

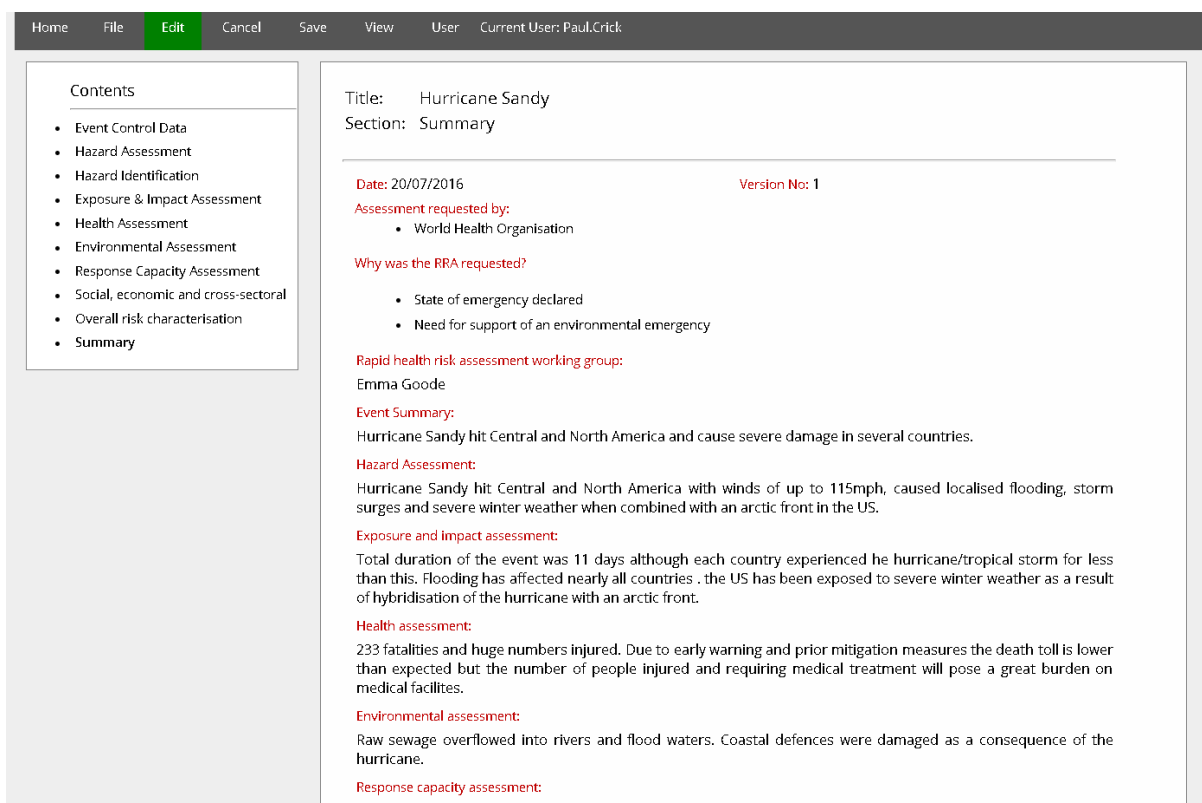
European Multiple Environmental Threats Emergency Network (EMETNET) Newsletter January 2018

The EMETNET project is developing a simple, efficient and robust methodology to enable the rapid assessment of risks and impacts of environmental emergencies. The risk assessment will provide a rapid overview of the potential and actual health and environmental impacts of the disaster, including cross-sectoral and societal effects. This can be used to support the selection of experts and assets deployed to affected regions, to provide a snapshot assessment to experts en route to disaster zones and to support the transmission of specific information to and from the disaster zone to update the situational picture. It will also aid defensible decision-making, communication, planning and risk management. A network of experts is being set up to carry out this rapid risk assessment. This network will also be available to provide back-office support to experts in the field, enabling them to have rapid access to information and expertise. As we are nearing the end of the project, we would like to give you an update on project activities.

WP2: The Rapid Risk Assessment (RRA) Methodology and Impact Assessment

After a successful 2nd Engagement workshop in Utrecht, the Netherlands, on the 3rd and 4th October 2017, the project team are currently working towards the final version of the Rapid Risk Assessment (RRA) template and methodology and an EMETNET Impact Assessment. Workshop participants gave constructive and useful feedback on both the rapid risk and impact assessments, which is being taken into account in the final versions. Evaluation feedback has shown us that an online RRA form is preferred over a word document and we have now produced an online, electronic version of the RRA template.

The RRA has already been through several iterations and was presented at two previous workshops in 2016; the first in Oxford, UK and the second in Amersfoort, the Netherlands. The RRA was then tested in two exercises; a one day exercise on 21st March 2017 and a two day exercise on 24th and 25th October 2017.



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- **Summary**

Title: Hurricane Sandy
Section: Summary

Date: 20/07/2016 Version No: 1

Assessment requested by:

- World Health Organisation

Why was the RRA requested?

- State of emergency declared
- Need for support of an environmental emergency

Rapid health risk assessment working group:
Emma Goode

Event Summary:
Hurricane Sandy hit Central and North America and cause severe damage in several countries.

Hazard Assessment:
Hurricane Sandy hit Central and North America with winds of up to 115mph, caused localised flooding, storm surges and severe winter weather when combined with an arctic front in the US.

Exposure and impact assessment:
Total duration of the event was 11 days although each country experienced the hurricane/tropical storm for less than this. Flooding has affected nearly all countries. the US has been exposed to severe winter weather as a result of hybridisation of the hurricane with an arctic front.

Health assessment:
233 fatalities and huge numbers injured. Due to early warning and prior mitigation measures the death toll is lower than expected but the number of people injured and requiring medical treatment will pose a great burden on medical facilities.

Environmental assessment:
Raw sewage overflowed into rivers and flood waters. Coastal defences were damaged as a consequence of the hurricane.

Response capacity assessment:
Critical capacity:

Figure 1: Electronic RRA form – example of a summary overview of a RRA

The Impact Assessment is under development. A 'mock-up' of the Impact Assessment was presented to participants at the Engagement workshop and was tested in the October exercise.

WP3: The Network of Experts

Identifying and inviting experts with the areas of expertise needed within the network is an ongoing process during the project. Through engagement with project stakeholders and experts, areas of expertise were identified which could be required to support deployed experts in the field. The areas of expertise which have been recognised so far and those already covered by the network are shown in Table 1. The network of experts currently contains 46 members from a number of European countries. The network has been tested in two exercises and could now function in pilot mode in the case of a real 'live' event.

In the recent Engagement workshop, participants explored the different roles and tasks of the ad hoc expert working group which would be convened to conduct a RRA in response to an environmental emergency. We also discussed how back-office support can best be delivered to experts deployed by the European Commission to an environmental emergency, and which means of activation and lines of communication would best facilitate this.

Technical expertise: cross-cutting	Technical expertise: scenario-specific	Environmental assessment	Public Health & Health Impact Assessment	Water and food	Risk / crisis mitigation	Aftercare & livelihood
Cartography & mapping (GIS)	Floods and flooding	Environmental science (water, air, land)	Public health science	WASH	Disaster response (CPM)	Clean-up / Recovery
Critical Infrastructure	Seismology	Fate and behaviour modelling (air pollution, aquatic systems)	Health outcome / Severity / Population Assessment	Drinking and surface water	Public health measures (shelter-in-place & evacuation)	Remediation
Structural engineering (e.g. dam stability)	Wildfires	Environmental sampling	Disaster medicine & care	Food safety	Decontamination (mass, personal)	Food security
Climatology	Volcanology	Environmental detection, identification & monitoring (field)	Emergency medical response & care	Water management	Disaster waste management	Water security
Meteorology	Ecology	Environmental detection, identification & monitoring (lab)	Environmental epidemiology			Biomonitoring
Hydrology	Oceanography	Meteorological Modelling	General toxicology			Psychosocial care
Wildlife	Marine biology	Eco / Environmental / Aquatic Toxicology	Clinical / Medical toxicology			Sociologists (gender experts, vulnerable groups, livelihood)
	Limnology (fresh water biology)		Signs and symptoms (toxidromes)			Fisheries / Pisciculture
	Oil spill response		Epidemiology			Agriculture
	Astronomy (space weather)		Points of entry (IHR)			Livestock

Table 1: Areas of expertise the EMETNET network should ideally cover and those currently covered by the network experts (highlighted in grey)

WP4: Exercises

The second of two EMETNET exercises was held on the 24th and 25th October 2017. Members of the network were encouraged to join in at the last workshop and they were asked to provide feedback on the tools and mechanism of action of the network. 17 experts joined the exercise over 2 days and there was an observer from the Emergency Response Coordination Centre. Experts and the project team had the opportunity to test out the new online, electronic version of the RRA template.

The incident scenario presented to the EMETNET ad hoc expert working group was a flooding incident after a dam collapse in Mosul, Iraq. In the scenario, several cities and towns downstream from the dam were flooded, killing a number of people, damaging homes, infrastructure and the environment. The working

group was asked to answer several critical questions on the first day of the exercise and to produce a RRA on the second day. The group split into a number of small sub-groups with each sub-group focussing on a specific question(s) depending on their area of expertise. The group worked remotely but collaboratively with the use of webconferencing facilities and a collaborative document sharing platform, which was used to fill out and exchange documents. The outputs from this exercise were a document containing the answers to the critical questions and a RRA.

The first exercise for the EMETNET project was held on the 21st March 2017, with 12 experts joining the EMETNET ad hoc expert working group for this incident. The incident scenario presented to the team was a heatwave affecting most of Europe throughout the months of July and August with extreme temperatures being recorded in south and central Europe. The heatwave led to a high death toll with particularly severe effects on refugee camps, large scale forest fires and a potential nuclear energy crisis in France. As with the most recent exercise, the expert working group split into sub-groups to answer the critical questions and contribute to the RRA.

The main observations from the EMETNET team and the experts were that the exercises were interesting and complex with everyone working well together despite a few minor technical difficulties. Observation and evaluation of both exercises have led to recommendations for improvement, both in the functioning of the network and in the RRA methodology.

What does the future hold?

We are currently looking into ways of continuing the network beyond the lifetime of the project and ensuring that the RRA methodology is adopted. Unfortunately, a proposal for implementation of the EMETNET outputs, which we submitted to DG ECHO under the 2017 call for proposals, was not granted funding, though we were on the reserve list. We are looking into submitting another proposal this year. The [Coordination of Assessments for Environment in Humanitarian Action Initiative](#), a joint initiative including UN Environment/OCHA Joint Unit (JEU), has shown an interest in our outputs. This Initiative is developing a Framework for Environment in Humanitarian Action, an online resource which could house the RRA tool. Furthermore, the Initiative is setting up a working group on remote environmental analysis that will be led by JEU. Members of the EMETNET project team have joined this working group, and we will share our experiences of building the EMETNET network with the group and explore synergies.

For further information on the EMETNET project or if you would like to join the network of experts, please contact emetnet@rivm.nl or visit www.emetnet.eu. A [paper](#) on the project was recently published in the International Journal of Safety and Security Engineering.

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