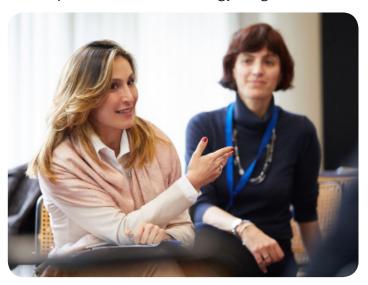
During the Stakeholder Forum, three different workshops were conducted each relating to one of the three challenges of the ESPREssO project. The goal was to identify and discuss important questions to be adressed and to promote fruitful discussions among the participants. The following chapter presents the summaries of the workshops.

1. Challenge workshop: Climate Change Adaptation and Disaster Risk Reduction Challenge Leader: Dilanthi Amaratunga and Richard Haigh (HUD)

Challenge 1 deals withe the boundary between CCA and DRR. The gap is created through the almost independent development of both fields and to overcome the boundary, an integration and harmonization of both approaches is needed.

1. What are the barriers to effective DRR and CCA integration?

Structures and barriers vary greatly across Europe, but national and local perspectives are often not well aligned. Timescales are also very different. For example, in Greater Manchester in the UK, a 5 year risk register approach is used for DRR, whereas CCA is considered over a much longer time period. In France, the Ministry of Environment in France covers both DRR and CCA, which is atypical, but despite this they are handled by separate departments and their activities are diverging. DRR is seen as an operational function that has operated over many years, dating back to the 1970s. In contrast, CCA has a more scientific basis but has emerged only recently. Integration is further hindered by legislation and building codes that often takes a single perspective, for example earthquake resistance or energy usage.



A holistic approach may promote convergence. Joint projects between Ministries and/or departments would encouage common practice.



2. How can these barriers be overcome?

A catalyst is needed to overcome these barriers. The Civil Contingencies Act was a major catalyst in the UK after a series of flooding events – legislation made it mandatory. DKKV in Germany provided a 25 plan that promoted shared values. It became the National Platform for DRR. However, no such platform exists for CCA. The CCA community should be engaged in DRR plans from the beginning and having joint projects to work on is critical.

3. How can we increase the political will to tackle DRR and CCA?

Who are we trying to influence? It may be necessary to target politicians indirectly. The scientific community could focus on building awareness and understanding on the public, who will in turn influence policy makers. Alternatively, major global initiatives bring many leaders together. For example, the UN Global Platform in May 2017 is bringing a lot of Heads of State together but it is a long term process. There is also concern that the global agreements do not

translate to the local level. If politicians are to be convinced, they will need evidence to show a return on investment within a shorter timeframe, perhaps 5 years or within an electoral cycle. Developers and politicians will always be reluctant if the returns aren't demonstrable in the short-medium term. Resilience should be sold as an asset that can be exploited. For example, in the UK, the BBC was attracted to Salford Quays because of resilience factors.

4. Is there a difference between perceived and actual climate change issues and disaster risk adaption measures?

It is important to find positive messages that can be promoted through the media etc. rather focusing on the the negative after a disaster. For example, in Denmark, local municipalities promote 'how to make a city liveable' instead of 'how to reduce the disaster risk of a city'. 'Livability of cities' as part of quality of life could be used as a way of promoting the benefits or framing the issue. It is likely to be more attractive than focusing on costs or lives lost. It will also be important to capitalise on the post-2015 agendas, but convergence will be important to avoid fatigue or confusion.

5. What are the possible transitions pathways and hallmarks of a new and effective strategy?

Defining aspirations of the many stakeholders in the territory is an important step. It will be important to show the relative importance of disaster risk and climate change, compared with other concerns such as crime and migration. The timing will be important as the perception of people will change over time, for example immediately after a disaster or during an election period.

The forum concluded by considering suitable scenarios for disaster risk reduction and climate change that might be considered by the think tanks. Cascading scenarios were suggested, such as intense weather leading to electricity cut-off as valuable suggestion for the training exercise in the upcoming Tink Tank in October 2017.

2. Challenge workshop: Science-Policy Interface Challenge Leader: Kristian Cedervall-Lauta (UCPH)

Challenge 2 deals with the existing boundaries between the production of knowledge and the institutional responses and implementation which are required for disaster management.

Media plays a central role in the science policy nexus. This regards both the potential dysfunctions of information overload and the opposite, namely lack of relevant information available to the public. In particular, in the mitigation and response phase, the so-called contradiction-principle or conflict principle applied by media was problematic.



In this context, it remains an important challenge to manage misinformation, and secure a lean, valid and direct information. Media accountability and ethics could play an important role in future governance of this.

Seen from the perspective of the scientist, there needs to be an increasing awareness of who the recipient of information is. There is also a need for scientists to make clear what they do not know, and what the limits of this knowledge are. In particular, the communication of uncertainty and residual risk was conceived as troublesome. So, convening to the public that the findings are based on models and not accurate predictions of the future. It seems overall, relevant to develop a scientific preparedness in addition to a general response preparedness. Such "preparedness" should include both communicative and legal knowledge in the scientific body.

The fear of liability seems in this regard to create a potential backlash into the willingness to communicate about risks in general, and seems to lead to increasing, and perhaps dysfunctional, precaution. It was pointed out that medias principle of contradiction also drives some scientists to take up

controversial positions in order to get air-time or funding – this is a central issue for creating good, solid and trustworthy scientific communication to the political branch as well as to the public. Furthermore, classic scientific virtues as critical thinking and questioning existing conventions might be problematically abused to create unnecessary public unease in disaster situations – and should be addressed and discussed.

From the perspective of the general public, it was pointed out that trust is crucial for the success of the policy and science nexus. This entails both trust in the political branch ability to control the disaster event, and in the information made available by the scientific branch. The interplay between the scientific and political stakeholders in the run up to a disaster seems key to maintain this trust. Not least a steady and highly transparent flow of information could be crucial in this regard and more information on public information needs. On the balance, the issue of trust and mutual understanding is obviously a two-way process, and it was emphasised that increasing public understanding of risk and probability, enabled through general education, is crucial.

Clear roles between, and expectations to, scientists and politicians seems essential not only to avoid liability issues, but to ensure a coherent effort. In cases of scientists offering their assistance in DRR and response efforts, the issue of potential liability shielding were flagged (potentially including these in good Samaritan laws).

On the issue of integrating scientific knowledge into existing policies, a number of central themes were brought up. Obviously, knowledge on risks plays into a complex policy context, in which politicians and public officials are forced to make difficult ba-



lancing exercises with other public agendas. In this regard, not least the distribution of costs for longer term DRR-measures in general, and private-public partnerships in particular, are central. Overarching themes like responsibility and justice therefore become essential to the calculus of dealing with risks. Even with this in mind, it was pointed out there is still potential to stress the urgency and need to further addressing immanent disaster risks, and that the scientific branch has a central role in doing so. In particular, the issue of future risks is problematic. Here the challenge of transforming uncertainties into clear policy choices or language could be particularly troublesome, and raised general issues of governance, communication and in general seemed emblematic for the gap between science and policy. In this regard, there seems to be an oversimplified treatment of risk scenarios in the public sphere. In particular there is a need to address multi-risk cases, even if these can only be reasonably addressed through scenarios. Such scenarios present a particular challenge when setting out to learn general lessons from previous disasters. Time scales and

overlapping causalities often makes it difficult to pinpoint exactly which efforts were effective and which not. Scientific input could play a much larger role in this exercise.

Three potential themes for cases. One investigating the terror events in Bruxelles, in particular highlighting the cascading effects and the multiple stakeholders and orders involved in solving this. One theme focusing on scientific communication under the threat of liability, and finally a theme focusing on future risks – challenging both the scientific and political branch to deal with the uncertainties involved in this.

Based on a vivid discussion – a number of themes for further discussion in the think tank will follow.

3. Challenge workshop: Transboundary Crisis Management Challenge Leader: Gilles Grandjean (BRGM)

Challenge 3 deals with issues relating to disaster affecting transboundary regions such as earthquakes. Different national regulations, increasing number of actors as well as the scale of operation require an even more cohorent approach for disaster management as well as string and effective collaborations.

The Workshop on Transboundary Crisis Management was very fruitful, with the stakeholders producing a number of strong statements but also raising a number of questions that will require further study within ESPRESSO:

The first point is a call to be proactive rather than reactive. Trans-boundary crisis management is not something that can be readily improvised. Structures and methods must be set in place in advance.

Communication, particularly in the presence of language barriers, was discussed in detail. Visualisation and mapping were identified as useful tools that could propose a solution to language barriers. However, even more important than how you say something is the question of who is going to listen:



Institutional channels of communication may not be symmetrical on both sides of a given border, making for mismatches in scope and delayed response. The scope of the messages in particular was noted as a key aspect: it is very important that the right stakeholders receive the information they need in a way that they can understand it and act upon it.

These issues can in part be mitigated by the emergent recognition of "border regions": cross-border areas with a shared history, close relations and



cultural values. In these areas, practitioners on either side of a border are more likely to interact regularly and have a better working knowledge of issues specific to their neighbours. This knowledge is very rarely shared upwards in the chain of command, resulting in the local institutions being much better prepared to handle trans-boundary issues than higher echelons of government. A more efficient management of large crises, which may be beyond the material scope of these local risk managers, could therefore emerge from an improved combination of bottom-up and top-down knowledge and processes. But how can we accomplish this?

Closer cooperation in border regions may also aid with other issues in trans-boundary DRR identified by the stakeholders: Keeping alive the memory of hazardous events when the records of previous disasters fall on different sides of a border, having access to all relevant risk information regardless of borders, and being able to foresee and prioritise cascading risk information at different scales.

Moving forward, we will be keeping an eye open for solutions to these problems.

A big thank you to all those who participated!