"Lets talk about you …"
Opening space for local experience, action and learning in disaster risk reduction

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Abstract
Purpose – The purpose of this paper is to report on the creation of innovative methods for engaging in conversations about everyday risk.

Design/methodology/approach – A range of methods from conventional survey research to open-ended, semi-structured conversations and focus groups were used in the series of studies that serve as the subject of this meta-study. The meta-study uses participant observation, key informant interviews and project reports to narrate and evaluate the evolution of Frontline as an action planning, monitoring, advocacy and research tool.

Findings – The Views from the Frontline (VFL) methods began as the bottom-up mirror of a top-down monitoring approach used by the United Nations (Hyogo Framework for Action Monitor). Limitations of such bottom up monitoring led to creation of guidelines for formalising local knowledge resulting from actions – Action at the Frontline (AFL) and, later, Frontline, a flexible tool for eliciting experiences of everyday risk. The earlier VFL monitoring approach had shared outsiders' assumptions about the nature of the "problem" and limited the degree to which local residents could express their own experiences and priorities.

Originality/value – Extensive use of this suite of methods has shown that civil society organisations are fully capable of conducting credible research when properly supported and motivated. Use of these methods has so far provided strong support for policy advocacy at the global scale, has had moderate success in liaison with national policy makers and slow but promising results as a learning/action tool at the local scale. Frontline has as yet untapped potential as a resource for academic research.

Keywords Participation, Community-based disaster risk management, Listening, Participatory research, Bottom up initiative, Everyday risk, Extensive risk, Local knowledge

Paper type Research paper

Introduction
Community participation in disaster risk reduction (DRR) has origins and accumulated practice dating from the 1970s (Heijmans, 2009) and has been strongly endorsed by policy makers for more than 20 years. The emergence of community-based approaches reflected recognition of untapped local knowledge and capacity for organisation and action, particularly in relation to small to moderate, recurrent and chronic threats (Kelman and Mercer, 2014; Pelling, 2013; Shaw, 2012; Dekens, 2007; Wisner and Walker, 2005; Fischer, 2000; Wisner, 1995). Nevertheless, focussing on large, catastrophic hazards, the acknowledged United Nations framework for guiding disaster reduction from 2005-2015 remained top down in approach and assumed that local people were not to be listened to, rather needed informing and educating (de la Poterie and Baudoin, 2015). Somewhat greater acknowledgement of active role of local populations finally appeared in the UN's successor framework launched in 2015. However, will the rhetorical acknowledgement of local capacity be matched by practice? Will practice

transcend commonplace appropriation by business-as-usual, top-down project management and distortion of community participation (Cooke and Kothari, 2001; Wisner, 2010)? This paper discusses one attempt[1], reporting a journey at the practitioner/academic interface, where a network of civil society organisations, the Global Network of Civil Society Organisations for Disaster Reduction (GNDR)[2], attempted to gather local knowledge and apply it to influence development pathways.

GNDR and Views from the Frontline (VFL)
Institutional context and the network
GNDR is a regionally decentralised network of over 800 non-governmental organisations and other civil society organisations in 129 predominantly medium and low-income countries. Its coordinating centre is in London. GNDR grew out of demand by a group of NGOs attending the UN's Global Platform for Disaster Reduction in 2005 in Kobe, Japan. At that meeting 168 governments agreed to follow a set of guidelines for actions to reduce losses and impacts of natural hazards – the Hyogo Framework for Action (HFA) (UNISDR, 2005). Dissatisfied with the HFA, a group of international non-governmental organisations (INGOs) demanded a more bottom-up approach to reducing disaster risk (Wisner and Walker, 2005). Since the 1994 mid-term review a previous ambitious UN programme, the International Decade for Natural Disaster Reduction, NGOs had been demanding focus on community priorities and local knowledge. That year they formed the Global Forum for Disaster Reduction and were active through the end of the IDNDR. Many of these national and international NGOs brought their increasingly strident demands yet again to the 2005 Kobe meeting, and in 2006 the current network, GNDR, was born during a meeting that reviewed lessons learned by the Global Forum (Delica-Willison, 2015, personal communication with B.W., 3 August 2016).

The GNDR was conceived as a countervailing force that could nudge implementation of the HFA DRR guidelines in ways that would be more responsive to the views of ordinary women, girls, boys and men, the primary risk bearers. The founding GNDR steering group met in Delhi in March 2008. The group discussed "holding governments to account", "valuing local knowledge" and "ensuring local voice is not diluted"[3]. These were grand aspirations, but could they be operational? The answer was an action research programme called "Views from the Frontline (VFL)". VFL would roll out a local level assessment of progress focussed on implementation of the HFA. This bottom up assessment would complement the top down attempt by the UN to monitor implementation of the HFA. The UNISDR's (2015b) attempt to monitor progress on its five major priority areas depended on its so-called HFA Monitor[4]. Every two years (2007-2015) governments voluntarily provided their own assessments of progress on a scale of 0-5. These assessments were done by mid-level government employees and forwarded to UNISDR. No fact checking or independent assessment was done by the UNISDR. VFL sought to look at the same priority actions from the grassroots and see how these assessments of progress compared with governments self-assessment.

Was HFA implementation visible at the local level? GNDR conducted the VFL studies in 2009, 2011 and 2013, asking questions covering the HFA's five priority actions. The VFL process depended on a large-scale survey (85,000 individual consultations over the three reporting periods) conducted by GNDR member organisations (GNDR, 2009, 2011, 2013). Headline findings are seen in Box 1.

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Box 1. Headline findings from Views from the Frontline

2009: A "fading out" of assessments of progress
Whilst national governments reported progress in reducing losses, other respondent groups gave increasingly negative assessments, ranging from civil society organisations and local governments to community representatives and women, who were the most negative.

2011: 57 per cent of people feel disaster losses have increased
The 2011 study asked respondents for their perception of increasing or decreasing losses. In all, 57 per cent perceived losses as increasing over the previous five years.

2013: "The poorer you are the worse it gets"
The 2013 study gathered data on peoples' self-reported economic status. Only those who perceived themselves as relatively much better off felt that losses were decreasing. All other groups felt losses were increasing, and this was felt most strongly by the poorest respondents.

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Were voices really being heard?
VFL was successful in serving an international monitoring and advocacy function. INGOs, donors and the UNISDR itself cited and debated VFL results. However, by 2013 GNDR members complained that the VFL studies remained distant from local people's needs and aspirations. People were only asked about the priorities framed by the UN and about hazards and risks prioritised by outside experts. VFL's narrow focus failed to reflect peoples' everyday experience. The GNDR participating member organisations asked how the process could be re-designed.

Two bottom up approaches
Taking up this challenge, the authors participated in a radical re-design involving open ended conversations that got at what people considered top priority threats they face[5]. The starting point was everyday risks, even if they did not fit into the categories defining the mandates (and budgets) of outside institutions (e.g. natural hazard, technological hazard, climate change impact). Two "tracks" emerged from this re-thinking. The remainder of this paper will describe these two tracks, their eventual merger and the early results of using Frontline and Actions at the Frontline methods. A subsequent companion essay planned for this journal will discuss the strengths and limitations of the methodology.

Track 1: Frontline development
Frontline begins with a structured conversation that captures people's priorities based on asking four questions: what threats they faced, the consequences of those threats, the potential actions that could be taken locally to overcome these threats and the barriers they perceived to taking action.

Frontline was piloted in three phases. First it was used in ten countries in South America in partnership with a consortium of civil society organisations led by Soluciones Practicas Peru. 7,053 conversations were conducted. A second pilot, revised on the basis of the South America work, was conducted in five countries in Central America by a consortium convened by Oxfam and produced a further 6,453 conversations. In the third and final pilot phase, 15 countries in Asia, Africa and the Caribbean were involved, yielding 6,173 records of individual experiences of and reflections on everyday threats. Primary data were discussed in focus groups at the local scale and also entered into a highly flexible analytical framework in "dashboard" format called Tableau

(see www.gndr.org/tableau) that allows the data to be investigated at several scales and also filtered by factors such as age, gender and economic status.

Piloting Frontline was implemented through an earlier structure developed for VFL studies. Some partner NGOs took on the role of regional coordinators and trained other NGO representatives in Frontline methods. These national NGO representatives returned home and trained further participating civil society organisation (CSO) members. Choice of study sites and interviewees was based on purposive sampling. In each country context a range of representative risk zones were identified. Communities located in each of these zones were selected and in each community a range of respondents reflecting the diversity of the population.

The group of NGOs and CSOs conducting this work met at country level developed a range of anticipated codes for likely responses, so that the free text data could be coded. Where no suitable code was found during fieldwork, additional codes were created. Further information on methods can be found on the GNDR web site and will be discussed in the companion piece planned for a later issue of this journal[6].

Track 2: Action at the Frontline (AFL)
Before Frontline was developed another effort began in 2011 called "AFL". The AFL programme provided a set of guidelines that generated case studies to assist the national and local civil society organisations in formalising what they had learned from attempting actions based on earlier VFL results.

AFL was launched with an invitation to GNDR partners to join a participatory video case study competition. This strategy led to over 50 videos being contributed[7]. The winning entry depicted a partnership centred on the community of Hotel de Canas in Costa Rica, where construction of a dam resulted from collaboration of community groups, municipal departments and eventually the Japanese International Cooperation Agency (Plate 1).

During an early evaluation of AFL, participants also discussed the Frontline programme, at that time in early stages of development. They recognised

Source: GNDR AFL Project

Plate 1.
Community engaged in dam building: Hotel de Canas, Costa Rica

the structured conversation that is the core activity of Frontline to be very similar to the community risk profiling conducted during AFL. This led to a unified process in which the initial structured conversation led to branching activities: using the AFL process locally to apply findings from the conversation, and at other scales; aggregating the data to inform advocacy and action at national and international scales. This unified structure is depicted in Table I.

Listening closely: results of AFL and Frontline
AFL results
In all, 11 communities in different countries participating in the final Frontline pilot had also produced case studies through the AFL process. In all 50 communities participated in AFL, but only case studies from countries that also used Frontline are examined here. Case study findings from these 11 are summarised in Table AI.

AFL case studies show the unearthing of local knowledge, of risk factors and priorities for action (e.g. Indonesia) that often contrasted with external perceptions. Several cases also show acknowledgement of need for partnerships and combination of different sources of knowledge, expertise and resources, for example, in the South Tarawa, Kiribati case, where this led to mangrove restoration. Several case studies mentioned the benefit of increased community mobilisation and ownership. Anecdotally, participants contrasted what they are able to do during "business as usual" (their externally funded project cycles) with the way they are "given permission" to work within AFL. Agnes, a programme officer from a participating organisation in Malawi, stated that the benefit of AFL to their work in informal communities in Blantyre was that it allowed them to work in a way they never could during normal

| | AFL/Frontline process | | | | |
| | 1 | 2 | 3 | 4 | 5 |
	Structured conversation	Analysis	Discussion	Action planning and advocacy	Implementation
Local	Structured conversation One-to-one conversations leading to prioritisation of threats, consequences, actions and barriers	Local qualitative analysis and representation to support community consultations	Meetings with community members and other stakeholders to discuss findings from risk profiling	Action planning Identifying opportunities for collaboration and action to address key priorities emerging from risk profiling	Improved local action to address identified priorities
National/ International		Aggregated qualitative analysis of prioritised responses through coding	Production of interactive dashboards in Tableau to investigate the findings	Application of the findings in dialogue between CSOs, communities, local and national government and other stakeholders	Influence on implementation at local and other levels on the basis of local knowledge presented through Frontline

**Table I.**
AFL/Frontline process

"projects", unconstrained by time and deliverables and able to work on the priorities set by the community itself (pers. com. with T.G. Johannesburg 24 July 2015). Similar comments were made by participants in Nepal and Vietnam. An emerging message is that many small CSOs have very limited opportunities to work in this way. AFL provided this space.

Frontline results. The AFL cases above show how the experiences gathered through structured conversations can lead directly to consultations and potentially to action planning and implementation of community-led activities. The Frontline process takes such data and aggregates it into databases that can be accessed through an interactive "dashboard" (the Tableau platform). In the discussion below, we examine data covering the sites in the 15 countries where the final Frontline pilot ran.

A first notable finding is that in nearly all countries a majority of respondents perceived an upward trend in disaster losses (2005-2015) (see Figure 1).

This finding contrasts strikingly with data reported at a global scale, for example, by the much used EM-DAT database (Center for the Epidemiology of Disaster, 2016). EM-DAT data is used widely in policy development and planning. However, EM-DAT does not cover small events that erode well-being and livelihoods. Such so-called "extensive" (vs "intensive") risk has begun to be recognised, for example, in studies drawing on data from Desinventar[8] (UNISDR, 2015a), and they also have been flagged as important by the new Sendai DRR guidelines (Rowling, 2016). Using its open-ended approach, Frontline elicited a wide range of everyday threats and consequences that covered extensive risk and went considerably beyond (Figures 2 and 3).
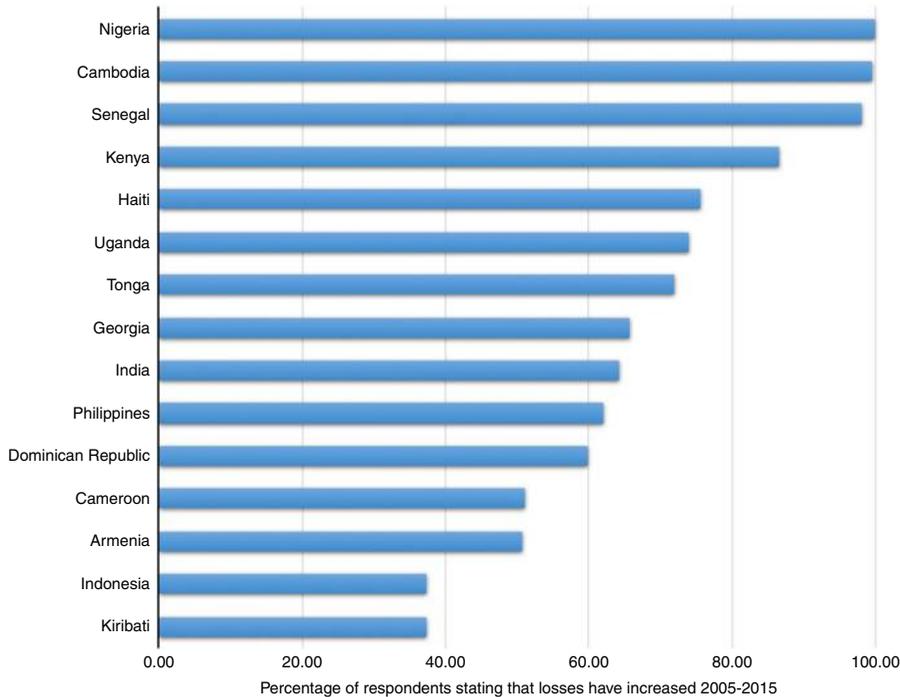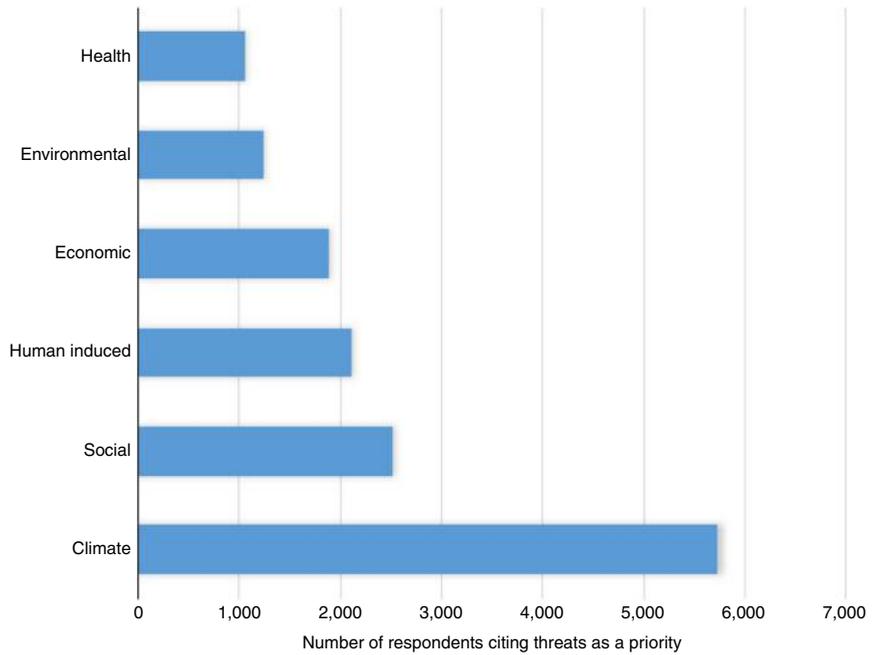

Figure 1.
Percentage of respondents perceiving an increase in disaster losses 2005-2015
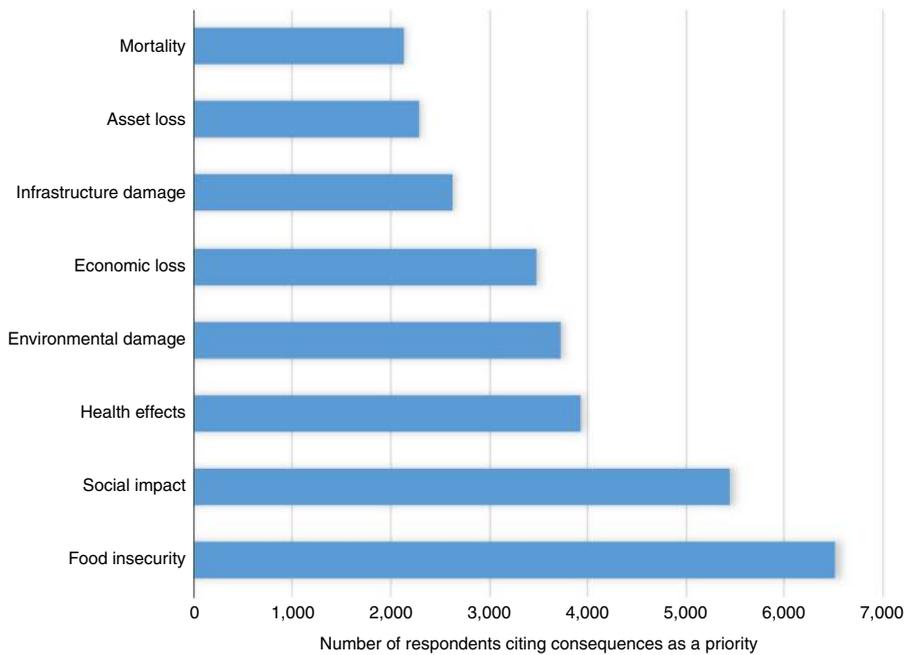
Note: $n = 6,173$

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A snapshot of how everyday risk is experienced comes from the AFL Metro Manila, Philippines case study (Table II and Plate 2).

The critical interplay of risk and poverty referenced to in these narratives. Frontline data highlight the same message, in the words of the VFL 2013 report: "the poorer you are the worse it gets" (see Figure 4).

Using Frontline results for research
The primary uses of Frontline are to stimulate and guide local action planning and to inform policy advocacy. It was not designed for academic research. Nevertheless, use of Frontline may reveal broad patterns, and these, in turn, may shed light on new questions. Thus Frontline can be seen as an aid to formal academic research, not a substitute for it.

Comparing national respondent groups
The Tableau interactive platform allows comparison of aggregated Frontline data. Two country sites reporting starkly different risk profiles are the Philippines and Cambodia. Data gathered in Cambodia reveals perceived experience of increasing losses; whereas Philippines respondents gave a more moderate assessment.

Figure 4 suggested that there might be a correlation between self-assessment of one's socio-economic situation in relation to neighbours and reported experience of loss. We can examine this at country level using indices for income and poverty in Cambodia and the Philippines. The World Bank GDP per capita (World Bank, 2014) and the UN Multidimensional Poverty Index (United Nations, 2015) for the two countries are shown below (Table III).

These indices show that income levels are substantially lower in Cambodia and poverty levels substantially higher compared with the Philippines. While we cannot assert with rigour and confidence that the Frontline sampling in these countries provided groups of respondents with precisely the statistically mean characteristics of people in their respective counties, every attempt was made to choose "representative" respondents. Assuming we were moderately successful in polling average residents,

Threat consequences	Narratives
Disaster disrupts livelihood	"My husband is not able to report to his job because of the flood" "When there's flood, my husband is not able to report to his job" "We were not able to report to our jobs for days"
Disaster contributes to community instability (e.g. youth riot, youth out of school, gambling, use and selling of illegal drugs, stealing)	"Because of poverty, people resort to doing unlawful acts to earn money" "If you don't have a decent job, it will be easy to invite you to try it (use of illegal substances)" "Unemployed residents are easily tempted to join the industry [i.e. drug culture]" "Residents resort to unlawful acts to earn money"
Disaster's impact on education	"Many informal sellers here do not have the capacity to send their children to school" "We are having a hard time funding our child to school" "People are not able to finish school thus they have a hard time getting jobs"

Table II.
Key narratives cited in Metro Manila AFL case study

Source: AFL participant organisation CDP, Philippines

then national statistics seem to reinforce the relationship between experience of disaster loss and poverty.

We can further ask whether this contrast in reported experience of loss leads to contrasts in the profile of consequences reported by respondents in the two countries. Respondents in the Philippines highlighted loss of life and assets, and livelihoods disruption, as consequences of threats; whereas those in Cambodia emphasised crop damage, disease, food insecurity and economic loss. This contrast may be a function of the highly rural sample in Cambodia, where 97 per cent of respondents were recorded as rural compared with 78 per cent in the Philippines. Also the lower income in Cambodia may result in people having fewer assets to lose and more immediate concern with food security in the present and immediate future in the form of damage to crops.

The contrast extends to the perceived actions, which for Cambodian respondents mainly involved community capacity and action. Philippines respondents cited more structural activities involving external institutions and support such as disaster preparedness, and livelihood restoration. This suggests reliance on a more substantial economic and government infrastructure in the Philippines, compared with implied self-reliance as the main option for Cambodian respondents.
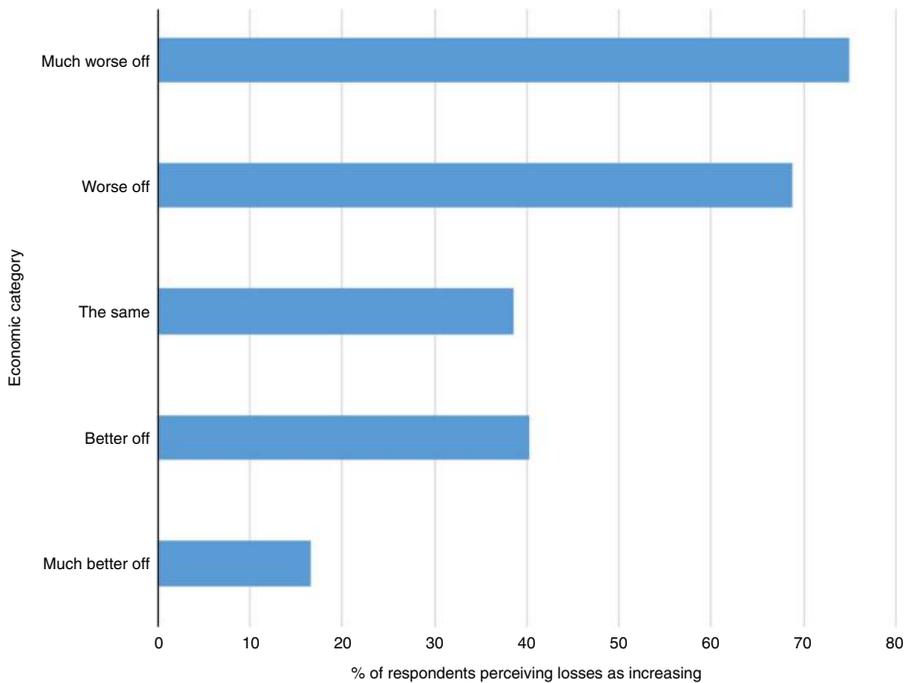
Note: $n = 6{,}173$

Figure 4.
Frontline perceptions
of trends in Losses
2005-2015 from
different
economic groups

Index	Cambodia	Philippines	
Percentage reporting increasing losses	99.6%	62.1%	
GDP per capita	$3,263	$6,969	
Multidimensional poverty index	0.211	0.033	

Table III.
Income and poverty
indices for
Philippines and
Cambodia

These findings suggest a lived experience in the rural Cambodian context of small-scale everyday impacts, for example, crop loss and consequent food insecurity, which according to respondents are addressed through local community self-reliance and action; whereas in the Philippines the perceived risk profile emphasises major impacts from climate-driven and geophysical hazards, along with an expectation of actions to mitigate and adapt to these hazards. Those actions would tend to require a more developed and prosperous economy and government capacity for outreach to assist with preparedness and response. These findings resonate with the situation described in AFL case studies from these two countries. The impact of drought on lives and livelihoods was dominant factor in the Cambodia case study. In Metro Manila the chief concerns stemmed from rapid migration into informal urban neighbourhoods communities and consequent problems of unemployment, drug use and crime.

Contrasts by risk zone within a country
Tableau allows the data to be examined at various scales, and in this illustrative investigation we can "zoom in" on one country and look at the contrasting experiences

of respondents in different risk zones. The Philippines data set includes respondents from a range of risk zones, and the coastal and the urban informal risk zones were selected as contexts that might throw up contrasting experiences.

Immediately notable is that the threats reported in the urban context are quite different in character to those in the coastal zone. Whereas typhoons and earthquakes appear alongside poverty and disease as hazards in the coastal zone, in the urban informal zone the only environmental hazard appearing is flooding, and the others in the top five are poverty, drug abuse, disease and unemployment.

The cited consequences of threats in each zone echo this contrast between environmental threats in the coastal zone and social and economic threats in the urban context. Whereas livelihood loss, loss of life and loss of assets are cited along with food insecurity in the coastal zone, in the urban informal zone the consequences are again social and economic: disease, insecurity, crime, asset loss and unemployment.

This one example from Frontline emphasises the value of examining the risk profiles which impact people in diverse contexts – depending, for example, on degree of poverty and on urban and coastal contexts in the discussion above. Peoples' own accounts of their experience, the threats they face, and their assessment of options for action to reduce exposure to these threats are not limited to "natural" disasters and cannot be addressed by "one size fits all" responses. Many of the threats and consequences they experience may be "under the radar" as far as other methods of monitoring are concerned.

Generating hypotheses from Frontline data
Frontline was originally designed as a tool for tapping local knowledge for purposes of community mobilisation, action planning and advocacy as various scales. It was not created in the first instance as an academic research tool. However, Frontline's use in many countries and risk zones and the number of responses collected offer the possibility of conceiving hypotheses about the relations among risk, development and people's situation. In addition to being a tool for policy formation and planning, it can be used to incubate rough guesses about such relations and to test hypotheses in a preliminary manner. Listening to people's concerns and priorities may stimulate the creation of new questions. Such questions, formalised as hypotheses can explored in a preliminary manner by Frontline, but definitive hypothesis testing requires other methods. As an illustration, consider two hypotheses that can be formulated on the bases of the preceding discussion of Cambodia and the Philippines:

H1. Less prosperous people are more affected by small-scale, everyday risk.

The Frontline data reinforces earlier VFL evidence of a link between poverty and perceived losses. The consequences of the threats reported by Cambodian respondents are likewise localised, cumulative and erosive of livelihood security: crop damage, disease, food insecurity and economic loss. In the Philippines respondents mentioned loss of lives, livelihoods and assets. Unpacking the hypothesis, one could consider the capacity of the respective groups of respondents to absorb and cope with shocks of all sorts. Does the limited absorption capacity of households living in or near poverty at household level play a role in their reporting increased experience of loss? Do the more limited social and governance capacities of their respective national contexts also contribute to greater vulnerability of the poor to small scale, recurrent, "everyday" risk?

Using the entire data set from the final pilot, we can investigate this hypothesis further. Support would come from seeing a contrast in the perceptions of threats and

consequences between the most prosperous and least prosperous respondents across the entire data set. The highest priority threats and consequences for the least prosperous and most prosperous respondents are shown in Table IV.

The pattern of responses gives some support for the hypothesis. Whilst flooding is the greatest perceived threat for both groups (and is generally perceived as the greatest threat for many respondent types and in many risk zones) the more prosperous respondents include among priority threats environmental problems (water pollution and erosion). The less prosperous group cites threats that are personal and localised (poverty itself, disease and alcoholism). Regarding consequences those cited by more prosperous respondents include some that are structural and systemic (building destruction and economic loss) as well as several in common with the list of the less well off. However, note that the poorer people rank crop failure higher than the richer, and the poor also directly mention food insecurity. Thus, the contrasting perceptions of threats and consequences suggest a picture of more prosperous respondents being concerned about environmental impacts on infrastructure and assets, with a tendency for the less prosperous group to be more concerned about social and economic threats and related consequences.

Tableau allows further investigation of the hypothesis by examining the perceptions of respondents in different regions, different risk zones, in urban and rural contexts, as well as by age, gender and self-assessed socio-economic status. Such investigation, when triangulated with AFL case studies, can help generate hypotheses and begin to refine and to test them. For example, the AFL case studies from Haiti and Kenya depict very poor populations struggling to influence their situations. Participating communities in Ennery commune, Haiti, were beginning to organise themselves to address deforestation. People in West Mandera, Kenya, near the Somali border, were struggling with the limitations of local governance and ethnic conflict. By contrast, in case studies of more prosperous groups, people were exerting more control over the everyday risks they face and their focus was shifting to larger scale threats. In Kiribati the local population in South Tarawa were forming partnerships to address the impacts of climate change, and in Indonesia, the population in Salam district had adopted their own response to the problem of lahar floods:

H2. Urban dwellers experience risks that are predominantly social and economic.

Frontline sample invites a preliminary investigation whether the risk profiles perceived by urban respondents are markedly different to those perceived by rural dwellers, and if so, whether the contrast supports *H2*. Table V shows the findings from this comparison.

Threats and consequences	Respondents self-reporting as much better off economically ($n = 42$)	Respondents self reporting as much worse off economically ($n = 798$)	
Threats, prioritised from 1-5	1 Flood	Flood	
	2 Insecurity	Disease	
	3 Drought	Poverty	
	4 Water pollution	Drought	
	5 Erosion	Alcoholism	
Consequences, prioritised from 1-5	1 Disease/health effects	Crop damage	**Table IV.**
	2 Economic loss	Disease/health effects	Highest priority threats and
	3 Building destruction	Loss of life	consequences for
	4 Loss of life	Food insecurity	different
	5 Crop damage	Economic loss	economic groups

The threats prioritised by urban respondents were generally social and economic in character (other than flooding); whereas rural respondents listed drought, disease and climate. However, in terms of consequences the picture is less clear. Urbanites commonly included building destruction, and this likely because of the nature of the built environment. That crop damage is also cited by urban dwellers is not as odd as it might seem because cities in the Frontline final pilot countries include large amounts of periurban land where market gardening is important (as one sees in such AFL case study sites as Limbe, Cameroon and Sopa, Tonga).

Reflections/discussion
Looking with fresh eyes at "the obvious"
The two hypotheses we used to illustrate the use of Frontline for research are unexceptional. Given the large existing research literature[9], our "hypotheses" might seem to belong more to the epistemic territory of "fact". So, why choose such obvious examples? To clarify, we first need to stress that Frontline was not created as an academic research tool, and its potential as such has only recently come to light. We hope that as the Frontline programme is developed, refined, and more data gathered it might generate more challenging hypotheses. Indeed, given the open access nature of Frontline's Tableau database (www.gndr.org/tableau), any researcher can have a go at "slicing and dicing" the data in new ways that may reveal or hint at the existence important relationships. All the data from the three pilots are there, and more will be added as Frontline is employed in the future.

Second, whilst much of what AFL and Frontline reveals has been documented by more conventional research methods, little has so far been taken up and applied by national authorities. The "obvious" bears repeating. As the first VFL report put it, there are "Clouds but little rain". There is an important role of evidence from peoples' own experience, as their voices may be used to motivate governments to act more effectively.

Has Frontline guided action?
Recalling the GNDR meeting in 2008 that began this journey, Frontline originally had three purposes:

- to raise local consciousness of risk-development relations;
- to provide the evidence for advocacy at local, national and international scales; and
- to assist action planning at the community scale.

Threats and consequences		Urban respondents ($n = 1,441$)	Rural respondents ($n = 4,002$)
Threats, prioritised from 1-5	1 Flood		Flood
	2 Insecurity		Drought
	3 Alcoholism		Disease
	4 Poverty		Climate
	5 Fire		Alcoholism
Consequences, prioritised from 1-5	1 Disease/health effects		Crop damage
	2 Building destruction		Disease/health effects
	3 Loss of life		Loss of life
	4 Crop damage		Impact on biodiversity
	5 Economic loss		Food insecurity

Table V.
Comparison between urban and rural perceptions of threats and consequences from Frontline final pilot data

To date the advocacy value of Frontline is evident. A World Bank representative said "what's important about this is that the points being made are drawn from people's actual experience, in the data you've shown us, and that adds real weight to them" (pers. comm. with T.G. 18 February 2016). Findings from Frontline have already been applied by partner CSOs for engagement with government in Columbia, Chile, Paraguay and Indonesia in order to influence risk management policy and practice. A district government representative in Malawi discussing AFL findings said they gave him evidence to use in pressing central government for action on risk management (pers. com. with T.G. Johannesburg 24 July 2015). The AFL case studies demonstrate that the local level action has stimulated new collaborations in local populations and with participating CSOs.

Walking on both legs: experiential knowledge complements normal science
Implementation of Frontline is one of many efforts that highlight great significance of experiential knowledge (Mercer, 2012; McCall and Peters-Guarin, 2012). We suggest this is because the conventional model of knowledge creation is not well suited to dealing with diverse, dynamically changing, complex local contexts. Surprises occur, and normal science is not well placed to appreciate the unexpected, categorising it as an anomaly or outlier. Moreover from an ethical point of view, choices and opportunities should be offered to people as important pillars of human development; whilst people should not be coerced or forced to accept these opportunities, even softly "nudged" or swayed by the glamour and trappings of external expertise (Wisner, 2010).

One AFL case study shows how causal chains leading to everyday disasters can consist of multiple environmental, social and economic factors that interact in surprising ways. In Mvurwi, Zimbabwe, the case study revealed that high youth unemployment led young people to take any work they could get. This included illegal brickmaking based on clay pits being dug, damaging the environment and producing stagnant pools where malarial mosquitos bred. One solution to this damaging cycle was to create legal employment for young people in the area, including development of fish farms that eventually managed the ponds, reduced transmission of malaria, and provided work and food (Plate 3).

Source: AFL participant organisation Action 24, Zimbabwe

Plate 3.
Flooded clay pit,
Zimbabwe, 2014

However, our argument and the thinking behind Frontline do not imply a rejection of normal science and the role in development practice of external expertise. In the Zimbabwe case, hydrology, soil science, entomology and public health as well as economics all had a role in understanding the chain of events and imaging an alternative.

On methodology and epistemology
Length limitations preclude detailed discussion of Frontline method and the theory of knowledge that underlies it. A companion essay on these questions is planned for a future issue of this journal. At that time limitations and necessary improvements to Frontline methods will also be discussed. Some of these issues may well have already occurred to the reader and are summarised in Box 2.

Conclusions
Innovative methods have been incubated for nearly a decade in the practice of members of a global network focussed on risk and human development. These methods began as the bottom up mirror of a top down monitoring approach (VFL vs the UNISDR's HFA Monitor). However, VFL shared outsiders' assumptions about the nature of the "problem" and limited the degree to which local residents could express their own experiences and priorities. Radical modifications led to guidelines for formalising local knowledge resulting from actions – AFL and, later, Frontline, a flexible tool for eliciting experiences of everyday risk. Extensive use of this suite of

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Box 2. Possible improvements in Frontline methodology

- the coding process, training support and quality management may require further examination;

- the sampling strategy should be reviewed, especially in large, geographically and socially diverse countries;

- it is possible that larger samples should be produced; the authors found that sample sizes rapidly shrank as they drilled into the Tableau data;

- "risk zones" should be considered as a possibly more meaningful unit of analysis than "countries";

- limitations of self-reporting by respondents, especially concerning wealth status, need to be considered;

- the interpretation of data from Tableau may require further visualisation to make it accessible to end-users;

- AFL case studies should be pursued as a valuable means of triangulating findings. Most of those documented are at early stages, and it will be important to continue documenting the progress of these and other cases;

- criteria for choosing Action at the Frontline case studies and their documentation need to be spelled out; and

- a thorough and on-going discussion of methods used by other researchers attempting to "give voice" to local people should be launched and sustained.

methods has shown that civil society organisations are fully capable of conducting credible research when properly supported and motivated. Furthermore, use of these methods has so far provided strong support for policy advocacy at the global scale, has had moderate success in liaison with national policy makers and slow but promising results as a learning/action tool at the local scale. Finally, Frontline has as yet untapped potential as a resource for academic research.

Notes

1. The authors want to emphasise that this is only one attempt to elicit what the World Bank called "the voices of the poor" (Narayan *et al.*, 1999, 2000) and that others have called for a "time to listen" (Anderson *et al.*, 2012). To our knowledge, however, what we describe is the first large scale "listening project" focussed on perceived threats and used for local action planning and advocacy.

2. The Global Network of Civil Society Organisations for Disaster Reduction (GNDR) is a network working in more than 129 countries worldwide, with membership in excess of 800 organisations collaborating in knowledge generation, advocacy and action with a stated vision of "A world of resilient communities where vulnerable people are able to prepare for, mitigate against and recover from disasters, and adapt to hazards and a changing climate" (available at: www.gndr.org/about.html accessed 25 April 2016).

3. From minutes of GNDR Steering group 10-11 March 2008, Delhi.

4. These five priority areas were, in brief: ensure that disaster risk reduction is a national and a local priority with a strong institutional basis for implementation; identify, assess and monitor disaster risks and enhance early warning; use knowledge, innovation and education to build a culture of safety and resilience at all levels; reduce the underlying risk factors; strengthen disaster preparedness for effective response at all levels (UNISDR, 2005).

5. The authors wish to highlight the huge input to development and implementation of Frontline made by participating GNDR members, the GNDR secretariat and advisers and, in particular, the energy and commitment of GNDR programmes manager Stu Solomon in leading the implementation of the programme.

6. Methodology guidelines and other resources are available at: www.gndr.org/frontline

7. Case study videos are available at: http://gndr.org/learning/resources/case-studies/case-studies-afl-2011.html

8. Desinventar is a disasters database that gathers information from CSO, NGOs, local and sub-national governments where available and sub-national news media (www.desinventar.org/).

9. Among others, see Pelling (2003), Rodriguez *et al.* (2006), Pelling and Wisner (2009), Wisner *et al.* (2012, 2015), Wamsler (2013), Bobrowsky (2013), Lopez-Carresi *et al.* (2014), Tierney (2014) and Cutter (2016).

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(The Appendix follows overleaf.)

Appendix

Location	Challenges	Analysis	Discussion	Action planning	Action	Notes
Cambodia: Samaki, near Battanbang	Highly vulnerable drought affected district	Crop failure leads to poverty, famine and migration	CSO introduced idea of micro-insurance to provide buffer for families during crop failure	Local organisation and coordination in collaboration with CSO	Growing rolling fund has also financed development of diversified livelihoods	Programme was largely established before the AFL phase
Cameroon: Limbe	Urban communities on unstable land exposed to landslides	Poor communities exposed as can only build on unstable land. Authorities focus on response rather than prevention	Earlier reforestation work to stabilise slopes had stopped. Drainage was poor and existing drainage often blocked by waste	Community sensitisation was needed as a prerequisite for action and for advocacy. Several meetings were conducted	Reinstate reforestation as collaboration between community and CSO. Neighbourhood watch to protect drainage and manage building	CSO acknowledge that advocacy for better urban planning and support for mitigation measures is needed
Georgia: Keda municipality, Adjara region	Landslide, drought and flood risks	Landslide and flood damage village infrastructure, creating unsafe living conditions	Reducing the impact of floods and landslides required infrastructure improvements	Collaboration between CSO and community to develop fundraising skills	Secured funding from municipal budget and from an EU fund to construct drainage channels	CSO reports that several different community groups and sectors became involved
Haiti: Ennery Commune	Poor community making insufficient income from agriculture. Turning to charcoal production leading to deforestation	Many different factions – men, women, landless, elite, government interpret risks differently	Recognised need to build horizontal links with communities, CSOs and CBOs and vertical links with government to build shared understanding	Programme is currently building platforms for forging shared understandings of options for action	No action to date	Process of consensus building is lengthy
India: Kanipadar, Odisha	Drought and flash flooding	Monsoon rain patterns are believed to have become increasingly intense. Flooding damages crops and buildings and is followed by drought and famine	AFL process led to establishment of a committee to develop ideas for mitigating the effects of flooding	The group proposed construction of a check dam to reduce damage from flash flooding, protecting crops and buildings	With government support the community coordinated and participated in production of a diversion weir	Process led to recognition of need for mitigation by government

(continued)

Location	Challenges	Analysis	Discussion	Action planning	Action	Notes
Indonesia: Salam sub-district. Central Java	Prone to lahar floods leading to government attempting to relocate community	Some residents refused to be relocated to a different area There were confused messages about whether area now safe after construction of lahar canal	Distrust of the government and confused information led the residents to decide to develop strategies to stay in their original area and develop new livelihood options	An earlier government initiative, now not pursued: "Living in Harmony with Disasters", was re-established by the community and the CSO	Integrated programme developed "disaster tourism" (to broaden understanding disaster reduction) as livelihood option Developed early warning and escape routes and forged partnerships to lobby for government support	CSO reported that the process enabled the community to identify their own priorities and develop confidence in acting on them
Kenya: Mandera district, Somalia border	Drought in rural area dependent on livestock Conflict and ethnic tension	Ethnic divides and fragmented governance and breakdown of community collaboration lead to passivity	In village meetings facilitated by the CSO participants reflected on past collaborative actions and were encouraged by village chief to strengthen collaboration and resist ethnic divides	The meetings acknowledged that forthcoming elections could be divisive because of ethnic distinctions and that they would need to resist this and continue the development of collaboration through the AFL process	The programme has not reached an action planning stage	
Kiribati: South Tarawa Island	Increased flooding, saline incursion to fresh water sources, reduced fishing yields from higher sea temp. and acidity, drought, loss of land and employment, consequent social stress	Many of the threats facing the population are climate change related. The consequences impact livelihoods and social stability	Whilst people recognised the changes they faced they did not understand the causes, or future scenarios	The CSO facilitated a disabled community to become champions to promote cohesion and learning, drawing in the community, government and technical experts	Experts have been able to provide information and guidance to different groups, and they have embarked on practical adaptation activities such as mangrove planting	

Table AI.

Location	Challenges	Analysis	Discussion	Action planning	Action	Notes
Nigeria: Angwan Rogo community, Jos	Flooding, crime, insecurity and ethnoreligious conflict	Youth turn to crime as consequence of unemployment. They are also often targeted during conflict Flooding is exacerbated by poor drainage and waste management	Necessary to engage youth and other community members to address the challenges they face	Proposed that youth are engaged in community policing and traffic management Drainage and waste could be better managed by community action	Youth participation in community policing and traffic management Community clean-ups and waste management	
Philippines: Metro Manila	Earthquakes, Hurricanes, cyclones, tsunamis. Dense population with many informal settlers in high-risk areas. Disease after floods. Unemployment, drugs, crime	Management of the city is stressed by massive inward migration and ballooning informal settlements in high risk areas	Government response is relocation but this is badly managed with poor facilities at the new locations so people often move back	Establish meetings between community, local government and other stakeholders to increase mutual understanding leading to better managed responses		
Tonga: Sopu, Tongatapu	Low lying and over-populated new village built on swampy land, vulnerable to flooding and disease Poor nutrition Limited access to education	Those who can afford to use landfill to create dry land for homes, gardening, etc. Others live in swampy conditions Fishing yields decreasing	Recognition that unless the community coheres and acts the situation would not improve Also need to invest in children and youth as "reef of today and island of tomorrow"	Encourage women's groups to take action to address the challenges of livelihoods, nutrition and education	Collaborated with a gardening project initiated by Rotary Worked together to build new classrooms and increase access to education	

Table AI.