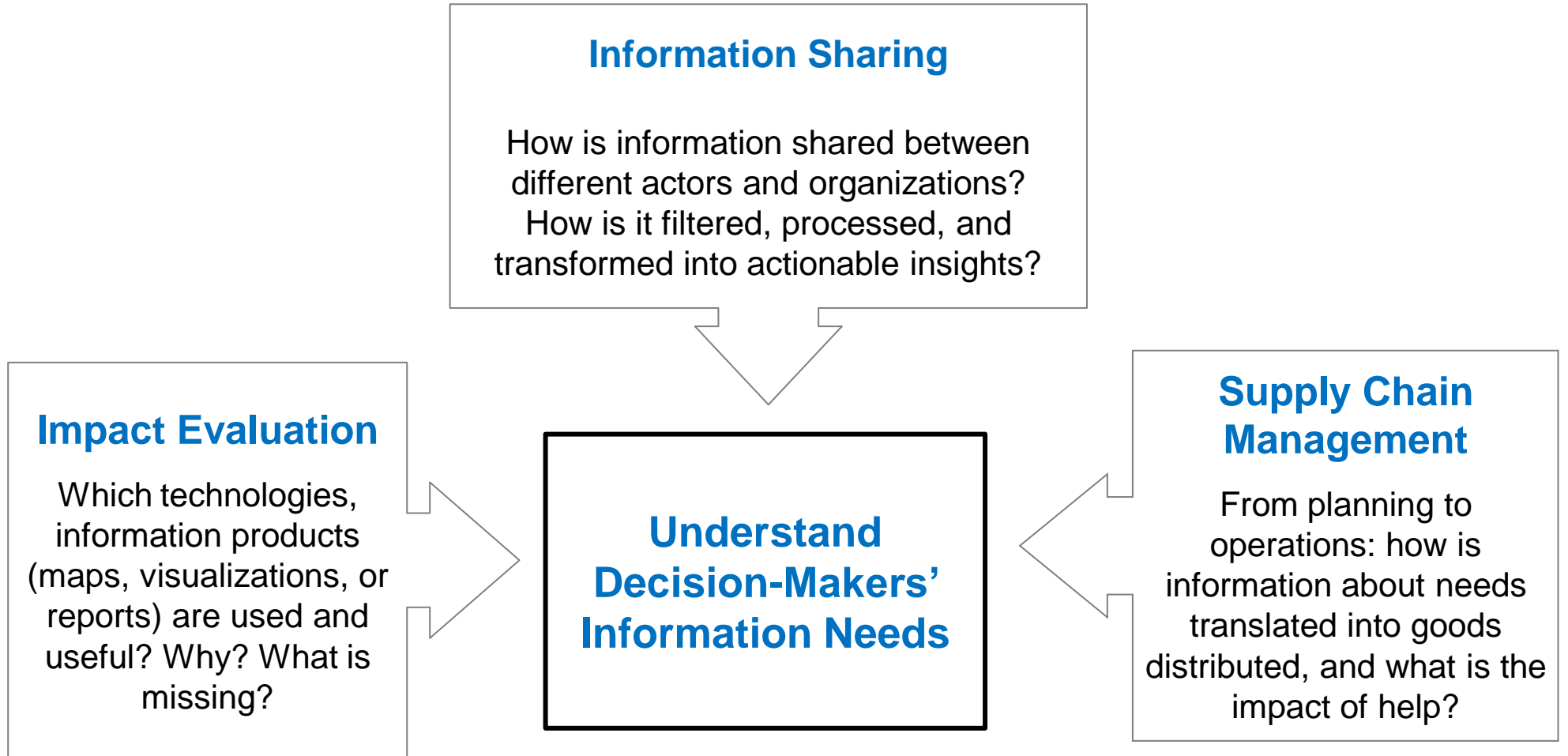
## **Bert Bruggemans: Practitioner Perspective**

Digital Humanitarian Network, safety and security support, social media and crowd funding

 BertBruggemans



# DRL RESEARCH OBJECTIVES



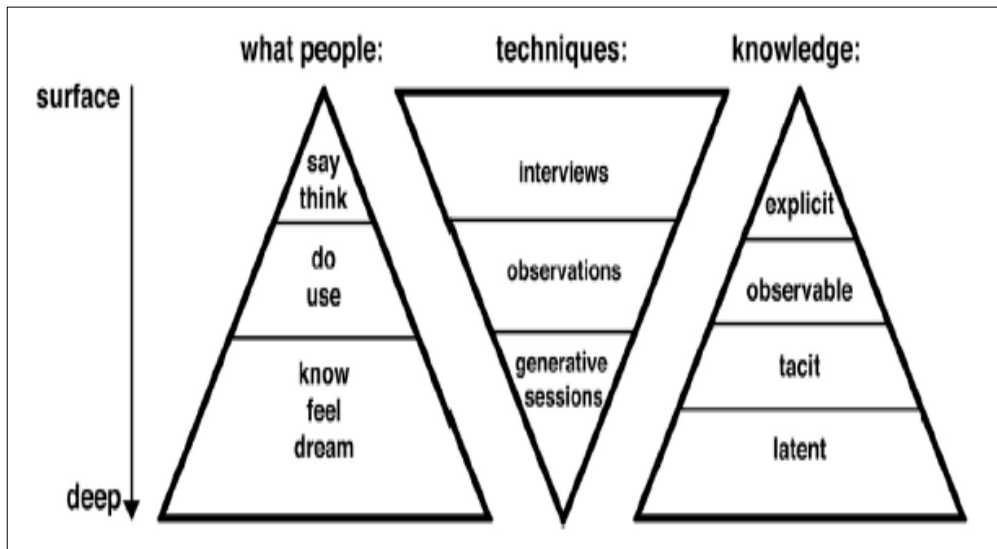
# RESEARCH DESIGN CHALLENGES



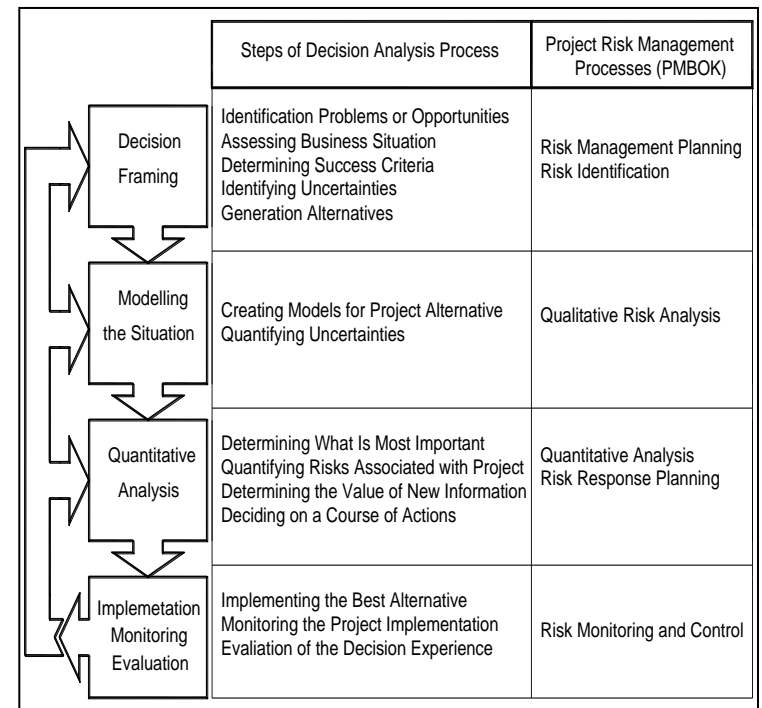


# TRANSDISCIPLINARY FIELD RESEARCH

Extend research methods such that they can be applied in the field:  
using a mix of methods and techniques from different fields



*IS research methods*



*A Decision Support Process*

# ... IN THE FIELD



**35 Interviews:** Decision-Makers, Information Managers, Officials, Field staff



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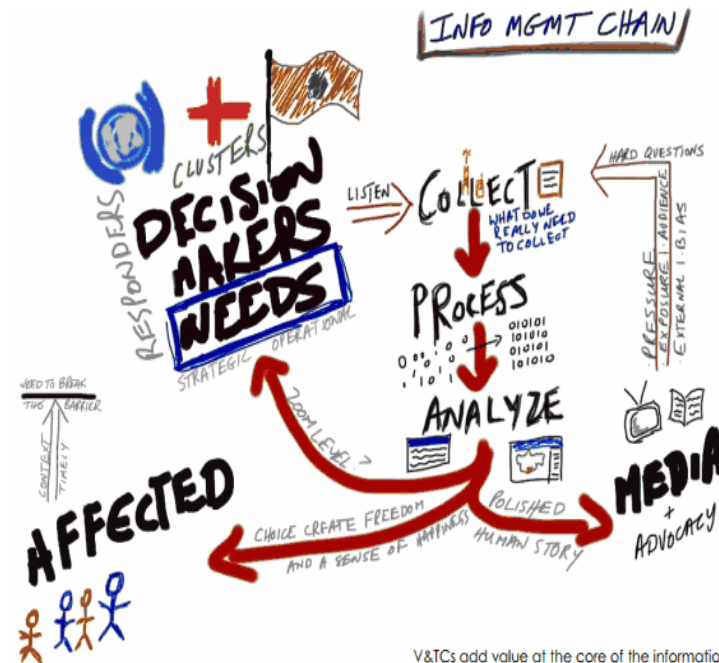




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# ADDRESSING DECISION MAKERS NEEDS

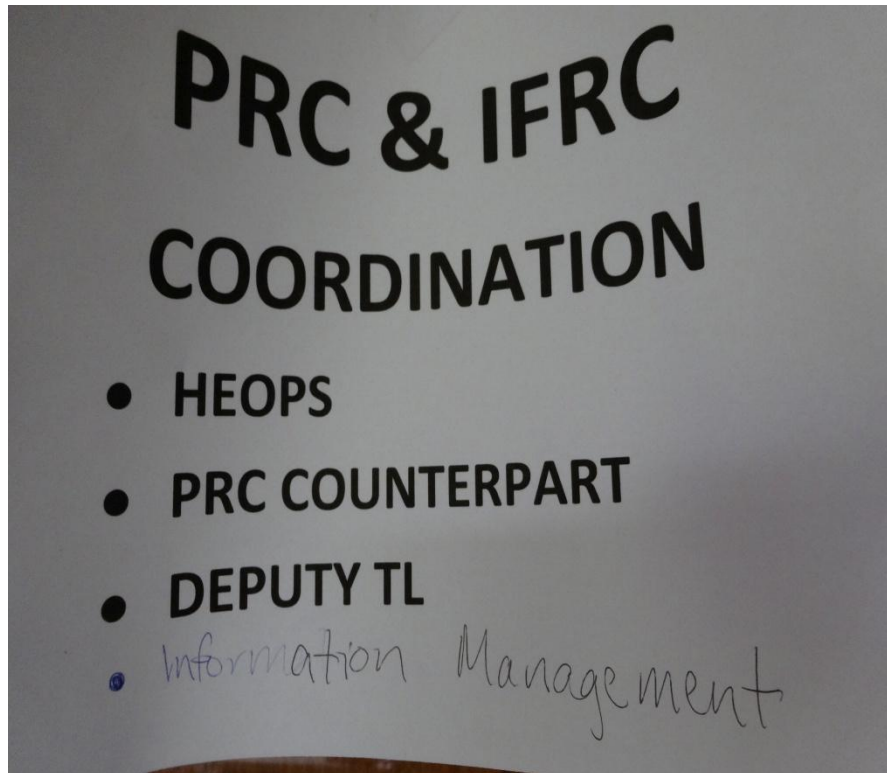


V&TCs add value at the core of the information management chain: the collection, processing, and analysis of data.  
Information Management Chain. Andrej Verity, 2010.

“Information is often not perceived as the most urgent or most vital. But without information there is no response, no help.”

Interview Radyo Bakdaw

# INFORMATION MANAGEMENT



*“We are providing information to donors and Headquarters. We are only feeding the beast...”*

Interview in Manila

**Information managers don’t understand themselves as decision-makers.**

*“This is the information disaster. Just too much information.”*

Interview OSOCC Guiuan

**Unclear to whom and for what purpose information is provided.**

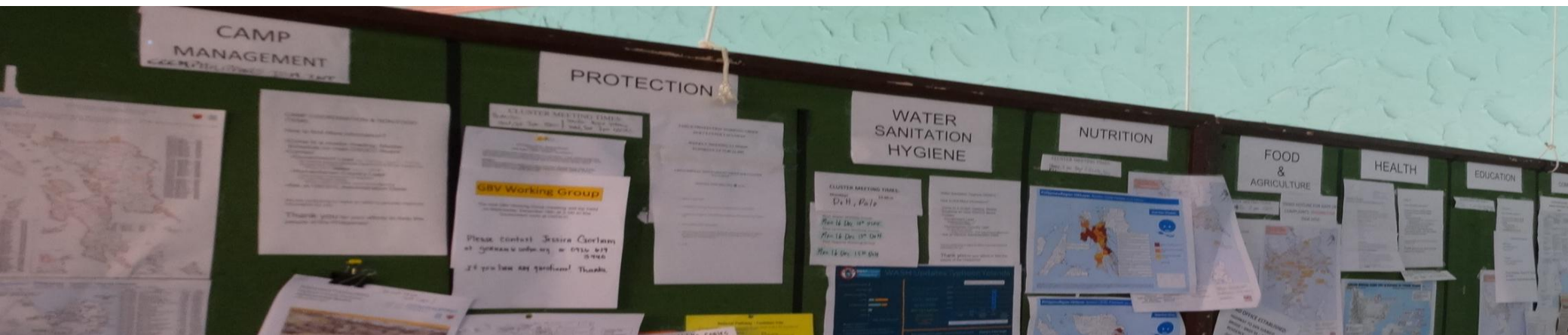
IM key function?!



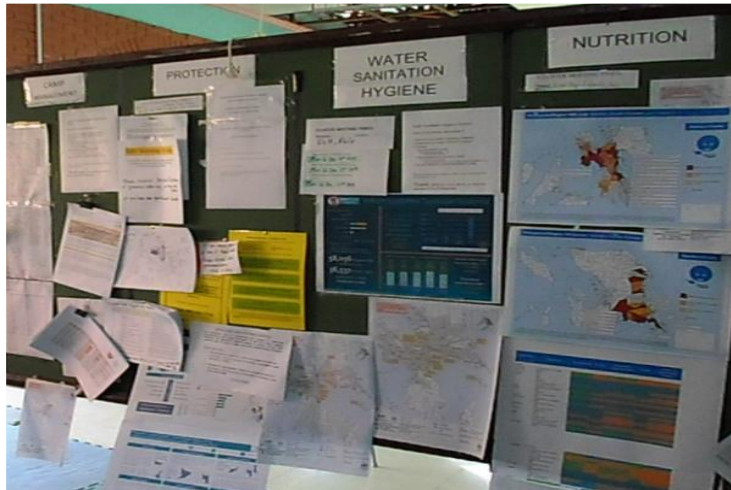
# INFORMATION MANAGEMENT

## A way ahead

- Strengthen the role of IM as core function
- Provide teaching and training for IMO's
- Target decision-makers' needs and answer specific problems within and across clusters and organizations
- Distinguish operational and strategic function of information and tailor products accordingly



# INFORMATION SHARING



**Information products** used are hard to update, monitor and track with respect to their use and relevance

- › Maps
- › Paper-based lists
- › Whiteboards



## Communication

Technology:

- › Radio
- › Dropbox & skype
- › Sat phones and walkie talkies

Often direct and bilateral communication

# INFORMATION SHARING

## A way ahead

- Facilitate information sharing
- Establish clear communication lines
- Tagging and labeling of information including time stamps and decisions such that it can be retrieved and update





# UNDERSTANDING NEEDS



- Needs are assessed and communicated via a Multi-Cluster Rapid Assessment (MIRA)
- Complemented by assessments of various organizations and local governments
- Repeated assessments without providing concrete help are perceived as burden.

*“In the next disaster we should not assess needs. full stop.”*

Interview Manila

# UNDERSTANDING NEEDS

## A way ahead

- Understand and monitor potential threats *before* they become acute
- Communicate with the population and local governments and decision-makers
- Monitor impact of response and trends, concerns of the population and the environment – and respond adequately
- Need for
  - Support to filter and process relevant information that requires changes in the current response
  - Transparent communication and monitoring



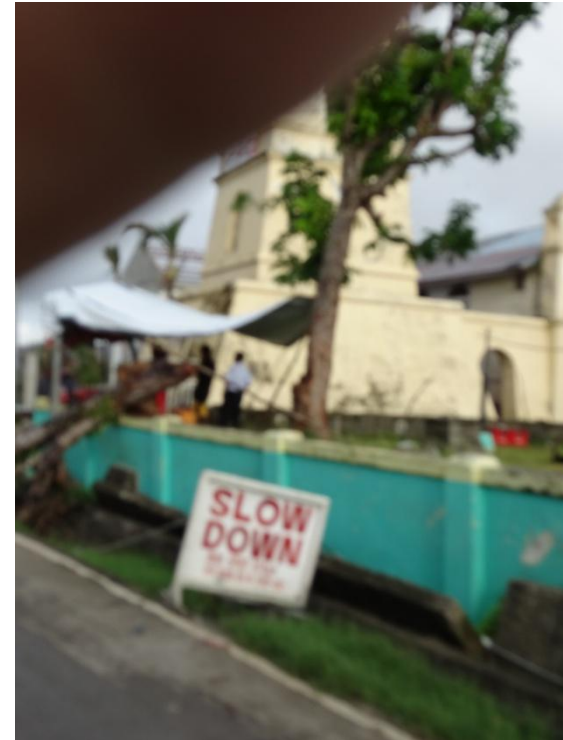
# FROM RELIEF TO RECOVERY



*Understand the impact of delivering aid, the expectations and needs it creates and how the needs evolve over time to design response that leads to recovery.*



# RISK ACCELERATORS



*We need to think in terms of risk accelerators. For that, we need to get after information.*

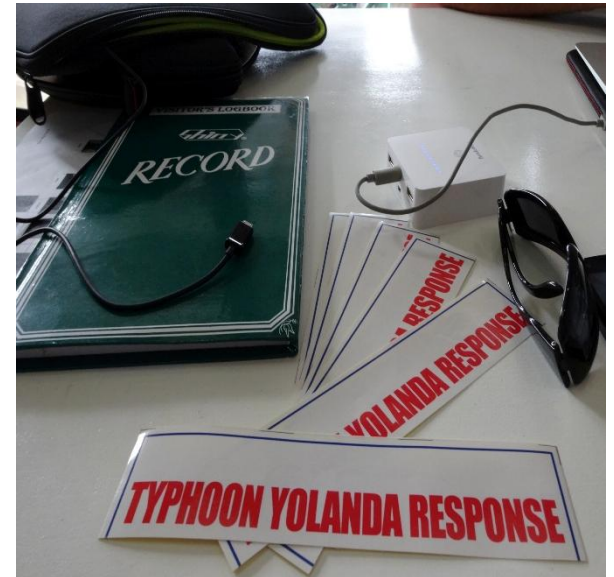
*Jesper Lund*



*“Then as dynamic in the disaster, that’s when you also need to be that step ahead “ -- Jesper Lund, Head of OCHA Operations*



# NEXT STEPS





# WE KEEP (RE)SEARCHING



- Field trip for UN-OCHA to Amman in May 2014 – report coming out soon
- Future work with Cordaid and MapAction on impact assessment and coordination
- Work on coordination and Humanitarian Logistics with INSEAD

# ISCRAM SUMMERSCHOOL

Tilburg Sustainability Center, Tilburg University, The Netherlands, 13-22 August 2014

## Summer School: Serious Gaming for Disaster Resilience

The Dutch research institute Tilburg Sustainability Center (TSC) is proud to host the ISCRAM Summer School 'Serious Gaming for Disaster Resilience'. PhD Candidates and practitioners will benefit from an intense, interactive learning experience on the use of information and supply chain management in humanitarian crisis response. Lectures and hands-on workshops will lead up to a two-day augmented reality game that will test the participants' approaches to and insights on humanitarian information management and crisis response.



 [WWW.DISASTERRESILIENCELAB.ORG/SUMMERSCHOOL.HTML](http://WWW.DISASTERRESILIENCELAB.ORG/SUMMERSCHOOL.HTML)

**YOU CAN STILL SEND YOUR STUDENTS 😊**

# Hard Times Bring us All Together...





Thank you





**QUESTIONS?  
GET IN TOUCH !**



bvdwalle

bvdwalle@gmail.com

<http://www.disasterresiliencelab.org/>