Case study 14

Recognising and Understanding Collective Resilience in Crowds of Survivors

Image 14 Disaster training exercise (Image source: Public Health England)

With disasters becoming more frequent and impacting on a greater number of people, the impact on crowds has been growing in importance. Using 50 years' worth of research into the psychological and sociological behaviour of crowds in a disaster situation has allowed for governments to design more effective emergency strategies.

Ref: PreventionWeb (2015). Scientific and Technical Advisory Group. *Online Case Studies: Using Science for DRR*. Accessed on 11 February 2015 from http://www.preventionweb.net/files/workspace/7935_comahcasestudyera.pdf

and technical communities and networks will mobilise and strengthen existing capacities and initiatives to support the implementation of the post-2015 framework for DRR from the local to the global scale, and in particular deliver outputs in the following six areas:

(1) Assessment of the current state of data, scientific knowledge and technical availability on disaster risks and resilience (what is known, what is needed, what are the uncertainties, etc.);

(2) Synthesis of scientific evidence in a timely, accessible and policy-relevant manner;

(3) Scientific advice to decision-makers through close collaboration and dialogue to identify knowledge needs including at national and local levels, and review policy options based on scientific evidence; and

(4) Monitoring and review to ensure that new and up-to-date scientific information is used in data collection and monitoring progress towards disaster risk reduction and resilience building.

In addition, two cross-cutting capabilities need to be strengthened

(5) Communication and engagement among policy-makers, stakeholders in all sectors and in the science and technology domains themselves to ensure useful knowledge is identified and needs are

met, and scientists are better equipped to provide evidence and advice

(6) Capacity development to ensure that all countries can produce, have access to and effectively use scientific information

More specifically, outputs to deliver on these six areas will include the following:

1) Mobilizing relevant institutions, networks and initiatives to join-up efforts and support a successful implementation of the Post-2015 framework for DRR at national, regional and global levels

2) Working with UNISDR, UN agencies, countries, scientific organisations, donors and stakeholders (including through consultative forum) to map the current science and technology landscape and articulate the format and content of future science and technology input;

3) Work with these partners, and in particular with STAG, to empower partnerships to deliver on the enhanced contribution of the science and technology community;

4) Work with these partners for activating regional cooperation frameworks bridging national and global levels;

5) Work with partners on related research and action topics (e.g.: science education; disasters and cultural heritage; earth observation and space technology;

6) Deliver concrete outputs in relation to the six areas in collaboration with governments, UN agencies, donors, stakeholders as appropriate; and

7) Strengthen academic education in DRR at all educational levels.

3.4. The importance of capacity development at all levels and across sectors and disciplines

The DRR context is evolving and growing in complexity, as described above. Regions increasingly embrace multi-stakeholder risk governance approaches, both in terms of administrative processes but also in including those at risk (e.g. residents, business owners). Within this context, we are all becoming risk managers as illustrated by research into the collective resilience of crowds in disasters (see case study 14). It should be recognized that capacity development across all societal sectors is an iterative (rather than linear) process and should be participatory and inclusive.[73] Capacity development can change people's behaviours and perception of the risks associated with climate change and natural disasters at all levels of policy making. Developing capacity also supports knowledge generation and uptake of science into the policy and practice of DRR as well as enabling shared understanding and, therefore, unified action in areas of policy and practice that can be conceptually complex. In other words, capacity development is a means to increasing resilience to disaster risks.

Conversely, capacity development is dependent on reducing vulnerability to disasters. The existing Millennium Development Goal on education has a strong focus on enrolment but educational outcomes are dependent on a safe and secure school environment and disasters can damage school buildings and divert children away from learning into activities of post-disaster recovery within households including providing care for sick or injured family members or through labour to help with income generation.[74]

Enabling the kind of contextual transformation for responding to the growing need for multidisciplinary approaches in DRR science, policy and practice requires continuing education and knowledge sharing across individuals and organizations.[75] Countries with successful social policies demonstrate the importance of developing capacity and systems that can support the collection of data and information as well as knowledge synthesis and sharing in order to develop new policies that benefit communities.

3.5. Creating incentives at local, national, regional and global levels

Knowledge and evidence generated by scientific research and technological advances can contribute to enhancing the local, national, regional and global legitimacy of decision making processes and facilitate change. Yet, linking science, technology and innovation to policy requires a conscious effort, both from the supply side (researchers & experts) and the demand side (policy-makers and practitioners), to use results of scientific analyses and assessments in the formulation of policy interventions, and governments will be particularly concerned by cost-effectiveness of DRR interventions. This broader collaborative approach can be seen in Victoria, Australia with policy makers actively including scientific predictions on wildfires into policy (case study 15). The current body of research and case studies, including estimates of