



planning from the future



British Geological Survey
NATURAL ENVIRONMENT RESEARCH COUNCIL



Interagency
Resilience Working
Group

Identifying concrete opportunities for further integrating science across humanitarian and development planning to support community resilience

Workshop Report

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Wellcome Trust

Workshop Convenors

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The workshop was attended by over 40 participants, with representatives from academia and research, funding institutions and intermediary bodies, and humanitarian and development non-governmental organisations (NGOs). The following report is a summary of the key topics that were emerged during the presentations, group discussions and plenary that comprised the day, and includes proposed next steps for further integrating science across humanitarian and development planning. The workshop report is complimented by a set of draft guidelines (Duncan et al., 2013) that are based upon discussions from the workshop and the experiences of the authors of the guidelines.

Author of workshop report: Melanie Duncan

The workshop report should be cited as: Duncan, M. (2013) *Identifying concrete opportunities for further integrating science across humanitarian and development planning to support community resilience – Workshop Report*.

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Rationale and workshop objectives

The workshop opened with a presentation from Kate Crowley (CAFOD) who highlighted the timeliness of the event owing to the growing recognition of the need for science, along with community knowledge, to underpin risk assessments and ensure the credibility of DRR. Despite this increasing recognition there is little guidance for practitioners on how to integrate science in their planning and decision-making. Furthermore, Kate noted that NGOs are not always being recognised as a key stakeholder in scientific collaboration, despite the fact that a number of agencies are already partnering with academic institutions. It is key to ensure that NGOs have access to the most credible and robust sources of scientific information and Kate urged participants to think about what sort of guidelines could help agencies better integrate science into their humanitarian and development planning. The objectives of the day were therefore to:

1. Discuss opportunities and mechanisms for a more systematic integration of science across existing humanitarian and development planning processes.
2. Share learning and methodologies from efforts to support appropriate application of scientific understandings of risk within humanitarian and development planning processes.
3. Jointly draft guidelines for integration of scientific understandings of risk within humanitarian and development planning processes and identify mechanisms for more systematic inter-community dialogue.

Given that the workshop was highly participatory, the report only makes minor reference to individual presentations and comments and instead highlights the general themes that arose during the day regarding mechanisms for integration, as well as issues with using science. During the workshop, it quickly became apparent that partnerships between NGOs and scientific organisations are essential to the delivery of credible science. Discussions focused upon the opportunities for and challenges of partnerships and collaborative research, which need to be addressed in order to integrate science. The first part of the report reflects upon these, pulling together the general themes that emerged throughout the day; in particular those that arose during the group discussion of four case studies: Bangladesh, Democratic Republic of the Congo (DRC), Philippines and the Sahel. The second part comprises a more detailed summary of two key areas of interest: monitoring and evaluation of the impact of integrating science and how to ensure accountability. The report concludes with a series of concrete next steps.

Critical opportunities and barriers to science integration and communication for humanitarian and development decision makers

Lynne Porter (*NERC*) presented opportunities that may arise from the new NERC strategy coming out in the autumn (2013), which focuses on excellence in science, impact and partnerships – the latter being a new high level priority. Lynne discussed the types of partnerships NERC is involved in, including business clubs, strategic partnerships with universities or with business, policy or NGO. NERC has two types of call: responsive and directed calls; the latter are framed around priority needs including data, risk management, natural resources, infrastructure and sustainable agriculture.

Knowledge Exchange Fellows Emma Visman (*HFP*) and Susanne Sargeant (*BGS*) then went on to introduce key barriers that they have identified with regard to scientific information itself:

- accessibility
- usability
- trustworthiness/legitimacy
- credibility
- reliability and robustness

And the operational landscape:

- emerging and existing risk
- complexity of integration 'space'
- accountability and impact for all
- understanding and respecting each other's knowledge sources and ways of working.

Emma highlighted the long-term opportunities that may arise with the HFA post-2015, but that there are more immediate opportunities to support communities. This takes more than risk communication; it is about the full process of integration, including access to, understanding and application of relevant scientific understanding of risk to support decision making at community, district, national, regional and international levels.

Building upon these presentations, a number of key opportunities and associated barriers were discussed throughout the workshop activities, which have been summarised below:

Partnerships are crucial to the **delivery of science** and may be beyond simply providing scientific information to in fact helping NGOs make sense of the evidence they have collected. Partnerships need to be **multi-stakeholder**, including in-country scientists, and may need to challenge assumptions regarding conventional partnerships and partners. They are **often initially informal**, with academics and NGOs having the opportunity to engage through former students/colleagues who have moved from one sector to the other. The **challenge is formulating and sustaining partnerships institutionally** without 'over-engineering' the process.

Funding and resources: whilst funding is increasingly becoming available for knowledge-exchange projects, core funding within research councils/donors needs to have a greater emphasis on integrating science for humanitarian and development planning. The funding for research partnerships has been positive and there are an increasing number of organisations (e.g. Enhancing

Learning and Research for Humanitarian Assistance, ELRHA) providing the 'connective tissue' to facilitate the delivery of science to decision-makers. The key barrier to securing greater funding was identified as the unhelpful ways in which research councils and donors **define and measure impact**. Academics are constrained by the need to demonstrate academic (scientific) excellence and publish in peer-reviewed journals (not always accessible to NGOs). Moreover, they are not always given the necessary **integration space** or funding to accommodate the associated dialogue and communication required to support appropriate application of relevant scientific understanding. Furthermore, stakeholders require **incentives** to engage in academic-NGO collaborations. There are some positive changes in the academic system; it was noted that the assessment of impact can now include reports for NGOs written by academics.

Often, NGOs work under much greater **time constraints** than scientists and researchers. In the case of a humanitarian response, agencies may only have a few days to put together a proposal for funding, which raised concern over ensuring this allows time for the inclusion of credible science. One suggestion was to see if ECHO funding could be complimented by NERC funding for scientists. John Seaman (*Evidence for Development*) exemplified the inclusion of science in a short time frame by sharing an experience of when scientists had been brought to a refugee camp. There, they were able to identify problems and help restructure the camp and their actions ultimately saved lives. John noted that 'even if it feels urgent, pausing to consider does make a difference'.

Integrating science is a process that must be monitored and evaluated to ensure impact and accountability. **Communication** and **learning** through the process of integration are essential. It was noted that some NGOs struggle with knowing where the suitable entry point for science is; evidence from the case studies (table 1) indicates that it is iteratively included from the beginning to end of any project as it is about building a **dialogue and learning throughout the process**.

Credibility of science: there were concerns amongst practitioners and academics alike over how to ensure that credible sources of science are integrated and that NGO staff have access to these. It was suggested that scientific capacity within NGOs needs to be increased, with **training** and professional development. Relatively simple actions that NGOs can take to help ensure the utilisation of credible information were highlighted, including consulting more than one source of information and ensuring reports are sufficiently referenced.

There is a need to raise awareness of this work through **collecting evidence** of both successful and unsuccessful projects in order to inform future research agendas and generate incentives for those not currently integrating science. Whilst new research is helpful, it was noted that there is a lot of existing evidence to demonstrate the value of integrating science, which needs to be collated.

Case studies

Some of the points outlined above arose during the discussion of the four case studies. Each of the case studies focused on a context in which humanitarian and development planning could be strengthened by relevant scientific understandings of risk, and the subsequent discussions were informed by the experience of workshop participants. Whilst a number of points were raised, each group was asked to highlight three key themes associated with closer integration of science in humanitarian and development planning. These are summarised in table 1 below:

Table 1: Summary of the key points made during the case study discussions

| Case study and lead author | Risk context | Key point (1) | Key point (2) | Key point (3) |
|---|---|--|--|---|
| Bangladesh (Susanne Sargeant, BGS) | Earthquake, water quality and storage risks, climate change, coastal inundation. High vulnerability. | Creation of knowledge and its application – relevant to the local context; multi-stakeholder, including community early in the process. | Frameworks, architecture and infrastructure for integration- overcome the barrier of knowledge impact to promote more knowledge exchange funding; ethical considerations. | The need for more partnerships– constructive and overcoming politics. |
| DRC (Emma Visman, HFP) | Management of natural resources and range of inter-related risks, with violence, displacement, epidemics, food insecurity, active volcanoes, seismic risks. High vulnerability. | Need to extend partnerships and engage with less conventional partners – including parties to the conflict | Emphasise citizen science and the need for good education– communities can monitor environmental change. | Opportunities through harnessing technology – mobile phones for greater reach, and satellite to support local observations |
| Philippines (Melanie Duncan, UCL) | Active volcanoes, earthquakes, tsunamis, flooding, etc. Inter-related hazards (e.g. earthquake triggered landslides), conflict; environmental degradation. High vulnerability in parts. | Timescales of operation between researchers and NGOs differ | Need to demonstrate the value of partnerships – build an evidence base. | Lack of science in training for NGOs – need to increase scientific capacity within NGOs. |
| Sahel (Rosalind Cornforth, University of Reading) | Environmental degradation, food insecurity, recurrent conflict, epidemics. High vulnerability. | Trans-disciplinary projects – finding a balance of research and knowledge exchange (a model to get useful information accessible). | Improved recognition of this work - local knowledge and traditional science knowledge, and funding resource for integration. | Stronger scientific component to measuring impact and community driven approach - mutually beneficial. |

Throughout the case studies, collaboration and partnerships with multiple stakeholders were highlighted as essential to the delivery of science. A major challenge, however, resides in how best to monitor and evaluate the impact of integrating science, whilst ensuring accountability to all stakeholders. The afternoon session comprised of a dedicated group discussion on these topics.

Monitoring, Evaluation and Accountability

These final group discussions were chaired by David Grimshaw (*ICT4D*) and Mark Pelling (KCL), who reported back on the monitoring and evaluation (M&E) and accountability discussions respectively. The participants had the opportunity to discuss both M&E and accountability and thus a wide range of themes emerged; however the main points are summarised below:

Monitoring and Evaluation (M&E)

M&E is currently a challenge for humanitarian and development agencies owing to the difficulty of how to measure and attribute change to interventions in the long-term (with agencies citing the ‘theory of change’ approach). There is also the added complication of attributing science to change if the problem being dealt with (e.g. earthquake risk) has not been tested (i.e. there has not been an earthquake during the time-span of the project). There is a need to build M&E into long-term sustainability and resilience frameworks.

M&E are **processes that should be embedded from the beginning** of any project (research or otherwise). There is a need to remove rigid funding structures that ask for goals, impacts and delivery to instead more **flexible approaches** that account for changes (both expected and unexpected) throughout the project process owing to the influence of scientific information and expertise.

Learning is crucial and there is a need to learn from failed as well as successful projects – agencies need to be more open to sharing these failures so as to inform future funding and collaborations. M&E is, in part, a way of building evidence to inform future funding strategies.

Methodologies, aims and approaches for monitoring and evaluating differ between scientists/academics and NGOs and any guidelines need to look at a commonality of measures. Two applications of science were discussed: (1) the need to measure the impact of using scientific information and knowledge for users (e.g. communities at risk) and any notable reduction in vulnerability and/or enhancement in their resilience, and (2) whether scientific methods for validation could help to support the indicators used to monitor and evaluate humanitarian and development projects. Data may be viewed differently – some may place more value on quantitative rather than that which is based upon memory. Testing the scientific robustness of the impact of projects (e.g. through replication and comparison) is challenging – how do we determine baselines and is it **ethical** to have control subjects? It is necessary to find a common ground for the combining the different approaches.

Communication and managing expectations are essential - NGOs and scientists differ in their approaches to M&E and are **constrained by different measures of impact** – academic excellence versus poverty/risk reduction – thus it is necessary for both parties to be aware of the constraints under which they respectively operate.

Accountability

To strengthen **trust and confidence** in science, it is essential to communicate the associated uncertainties within the information provided and allow space for difference of scientific opinion and other knowledge sources. Scientists are seen as producers of information and thus accountable for what they produce, therefore it is essential to communicate the associated uncertainty in the science. It is also necessary to **remove the fear of failure** and learn from lessons of failed projects. We need also to move toward the idea of **co-production of knowledge**, with NGOs and communities providing data, where appropriate.

Stakeholders need to be aware that science is not 'value neutral' and has its own world views that may bring about unexpected changes that may not easily fit within the culture of humanitarian and development organisations. It can also be politicised (policy science in governments influences what issues are addressed first). One participant suggested that NGOs should conduct a power analysis of science.

In order to avoid the pitfall of dismissing science (owing to the fact that agencies tend to be overloaded with work) it is necessary to demonstrate the value added by science. It is also necessary to **manage expectations**, highlighting to stakeholders the limits of science and what it can be used for. Furthermore, the data communities and NGOs can provide should be emphasised (experience and community knowledge).

A set of **standards are necessary to ensure the quality of science**. It was suggested that scientists should become fully integrated within humanitarian and development agencies in order to professionalise science within the sector rather than view science as an external 'beast'.

Accountability is about protection for all stakeholders. We thus need to consider the **flow of accountability**; scientists are automatically accountable to funders, universities and students but what happens with the extra mile of humanitarian engagement? It was suggested that a shared accountability is necessary when working together on a particular problem.

Similar to M&E, **accountability is approached differently** by scientists and is more systematically included in academic settings due to funding structures, university practice and the peer-review process. Within NGOs there is currently no accountability measure with regard to whether they are using credible science.

Integrating science within humanitarian and development planning: Next steps

Workshop participants and convenors proposed a number of actions to promote and sustain efforts to strengthen the integration of relevant scientific understandings of risk within humanitarian and development planning. Most immediately, these include:

- workshop participants are to share the discussions from the workshop with their organisations;
- there is a need to agree upon an overarching objective of this work;
- the establishment of a working group to move forward with this initiative;
- the dissemination of workshop report (September 2013);
- the development of draft guidelines for integrating science into humanitarian and development planning and decision-making, which shall be disseminated for wider review in September 2013.

Recommendations from the final plenary included:

- the need for the revision of metrics of academic impact;
- the need for incentives:
 - incentive to use science through the establishment of an international level of accountability;
 - generate national incentives by building science-humanitarian dialogue development into (for example) millennium development goals;
 - space and recognition of this type of work to encourage academics and NGOs to come together;
- the need to emphasise and utilise existing evidence of this type of work to inform donors and humanitarian and development agency research strategies;
- establish joint aims to better integrate science in development and humanitarian aid to increase resilience;
- identify and secure resources for these aims, ensuring that the importance and benefits are recognised by all parties especially those sources of funds to allow for sustained support.

References

Duncan, M., Crowley, K., Edwards, S., Ewbank, R., McLaren, C., Penya, J. L., Obrecht, A., Sargeant, S., and Visman, E., 2013. *Integrating science into humanitarian and development planning and practice to enhance community resilience: initial guidance for non-governmental organisations*. Draft document for review.

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