

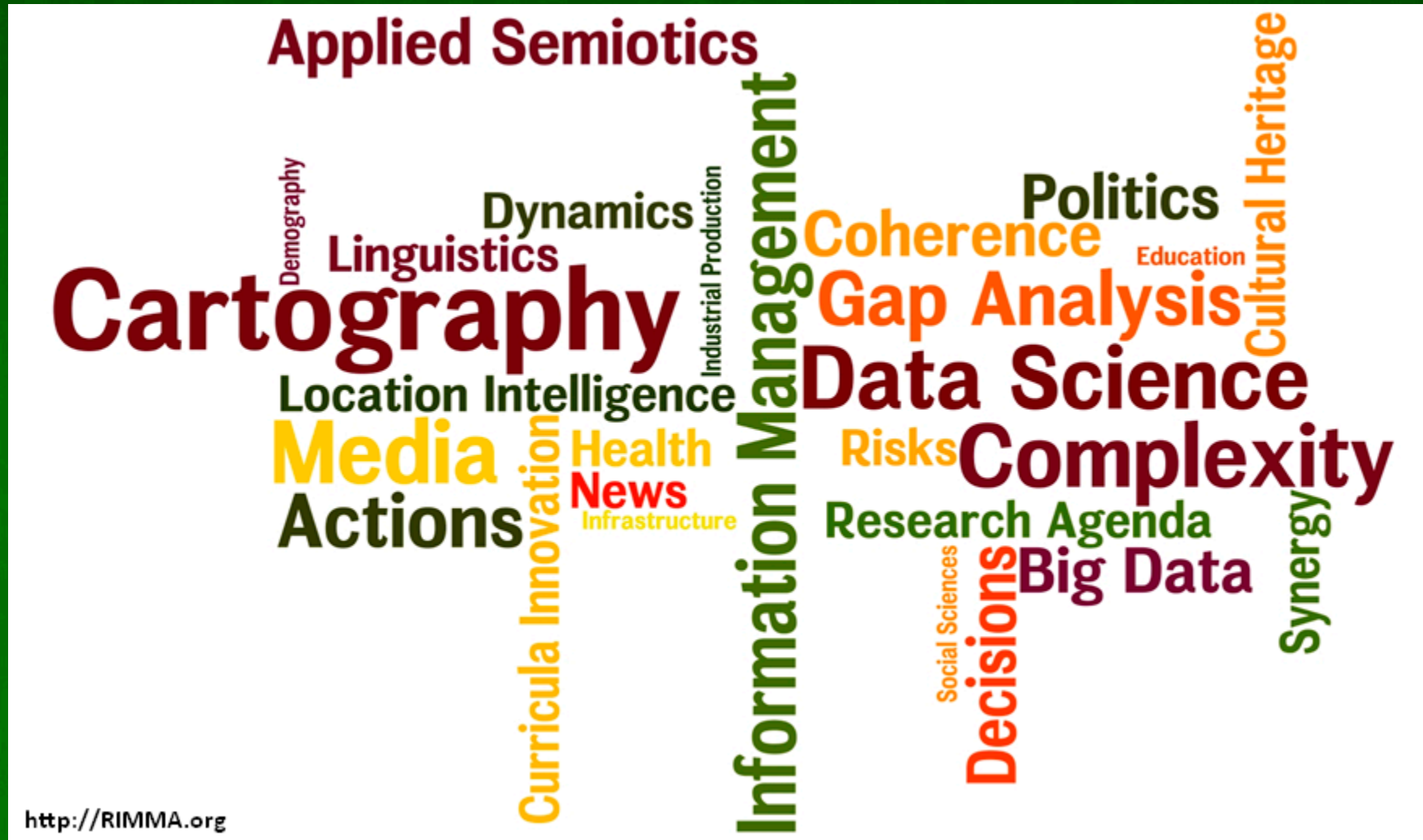
Disaster Risk Information Management Deficits

- Stakeholders in and after the Central European Flood Disaster of July 2021 -

ENVIROINFO2021 Special Track on
„Advances and Gaps in Risk Information Management”
- Challenges in Implementing the UN SENDAI Framework -

Berlin International University
2021-09-27

Horst Kremers
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"[...] vernichtete die Überschwemmung gewissermassen aller grossen Flüsse von ganz Europa und der kleinen Nebenflüsse Ortschaften, Menschen, Bäume, Äcker, Wiesen von Grund aus und trugen sie an den unteren Lauf fort." (Johannes von Viktring)

the flooding of all the great rivers of all Europe and the small tributaries destroyed villages, people, trees, fields, meadows and carried them away to the lower course

<https://www.spektrum.de/news/die-groesste-flut/1197755>

The most outstanding, historically documented flood catastrophe in Central Europe took place in the summer of 1342 - six years before the Grassen Plague of 1348.

Torrential and widespread precipitation over Central Europe triggered a flood on Magdalen's Day (22nd).

Magdalen Day (July 22) a flood wave, the height and extent of which since then has not been observed, left behind an immense picture of damage in all Central European river basins. The bridges in Regensburg, Bamberg, Würzburg, Frankfurt, Dresden and Erfurt were destroyed, and the water inundated the city centers with their squares, churches and town halls.

It can be assumed that tens of thousands of people drowned in the floods.

In rural areas, there was extremely heavy surface runoff, the floodwater carved deep gorges and sand soil erosion reached catastrophic levels.

No single event in historical time had such an impact on the landscape surface of the catchment areas of the Danube, Neckar, Main, Lahn, Rhine (below the mouth of the Neckar), Weser, Elbe and Eider as this flood.

In large areas, the harvest was destroyed, and there was famine and starvation.

The floods were among the severest natural disasters in Europe in the last 1,000 years, and the changes in relief, soil of the relief, the soils and thus the land use still have an effect today.

Translated
source:

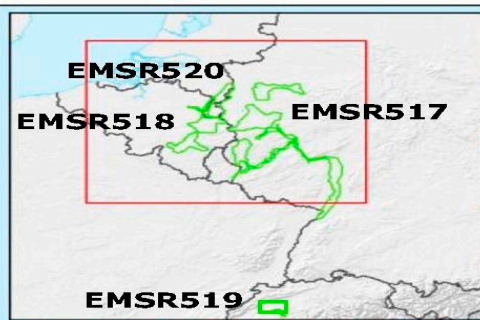
Eveline Zbinden: *Das Magdalenenhochwasser von 1342 - der "hydrologische Gau" in Mitteleuropa.*

Wasser Energie Luft, Fachzeitschrift für Wasserwirtschaft 103 (2011) (3) . Schweizerischer Wasserwirtschaftsverband, https://issuu.com/swv_wel/docs/wel_3_2011

source: https://de.wikipedia.org/wiki/Hochwasser_der_Ahr_am_21._Juli_1804

Between 12-15 July 2021, a low pressure system stalled across Europe bringing excessive rainfall in a short period to a number of countries including

- Germany,
- Netherlands
- Luxembourg,
- Belgium,
- France,
- Switzerland,
- Austria



© European Union, 2021. Map produced by JRC. The boundaries and the names shown on this map do not imply official endorsement or acceptance by the European Union.

Impact overview in Belgium



Source: [NCCN](#), as of 16 Jul at 15.00 UTC

Impact overview in Germany



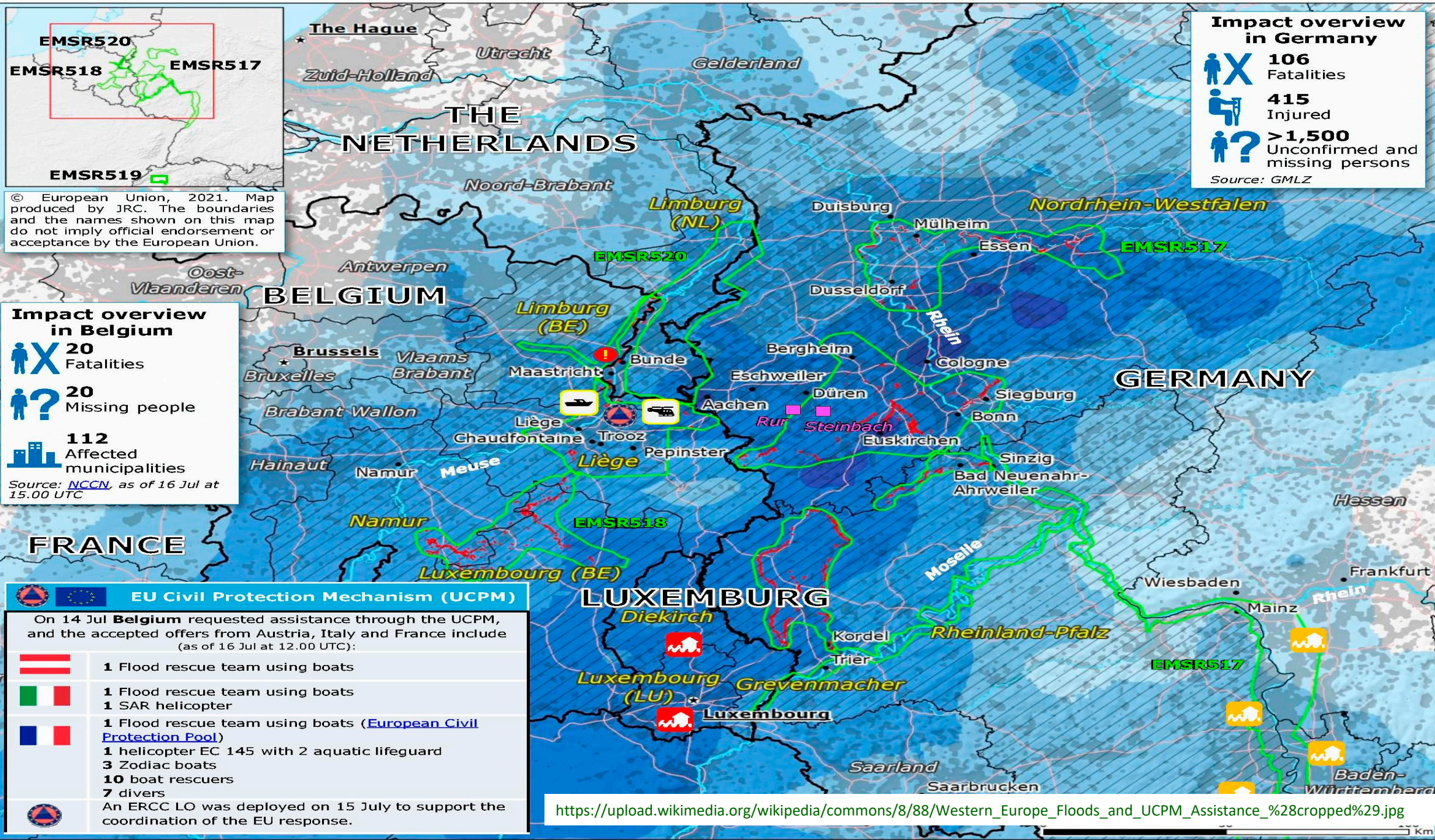
Source: GMLZ

FRANCE

EU Civil Protection Mechanism (UCPM)

On 14 Jul **Belgium** requested assistance through the UCPM, and the accepted offers from Austria, Italy and France include (as of 16 Jul at 12.00 UTC):

	1 Flood rescue team using boats
	1 Flood rescue team using boats 1 SAR helicopter
	1 Flood rescue team using boats (European Civil Protection Pool) 1 helicopter EC 145 with 2 aquatic lifeguard 3 Zodiac boats 10 boat rescuers 7 divers
	An ERCC LO was deployed on 15 July to support the coordination of the EU response.



https://upload.wikimedia.org/wikipedia/commons/8/88/Western_Europe_Floods_and_UCPM_Assistance_%28cropped%29.jpg

- ref: Declaration on the Commemoration of the Seventy-fifth Anniversary of the United Nations
<https://www.un.org/pqa/74/wp-content/uploads/sites/99/2020/06/200625-UN75-highlight.pdf>

World Summit on the Information Society

The ability for all to access and contribute information, ideas and knowledge is essential in an inclusive Disaster Risk Reduction informed society.

The sharing and strengthening of local, national and global knowledge for Disaster Risk Reduction DRR can be enhanced by

- **removing barriers to equitable access** to participative Governance
- **removing barriers to** information for economic, social, political, health, cultural, educational, and scientific needs in all disaster phases
- facilitating access to domains knowledge, information and data

source: <https://www.itu.int/net/wsis/docs/geneva/official/dop.html>

Stakeholders

Floods have caused devastating damage in the Ahrweiler district of Rhineland-Palatinate.

Experts say:

The disaster was predictable.

Why did so many people have to die anyway?

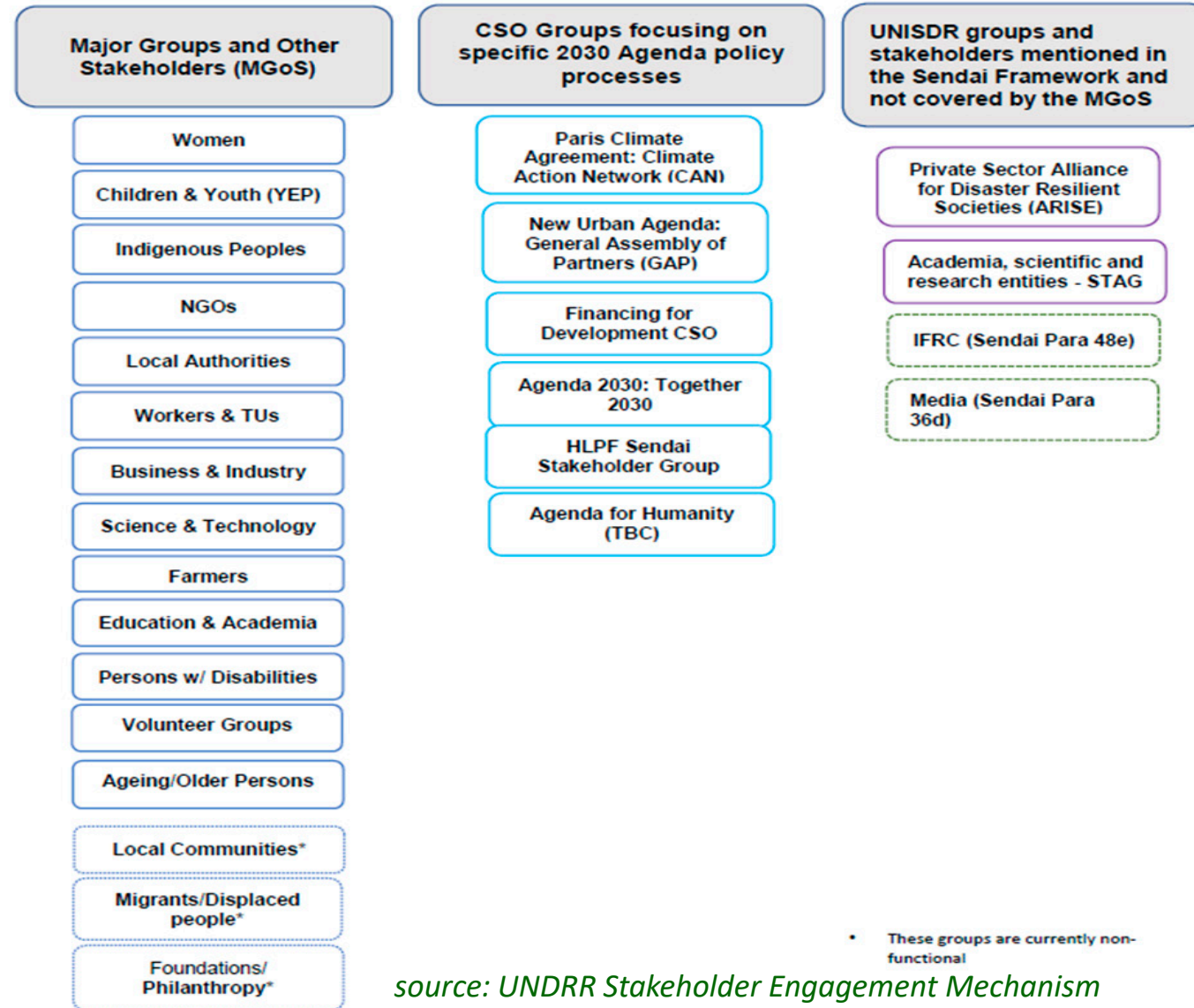
These control obligations include phases of retrace, audit, reexamination, analysis, avoidance of malpractice, and indications on weaknesses/vulnerabilities.

Knowledge Sharing and Communication Plan

- Historic DRR Knowledge
- Phases of Disaster and stakeholder knowledge, information and data demands
- Indigenous Knowledge documentation, communication and use in DRR
- Knowledge Collection
- Knowledge use in Phases of Disaster Cycle
- Knowledge generated during Phases of Disaster Cycle
- Decision Support from Formally Structured Knowledge
- Knowledge Writeup / Archiving
- Knowledge Mining
- Defining Knowledge Deficits

source: current discussion at UNDRR Stakeholder Engagement Mechanism

Stakeholder Advisory Group Visual



source: UNDRR Stakeholder Engagement Mechanism

Post-Tropical Cyclone Teresa Public Advisory

[Home](#) [Public Adv](#) [Discussion](#) [Wind Probs](#) [Graphics](#) [Archive](#)

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WTNT34 KNHC 252041
TCPAT4

BULLETIN
Post-Tropical Cyclone Teresa Advisory Number 5
NWS National Hurricane Center Miami FL AL192021
500 PM AST Sat Sep 25 2021

...TERESA DEGENERATES INTO A REMNANT LOW...
...THIS IS THE FINAL ADVISORY...

SUMMARY OF 500 PM AST...2100 UTC...INFORMATION

LOCATION...34.4N 64.3W
ABOUT 150 MI...240 KM N OF BERMUDA
MAXIMUM SUSTAINED WINDS...35 MPH...55 KM/H
PRESENT MOVEMENT...E OR 90 DEGREES AT 5 MPH...7 KM/H
MINIMUM CENTRAL PRESSURE...1010 MB...29.83 INCHES

WATCHES AND WARNINGS

There are no coastal watches or warnings in effect.

DISCUSSION AND OUTLOOK

At 500 PM AST (2100 UTC), the center of Post-Tropical Cyclone Teresa was located near latitude 34.4 North, longitude 64.3 West. The post-tropical cyclone is moving toward the east near 5 mph (7 km/h). A turn to the northeast is expected this evening.

Maximum sustained winds are near 35 mph (55 km/h) with higher gusts. The remnant low is expected to dissipate Sunday morning.

The estimated minimum central pressure is 1010 mb (29.83 inches).

HAZARDS AFFECTING LAND

None

NEXT ADVISORY

This is the last public advisory issued by the National Hurricane Center on Teresa. Additional information on this system can be found in high seas forecasts issued by the National Weather Service, under AWIPS header NFDHSPAT1 and WMO header F2NT01 KWBC, and online at ocean.weather.gov/shtml/NFDHSPAT1.php

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Forecaster Hagen/Latto

source: <https://www.nhc.noaa.gov/text/refresh/MIATCPAT4+shtml/282050.shtml>

Berlin, 2021-09-27

further Information Demands in Post- disaster Phase

- social aspects of decisions made
- recover expectancy and the relationship with race, education and poverty
- local and national welfare organizations
- Technical and material aid in reconstruction;
- Assistance in seeking financial aid;
- Monitoring

- Property Owners Associations
- Chambers of Commerce
- Chambers of Health
- Chambers of Civil Engineers
- Consumer organizations
- Sociologists, Psychologists and Behaviour professionals NGOs
- advancing policies that benefit children
- Religious organizations and communities
- Nurses (practitioners, Nurses professional Associations)
- patients advocacy
- children in foster care
- Salvation Army
- Health care and nursing services providers organizations and associations
- School Services / Parent-Teacher Associations PTAs
- Medical care service organizations
- centers for community research & service
- Food and nutrition support

Issues of Governance

- critical thinking
- gaps and deficits analysis
- decision, action, and control cycle support
- transparent analysis
- compliance to legal and technical regulations and other boundary conditions
- include financial structures, budgets and the use of financial instruments in reporting and control
- constructive goal-reaching and effectivity control
- guidance on human resources (quantity, future competence levels)
- avoidance of malpractice
- extend concepts of FAIR information principles to support transparency goals and accountability
- extensive documentation and reporting obligations
- quality indications on confidence, weaknesses, uncertainties, error propagation, and vulnerabilities

- defining the basic elements of coherence
- consequences for holistic information management across programs and conventions
- rising awareness on the key role of stakeholder driven participative information governance needed to foster of cross-domain and cross-organizational national as well as international implementations.

Timeliness implementations guided by the principles of holistic information management are key prerequisites in societal, natural, technical, humanistic and ethical aspects for the future of people and planet.

Aims

Coherence and Accountability Improvements for Information Society

WARSAW INTERNATIONAL MECHANISM FUNCTIONS

The WIM promotes the implementation of approaches to address loss and damage associated with the adverse effects of climate change by undertaking the following functions:



Besides multi-stakeholder inclusion and discussion in the development of strategies, implementing a concept of follow-up roadmap / action-plan is to be anticipated already in preparatory phases:

- negotiate for standards for situation/action phases definition
- make Information Management elements a prerequisite of comprehensive reporting and (annual) National Reporting (National Focal Points for UN Instruments)
- specify a priori documentation requirements according to UN Instruments extensive requirements
- enable content search by timestamp, time period, content or actor group involved (define information management elements in strong anticipation of information use)
- check with all stakeholders for potential fraud in decisions and actions in operation as well as in administration, financial and private sector domains
- implement awareness on best practice ethical principles

in the design and implementation of policies, plans and standards.

There is a need for the public and private sectors and civil society organizations, as well as academia and scientific and research institutions, to work more closely together and to create opportunities for collaboration,

- Enable steps in direction of institutionalizing participative Governance of RISK Information, including periodic reporting as well as independent auditing according to holistic management principles on all levels. Alignment of interest and operational role of different stakeholder groups is achieved by open participative procedures.
- Audit against the full requirements of the UN Instruments text and encourage NGOs to document their stakeholders view and recommendations from situations in crisis / disaster and from the aftermath situation
- Consider the role of UN SENDAI National Platforms in cross-domain and inclusive participation, especially for and with most vulnerable groups and socio-economic effects
- Draw from existing previous long-term experiences in the broad fields of environmental information and geoinformation

Since the phrase was coined in May 2013 in the report of the High-Level Panel of Eminent Persons on the post-2015 Development Agenda, the “data revolution” has come to mean many things to many people. Here, we take it to mean the following:

➤ An explosion in the volume of data, the speed with which data are produced, the number of producers of data, the dissemination of data, and the range of things on which there is data, coming from new technologies such as mobile phones and the “internet of things”, and from other sources, such as qualitative data, citizen-generated data and perceptions data;

- ## ...The data revolution for sustainable development is:

- » The integration of these new data with traditional data to produce high-quality information that is more detailed, timely and relevant for many purposes and users, especially to foster and monitor sustainable development;
- » The increase in the usefulness of data through a much greater degree of openness and transparency, avoiding invasion of privacy and abuse of human rights from misuse of data on individuals and groups, and minimising inequality in production, access to and use of data;
- » Ultimately, more empowered people, better policies, better decisions and greater participation and accountability, leading to better outcomes for people and the planet.

The United Nations Secretary-General's Independent Expert Advisory Group on a Data Revolution for Sustainable Development (IEAG) <http://www.undatarevolution.org>

UN 2021 - Our Common Agenda

With the dawn of the nuclear age, humanity acquired the power to bring about its own extinction.

Continued technological advances, accelerating climate change and the rise in zoonotic diseases mean the likelihood of extreme, global catastrophic or even existential risks is present on multiple, interrelated fronts.

Being prepared to prevent and respond to these risks is an essential counterpoint to better managing the global commons and global public goods.

source: *Our Common Agenda – Report of the Secretary-General, UN Geneva 2021*, https://www.un.org/en/content/common-agenda-report/assets/pdf/Common_Agenda_Report_English.pdf

UN 2021 - Our Common Agenda

States remain central to our collective ability to meet global challenges and have unique responsibilities in the multilateral system, while also acknowledging that solutions increasingly depend on the private sector and non-State actors, who should therefore be part of the deliberations and accountable for their commitments.

The role of **parliaments, cities and other subnational authorities** is particularly being recognized in inclusive approaches, with, for example, voluntary local reviews of Sustainable Development Goal implementation providing a model on which to build.

Civil society needs to remain part and parcel of our work across sectors and in multilateral forums. In the light of its power to shift the needle significantly on many of our most critical challenges, inclusion and accountability of **the private sector** are essential.

Data Strategy of the Secretary-General for Action by Everyone, Everywhere

with Insight, Impact and Integrity

2020-22

Suggested R&D Domains and Projects

proposals for R&D Domains and selected projects that are needed to overcome current deficits:

- Local / National / Regional / Global RISK Observatory

Feasibility Study

(long-term organization to compile historic information, develop Disaster Documentation Standards (contents, formats, use), digitize historic documents for ad-hoc situation support, integrate with operational disaster information actors, compile / provide information to stakeholders etc.

- Roles and Accountability in and after Disaster Operations

Management study, including legal issues

In its “Guiding Principles”, the UN SENDAI Framework states:

III. (e) Disaster risk reduction and management ... requires the full engagement of all State institutions of an executive and legislative nature at national and local levels and a clear articulation of responsibilities across public and private stakeholders, including business and academia, to ensure mutual outreach, partnership, complementarity in roles and accountability and follow up

The scope and all facets of Roles and Accountability needs transparent clarification because of the very complex nature of small and large scale cascading disasters.

>>> for more detailed discussions on innovation in terms of RISK Information Management see <http://RIMMA.org>

vfdb President Dirk Aschenbrenner said therefore to the project of the commission:

"The criticism is not surprising.

The evaluations of similar events have been repeated for years and come to similar findings each time.

The approaches to improvement are capable of consensus, but they are implemented too late, too little or not implemented at all."

vfdb – German Association for the Promotion of Fire Protection

translated from source:

BehördenSpiegel Newsletter „Rettung, Feuer, Katastrophe“ Nr. 43, Sept. 2021, ISSN 2699-9749, http://daten.behoerderspiegel.eu/nl/nl_kata_43.pdf

join us today !

**Community and Interdisciplinary International Conference Series on
RISK Information Management, Risk Models and Applications**



The RIMMA Community on Risk Information Management, Risk Models, and Applications will enable sharing of best practices as well as giving space for discussing methodological problems in risk (NaTech) and security (CBRNE) modeling from the information systems point of view for all phases of the disaster management cycle.

What we agree today, will affect the sustainability of our planet as well as the welfare of generations for decades to come. Through reinvigorated global action and by building on the progress achieved in the last 75 years, we are determined to ensure the future we want.

To achieve this, we will mobilize resources, strengthen our efforts and show unprecedented political will and leadership.

We will work together with partners to strengthen coordination and global governance for the common future of present and coming generations.

ref: Declaration on the Commemoration of the Seventy-fifth Anniversary of the United Nations, 2020
<https://www.un.org/pga/74/wp-content/uploads/sites/99/2020/06/200625-UN75-highlight.pdf>

are we acting fast enough?

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