

Minutes

Progress Meeting 6a: Expert Panel on Natural Hazards – Meteorological and Coastal Flood Hazards Sub-Panel

Held on 14 September 2021, Windsor House, 50 Victoria Street, London SW1H 0TL

Attendees:

- ██████████ – ONR External Hazards Inspector (Chair)
- ██████████ – ONR Professional Lead for Civil Engineering and External Hazards
- ██████████ – ONR External Hazards Inspector
- ██████████ – ONR External Hazards Inspector
- ██████████ – ONR External Hazards Principal Inspector (Joined remotely)
- ██████████ – ONR External Hazards Inspector (Joined remotely)
- ██████████ – ONR External Hazards Inspector (Joined remotely)
- ██████████ – Expert Panel member
- ██████████ – Expert Panel member
- ██████████ – Expert Panel member
- ██████████ – Expert Panel on Natural Hazards (Secretariat)

Agenda

Serial	Timing	Item Description	Introduced
Tuesday 14th September			
1	09:00 – 09:30 09:00 – 09:30	Welcome, Introductions and Update Welcome and update on activities from ONR	██████████
2	09:30 – 10:55 09:30 – 10:00 10:00 – 10:20 10:20 – 10:40 10:40 – 10:55	Met & Coastal Flood Hazards – CCRA3 Overview and Highlight Findings Weather Hazards Coastal Change – “What the report does not say” Discussion	██████████ ██████████ ██████████ All
	10:55 – 11:15	<i>Break</i>	
3	11:15 – 12:45 11:15 – 11:45 11:45 – 12:05 12:05 – 12:25 12:25 – 12:45	Met & Coastal Flood Hazards – IPCC WG1 Overview including CMIP6 Weather Hazards Coastal Flood Hazards- A forward look to infrastructure Discussion	██████████ ██████████ ██████████ All
4	12:45 – 13:05 12:45 – 13:05	Meteorological & Coastal Flood Hazards Differences between SSPs and RCPs	██████████
	13:05 – 14:00	<i>Lunch</i>	
5	14:00 – 15:30 14:00 – 14:20 14:20 – 14:40 14:40 – 15:00 15:00 – 15:10 15:10 – 15:30	Meteorological & Coastal Flood Hazards NH Heatwaves, Blocks/Heat Domes and Wildfires Flooding in Europe and China AMOC Attribution of Extremes Discussion	██████████ ██████████ ██████████ ██████████ All
	15:30 – 15:45	<i>Break</i>	
6	15:45 – 16:05 15:45 – 16:05	Meteorological & Coastal Flood Hazards TAG13 Annexes 2 and 3 & EP Papers -Update	All
7	16:05 – 16:25 16:05 – 16:25	Meteorological & Coastal Flood Hazards “Research Briefing Update”	██████████
8	16:25 – 16:30	Actions	██████████
9	16:30 – 16:40	AOB – FOIs and NGO engagement	All
	16:40	<i>Close</i>	

1 ONR Update

ONR provided an update on regulatory matters relevant to the Expert Panel on Natural Hazards – Meteorological and Coastal Flood Hazards Sub-Panel.

The Expert Panel (EP) raised the issue of tsunamis triggered by submarine landslides, which had been published in the [Financial Times](#). This article highlighted some issues raised by Prof Bill Maguire at the British Science Festival in Chelmsford. The EP will share with ONR any information, reports or links to recent, relevant tsunami research in the UK including papers on tunnel valleys in the North Sea (**Action 1/6a**). The EP will also develop a briefing note on the possible effects of climate change on wind and precipitation hazards including “superstorms” (**Action 2/6a**).

2 Meteorological and Coastal Flood Hazards – CCRA3

The EP presented on the recently published [Climate Change Risk Assessment 3 \(CCRA3\) report](#). With respect to climate change approaches, the EP highlighted work by the Bank of England (BoE) in relation to Climate Stress Test assumptions, and the Taskforce on Climate-related Financial Disclosure (TCFD). The EP will produce a briefing note providing insight to the work and approaches being used (**Action 3/6a**).

The EP will participate in a workshop on 20-21 September 2021, organised by the Met Office, and which will focus on the effects of sea-level rise. ONR asked the EP to enquire whether they are able to attend this workshop and, if not, then provide a summary of the meeting (**Action 4/6a**). [*Post meeting note: ONR did not attend the workshop*].

The EP stated that the CCRA3 report mainly focuses on a single storm event and the potential for persistent, sequences of storms (e.g. the Dawlish seawall failure) is given little explicit consideration. The EP stated that, in many locations, the current Shoreline Management Policy (SMP) is to “Hold the Line”, but this may become more challenging to justify in some of these locations due to sea-level rise. The EP has a paper in review on the possible impacts of climate change on SMP policy choices, which will be circulated to ONR in due course (**Action 5/6a**).

Model projections beyond 2100 were discussed. ONR stated this could be a future Research Briefing topic.

3 Meteorological and Coastal Flood Hazards – IPCC- WG1

The EP presented on the recently published [Intergovernmental Panel on Climate Change \(IPCC\) sixth assessment report \(AR6\) by Working Group 1 \(WG1\)](#). The EP agreed with the findings of AR6 that observed warming is attributable to human activities and that allowing for Equilibrium Climate Sensitivity (ECS) in the annual mean temperature maps was a positive approach. Issues and omissions in the report were highlighted. For example, there is little discussion on coastal flooding and erosion and the influence of climate change on infrastructure in the WG1 report. This will be discussed in more detail in Working Group 2 (WG2) report due for publication in early 2022. The EP confirmed that the TAG13 Annex 3 Expert Panel Paper covers the main coastal hazard issues raised by the IPCC.

4 Meteorological and Coastal Flood Hazards – Differences between SSPs and RCPs

The EP presented the differences between shared socioeconomic pathways (SSPs) and representative concentration pathways (RCPs). The EP stated that for ONR’s purposes the RCPs provide a more direct approach to determining climate change effects. Following

discussion, the EP agreed to provide a summary statement clarifying the differences between the two suites of pathways (**Action 6/6a**), which is reproduced below.

“RCPs set pathways for greenhouse gas concentrations and associated radiative forcing in watts per metre squared. This determines the likely amount of warming to be expected at different greenhouse gas concentrations. SSPs are to be seen as complementary to RCPs and are socioeconomic pathways that we might follow over the 21st century, and the likely radiative forcing attached to these.”

5 Meteorological and Coastal Flood Hazards – Briefing Notes

The EP presented on recent extreme events, which supplemented the briefing notes provided before the meeting. This included:

- floods in Europe, China and the US;
- heatwaves and wildfires in the US;
- the Atlantic Meridional Overturning Circulation (AMOC); and,
- extreme event attribution.

Following the discussion, the EP agreed to provide an overview (one page) relating to the UK rapid response catchments programme (**Action 7/6a**).

ONR thanked the EP for drafting the briefing notes, and will conduct a final review before these are finalised (**Action 8/6a**).

6 Meteorological and Coastal Flood Hazards – TAG 13 Annexes 2 and 3 & EP Papers - Update

ONR provided an update on the status of the TAG 13 documents. The Expert Panel Papers supporting Annexes 2 and 3 and the Expert Panel biographies have been published on the ONR website. ONR will share the links with the EP (**Action 9/6a**), which are reproduced below.

- [Updated Expert Panel Paper for Annex 2](#)
- [Updated Expert Panel Paper for Annex 3](#)
- [Expert Panel Bio-Details](#)

7 Meteorological and Coastal Flood Hazards – Research Briefing Update

ONR expects to publish the first “Research Briefing” on the ONR website in October. Following discussion, it was suggested that the next Research Briefing would possibly concentrate on CCRA3, the following one on “AR6”, and the third on the literature looking at post 2100 scenarios.

8 Actions

No.	Action	Responsible
1 / 6a	Provide information, reports or links to any recent tsunami research in the UK together with papers on tunnel valleys in the North Sea relevant to tsunami hazards.	EP
2 / 6a	Produce a briefing note on the possible effects of climate change on wind and precipitation hazards including “superstorms”.	EP
3 / 6a	Produce a briefing note providing insight to the work and approaches being used by the BoE Climate Stress Test	EP

	assumptions and the Taskforce on Climate-related Financial Disclosure (TCFD).	
4 / 6a	Check whether ONR are able to attend the Met Office workshop on sea-level rise on 20-21 September and provide a summary of the meeting.	EP
5 / 6a	Share recent paper (currently in press) on the possible impacts of climate change on Shoreline Management Plans policy choices.	EP
6 / 6a	Provide a statement for the minutes clarifying the differences between SSPs and RCPs.	EP
7 / 6a	Provide an overview (one page) relating to the UK rapid response catchments programme.	EP
8 / 6a	Conduct a final review of the briefing notes.	ONR
9 / 6a	Share the links with the Expert Panel from the ONR web-site for Annexes 2 and 3 Expert Panel papers together with the Expert Panel bio-details.	ONR

9 Any Other Business

No other business was raised