

PROMOTING THE INCLUSION OF PEOPLE WITH DISABILITIES IN DISASTER MANAGEMENT IN INDONESIA



CENTRE FOR
DISABILITY
RESEARCH
AND POLICY



THE UNIVERSITY OF
SYDNEY

TECHNICAL REPORT 3

THE DISABILITY INCLUSIVE DISASTER RESILIENCE (DIDR) TOOL: DEVELOPMENT AND FIELD TESTING

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The Disability Inclusive Disaster Resilience (DiDR) Tool: Development and Field Testing

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Acronyms

ASB Indonesia	Arbeiter-Samariter-Bund Indonesia Office
DiDRR	Disability Inclusive Disaster Risk Reduction
DPO	Disabled People's Organisation
NGO	Non-Government Organisation
INGO	International Non-government Organisation
DRR	Disaster Risk Reduction
RRI	Relative Resilience Index

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EXECUTIVE SUMMARY

Scope

This is the third Technical Report in a three part series for the two year DFAT Australian Aid funded project (2013-2015), *Promoting the Inclusion of People with Disabilities in Disaster Management in Indonesia*. This report details the development, refinement and field-testing of the Disability Inclusive Disaster Resilience (DiDR) tool.

Purpose of the DiDR tool

The purpose of the DiDR tool is to identify the resilience and capabilities of people with disabilities to natural disasters in their family and community setting. The tool is designed to be used by people with disabilities, their families or carers and thereby to promote the inclusion of people with disabilities in Disaster Risk Reduction (DRR) policy making and strategy implementation.

The tool assesses the resilience of people with disabilities by bringing together four components known to be fundamental to disaster risk reduction: the individual's functioning status, their level of participation in their communities, the physical vulnerability of their place of residence, and individual risk predictors known to influence the behaviour of the general population before, during and after a natural hazard emergency.

The DiDR tool development

The development of the DiDR tool was informed by international guidelines in Disability-inclusive Disaster Risk Reduction (DiDRR) drawn from the work done following the Hyogo Framework (UNDISR, 2005), including the recently issued Sendai Framework for Action (UNDISR, 2015).

The first draft of the tool was generated in September 2014. This draft was reviewed by an international panel of experts in disability and disaster risk reduction research and practice, representing academic organisations, INGOs and DPOs in South East Asia and globally.

In November 2014, the draft DiDR tool was trialled by people with disabilities and DPOs in a 2-day workshop in Indonesia, organised by ASB Indonesia. The trial produced a series of recommendations to improve the applicability of the tool in Indonesia. These were incorporated in the version of the tool prepared for training and field-testing.

Field-test of the DiDR tool: training and data collection

In January 2015, the Project Team organised a 5-day workshop in Yogyakarta (Indonesia) to train 14 survey teams of people with disabilities (from Indonesian DPOs) and village volunteers in the use of the DiDR tool. This training included classroom practice and pilot field testing which resulted in further improvements to the DiDR tool. At this time, two forms of the DiDR tool were developed, one for completion in interviews with people with disabilities, and the other for completion in interviews with carers. In February and March 2015, the survey teams administered the DiDR Tool by interviewing 289 people with disabilities or their carers in four Indonesian Districts affected by diverse natural hazards previously selected as the working areas for the project, that is, Ciamis, Klaten, Bantul, and the Mentawai Islands.

Data analysis

Following review of the completed DiDR forms, 173 forms were usable for data analysis. Of these 173, 88 (51%) were completed in interviews with individuals with a disability and 85 (49%) were completed in interviews with carers. Data derived from the scientific literature on disability research and disaster risk reduction (including standard scoring procedures where available) were used to assign scores to answers on the DiDR tool questions. Geometric means of the scores were computed to derive an overall relative resilience score - the Relative Resilience Index (RRI) - for each participant.

Descriptive statistical analysis was performed to describe the characteristics of the participants and to analyse associations between individual's resilience profile and selected characteristics regarded as informative for disability inclusive risk management policy and planning.

Summary findings

The survey participants were from Klaten (39%), Bantul (33%), Ciamis (23%) and Mentawai (5%). Approximately equal proportions of the interviewees were the person with disability (51%) and the carer (49%).

The sample included more males (almost 60%) with about 40% female participants. The age of the sample was reasonably equally distributed with 26% of participants being 18-30 years old, about 40% being 31-49 years old, and 33% being 50 years of age and over. The majority of the participants (56%) were not married; of the remainder, 32% of participants were married, and 12% were divorced or widowed. In terms of education level 53% of the participants had not completed elementary school, with 35% having never attended school and 18% having attended but not completing elementary school; 44% had completed elementary school or higher (3% did not answer the question).

Based on the Washington Group Short Set of questions on functioning, the highest proportion of participants had difficulty (*at least some difficulty*) in remembering/concentrating (53%), followed by communication (51%), mobility (46%), self-care (38%) and hearing and vision (both 24%). Using a three dimension approach for the Simplified Participation Scale (Kelders et al. 2012), 21% of participants were in the low participation group, 24% in the moderate group and 55% were in the high participation group.

Analysis of the participants' perceptions of risk in relation to natural hazards showed that the majority of participants were mostly concerned about volcanic eruptions (40%) and earthquake (39%), followed by landslides (9%), tsunamis (4%), storms (4%), droughts (2%) and river floods (1%). At the time of the field test, 27% of participants had an emergency plan ready with only 9% having an emergency kit. Only 20% of participants knew of the existence of a government agency in their area with emergency management responsibilities.

By far the majority of participants – 80% - had lived through a natural hazard emergency in the last ten years and these hazards were typically earthquakes or volcanic eruptions. During the event that participants spoke about during the interview, 33% had received emergency messages and 62% had evacuated to an emergency shelter. However, before the event only a small percentage of respondents had organising a household emergency plan (2%), or an emergency kit (3%, which are considered to be basic preparedness measures. Of all participants who had lived through a natural hazard emergency in the last 10 years, 9% had their disability made worse by the event and for 3% their disability had been caused by the natural hazard emergency.

On the individual relative resilience index, higher resilience levels were associated with having completed primary school, or having participated in some kind of risk awareness activities in the past. Individuals with disabilities who were able to independently carry out the interview showed a much higher degree of resilience than those participants where the interview was conducted with the carer. There were no significant differences by gender or age.

Conclusion

The DiDR tool is the first instrument of its kind, to the best of our knowledge, to provide a framework for assessing the resilience of people with disabilities to natural hazards, and to promoting through participation in the interview process and associated workshops, the involvement of people with disabilities in disaster risk reduction. The tool represents a collaborative effort involving contributions to its development from academia, DPOs, INGOs and NGOS working with people with disabilities in South East Asia and globally.

The work presented in this report demonstrates that:

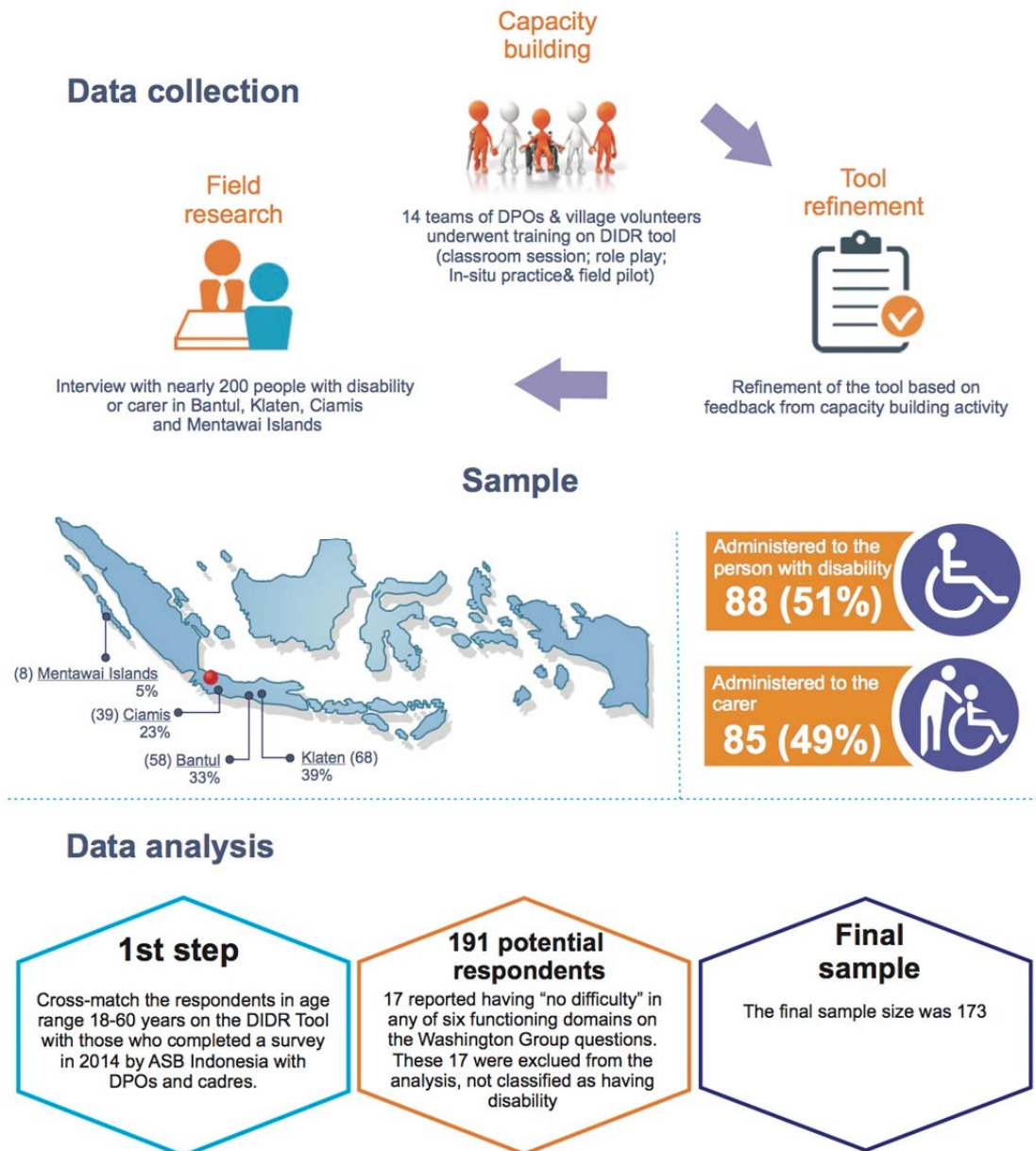
- The DiDR tool can be used to identify relative resilience of people with disabilities specifically related to their local areas and from which targeted measures to increase the resilience of people with disabilities, their families and carers can be developed;
- The DiDR tool provides an effective approach to including people with disabilities in identifying their risk and resilience and other DRR activities thus enabling them to meaningfully contribute to reducing risk in their communities;
- Successful approaches to Disability Inclusive Disaster Risk Reduction need to be collaborative across all DRR stakeholders including first and foremost people with disabilities, their families and carers, as well as DPOs, INGOs, NGOs, government agencies and other DRR stakeholders in the community.

Future research and policy and practice implications

- The DiDR Tool, in the absence of disability specific data, was developed based on the reasonable assumption that risk predictors known to influence the behaviour of the non-disabled population in natural hazard emergencies also apply to people with disabilities.
- Currently the DiDR tool comprises a set of questions determined as manageable in an interview time of approximately 1- 2 hours. Further work is required to determine the utility of each question in an effort to ensure inclusion of those questions only that are as effective as possible.
- The DiDR tool version developed in this project was ultimately informed by Indonesian people with disabilities, DPOs and NGOs in the Indonesian context. Future research is required to examine the applicability of the DiDR tool in other countries and with an expanded range of natural hazards.

Infographic

The application of Disability-Inclusive Disaster Resilience tool (DIDR tool)



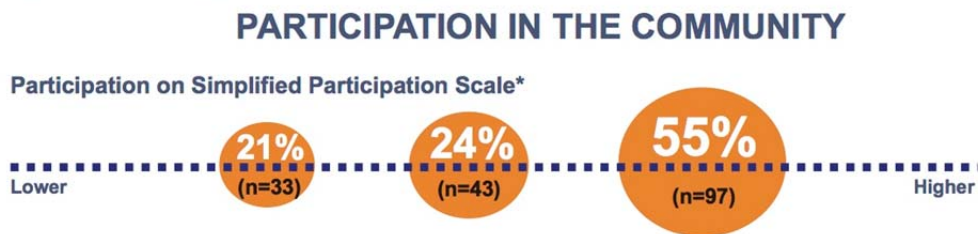
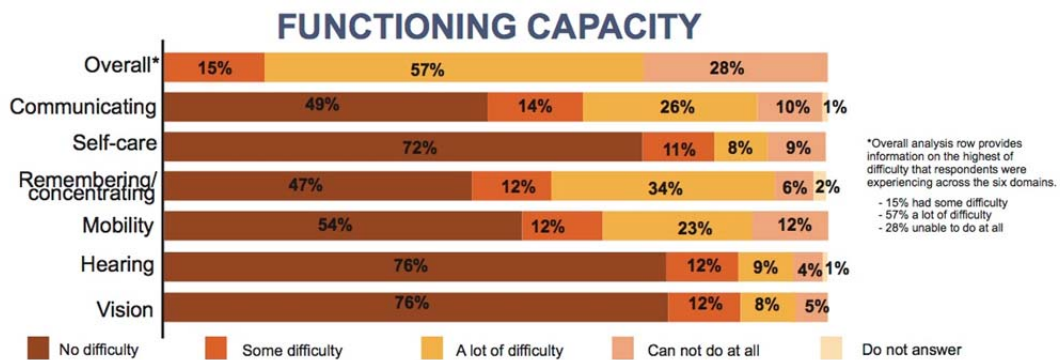
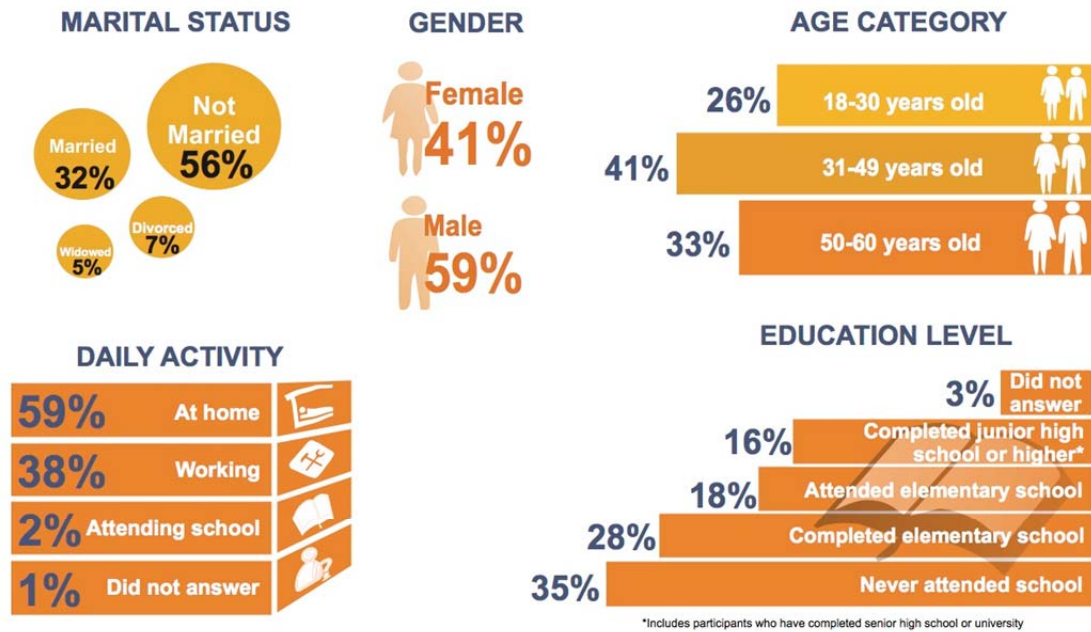
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Figure 1 Infographic: The application of Disability-inclusive Disaster Resilience tool (DiDR Tool)

Findings from field research (1)

Socio-demographic characteristics



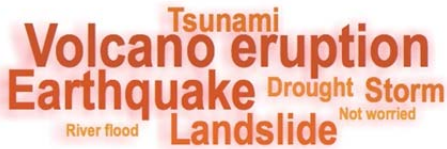
*Kelders, R., VanBrakel, W., Beise, K., & Iwanto (2012). Testing and validating a simplified scale to measure social participation of people with disabilities in Indonesia. *Disability & Rehabilitation*, 34(8), 638-646.

Figure 2 Infographic: Findings from field research (1)

Findings from field research (2)

PREPAREDNESS AND PERCEPTION OF NATURAL HAZARD EMERGENCIES

Natural hazard most worried about



Emergency kit ready, plan prepared, and knowledge of emergency service provider



Lived experience of natural hazard emergencies in last 10 years*

Which natural hazard emergency affected you most?



*80% (138 respondents had experienced a natural hazard emergency in the last 10 years). Analysis in this section thus relates to these 138 respondents.

n regards to the natural hazard emergency that affected you the most (n=137)

Did you:

In regards to the natural hazard emergency that affected you the most, your disability was.... (n=137)

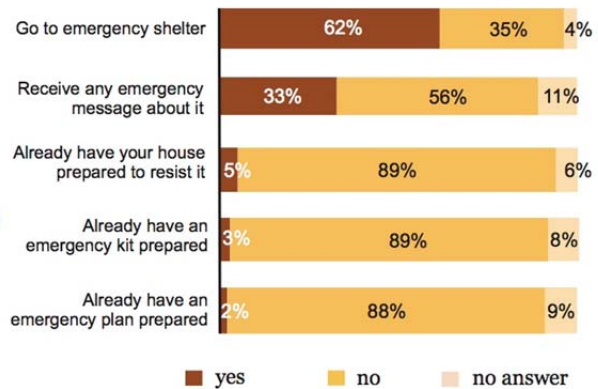
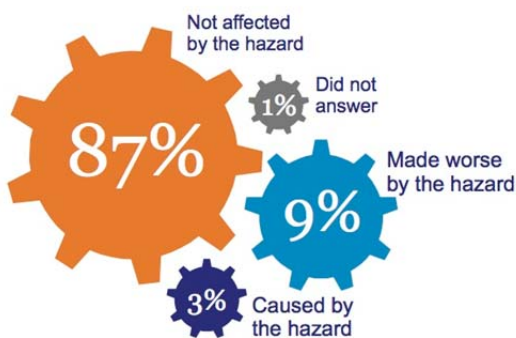
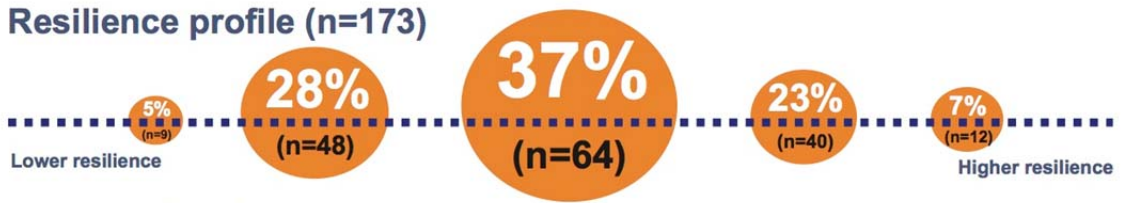


Figure 3 Infographic: Findings from field research (2)

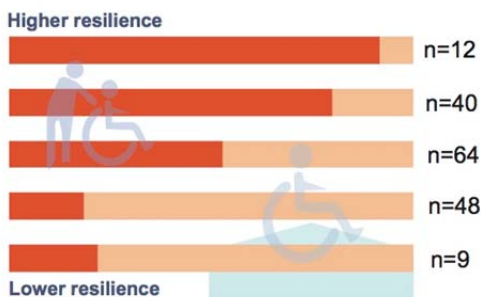
Infographic on Disability-Inclusive Disaster Resilience tool (DiDR tool)

Resilience profile

Resilience profile (n=173)

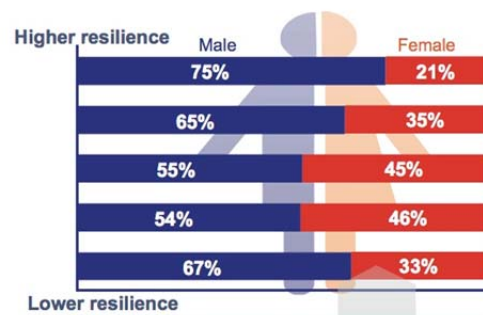


Interviewee



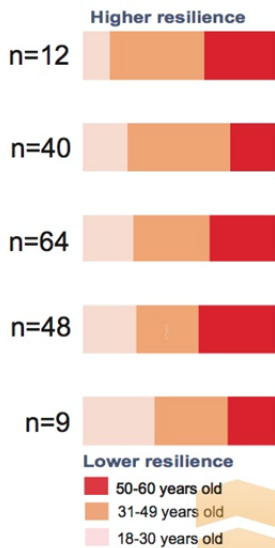
Completion of interview by the person with disability is significantly associated with the higher resilience ($p < 0.001$)

Gender



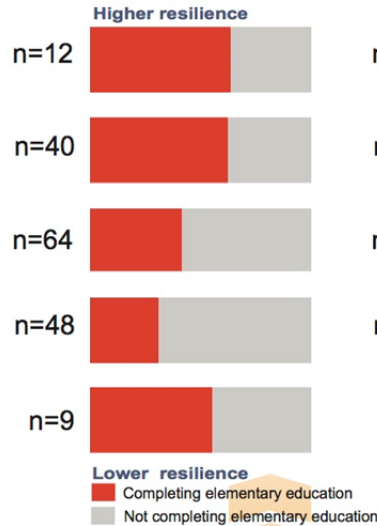
There is no significant difference by gender in the resilience profile

Age



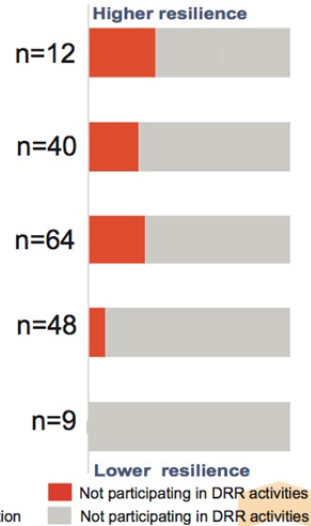
There is no significant difference by age in the resilience profile

Completion of elementary school



Completion of elementary school is significantly associated with higher resilience ($p < 0.05$)

Participation in DRR activities



Participation in DRR activities is also significantly associated with higher resilience ($p < 0.05$)

Figure 4 Infographic: Resilience profile

FULL REPORT

1. Background

Globally, about one in five people live with a disability. This equates to more than one billion people with disabilities worldwide (WHO and World Bank, 2011). People with disabilities are two to four times more likely to die or be injured during natural disasters than the general population (UNISDR, 2013). They are also less likely to receive aid and ongoing support to recover over the longer term. Risk for people with disabilities is further increased in many countries due to fragmented systems where the responsibility to address the unique needs and capabilities of people with disabilities in disasters is not at all clear.

The Hyogo Framework for Action (HFA, UNISDR, 2005) and more recently the Sendai Framework for Disaster Risk Reduction (SFDRR, UNISDR, 2015), adopted by the United Nations in 2015, provides guidance to Member States in regards to Disaster Risk Reduction (DRR). The SFDRR promotes a strategic and systematic approach to reducing risk from natural hazards, and emphasizes the need for a disability inclusive approach to DRR (i.e. Disability-inclusive Disaster Risk Reduction – DiDRR), to facilitate people with disabilities to actively participate in, and provide meaningful contribution to, DRR activities in their communities.

Evidence-informed DiDRR policy and planning requires high quality data on many aspects of disaster preparedness, risk reduction, response and recovery. At present little information is available on how to identify the resilience of people with disabilities in disaster preparedness and risk reduction and to promote their active involvement in developing DiDRR strategies. Robust, tested tools are required to gather quality information on the resilience of individuals with disabilities to natural disasters, to increase their participation in their communities, and to empower them to actively engage in disaster risk mitigation and preparedness activities.

In 2012, the Australian Department of Foreign Affairs and Trade under the Australian Aid Research and Development Awards Scheme funded the project *Promoting the Inclusion of People with Disabilities in Disaster Management in Indonesia*. This two-year project was undertaken by a collaborative partnership between the Centre for Disability Research and Policy, the University of Sydney and Arbeiter-Samariter-Bund Germany's Indonesia Office, 2013-2015.

One aim of the project was to gather quality data on preparedness for and experience of natural disasters and their impact on people with disabilities. To this end, we developed and field-tested a novel tool to be used by people with disabilities, their families, carers and community workers for assessing the resilience of people with disabilities to natural hazards: the Disability Inclusive Resilience (DiDR) tool. For people with

disabilities, learning to use and apply this tool with other people with disabilities was anticipated to increase their knowledge and understanding of natural hazards and disaster preparedness, and their active participation and meaningful contribution in disaster risk reduction activities in their communities. This technical report describes the development of the DiDR tool and presents the outcomes of field-testing the DiDR Tool in Indonesia in February to March 2015.

2. The DiDR tool

2.1 Assumptions underpinning the DiDR tool

The DiDR tool is predicated on the understanding of disability as defined in the *United Nations Convention on the Rights of Persons with Disabilities* (UN, 2008) and the *World Report on Disability* (WHO and World Bank, 2011). This understanding of disability relates to the person and their impairment in interaction with their environment:

“Persons with disabilities include those who have long-term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others.” (Article 1, UN, 2008).

The *World Report on Disability* adopts the International Classification of Functioning, Disability and Health’s model of disability as “the interaction of health conditions with contextual factors – environmental and personal factors” (WHO and World Bank, 2011).

The DiDR tool was designed as a questionnaire to be administered in a face-to-face interview. The express purpose was for the tool to be used by people with disabilities as a way to foster their participation in disaster risk reduction activities through increasing knowledge, understanding risk indicators related to natural hazards, housing vulnerability, individual functioning and capacity, socio-demographic characteristics and community participation. By completing the questionnaire, a ‘resilience profile’ is generated, which summarises an individual’s vulnerabilities, but most importantly highlights an individual’s capacity and abilities to respond to a range of natural hazards. The data generated by the DiDR tool provides individuals and their communities an opportunity to consider the options that are available or opportunities that need to be created to increase the resilience of people with disabilities to natural hazard emergencies.

Findings from implementing the DiDR tool can be used for awareness raising, education and advocacy. The expected outcome of involving people with disabilities in disaster risk reduction processes is their increased resilience and that of their families, carers and communities to natural disasters.

Figure 5 presents the conceptual framework underpinning the design of the DiDR tool. Figure 6 illustrates the components contained within the DiDR Tool derived from

disability and disaster risk reduction research. The DiDR tool encompasses the main factors known to affect the resilience of the non-disabled population to natural hazards, as well as accounting for the specific challenges people with disabilities may face before, during and after disasters. These factors are organised in four main components in the DiDR tool. The rationale for inclusion of each component follows with reference to the research literature.

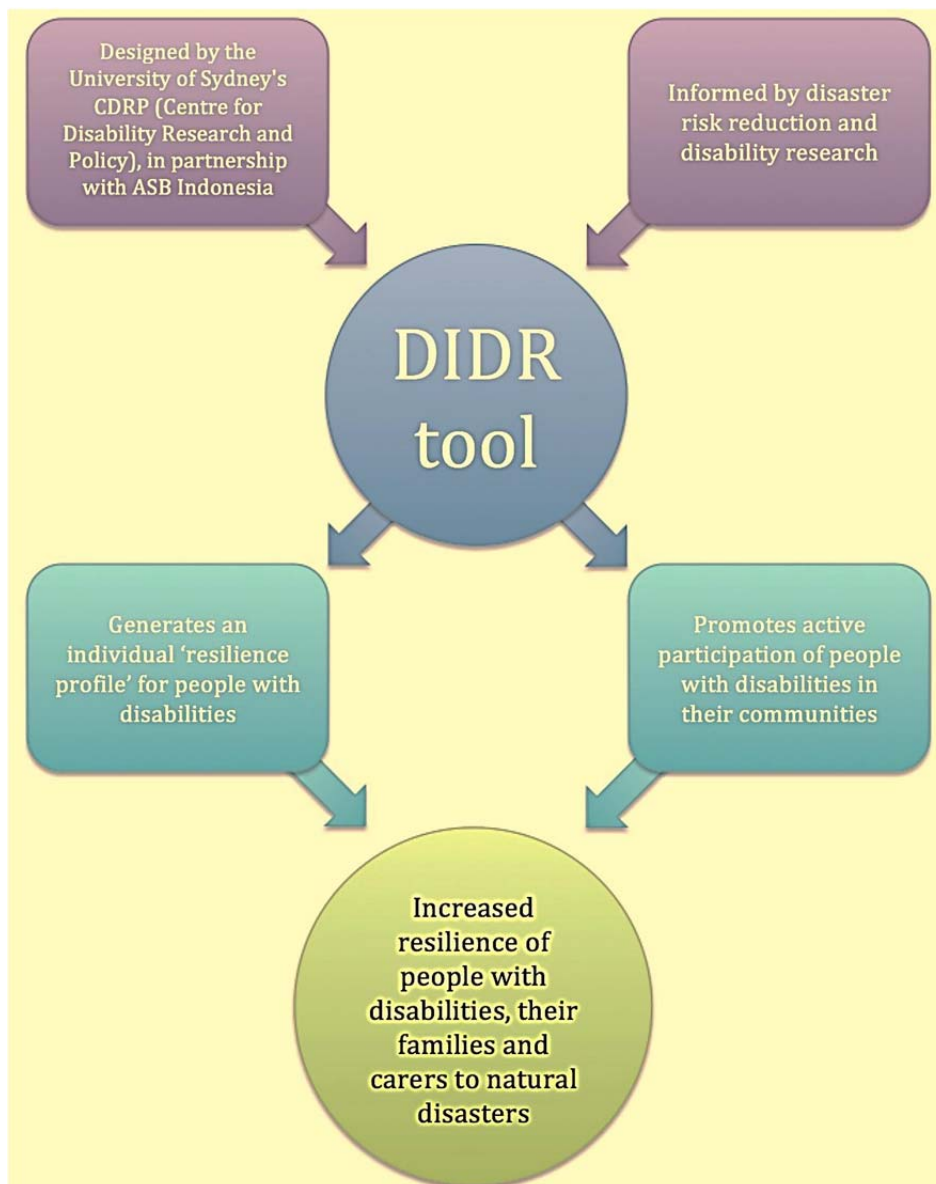


Figure 5. Conceptual framework for design of the DiDR tool



Figure 6. The components contained within the DiDR tool

2.2 Components of resilience in the DiDR tool

2.2.1 Individual's functioning and capacity

The Washington Group Questions (WG Questions) Short Form was selected as a standard international set for identifying functioning (Washington Group on Disability Statistics, 2009). The WG Questions Short Form is widely used in census and surveys and has been used previously in Indonesia. The WG Questions Short Form offer the following advantages: (a) they have undergone relatively robust field testing, (b) they are easy to implement, and (c) they provide a standard for comparison with data collected for other purposes either within country or in another location. The WG Questions are based on the World Health Organization (WHO) International Classification of Functioning, Disability, and Health (ICF), which defines disability as the interaction between the individual's health condition/s and the environment. The ICF is the WHO framework for measuring health and disability at both individual and population levels. ICF was officially endorsed by all 191 WHO Member States in the Fifty-fourth World Health Assembly on 22 May 2001 (resolution WHA 54.21) as the international standard to describe and measure health and disability (http://www.who.int/classifications/icf/icf_more/en).

The WG Questions Short Form offer a standard approach to: (a) identify functioning capacity and limitations related to a health problem, and (b) capture the degree or severity of the difficulty experienced through the use of response categories. Multiple

disability scenarios can be described depending on the domain(s) of interest and the choice of severity cut-off.

2.2.2 Participation in the community

People with disabilities may be socially excluded and quite isolated in their communities (WHO and World Bank, 2011). They may also be excluded from school and other forms of education such as community information and education about disaster preparedness strategies. This places them at much greater risk in a natural hazard emergency (WHO and World Bank, 2011). Increased participation and engagement of people with disabilities in their communities is thought to reduce their risk in natural hazard emergencies (Abbott and Porter, 2013). In the DiDR tool, the participation and engagement of the person with a disability in their community is evaluated using the simplified version of the Participation Scale (P-Scale), which has been tested and validated in Indonesia (Kelders et al., 2012).

2.2.3 Physical vulnerability of the individual's house

The vulnerability of the built environment may affect people with disabilities more than the general population as people with disabilities spend on average more time in their homes and they are less likely to evacuate in a disaster (Abbott and Porter, 2013). As a consequence, the physical vulnerability of the building in which they live may influence their probability of being affected by a natural hazard. The attributes influencing the vulnerability of buildings to natural hazards are identified in the relevant scientific literature, and are generally hazard-specific (Mück et al., 2013; Jaiswal et al., 2011; Quarles et al., 2010; Dall'Osso et al., 2010; Lowe, 2010; Papathoma-Köhle et al., 2007; Baxter et al., 2005; Boen, 2001; Blong, 1984; Mayer, 1984).

2.2.4 Risk indicators (or predictors)

This component includes six risk indicators known to influence the behaviour of the general population before, during and after a natural hazard emergency. These are widely discussed and validated risk predictors in the DRR literature. Each is discussed in turn and referenced.

2.2.4.1 Attachment to the place of living

The attachment to the place of living is developed from a range of factors, including ownership of the place of residence, duration of residency and community involvement. People with a high attachment to the place of living will have a higher tendency to prepare for natural hazards, and tend to recover more quickly (Devine-Wright, 2013; Boon et al., 2012; Lewicka, 2011; Hernandez et al., 2007; Adger, 2000).

2.2.4.2 Daily support vs. expectations during emergencies

During emergencies, people with disabilities who cannot evacuate are often left behind or told to “wait to be rescued” (Abbot and Porter, 2013). The aim of this domain is to gather an understanding of the support that people with disabilities receive in day-to-day activities, and their expectations in terms of the support they would receive during a natural hazard emergency. The recent work of Calgaro and Dominey-Howes (2013) in Australia with the Deaf community identified these aspects of the support system as proxies of their behaviour and that of their families/households before and during natural hazard emergencies.

2.2.4.3 Risk perception/knowledge

Risk perception is one of the most important risk behaviour predictors. Usually, before and during natural hazard emergencies, people make decisions based on their perception of risk (Burningham et al., 2008). Risk perception is influenced by factors such as the type and quality of education, the access to reliable sources of information and lived experience (e.g. if they lived through a natural hazard in the past). Individuals who have a risk perception significantly different from real risk are less resilient (Levac et al., 2012; Kohn et al., 2012; Burningham et al., 2008; Lindell and Hwang, 2008).

2.2.4.4 Preparedness

This domain addresses which preparatory actions have been undertaken by an individual and their household to increase their resilience to natural hazards. Typical preparatory actions include the drafting of a household emergency plan and the preparation of an emergency kit (Levac et al., 2012; Kohn et al., 2012; Perry et al., 1980). The drafting of a household emergency plan must be a participatory process involving the whole family, so that all know what is in the plan and how to carry this out in an emergency. The plan must account for the needs of each individual in the household, and summarise all the actions that must be undertaken during an emergency to make sure that each household member is safe (e.g. list of emergency contacts, when to evacuate, where to evacuate, meeting point with family, evacuation checklists, etc.). Preparedness measures are of critical importance for people with disabilities (Uscher-Pines et al., 2009).

2.2.4.5 Risk communication

The way risk is communicated is known to influence knowledge and behaviour of both the general population (Mayhorn and McLaughlin, 2014) and people with disabilities (Spence et al., 2007). This component investigates risk communication on a double time scale:

- Long term: in order to understand the preferred communication channels through which individuals receive information about natural hazards. This is important to understand each person’s level of knowledge (perceived risk) and

what are the most appropriate channels to use for future educational activities about natural hazards.

- Short-term (i.e. during natural hazard emergencies): in order to understand the best communication options to send emergency messages (such as warnings and evacuation orders) to individuals.

2.2.4.6 Lived experience

This domain focuses on the experience of living through a natural hazard emergency. The lived experience is an important predictor of risk perception (Mayhorn and McLaughlin, 2014; Burningham et al., 2008) and determines a heightened level of precautionary intent and warning compliance, particularly to the same hazard experienced in the past (Knuth et al., 2014). Understanding risk in relation to lived experience is also important to understand to what extent the individual's lived experience has influenced their perception of risk.

2.3 Development, review and refinement of the DiDR tool

2.3.1 First draft

The Project Team developed the first draft of the DiDR tool by bringing together socio-demographic characteristics, the Washington Group Questions Short Form, the Participation Scale and initially identifying over 150 potential questions in the Risk Predictors component. The questions in this component were selected according to the guidelines provided by Bird (2009) from his review of the state of the art in the use of interviews to gather scientifically-valid data on risk perception and mitigation. This was fine-tuned with insights from Calgaro and Dominey-Howes (2013), who developed and successfully applied a survey to assess the risk of individuals with hearing impairment to natural hazards in NSW (Australia). In keeping with the aim of tool implementation requiring less than two hours, a limited number of questions were selected for each domain within the Risk Predictors component.

2.3.2 Review by international panel

The first draft of the DiDR tool, together with a document presenting the tool aim and logic framework, was reviewed by an international panel of 12 experts in disability research and disaster risk reduction. The panel included academics as well as members of DPOs and NGOs operating in Indonesia, South East Asia or globally. Each member of the panel provided general comments on the tool's scope and utility as well as recommendations about specific questions. The international panel members are listed in Annex III.

The Project Team incorporated the Panel's feedback into the second draft of the DiDR tool, which was then translated into Bahasa Indonesia and Braille. Ethics approval for

the study was granted by the University of Sydney Human Ethics Committee, approval number: 2014/658.

2.3.3 Indonesian 2 day workshop for DiDR tool review

In November 2014, ASB Indonesia organised a 2-day workshop with 8 people with disabilities (members of local DPOs) and *Kaders* (i.e. village volunteers) all of whom had taken part in earlier activities as part of the *Promoting the inclusion of people with disabilities in disaster management in Indonesia* project. The main aim of the workshop was to check the logistics of tool administration in Indonesia such as issues with translation, level of difficulty of the questions, and time required to complete an interview using the DiDR tool. This was also an excellent opportunity to gain feedback from workshop participants who in early 2015 would be surveyors using the DiDR tool in the field testing phase of the project.

During this workshop, participants practised the administration of the tool both as interviewees and interviewers. While answering the questions appeared to be relatively straightforward for all participants, some of them encountered difficulties when acting as interviewers. Key obstacles included conceptual understanding of the meanings and use of certain technical terms following translation into Indonesian. It was therefore suggested to generate a “surveyor’s guide” which interviewers could refer to during the administration of the DiDR tool. Language also required attention with the following recommendations: (i) implement some specific alterations to the Bahasa Indonesia tool version and (ii) translate the tool into the local languages used in the planned case-study areas: Javanese, Sundanese and Mentawai.

The Project Team implemented these recommendations. A surveyor’s guide was included by adding general instructions at the beginning of the DiDR tool and specific instructions were inserted prior to each question (see Annex I and II).

2.3.4 Training in the use of DiDR Tool (Work Package 3)

In January 2015, in Yogyakarta, 14 teams of people with disabilities and *kaders* - who had participated in all previous Work Packages under the project *Promoting the inclusion of people with disabilities in disaster management in Indonesia* - underwent training in the DiDR tool using an instructional manual delivered in Bahasa Indonesia on MS PowerPoint and in hard copy (Figure 3). During this week there were three days of classroom sessions, role-play, *in situ* practice sessions, and a one day field pilot in the district of Klaten, Central Java for the 14 teams accompanied by the Project Team, and a final day to review the field pilot experience.

Adjustments were made as necessary after the field pilot to refine the final DiDR tool *Field-Test Version* and to create the two separate forms of the DiDR Tool (i.e. the “person with a disability form”, and the “carer” form, see Annex I and II for final format). The MS PowerPoint presentation used during the training is available on request for those planning on using the DiDR Tool from Professor Gwynnyth Llewellyn at gwynnyth.llewellyn@sydney.edu.au



Figure 7. Training workshop of the survey teams undertaken in Yogyakarta in January 2015

3 Field-testing of the DiDR tool

During February and March 2015, 13 survey teams (one team was unable to continue due to illness) used the DiDR tool to interview people with disabilities and carers across four Indonesian Sub-Districts, identified as suitable project case study locations by ASB Indonesia.

The DiDR tool was field-tested in the following four Indonesia Sub-Districts (Figure 4):

- Panawangan (district of Ciamis)
- Imogiri (district of Bantul)
- Kemalang (district of Klaten)
- South Sipora (district of Mentawai)

These locations were selected by the Project Team on the risk posed to the area by different types of natural hazards (Table 1).



Figure 8. Four field testing locations

Table 1 Four field testing locations and risk from natural hazards

Risk level:	Field Testing Locations			
	Ciamis	Bantul	Klaten	Mentawai islands
High	Landslide Wildfire	Earthquake	Volcano Lahar	Earthquake Tsunami
Average	Flood	Storm Flood	Storm Earthquake	Wild fire Storm
Moderate	Storm Earthquake Drought	Drought Landslide	Drought Wild fire Flood Landslide	Flood

Data source: Indonesia National and Local Emergency Management Agencies (i.e. BNPB and BPBD).

3.2 The sample

In July 2014, ASB Indonesia had independently undertaken a preliminary large-scale disability identification survey with 1,918 people with disabilities and elderly people in Indonesia in the field-testing areas below:

No	Name of district	Location of survey
1	Klaten district	Kemalang sub-district

2	Bantul district	Imogiri sub-district
3	Ciamis district	Panawangan sub-district
4	Mentawai Islands district	South Sipora sub-district

This survey gathered information on socio demographic characteristics status and level of functioning using the WG Questions Short Form with one question on previous engagement in disaster preparedness activities. This survey was conducted by 198 people with disabilities and *kaders* working in teams. People with disabilities were initially identified through the village head and subsequently by word of mouth and by other people with disabilities in each village.

ASB had trained a larger number of potential survey teams – 52 teams - for this disability identification survey (people with disabilities and *kaders*). From all of the teams trained, a smaller number of teams (n=14) who were most effective, efficiently collected reliable data and were available to work in the four field-testing locations of Ciamis, Bantul, Klaten and Mentawai Islands were selected to implement the field test of the DiDR tool.

The data collected in the disability identification survey allowed for prepopulating the DiDR tool in Sections 1, 2 and 3 which are about the surveyor personal data, the respondent's socio-demographic characteristics, and the Washington Group Questions, respectively.

Of the 1,918 people with disabilities identified by ASB in the preliminary disability identification survey, 289 between the ages of 18 and 60 were selected as participants for the field-testing of the DiDR tool. The selection applied the following inclusion criteria:

- Participant living in the same village as the 14 selected survey teams. This criterion was introduced to optimise the survey within time and cost constraints of the project and to ensure better quality data.
- Participant aged between 18 and 60 years (i.e. in working age).
- Participant able to independently respond to all questions, or participants not able/ willing to independently respond to any of the questions such that all questions had been answered by a carer/ family member.

Of the 289 participants who took part in the DiDR field testing, only 273 could be uniquely identified from the disability identification survey (the remaining 16 participants had incorrect identifiers). Of these, 82 respondents did not fully complete the DiDR tool survey and were therefore excluded from the data analysis. The remaining 191 participants for whom there was a fully completed DiDR tool form were matched to the answers provided during the disability identification survey so that Sections 1, 2 and 3 of the DiDR tool could be populated (Annex I).

Of these 191 participants in the DiDR field testing, 17 reported having “no difficulty” in any of the six functioning domains based on the Washington Group questions. Consequently, these 17 participants were excluded because they could not be classified as a person with disability using the standard approaches in the Washington Group Questions Short Form.

Of the 174 survey participants with *at least some difficulty* in functioning, 88 were answered by the person with disability at both times (the disability identification survey 2014 and the DiDR field testing 2015), 85 were answered by the carer at both times (the disability identification survey 2014 and the DiDR field testing 2015), and one was answered by the person with disability in the disability identification survey and by the carer in the DiDR field testing. Subsequent analyses in this report are based on data from the 173 surveys where the respondent was consistent at both the disability identification survey 2014 and the DiDR tool field testing 2015.

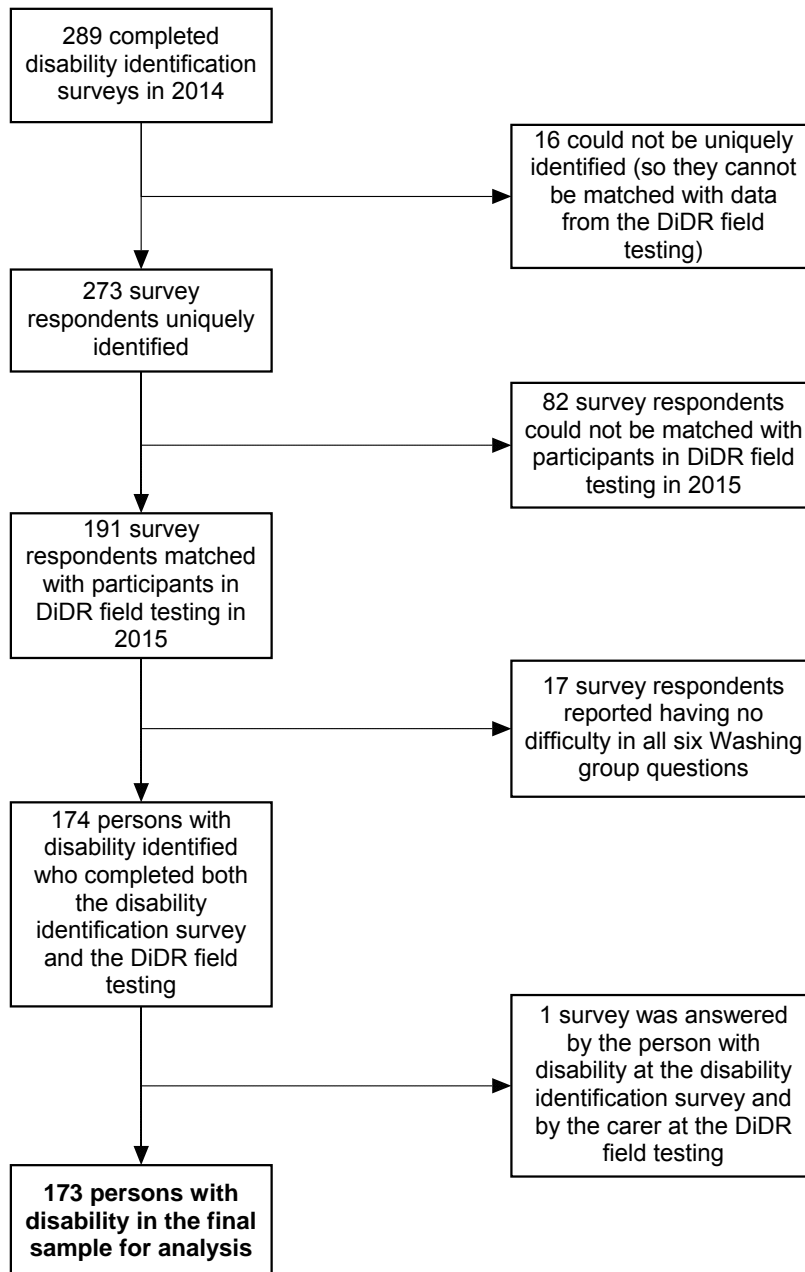


Figure 9 Flow chart of determination of final sample for analysis for DiDR field-testing

3.3 Data analysis

Raw data gathered through the DiDR tool field test were used to (a) generate descriptive statistics of the sample, and (b) calculate a Relative Resilience Index (RRI) for each respondent.

3.3.1 Sample characteristics

Descriptive statistics summarise the sample's attributes in terms of socio-demographic characteristics, disability and functioning, and information on their preparedness, perception and lived experience of natural hazard emergencies. Data were entered into a Microsoft Excel worksheet by a research assistant and imported into Stata for matching and recoding of data and for analysis. Tabulated data were used to generate charts with Microsoft Excel for this Technical Report.

3.3.2 The Relative Resilience Index (RRI)

The RRI provides information on the capability of the person with a disability to prepare for, resist and recover from a natural hazard emergency. RRI scores range from 1 (lower resilience) to 3 (higher resilience). The purpose of the RRI is to identify factors associated with higher or lower resilience levels. From this, appropriate disaster risk reduction measures and/ or disability inclusive disaster risk reduction programs can be implemented.

The Resilience Index is a relative measure, therefore RRI scores do not have a stand-alone meaning; rather, RRI scores compare levels of resilience between individual respondents (e.g. respondent A is more /less resilient than respondent B). It is not possible to use the resilience score to assess the absolute level of resilience of one individual (e.g. respondent A will not be affected by a given natural hazard emergency). The relative approach underlying the calculation of RRI scores is adopted by several validated index-based resilience assessment methods applied globally, such as the UNDP's (United Nations Development Program) Human Development Index (Anand and Sen, 1994), the Social Vulnerability Index (Cutter et al., 2003), and the Coastal Vulnerability Index (Gornitz et al., 1994).

RRI scores were calculated by aggregating each individual's score from the four resilience components: individual functioning and capacity, housing vulnerability, social participation and risk predictors. Each of these components was given a numerical score based on the answers to specific questions in the DiDR tool. The components' scores range from a minimum of 1 (equating to low relative resilience) to 3 (equating to high relative resilience). Each respondent's relative resilience (i.e. the final RRI score) was then obtained by calculating the geometrical mean of the scores on the four components, as described by the following relationship:

$$RRI = \exp\left(\frac{\sum_{i=1}^4 \ln x_i}{4}\right)$$

Where x_i is the score of the component i . The value of x_i is obtained by aggregating contributions from selected DiDR tool questions, as described in the following subsections.

The geometrical mean is a widely-used approach to aggregate contributions from different indicators in a final composite index (e.g. Human Development Index, Anand and Sen, 1994). As detailed in the OECD's (Organisation for Economic Co-operation and Development) Handbook on Constructing Composite Indicators (JRC, 2008), the geometrical aggregation of indicators is to be preferred over more simplistic additive methods (e.g. mathematical mean) because it avoids the risk of "full component compensability", that is, the risk of high and low scores compensating each other.

For example, if we had to calculate the final RRI scores of two respondents, one having the four RRI components scored (3, 1, 1, 1), and one with the RRI components scored (2, 2, 2, 2), we would obtain:

- a. Using the mathematical mean:

RRI of respondent #1 = 2

RRI of respondent #2 = 2

- b. Using the geometrical mean:

RRI of respondent #1 = 1.31

RRI of respondent #2 = 2

Although in this example, the two respondents represent very different resilience conditions these would not be reflected in the final RRI scores if the mathematical mean was used. The geometrical mean emphasizes low scores and thus allows the identification of the lack of resilience that respondent 1 had in almost all the RRI components.

3.3.2.1 Calculating the RRI component: functioning and capacity

Interviewee functioning and capacity is derived from the six Washington Group Questions included in Section 3 of the DiDR tool (Table 2). The final score is selected on the basis of number of respondent's impairments and degree of difficulty in functioning on the 6 questions, as suggested by the Washington Group on Disability Statistics (2009).

Table 2 Score assigned to the RRI component “functioning and capacity”

Functioning number and score	Score
One type of functioning difficulty only, with score of “some difficulty”	3
One type of functioning difficulty only, with scores of “a lot of difficulty” or “unable to do at all”	2
At least two types of functioning difficulty, with scores of “some difficulty”	2
At least two types of functioning difficulty, of which at least one score is “a lot of difficult” or “unable to do at all”	1

3.2.2.2 Calculating the RRI component: social participation

The individual’s participation in the community was derived from answers to the 15 questions in the simplified version of the Participation Scale (Kelders et al., 2012). Answers on the degree of difficulty for each question were scored on a scale of 0 for “No problem”, 1 for “Small problem”, 2 for “Medium problem” and 4 for “Large problem” (Kelders et al., 2012).

Exploratory analysis showed that those who answered “Not relevant, I don’t want to, or I don’t have to” were more likely to have a higher score, i.e. greater difficulty with participation on the other 14 questions, compared with those who gave one of the alternative answers, i.e. “No problem”, “Small problem”, “Medium problem” or “Large problem”. Because of this, those answering “Not relevant, I don’t want to, or I don’t have to” were treated as missing data. Multiple imputation of missing data using predictive mean matching was performed based on the scores from the other questions with non-missing data and from the six Washington Group questions.

Twenty replicates of missing data were imputed so that appropriate standard errors could be derived for statistical analysis. Instead of an effective score of 0 for the answer “Not relevant, I don’t want to, or I don’t have to” as given by Kelders et al. (2012), the imputed data was used in the calculation of a modified version of the analysis of the Simplified Participation Scale as performed by Kelders et al. (2012). The range of the modified scale was between 0 and 60, and this was split into a score of 1 for those who scored ≥ 40 (most restricted in participation), 2 for those between < 40 and ≥ 20 , and 3 for those who scored < 20 (least restricted in participation).

3.2.2.3 Calculating the RRI component: building vulnerability

The score of building vulnerability is derived from the six questions about the building’s physical and engineering attributes in Section 4 of the DiDR tool. The final building vulnerability score is obtained by:

1. Identifying the risk level posed by those natural hazards likely to occur in the district where the building is located (Table 1). This is a necessary step as the physical vulnerability of buildings is strictly dependent on the type of natural hazard considered (e.g. a building vulnerable to earthquakes may not be vulnerable to tsunamis).
2. For each of the hazards identified at point 1, calculating a hazard-specific building vulnerability score. This is the geometrical mean of the scores assigned to the relevant questions, as indicated in Table 3.
3. Calculating an overall building vulnerability score, accounting for all the hazards likely to occur in that location. This is a weighted geometrical mean of the hazard-specific vulnerability scores obtained at point 2. Weights are selected on the basis of the risk level associated to each hazard type (Table 1):
 - Weight = 3, if the risk from the natural hazard is classified as high
 - Weight = 2, if the risk from the natural hazard is classified as average
 - Weight = 1, if the risk from the natural hazard is classified as low

Table 3 Scoring of building vulnerability by natural hazard type

Question number	Questions	Earthquake	Tsunami, Flood, Lahar	Storm	Volcano	Landslide	Wild fire
4.1	Main construction material						
	▪ Bamboo, clay, tin, mud or other temporary materials	1	1	1	1	1	1
	▪ Wood	1	1	1	2	1	2
	▪ Well cemented bricks or natural stones	2	2	2	3	2	3
	▪ Concrete *	3	3	3	3	3	3
4.2	Number of stories						
	▪ One	3	1	1	3	1	NR**
	▪ Two	2	2	2	2	2	NR**
	▪ More than two*	1	3	3	1	3	NR**
4.3	Elevation of ground floor						
	▪ No, same level as ground	NR**	1	1	NR**	NR**	NR**
	▪ Yes, a few steps or ramp	NR**	2	2	NR**	NR**	NR**
	▪ Yes, entrance is at 2nd floor*	NR**	3	3	NR**	NR**	NR**
4.4	Shape of the roof						
	▪ Flat or almost flat	NR**	NR**	1	1	NR**	2
	▪ Pitched and simple	NR**	NR**	3	3	NR**	3
	▪ Pitched and complex	NR**	NR**	2	2	NR**	1
4.5	Roof material						
	▪ Clay, tin or other temporary materials	NR**	NR**	1	1	NR**	1
	▪ Wood*	NR**	NR**	2	1	NR**	2
	▪ Tiles or concrete	NR**	NR**	3	3	NR**	3
	▪ Not visible*	NR**	NR**	NR**	NR**	NR**	NR**
4.6	Shape of the building footprint						
	▪ Square or rectangular	2	2	2	NR**	NR**	2
	▪ Round or oval*	3	3	3	NR**	NR**	3
	▪ Complex with many sides and corners	1	1	1	NR**	NR**	1

(* This building attribute was not observed in the case study locations; ** Not Relevant). The scores are attributes on the basis of damage to different building types observed after the impact natural hazards (Mück et al., 2013; Jaiswal et al., 2011; Quarles et al., 2010; Dall'Osso et al., 2010; Lowe, 2010; Papatoma-Köhle et al., 2007; Baxter et al., 2005; Boen, 2001; Blong, 1984; Mayer, 1984).

3.2.2.4 Calculating the RRI component: risk predictors

The component, risk predictors, was calculated with the geometrical mean of the scores on the questions listed in Table 4. These questions were selected because there is evidence in the DRR literature that the answer to each is consistently associated with higher or lower resilience levels.

Table 4 Scoring of risk predictors

Question number	Questions	Answer			Rationale
		Score =1	Score =2	Score =3	
5.1	Ownership of house	Renting	-	Owning or "other"	Attachment to the place of living positively affects resilience (Boon et al., 2012), and has been empirically shown to associate with length of dwelling and property ownership (Devine-Wright, 2013; Lewicka, 2011)
5.3	Length of time living in that house	Only in past few years	-	Most or all of my life	
7.1 & 7.2	The top 3 natural hazards that worry the respondent the most	None of top 3 perceived hazards represents high or average risk in that area*	One of top 3 perceived hazards represents high or average risk in that area*	At least two of top 3 perceived hazards represents high or average risk in that area*	A realistic perception of risk is likely to determine a heightened level of preparedness (Levac et al., 2012; Kohn et al., 2012)
8.3	Respondent has emergency kit ready at the moment	No or does not know	-	Yes	The preparation of a household emergency plan and emergency kit are basic preparedness actions recommended by emergency managers globally (Levac et al., 2012). People with disabilities are more likely to stay at home during an emergency (Abbott and Porter, 2013). Easy access to water and electricity may allow them to action further preparedness measures such as storing water (e.g. in buckets) and recharging any electronic assistive devices or mobile
8.4	House has internal electricity supply	No	-	Yes	
8.5	House has internal water supply	No	-	Yes	
8.7	Respondent has emergency plan ready at the moment	No or does not know	-	Yes	

					phones.
F1 (Section 2 of the tool)	Respondent participated in DRR educational activities	No	-	Yes	Targeted educational activities are likely to increase risk awareness, which is positively correlated with resilience (Boon et al., 2012)
9.2	Respondents owns a mobile phone	No	-	Yes	Being able to communicate or receive emergency messages allows people with disabilities to make informed decisions before, during and after a natural hazard emergency (Calgaro and Dominey-Howes, 2013)
9.5 & 9.6	Lived experiences of natural hazard emergencies in last ten years	None or don't remember	One	Two or more	According to Knuth et al. (2014), lived experience of one specific natural hazard increases risk awareness of that hazard.

(* The risk classification per area is provided in Table 1)

3.2.2.5 Generation of a resilience profile for the entire sample

In order to generate a resilience profile for the entire sample, we classified the obtained RRI scores in 5 resilience groups, based on distance in standard deviation (*sd*) from the sample mean (Table 5), as previously done by Cutter et al. (2003).

Table 5. Classification of RRI scores in 5 resilience groups

RRI group	RRI interval
Group 1 (Lowest resilience)	$RRI < \text{mean} - 1.5sd$
Group 2	$\text{mean} - 1.5sd < RRI < \text{mean} - 0.5sd$
Group 3	$\text{mean} - 0.5sd < RRI < \text{mean} + 0.5sd$
Group 4	$\text{mean} + 0.5sd < RRI < \text{mean} + 1.5sd$
Group 5 (Highest resilience)	$RRI > \text{mean} + 1.5sd$

We then generated the sample resilience profile by analysing the association between the RRI resilience groups and the participants' socio-demographic characteristics. We performed the linear trend χ^2 test to test the significance of association of participant characteristics with the RRI groups. A p-value of 0.05 was used as the threshold for determining statistical significance. The sample resilience profile is presented in section 3.3.2.

3.3 Results

Results are organised in two subsections:

Section 3.3.1 presents descriptive statistics in relation to socio-demographic characteristics, functioning and capacity, social participation, risk perception and preparedness, and lived experience of a natural hazard emergency.

Section 3.3.2 includes the sample resilience profile, obtained by analysing the Relative Resilience Index frequency distribution in relation to the sample socio-demographic characteristics.

3.3.1 Descriptive statistics for the sample

3.3.1.1 Participants by district and interviewee status (person with disability or carer)

The highest proportion of participants were from Klaten (39%), followed by Bantul (33%), Ciamis (23%) and Mentawai (5%) (Figure 6). Approximately equal proportions of the interviewees were the person with disability (51%) and the carer (49%) (Figure 7).

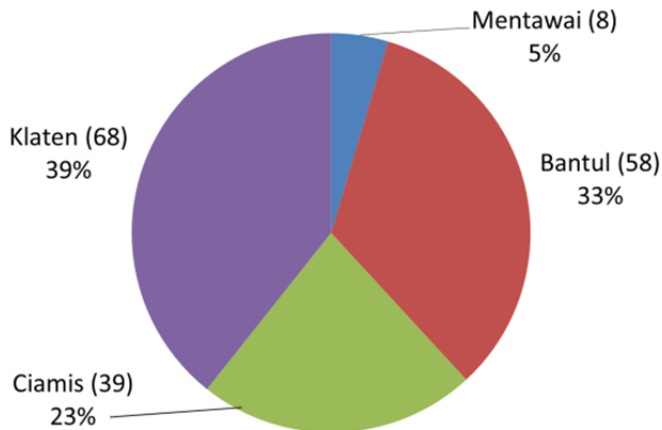


Figure 10. Participants by district (N=173)

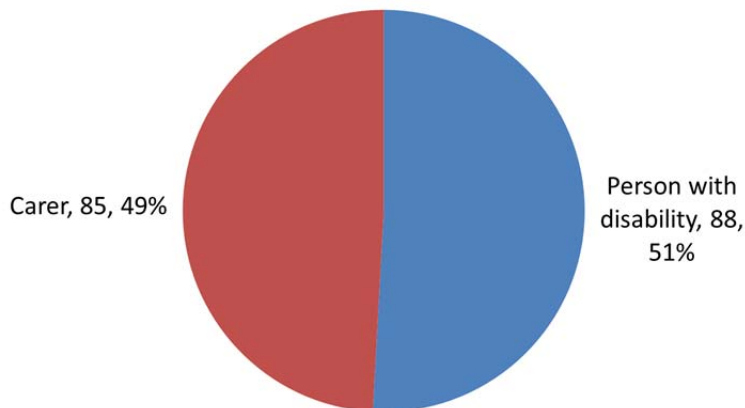


Figure 11. Participants being the person with disability or carer (N=173)

3.3.1.2 Socio-demographic characteristics

Figures 8 to 12 show the socio-demographic characteristics of participants by gender, age, marital status, education level and their daily activity. Almost 60% of participants were males, and about 40% were females (Figure 8). About a quarter (26%) of participants were in the youngest age group of 18-30 years old, about 40% were 31-49 years old and about a third (33%) were 50 years of age and over (Figure 9). 32% of participants were married, 56% were not married and 12% were divorced or widowed (Figure 10). In terms of education level, 35% of participants never attended school, 18% had attended (but have not completed) elementary school, 28% had completed elementary school, 16% completed junior school or higher and 3% did not answer the question (Figure 11). The majority (59%) were at home for their daily activity, followed by working for 38% of participants and only 2% were attending school (Figure 12).

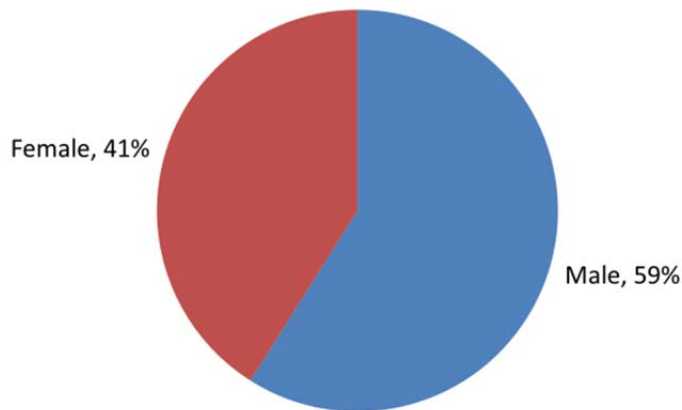


Figure 12. Gender (N=173)

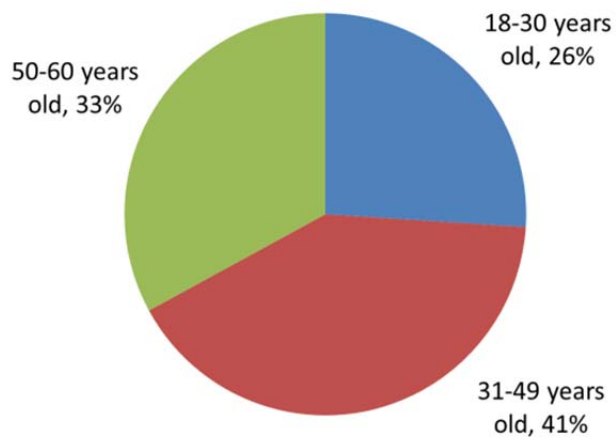


Figure 13. Age (N=173)

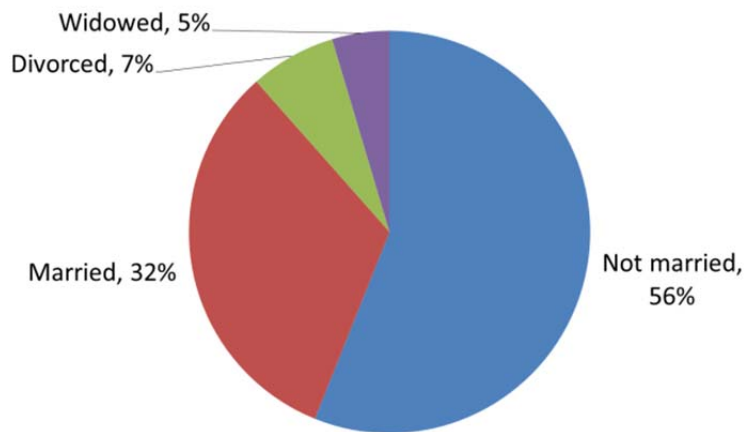


Figure 14. Marital status (N=173)

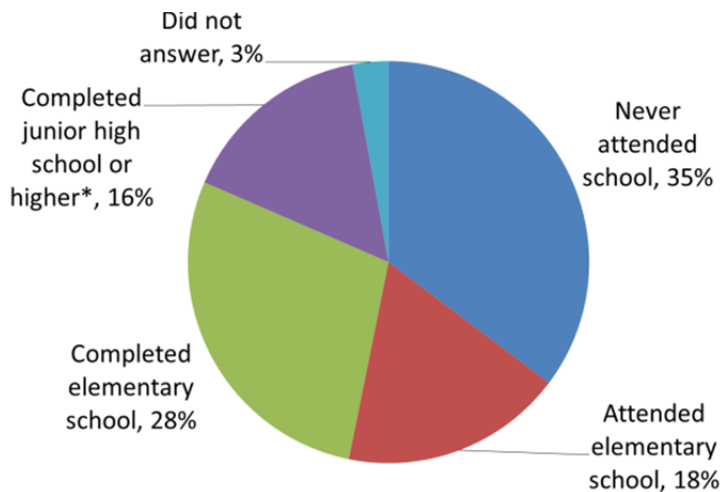


Figure 15. Education level (N=173)

* Includes participants who have completed senior high school or university

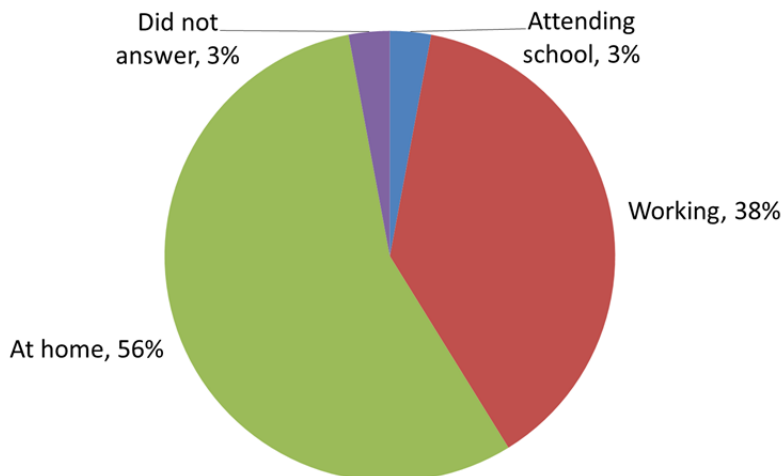


Figure 16. Daily activity (N=173)

3.3.1.2 Functioning and capacity

Figure 17 summarises the data from the six questions in the Washington Group Short Set. The highest proportion of participants had *at least some difficulty* (i.e. the sum of the proportion with some difficulty, a lot of difficulty and unable to do at all) in remembering/concentrating (53%), followed by communication (51%), mobility (46%), self-care (38%) and hearing and vision (both 24%). The overall indicator of functioning and capacity shows the highest degree of difficulty across the six question domains which are seeing, hearing, moving around, remembering or concentrating, self-care and communicating:

- 15% had some difficulty

- 57% a lot of difficulty
- 28% unable to do at all

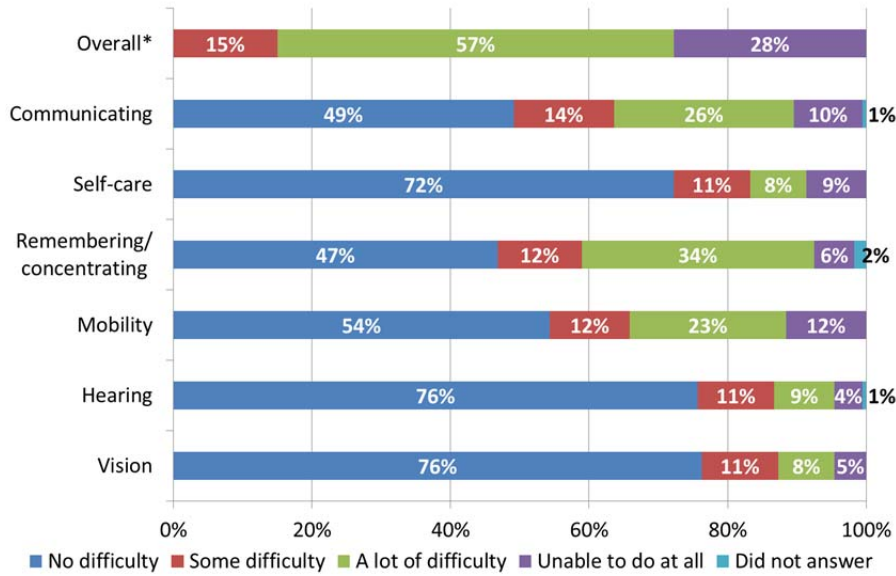


Figure 17. Functioning and capacity from Washington Group (WG) Questions Short Form (N=173)

*Overall analysis row provides information on the highest degree of difficulty across the six domains.

On the Simplified Participation Scale, 21% were in the low participation group, 24% in the moderate group and 55% were in the high participation group (Figure 14).

3.3.1.3 Social Participation

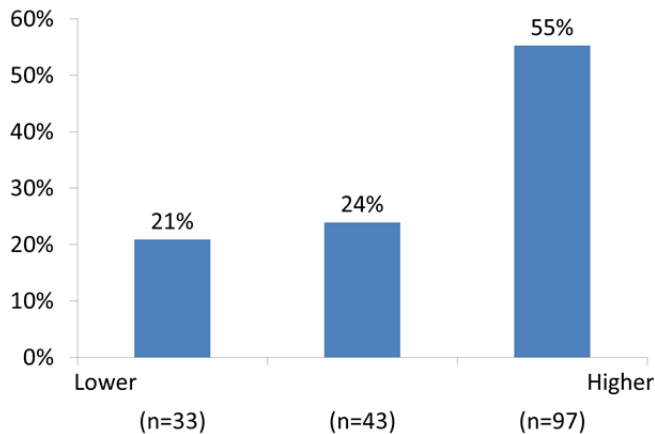


Figure 18. Participation on Simplified Participation Scale (N=173)

3.3.1.3 Risk Perception and Preparedness

The majority of participants were most concerned about the dangers associated with volcano eruption (40%) and earthquake (39%) (Figure 19). The rest were most concerned about landslide (9%), followed by tsunami (4%), storm (4%), drought (2%) and river flood (1%). A small percentage (1%) was not worried about any natural hazards. Lahar, wild fire, heat wave, tornado and hail were also in the list, but none of the participants reported these hazards as one that was of most concern.

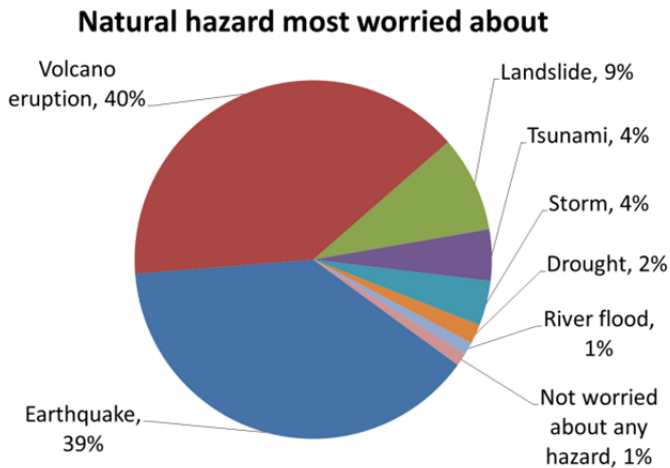


Figure 19. Risk perception (N=173)*

*The list also included lahar, wild fire, heat wave, tornado and hail, but no participants reported these as the natural hazard they were most worried about.

Twenty-seven per cent of participants knew and had an agreed emergency plan with the people in their house on what to do during a natural hazard emergency. Only 9% had an emergency kit ready at the time of their interview. 20% of participants knew of a government emergency service provider who would help them during a natural hazard emergency (Figure 20).

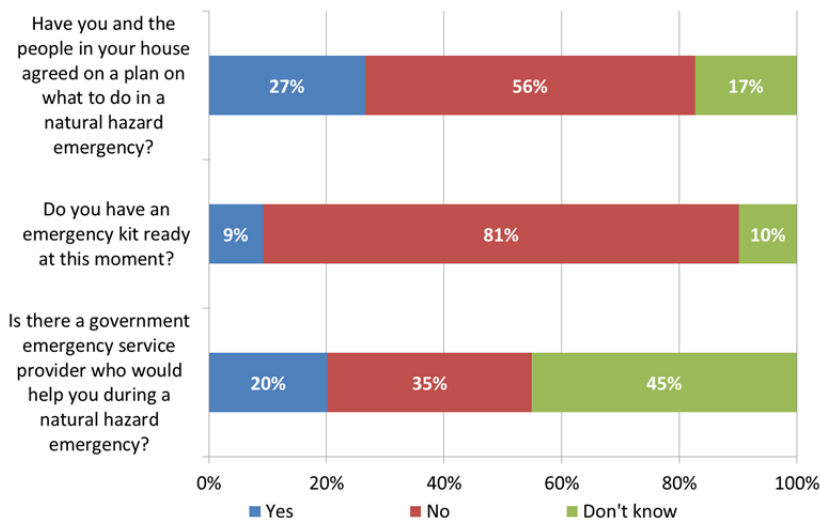


Figure 20. Risk preparedness (N=173)

3.3.1.4 Lived experience of natural hazard emergencies

Results show that 80% (N=138) survey participants had experienced a natural hazard emergency in the 10 years prior to their interview. Analysis in Figure 17 thus relates to these 138 participants. The majority of the 138 participants reported earthquake (53%) and volcano eruption (43%) as the natural hazard emergency that affected them most in the last ten years (Figure 21). A small percentage reported that storm (2%) and tsunami (1%) affected them most. The list included other natural hazards as given with Figure 15, but none of the participants reported these other hazards as the one that affected them most.

Which natural hazard emergency affected you most?

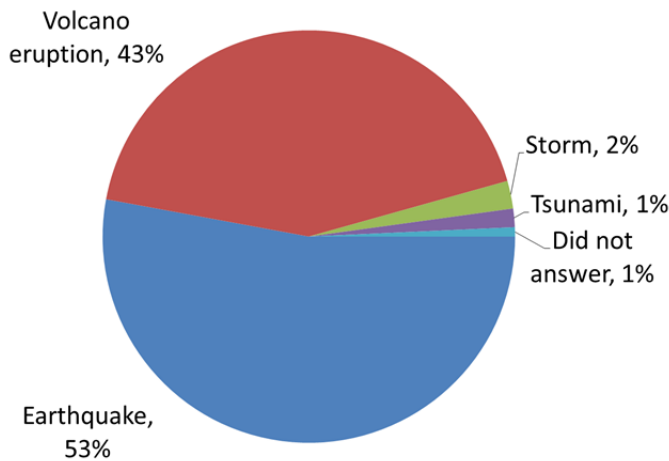


Figure 21. Natural hazard emergency that affected the respondents the most (N=138)*

*The list of natural hazards included also river floods, droughts, lahars, landslides, wildfires, heat waves, tornadoes and hail, but these were not selected by the participants.

One participant (out of the 138) did not answer the question about the natural hazard emergency that affected him/her the most, thus the findings in Figures 18 and 19 thus relate to 137 participants. For the natural hazard emergency that affected them the most, 62% went to an emergency shelter, 33% received emergency message(s) about this. Only 5% already had their house prepared to resist this emergency, 3% already had an emergency kit prepared and 2% had an emergency plan prepared (Figure 22). For 87% of participants, their disability was unaffected by this natural hazard emergency that had affected them the most, 9% had their disability made worse, and 3% had their disability caused by this natural hazard emergency (Figure 23).

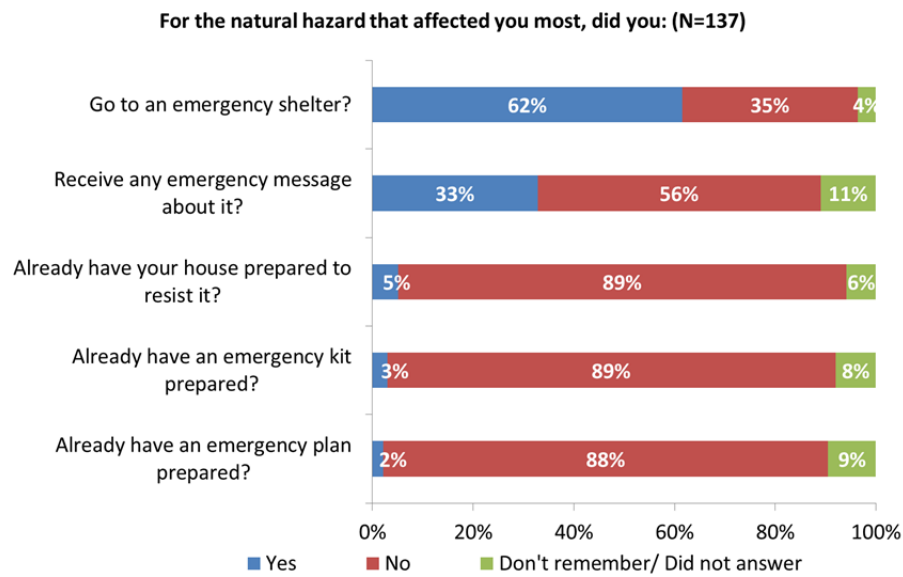


Figure 22. Actions taken before and during the natural hazard emergency (N=137)

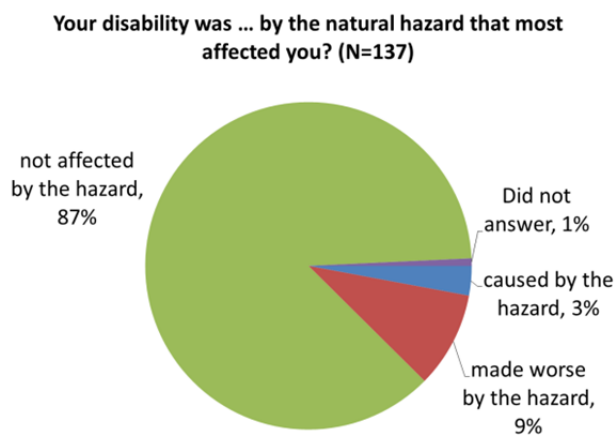


Figure 23. Impact of the natural hazard on disability (N=137)

3.3.2 Resilience profile

Figure 24 shows the distribution of RRI scores (i.e. the resilience index). As detailed in section 3.2.2.5 (about the methodology to obtain the sample resilience profile), RRI scores were divided into five groups using cut-off values based on the distance from the sample's mean, expressed in standard deviations (Table 5). The data is relatively symmetrically distributed.

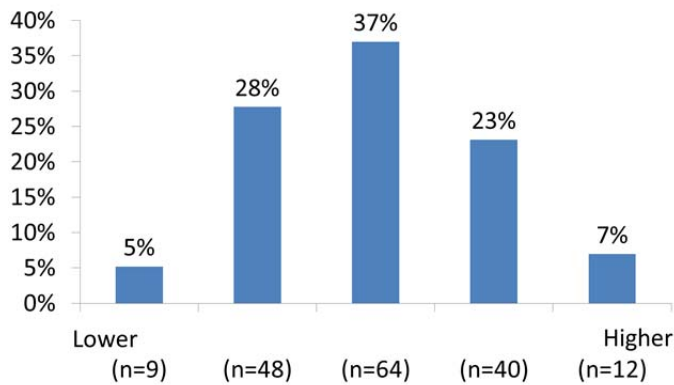


Figure 24. Resilience profile (N=173)

Figure 25 and Figure 26 show the percentage distribution of gender and age, respectively, by each of the five groups in the resilience profile. There was no significant difference by gender ($p=0.27$) or age ($p=0.06$) in the resilience profile. Their percentage distributions in the overall sample were shown in Figures 12 and 13. Figure 23 shows that participants with a higher level of resilience (as shown on the x axis from lower to higher) were more likely to have completed at least elementary school ($p=0.02$).

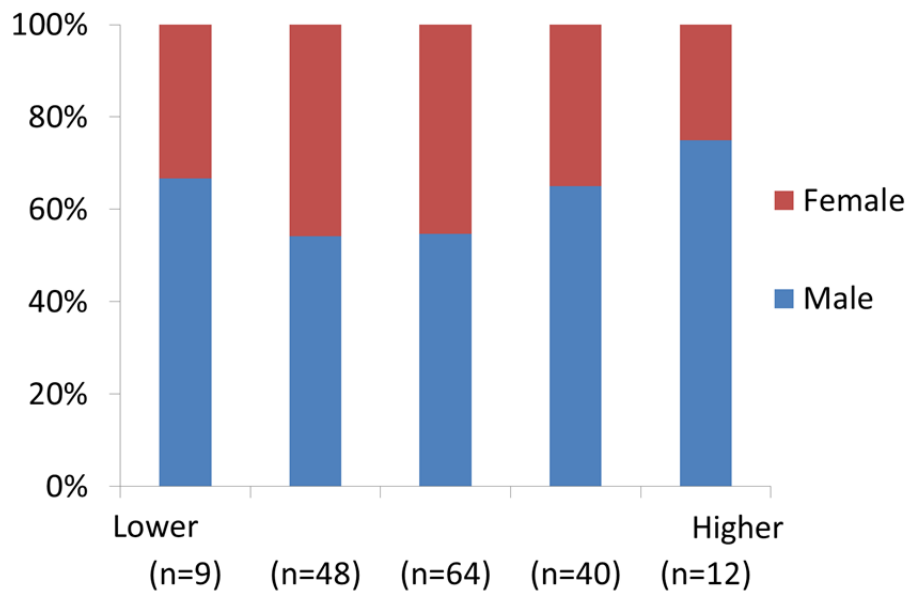


Figure 25. Resilience profile by gender (N=173)*

*There is no significant difference by gender in the resilience profile ($p=0.27$).

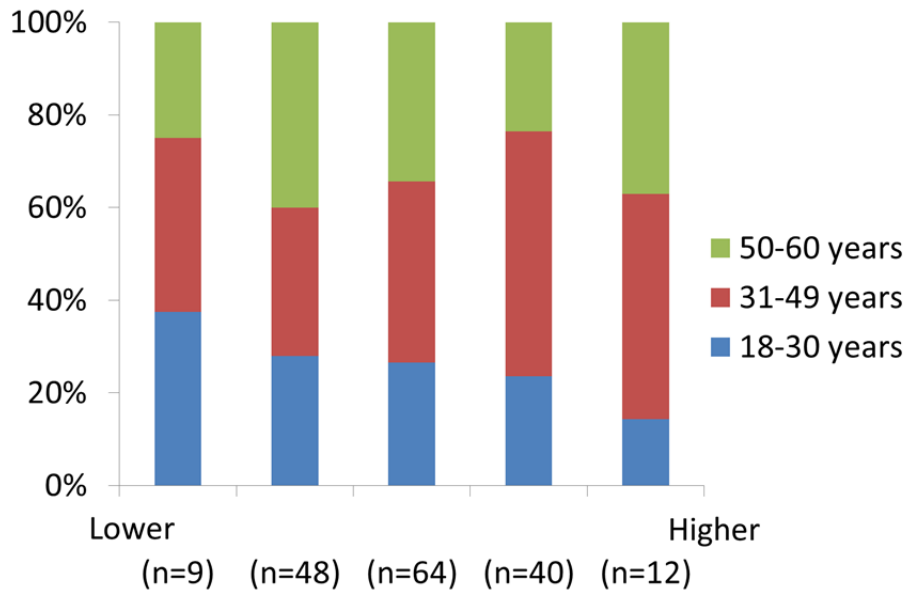


Figure 26. Resilience profile by age (N=173)*

*There is no significant difference by age in the resilience profile ($p=0.06$).

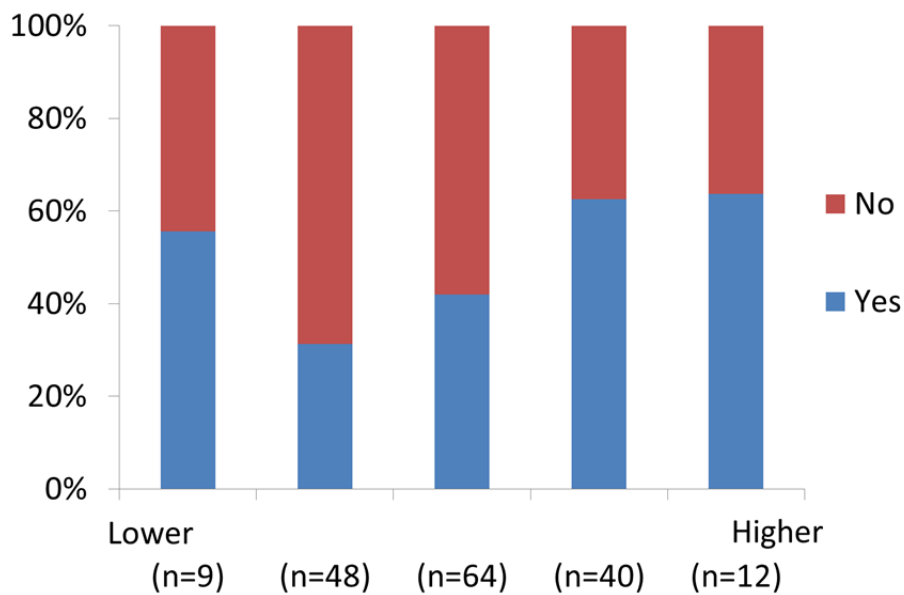


Figure 27. Resilience profile by completion of elementary school (N=173)*

*Completion of elementary school is significantly associated with higher resilience ($p=0.02$).

For about four-fifths (81%) of participants in the two lowest resilience profile groups the interview using the DiDR Tool Carer Form was conducted with the carer; only 17% of participants in the two highest resilience profile groups (as shown on the x axis from lower to higher in Figure 28) were participants where the interview was conducted with the carer. Those participants in interviews who were people with disabilities themselves were more likely to be in a higher resilience profile group ($p<0.001$).

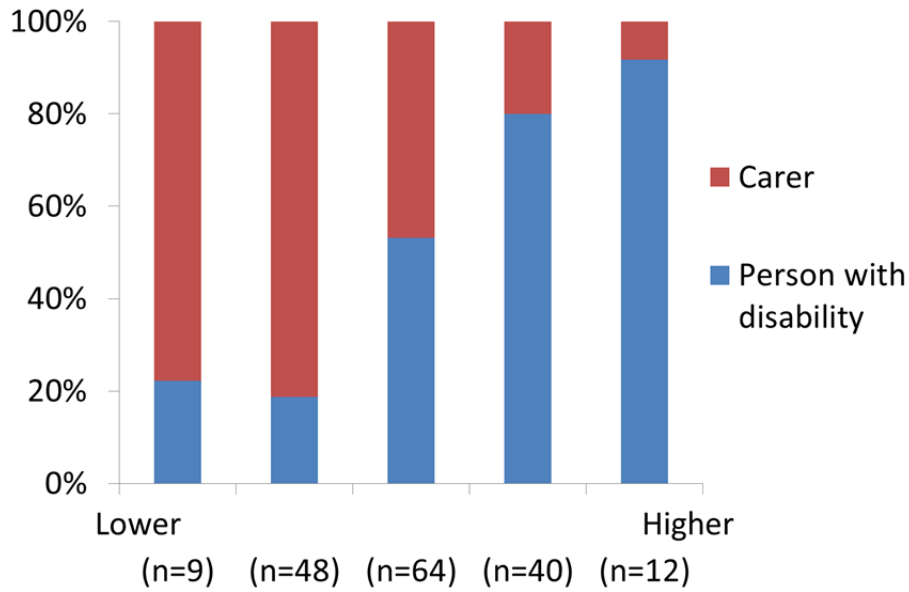


Figure 28. Resilience profile by interviewee being person with disability or carer (N=173)*

*Completion of interview by the person with disability is significantly associated with higher resilience ($p < 0.001$).

About one-fifth (21%) of the overall sample had ever participated in DRR education activities. Figure 29 shows that the percentage who ever participated in such activities ranged from 0% for participants in the lowest resilience profile group to 33% for participants in the highest resilience profile group (as shown by the lower and high groups on the x axis in Figure 25). Participants who ever participated in DRR educational activities were more likely to be higher in resilience ($p = 0.007$).

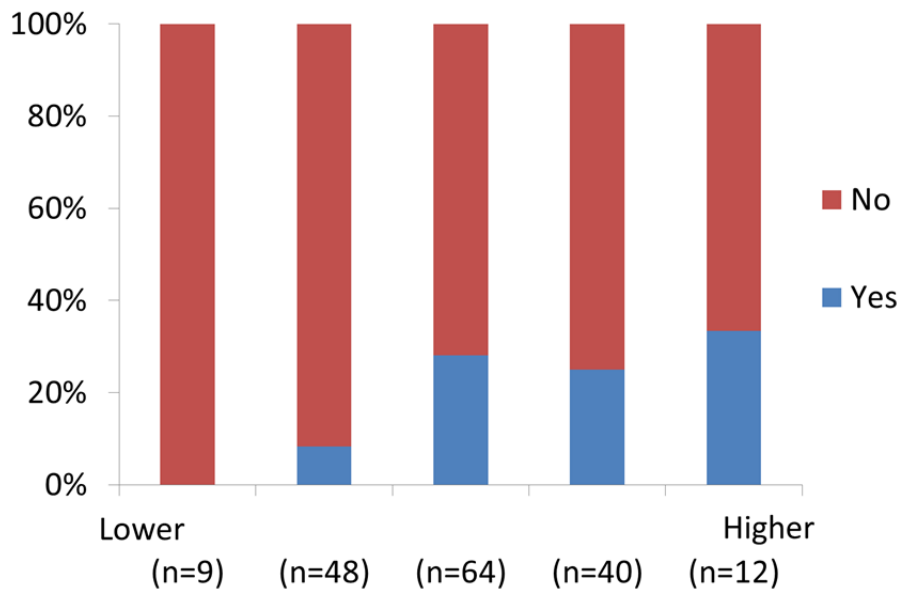


Figure 29. Resilience profile by ever having participated in disaster risk reduction activities (N=173)*

*Participation in DRR activities is also significantly associated with higher resilience ($p = 0.007$).

4. Discussion and conclusion

This technical report describes the development and field-testing of the Disability Inclusive Disaster Resilience (DiDR) tool. To the best of our knowledge, the DiDR tool is the first instrument of its kind that provides a framework for assessing the resilience of people with disabilities to natural hazard emergencies. The tool represents a collaborative effort involving contributions from academia, DPOs and INGOs working with people with disabilities in South East Asia and globally.

One aim of the DiDR tool is to promote the active participation and meaningful contribution of people with disabilities in Disaster Risk Reduction strategies. With this in mind, the tool was designed to be administered by people with disabilities in interviews with people with disabilities or with their carers if the person with a disability was unable/ unwilling to participate in an interview. This approach seeks to shift the paradigm which only regards people with disabilities as one of several vulnerable groups with special needs, to acknowledging that people with disabilities are capable of becoming resilient and knowledgeable individuals in disaster risk reduction who are able to contribute meaningfully to reducing risk in their communities.

The DiDR tool assesses the resilience of people with disabilities by bringing together four main components:

- Their functioning and capacity;
- Their participation in communities
- The physical vulnerability of their housing
- Individual risk predictors known to influence the behaviour of the non-disabled population before, during and after a natural hazard emergency.

We field-tested the DiDR tool in four locations in Indonesia. All interviews were undertaken by people with disabilities working in teams with *kaders*, trained by the Project Team over a week-long workshop including *in situ* and field piloting of the DiDR tool. The survey teams independently administered the DiDR tool to 289 people with disabilities in a face-to-face interview in the selected locations in Indonesia. Data obtained were collated and analysed by the University of Sydney's Centre for Disability Research and Policy (CDRP).

Results showed that while all participants lived in areas exposed to natural hazards (mostly earthquakes and volcanic activity) and 80% of them had lived through at least one natural disaster in the last 10 years, their level of preparedness was relatively low. At the time of the interviews, only a limited number of participants had already taken critical risk preparedness measures such as organising a household emergency plan (27%) or emergency kit (9%). Only 20% of the participants were aware of the existence of an official governmental organisation for disaster risk management.

The design of DiDR tool allowed the generation of a resilience profile for each individual, summarised by the individual's Relative Resilience Index (RRI). The distribution of RRI scores was analysed and compared with the sample's socio-

economic and cultural characteristics, which permitted the generation of a resilience profile for the entire sample. The level of resilience was found to be significantly higher in individuals who had completed at least primary education, or had participated in some type of disaster risk reduction activity in the past. Not surprisingly, individuals who were able to independently carry out the interview showed a degree of resilience that was much higher than those for whom the interview was conducted with a carer.

These results highlight the efficacy of DRR educational and training activities as an effective measure to increase the resilience of people with disabilities in Indonesia. Disability inclusive disaster reduction activities should aim at increasing individuals' and household preparedness to natural hazards, and at facilitating a dialogue between people with disabilities, their families and carers and local emergency agencies, services and managers.

- The DiDR tool can be used to identify relative resilience of people with disabilities specifically related to their local areas and from which targeted measures to increase the resilience of people with disabilities, their families and carers can be developed;
- The DiDR tool provides an effective approach to including people with disabilities in identifying their risk and resilience and other DRR activities thus enabling them to meaningfully contribute to reducing risk in their communities;
- That successful approaches to Disability Inclusive Disaster Risk Reduction need to be collaborative across all DRR stakeholders including first and foremost people with disabilities, their families and carers, as well as DPOs, INGOs, NGOs, government agencies and other DRR stakeholders in the community.

This project has demonstrated the feasibility of developing a disability inclusive risk resilience tool that can be used by people with disabilities for self-assessment and in a face-to-face interview with other people with disabilities or their carers. There are several implications for future research and policy and practice.

- The DiDR Tool, in the absence of disability specific data, was developed based on the reasonable assumption that risk predictors known to influence the behaviour of the non-disabled population in natural hazard emergencies also apply to people with disabilities.
- Currently the DiDR tool comprises a set of questions determined as manageable in an interview time of approximately 1- 2 hours. Further work is required to determine the utility of each question in an effort to ensure inclusion of those questions only that are as effective as possible.
- The DiDR tool version developed in this project was ultimately informed by Indonesian people with disabilities, DPOs and NGOs in the Indonesian context. Future research is required to examine the applicability of the DiDR tool in other countries and with an expanded range of natural hazards.

REFERENCES

- Abbott, D., & Porter, S. (2013). Environmental hazard and disabled people: from vulnerable to expert to interconnected. *Disability & Society*, 28(6), 839-852.
- Adger, W. N. (2000). Social and ecological resilience: are they related?. *Progress in human geography*, 24(3), 347-364.
- Anand, S., & Sen, A. (1994). *Human Development Index: methodology and measurement* (No. HDOCPA-1994-02). Human Development Report Office (HDRO), United Nations Development Programme (UNDP). Available online at: <http://hdr.undp.org/en/content/human-development-index-methodology-and-measurement>, Accessed 22/6/15
- Baxter, P. J., Boyle, R., Cole, P., Neri, A., Spence, R., & Zuccaro, G. (2005). The impacts of pyroclastic surges on buildings at the eruption of the Soufrière Hills volcano, Montserrat. *Bulletin of Volcanology*, 67(4), 292-313.
- Bird, D. K. (2009). The use of questionnaires for acquiring information on public perception of natural hazards and risk mitigation—a review of current knowledge and practice. *Natural Hazards and Earth System Science*, 9(4), 1307-1325.
- Blong, R. J. (1984). *Volcanic hazards. A sourcebook on the effects of eruptions*. Elsevier. ISBN 12 107180 4. Available online at: <http://www.sciencedirect.com/science/book/9780121071806>, Accessed 22/6/15
- Boen, T. (2001). Earthquake resistant design of non-engineered buildings in Indonesia. In EQTAP Conference. Available online at: <http://humanitarianlibrary.org/sites/default/files/2013/07/Indonesian%20Earthquake%20Resistant%20Design.pdf>, Accessed 22/6/15
- Boon, H. J., Millar, J., Lake, D., Cottrell, A., & King, D. (2012). Recovery from disaster: resilience, adaptability and perceptions of climate change. National Climate Change Adaptation Research Facility, Gold Coast, 467. Available online at: <http://www.nccarf.edu.au/publications/recovery-disaster-resilience-adaptability-climate-change>, Accessed 22/6/15
- Burningham, K., J. Fielding, et al (2008). 'It'll never happen to me': understanding public awareness of local flood risk. *Disasters* 32(2): 216-238.
- Calgaro, E., & Dominey-Howes, D. (2013). Increasing the resilience of the Deaf Community in NSW to natural hazards. Milestone 7 – Final Report. Report prepared for the NSW Ministry for Police and Emergency Services. Available online at: http://deafsocietynsw.org.au/documents/milestone_2_3_assessment_report.pdf, Accessed 22/6/15
- Cutter, S. L., Boruff, B. J., & Shirley, W. L. (2003). Social vulnerability to environmental hazards*. *Social Science Quarterly*, 84(2), 242-261.

Dall'Osso, F., Gonella, M., Gabbianelli, G., Withycombe, G., & Dominey-Howes, D. (2009). A revised (PTVA) model for assessing the vulnerability of buildings to tsunami damage. *Natural Hazards and Earth System Science*, 9(5), 1557-1565.

Devine-Wright, P. (2013). Think global, act local? The relevance of place attachments and place identities in a climate changed world. *Global Environmental Change*, 23(1), 61-69.

Gornitz, V. M., Daniels, R. C., White, T. W., & Birdwell, K. R. (1994). The development of a coastal risk assessment database: vulnerability to sea-level rise in the US Southeast. *Journal of Coastal Research*, Special Issue n. 12, 327-338.

Hernández, B., Hidalgo, M. C., Salazar-Laplace, M. E., & Hess, S. (2007). Place attachment and place identity in natives and non-natives. *Journal of Environmental Psychology*, 27(4), 310-319.

Jaiswal, K., Wald, D., & D'Ayala, D. (2011). Developing empirical collapse fragility functions for global building types. *Earthquake Spectra*, 27(3), 775-795.

JRC (Joint Research Centre-European Commission) (2008). *Handbook on constructing composite indicators: methodology and user guide*. OECD Publishing.

Available online at:

<http://www.oecd.org/els/soc/handbookonconstructingcompositeindicatorsmethodologyanduserguide.html>, Accessed 22/6/15

Kelders, R., van Brakel, W., & Beise, K. (2012). Testing and validating a simplified scale to measure social participation of people with disabilities in Indonesia. *Disability and Rehabilitation*, 34(8), 638-646.

Knuth, D., Kehl, D., Hulse, L., & Schmidt, S. (2014). Risk Perception, Experience, and Objective Risk: A Cross-National Study with European Emergency Survivors. *Risk Analysis*, 34(7), 1286-1298.

Kohn, S., Eaton, J. L., Feroz, S., Bainbridge, A. A., Hoolachan, J., & Barnett, D. J. (2012). Personal disaster preparedness: an integrative review of the literature. *Disaster Medicine and Public Health Preparedness*, 6(03), 217-231.

Levac, J., Toal-Sullivan, D., & OSullivan, T. L. (2012). Household emergency preparedness: a literature review. *Journal of Community Health*, 37(3), 725-733.

Lewicka, M. (2011). Place attachment: How far have we come in the last 40 years?. *Journal of Environmental Psychology*, 31(3), 207-230.

Lindell, M. K., & Hwang, S. N. (2008). Households' perceived personal risk and responses in a multihazard environment. *Risk Analysis*, 28(2), 539-556.

Lowe, C. J. (2010). Analysing vulnerability to volcanic hazards: application to St. Vincent (Doctoral dissertation, UCL - University College London). Available online at: <http://discovery.ucl.ac.uk/20466/>, Accessed 22/6/15

Mayer, W. H. (1984). *The Mitigation of Ash Fall Damage to Public Facilities: Lessons Learned from the 1980 Eruption of Mt. St. Helens*. Seattle (Washington), Federal Emergency Management Agency (FEMA), Region X, 70pp.

Mayhorn, C. B., & McLaughlin, A. C. (2014). Warning the world of extreme events: A global perspective on risk communication for natural and technological disaster. *Safety Science*, 61, 43-50.

Mück, M., Taubenböck, H., Post, J., Wegscheider, S., Strunz, G., Sumaryono, S., & Ismail, F. A. (2013). Assessing building vulnerability to earthquake and tsunami hazard using remotely sensed data. *Natural Hazards*, 68(1), 97-114.

Papathoma-Köhle, M., Neuhäuser, B., Ratzinger, K., Wenzel, H., & Dominey-Howes, D. (2007). Elements at risk as a framework for assessing the vulnerability of communities to landslides. *Natural Hazards and Earth System Science*, 7(6), 765-779.

Perry, R. W., Greene, M. R., & Lindell, M. K. (1980). Enhancing evacuation warning compliance: suggestions for emergency planning. *Disasters*, 4(4), 433-449.

Quarles, S. L., Valachovic, Y. A. N. A., Nakamura, G. M., Nader, G. A., & DeLasaux, M. J. (2010). *Home survival in wildfire-prone areas: building materials and design considerations*. ANR Publication, 8393. Available online at: <https://anrcatalog.ucdavis.edu/pdf/8393.pdf>, Accessed 22/6/15

Spence, P. R., Lachlan, K., Burke, J. M., & Seeger, M. W. (2007). Media use and information needs of the disabled during a natural disaster. *Journal of Health Care for the Poor and Underserved*, 18(2), 394-404.

StataCorp. (2013). *Stata Statistical Software: Release 13*. College Station, TX: StataCorp LP.

UN (United Nations) (2008). *Convention on the Rights of Persons with Disabilities*. <http://www.un.org/disabilities/convention/conventionfull.shtml> Accessed 9/6/15

UNISDR (United Nations International Strategy for Disaster Risk Reduction) (2013). *Living with disability and Disasters*, UNISDR 2013 Survey on Living with Disabilities and Disasters - Key Findings. Available online at: http://www.unisdr.org/2014/iddr/documents/2013DisabilitySurveyReport_030714.pdf, Accessed 22/6/15

UNISDR (United Nations International Strategy for Disaster Risk Reduction) (2005, March). *Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters*. In Extract from the final report of the World Conference on Disaster Reduction (A/CONF. 206/6). Available online at: <http://www.unisdr.org/we/inform/publications/1037>, Accessed 22/6/15

UNISDR (United Nations International Strategy for Disaster Risk Reduction) (2015). *Sendai Framework for Disaster Risk Reduction 2015-2030*. UN World Conference on Disaster Risk Reduction, Sendai, March 2015. Available online at

http://www.wcdrr.org/uploads/Sendai_Framework_for_Disaster_Risk_Reduction_2015-2030.pdf, Accessed 22/6/15

Uscher-Pines, L., Hausman, A. J., Powell, S., DeMara, P., Heake, G., & Hagen, M. G. (2009). Disaster preparedness of households with special needs in southeastern Pennsylvania. *American Journal of Preventive Medicine*, 37(3), 227-230.

Washington Group on Disability Statistics (WG) (2009). Understanding and Interpreting Disability as Measured using the WG Short Set of Questions. Available online at: http://www.cdc.gov/nchs/data/washington_group/meeting8/interpreting_disability.pdf, Accessed 19/4/15

World Health Organization (2011). *World report on disability*. Malta: World Health Organization. ISBN 978 92 4 156418 2. Available online at: http://www.who.int/disabilities/world_report/2011/en/, Accessed 22/6/15

Annex I: the DIDR Tool (people with disability form)



Disability Inclusive Disaster Resilience Tool

Promoting the Inclusion of People with Disabilities in Disaster Management in Indonesia

Professor Gwynnyth Llewellyn
Dr Filippo Dall'Osso
Dr Michelle Villeneuve
Sarina Kilham

PERSON WITH A DISABILITY SURVEY FORM
Version 1.1
March 2015

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READ THESE INSTRUCTIONS BEFORE YOU START EACH INTERVIEW

WHO IS THE INTERVIEWER?

- Only one surveyor should undertake the interview
- Before you get to the respondent's house, decide who will undertake the interview.
- If that surveyor gets too tired during the interview, the other surveyor can take over and finish the interview.

HOW TO INTRODUCE YOURSELF?

I AM [say your name], AND SHE/HE IS [say the name of your colleague]. WE WORK FOR ASB. WE ARE HERE TO DO AN INTERVIEW ABOUT DISABILITY AND NATURAL DISASTERS WITH YOU.

BEFORE STARTING, THERE IS SOME INFORMATION YOU NEED TO KNOW [show the PIS]. WOULD YOU LIKE TO READ IT YOURSELF, OR DO YOU WANT ME TO READ IT TO YOU?

[Once the consent form is signed]

THE INTERVIEW WILL TAKE APPROXIMATELY 1 HOUR. PLEASE FEEL FREE TO ASK QUESTIONS OR TO TAKE A SHORT BREAK AT ANY TIME.

WHO IS THE RESPONDENT?

- The survey is to be completed with the person with a disability. We need to know their perspective.
- Sometimes this is not possible. In this case the interview can then be done with a carer/family member.
- If you are undertaking the interview with a carer/family member please use the carer form.

HOW TO ASK THE QUESTIONS?

- The questions are numbered and written in bold. You must read the question as it is written in the survey.
- The script that you read out is written in upper case and LOOKS LIKE THIS.

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WHAT SHOULD YOU DO IF THE PERSON DOES NOT UNDERSTAND THE QUESTION?

- Read the question as it is written in the survey; if the respondent does not understand the language of the question, read it again. If the respondent still does not understand, use the survey that is written in the local language to ask the question again.
- If the respondent does understand the language, but does not understand the meaning of the question, you can explain the question in your own words.
- If the respondent still does not understand the question – write clearly next to the question: "respondent did not understand the question" and move to the next question.

DO RESPONDENTS HAVE TO ANSWER ALL QUESTIONS?

- All respondents must be asked all questions. Sometimes a respondent **may not want** to answer. This could be because it is distressing, or painful or embarrassing.
- Respondents can refuse to answer a question – see Participant Consent Form (point 5). If this happens write clearly against the question: "respondent did not want to answer this question"

HOW DO YOU MAKE A CHANGE ON THE SURVEY FORM?

- If you make a mistake on the form, or if the respondent changes their mind, double cross out the mistake and check the correct box. Make this **very clear** to help the data input person at ASB.

WHAT IF THE RESPONDENT ASKS YOU "ARE THERE OTHER ACTIVITIES PLANNED"?

- Here is your answer: "this interview is only for the purpose of the research, and no further activities are planned at this stage".

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1 Data Collector

A. INFORMATION ON DATA COLLECTOR ¹			
A1. Name	1.	A2. Phone	1.
	2.		2.

B. GENERAL INFORMATION	
B5. Form No. (Filled by ASB)	__ __ __ __
B6. Location	District : Sub-district.: Village:.....
B1. Consent Form to Participate in interview signed?	1. Yes () 2. No ()
B2. Time start WIB
B3. Time finish WIB
B4. Date of interview (date/month/year)/...../2015

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2 Socio-Demographic and Cultural Information

C. INFORMATION ON THE PARTICIPANT	
C1. Name	..........
C2. Age:.....year-old (Precise/ approx.) choose one	
C4. Sex	<input type="checkbox"/> 1. Male <input type="checkbox"/> 3. Female <input type="checkbox"/> 2. Other
C5. Marital status	<input type="checkbox"/> 1. Not married <input type="checkbox"/> 2. Married <input type="checkbox"/> 3. Divorced <input type="checkbox"/> 4. Widow(er)
C9. Education background	<input type="checkbox"/> 2. Never attended school <input type="checkbox"/> 3. Completed formal education <input type="checkbox"/> elementary school <input type="checkbox"/> Junior high school <input type="checkbox"/> Senior High school <input type="checkbox"/> University degree (D3/S1/S2/S3) Year <input type="checkbox"/> 4. Dropped out of school <input type="checkbox"/> elementary school <input type="checkbox"/> Junior high school <input type="checkbox"/> Senior High school <input type="checkbox"/> University degree (D3/S1/S2/S3) Level Year.....
C8. Daily activity (can tick more than one)	<input type="checkbox"/> 1. Currently attend school (continue C81x) <input type="checkbox"/> 2. Work (continue C82x) <input type="checkbox"/> 3. At home (continue C83x)
C81x. Level of education (only if ticked 'currently)	<input type="checkbox"/> Elementary school <input type="checkbox"/> Junior high school

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attend school')	<input type="checkbox"/> Senior High school <input type="checkbox"/> University degree (D3/S1/S2/S3) Level:..... Year:
C82x. Occupation (Only if ticked 'work'). <i>Can tick more than one.</i>	<input type="checkbox"/> 1. Civil servant <input type="checkbox"/> 2. Private sector employee <input type="checkbox"/> 3. Daily labour, please specify.... <input type="checkbox"/> 4. Entrepreneur, please specify..... <input type="checkbox"/> 5. Farmer <input type="checkbox"/> 6. Others, please specify
C83x. At home (Only if ticked 'at home')	Please describe
C10. Address	..........
C10b. Sub-village	.....
C10a. RT/RW	.....
C10c. Village	.....
C11. Phone number	..........
C12. Additional information to find the address	
F1. Have you ever participated in any disaster risk reduction/disaster preparedness activities?	<input type="checkbox"/> 1. YES <input type="checkbox"/> 3. NO

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3 Washington Group Short Set of Questions

Questions	No difficulty	Some difficulty	A lot of difficulty	Unable to do it at all	Do not know/ Not answer
Do you have difficulty seeing, even if wearing glasses?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you have difficulty hearing, even if using a hearing aid?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you have difficulty walking or climbing steps?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you have difficulty remembering or concentrating?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you have difficulty with self-care, such as washing all over or dressing yourself?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Using your usual (customary) language, do you have difficulty communicating? (for example, understanding or being understood by others)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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4 Building vulnerability

This section is to be completed only by the Survey Team without discussion with the respondent. It is better to complete this section before rather than after you do the interview.

4.1 What is the main construction material of the building?

Check one box only

Bamboo, clay, tin, mud or other temporary materials	<input type="checkbox"/>
Wood	<input type="checkbox"/>
Well cemented bricks or natural stones	<input type="checkbox"/>
Concrete	<input type="checkbox"/>

4.2 How many stories does the building have?

Check one box only

One	<input type="checkbox"/>
Two	<input type="checkbox"/>
More than two	<input type="checkbox"/>

4.3 Is the first floor of the building elevated with respect to the ground?

Check one box only

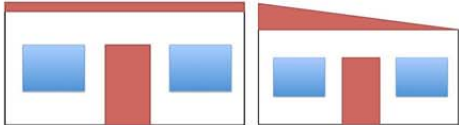

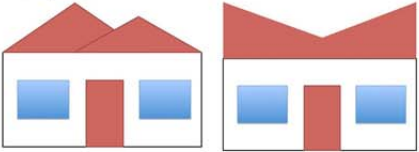
No, same level as the ground	<input type="checkbox"/>
Yes, there are a few steps or a ramp to get into the building	<input type="checkbox"/>
Yes, the entrance is at the second floor (the first floor is used for animals, tools, bikes, storage or other non-residential purpose)	<input type="checkbox"/>

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4.4 What is the shape of the roof?

Check one box only

<p>Flat or almost flat <i>Examples:</i></p> 	<input type="checkbox"/>
<p>Pitched and simple <i>Example:</i></p> 	<input type="checkbox"/>
<p>Pitched and complex <i>Examples:</i></p> 	<input type="checkbox"/>

4.5 What is the roof material?

Check one box only

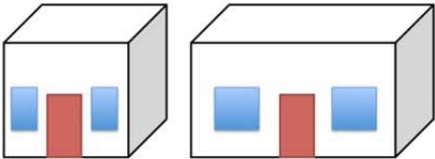
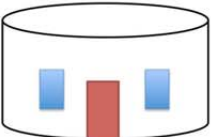
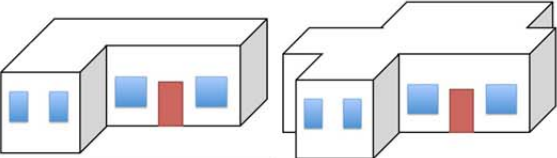
Clay, tin or other temporary materials	<input type="checkbox"/>
Wood	<input type="checkbox"/>
Tiles or concrete	<input type="checkbox"/>
Not visible	<input type="checkbox"/>

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4.6 Which one of the following shapes best describes the building?

Check one box only

<p>Square or rectangular <i>Examples:</i></p> 	<input type="checkbox"/>
<p>Round or oval <i>Example:</i></p> 	<input type="checkbox"/>
<p>Complex, with many sides and corners <i>Examples:</i></p> 	<input type="checkbox"/>

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5 Attachment to the place of living

IN THIS SECTION, I AM GOING TO ASK YOU QUESTIONS ABOUT THIS HOUSE AND YOUR HOUSEHOLD.

5.1 In regards to this house, do you or your immediate family:

Check one box only

Rent this house	<input type="checkbox"/>
Own this house	<input type="checkbox"/>
Other	<input type="checkbox"/>

5.2 Who lives in this house with you?

Check each one that applies – you must check one box in each row

Child/ children under 18 years old	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Older person/ persons over 60	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Someone else with a disability	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Animals essential for the household's economy	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Pets	<input type="checkbox"/> Yes	<input type="checkbox"/> No
I live alone	<input type="checkbox"/> Yes	<input type="checkbox"/> No

5.3 How many years have you lived in this house?

Check one box only

<input type="checkbox"/> Most or all of my life
<input type="checkbox"/> Only in the past few years

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6 Participation in community

THIS IS A NEW SECTION. NOW I AM GOING TO ASK YOU QUESTIONS ABOUT YOUR PARTICIPATION IN THE COMMUNITY. I WILL BE ASKING YOU TO COMPARE YOURSELF TO OTHER PEOPLE IN YOUR VILLAGE. EACH QUESTION HAS FIVE OPTIONS. YOU CAN ONLY CHOOSE ONE OF THESE OPTIONS.

THESE ARE THE OPTIONS: "NO PROBLEM", "SMALL PROBLEM", "MEDIUM PROBLEM", "LARGE PROBLEM". THE LAST OPTION IS: "IRRELEVANT, OR I DON'T WANT TO, OR I DON'T HAVE TO". YOU DO NOT HAVE TO REMEMBER THESE OPTIONS NOW, AS EVERY TIME I ASK YOU A QUESTION I WILL READ ALL THE FIVE OPTIONS TO YOU.

Check one box per row – you must check one box only in each row

Participation Scale Comparison with the other people in your village	No problem	Small problem	Medium problem	Large problem	Irrelevant, or I don't want to, or I don't have to
6.1 Compared to other people, finding any type of paid work (formal or informal) is?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.2 Working as hard as other people is? (same hours, type of work etc)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.3 Earning money/producing goods for the family in a similar way to other people is?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.4 Travelling outside your village/neighbourhood as much as other people do is? (except for treatment) e.g. bazaars, markets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.5 Taking part in activities as much as other people do is? (e.g. sports, chatting, meetings etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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6.6 Taking part in community or religious affairs as much as other people do is?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.7 Gaining or maintaining the same respect as other people in the community is?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.8 Taking Care of yourself (appearance, nutrition, health, etc) as well as other people is?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.9 Visiting other people in the community as often as other people is?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.10 Compared to other people, entering into or maintaining a long-term relationship with a life partner is?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.11 Visiting public places in your village/neighbourhood like schools, shops, offices, market and tea/coffee shops as often as other people is?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.12 Doing household work in your home as other people do is?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.13 Helping other people (e.g. neighbours, friends or relatives) is?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.14 Feeling comfortable to meet new people is?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.15 Feeling confident to try to learn new things is?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

WE HAVE BEEN GOING FOR SOME TIME NOW. BEFORE I START THE NEXT SECTION, WOULD YOU LIKE TO TAKE A SHORT BREAK?

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7 Natural hazards that could affect you in the future

IN THIS SECTION, I AM GOING TO ASK YOU ABOUT NATURAL HAZARDS THAT COULD AFFECT YOU IN THE FUTURE. THIS IS NOT ABOUT YOUR PAST EXPERIENCE, THAT COMES LATER IN ANOTHER SECTION.

7.1 Which of these events do you think could be a danger to you and your household in the future?

Check each one that applies – you must check one box in each row

Column A: Question 7.1			Column B: Question 7.2: Rank
Earthquake	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
River Flood	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Storm	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Drought	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Tsunami	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Volcano Eruption	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Lahar	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Landslide	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Wild Fire	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Heat wav	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Tornado	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Hail	<input type="checkbox"/> Yes	<input type="checkbox"/> No	

7.2 Which of the events you answered “yes” to in Question 7.1 worry you the most?

Rank only the top 3: 1 = most worrying -> 3 = least worrying.

Please complete Column B in the Table above.

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8 Natural hazard emergencies

THIS SECTION IS ABOUT WHAT YOU THINK YOU WOULD DO IN A NATURAL HAZARD EMERGENCY IN THE FUTURE, AND YOUR PREPAREDNESS.

8.1 Who would you rely on during a natural hazard emergency?

IN THIS QUESTION I AM NOT GOING TO READ OUT OPTIONS, I WANT YOU TO TELL ME IN YOUR OWN WORDS WHO YOU WOULD RELY ON DURING A NATURAL HAZARD EMERGENCY.

Code the response to the closest option in the list below. If they say a person's name, ask them who that person is. Check one box only

A member of the household	<input type="checkbox"/>
Friend	<input type="checkbox"/>
Neighbour	<input type="checkbox"/>
Official	<input type="checkbox"/>
Religious leader/Community leader	<input type="checkbox"/>
Other	<input type="checkbox"/>
No one	<input type="checkbox"/>
Faith	<input type="checkbox"/>

8.2 Is there a government emergency service provider who would help you during a natural hazard emergency?

Check one box only

<input type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> I don't know

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8.3 Do you have an emergency kit ready at this moment? An emergency kit is a special bag containing for example medications, water and food for a couple of days, a battery-operated radio, a torch, a mobile phone.

Check one box only

<input type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> I don't know

8.4 Is your house connected to an electricity supply, with the electricity available under the roof of the main building?

<input type="checkbox"/> Yes
<input type="checkbox"/> No

8.5 Is your house connected to a water supply, with the water supply available under the roof of the main building?

<input type="checkbox"/> Yes
<input type="checkbox"/> No

8.6 At what level of your house do you spend most of your time?

Check one box only

First floor	<input type="checkbox"/>
Second floor	<input type="checkbox"/>
Third floor or higher	<input type="checkbox"/>

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8.7 Have you and the people in your house agreed on a plan on what to do in a natural hazard emergency?

Check one box only

<input type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> I don't know

8.8 What would you do in a natural hazard emergency?

Check one box only

Go with my gut instinct	<input type="checkbox"/>
Follow the plan agreed with other people in my house	<input type="checkbox"/>
I would wait to be told by someone what to do, or I would ask someone	<input type="checkbox"/>
I would do nothing / I would pray	<input type="checkbox"/>

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8.9 What could prevent you from leaving your house in a natural hazard emergency?

IN THIS QUESTION I AM NOT GOING TO READ OUT OPTIONS. I WANT YOU TO TELL ME IN YOUR OWN WORDS WHAT COULD PREVENT YOU FROM LEAVING YOUR HOUSE IN A NATURAL HAZARD EMERGENCY.

Code the response to the closest option in the list below. Check one box only

I do not think I would be able to reach a safe place	<input type="checkbox"/>
Wouldn't leave my family/animals	<input type="checkbox"/>
Wouldn't leave my house and belongings	<input type="checkbox"/>
Nothing would stop me	<input type="checkbox"/>
Told by someone in your family/household to stay home	<input type="checkbox"/>
I do not want to go to the evacuation point / emergency shelters	<input type="checkbox"/>
No one would help me/I would be left behind	<input type="checkbox"/>
Other	<input type="checkbox"/>
Faith	<input type="checkbox"/>

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9 Learning about natural hazards in your community

THIS SECTION IS ABOUT THE WAY YOU WOULD LIKE TO RECEIVE INFORMATION ABOUT NATURAL HAZARDS IN THE FUTURE.

9.1 What sources of information would you trust to be educated about natural hazards?

Check each one that applies – you must check one box in each row

Official	<input type="checkbox"/> Yes	<input type="checkbox"/> No
NGO/CSO/DPO	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Religious leader/Community leader	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Television	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Radio	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Internet	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Newspaper	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Other	<input type="checkbox"/> Yes	<input type="checkbox"/> No

9.2 Do you have a personal mobile phone?

<input type="checkbox"/> Yes
<input type="checkbox"/> No

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9.3 During a natural hazard emergency, from whom would you prefer to receive emergency messages such as warnings or evacuation orders?

IN THIS QUESTION I AM NOT GOING TO READ OUT OPTIONS. I WANT YOU TO TELL ME IN YOUR OWN WORDS FROM WHOM YOU WOULD PREFER TO RECEIVE EMERGENCY MESSAGES.

Code the response to the closest option in the list below. Check one box only

A member of the household	<input type="checkbox"/>
Friend	<input type="checkbox"/>
Neighbour	<input type="checkbox"/>
Official	<input type="checkbox"/>
NGO/CSO/DPO	<input type="checkbox"/>
Religious leader/Community leader	<input type="checkbox"/>
Other	<input type="checkbox"/>

9.4 During a natural hazard emergency, how would you prefer to get emergency messages such as warnings or evacuation orders?

IN THIS QUESTION I AM NOT GOING TO READ OUT OPTIONS. I WANT YOU TO TELL ME IN YOUR OWN WORDS HOW YOU WOULD PREFER TO GET EMERGENCY MESSAGES.

Code the response to the closest option in the list below. Check one box only

Being communicated to in person	<input type="checkbox"/>
Receiving a phone call	<input type="checkbox"/>
Receiving a SMS	<input type="checkbox"/>
Television	<input type="checkbox"/>
Radio	<input type="checkbox"/>
Internet	<input type="checkbox"/>
Other	<input type="checkbox"/>

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9.5 Have you experienced any natural hazard emergencies in the last ten years?

Check one box only

<input type="checkbox"/> Yes (go to next question, 9.6)
<input type="checkbox"/> No (go to question 11 on the last page of the survey)
<input type="checkbox"/> I don't remember (go to question 11 on the last page of the survey)

9.6 Which of the following natural hazard emergencies have you experienced in the last ten years?

Check each one that applies – you must check one box in each row

Earthquake	<input type="checkbox"/> Yes	<input type="checkbox"/> No
River Flood	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Storm	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Drought	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Tsunami	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Volcano Eruption	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Lahar	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Landslide	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Wild Fire	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Heat wave	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Tornado	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Hail	<input type="checkbox"/> Yes	<input type="checkbox"/> No

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9.7 Which one of the natural hazard emergencies you selected in question 9.6 affected you the most?

NOW I AM GOING TO READ YOU THE NATURAL HAZARDS THAT YOU SELECTED IN THE PREVIOUS QUESTION. I WANT YOU TO TELL ME WHICH ONE AFFECTED YOU THE MOST. YOU MUST CHOOSE ONLY ONE. YOU NEED TO DO THIS BECAUSE THE REST OF THE QUESTIONS IN THE SURVEY ARE ABOUT THE PAST NATURAL HAZARD THAT AFFECTED YOU THE MOST. THE NATURAL HAZARD EMERGENCIES THAT YOU SELECTED IN THE PREVIOUS QUESTION ARE *[read them out]*

Check one box only

Earthquake	<input type="checkbox"/>
River Flood	<input type="checkbox"/>
Storm	<input type="checkbox"/>
Drought	<input type="checkbox"/>
Tsunami	<input type="checkbox"/>
Volcano Eruption	<input type="checkbox"/>
Lahar	<input type="checkbox"/>
Landslide	<input type="checkbox"/>
Wild Fire	<input type="checkbox"/>
Heat wave	<input type="checkbox"/>
Tornado	<input type="checkbox"/>
Hail	<input type="checkbox"/>

9.8 Approximately, how long ago did[the natural hazard emergency selected in question 9.7] happen?

Check one box only

1-2 years ago	<input type="checkbox"/>
3-5 years ago	<input type="checkbox"/>
6-10 years ago	<input type="checkbox"/>

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10 Lived experience of the past natural hazard emergency selected in question 9.7

IN THIS SECTION I AM GOING TO ASK YOU QUESTIONS ABOUT THE[*the natural hazard emergency selected in question 9.7*], YOU CHOSE THIS AS THE NATURAL HAZARD EMERGENCY THAT AFFECTED YOU THE MOST. THE FIRST FEW QUESTIONS ARE ABOUT THE WEEKS OR MONTHS BEFORE THAT EVENT.

10.1 Did you already have an emergency plan prepared?

Check one box only

<input type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> I don't remember

10.2 Did you already have an emergency kit prepared?

Check one box only

<input type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> I don't remember

10.3 Did you already have your house prepared to resist the

.....?

Check one box only

<input type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> I don't remember

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10.4 In the weeks or months before the did you receive any help in preparing yourself or your home?

Check one box only

<input type="checkbox"/> Yes (go to next question, 10.5)
<input type="checkbox"/> No (go to question 10.6)
<input type="checkbox"/> I don't remember (go to question 10.6)

10.5 If yes, you received help from:

Check each one that applies – you must check one box in each row

A member of the household	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Friend	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Neighbour	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Official	<input type="checkbox"/> Yes	<input type="checkbox"/> No
NGO/CSO/DPO	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Religious leader/Community leader	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Other	<input type="checkbox"/> Yes	<input type="checkbox"/> No

NOW, THE NEXT QUESTIONS I WILL ASK YOU ARE ABOUT THE DAY OF THE[the natural hazard emergency selected in question 9.7]

10.6 Did you receive any emergency message about the such as alerts, warnings or evacuation orders?

Check one box only

<input type="checkbox"/> Yes (go to the next question, 10.7)
<input type="checkbox"/> No (go to question 10.9)
<input type="checkbox"/> I don't remember (go to question 10.9)

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10.7 If yes, who were the emergency messages from?

IN THIS QUESTION I AM NOT GOING TO READ OUT THE OPTIONS. I WANT YOU TO TELL ME IN YOUR OWN WORDS WHO THE EMERGENCY MESSAGES WERE FROM.

Code the response to the closest option in the list below. Check one box only

A member of the household	<input type="checkbox"/>
Friend	<input type="checkbox"/>
Neighbour	<input type="checkbox"/>
Official	<input type="checkbox"/>
NGO/CSO/DPO	<input type="checkbox"/>
Religious leader/Community leader	<input type="checkbox"/>
Other	<input type="checkbox"/>
I don't remember	<input type="checkbox"/>

10.8 How did you receive the emergency messages?

IN THIS QUESTION I AM NOT GOING TO READ OUT THE OPTIONS. I WANT YOU TO TELL ME IN YOUR OWN WORDS HOW YOU RECEIVED THE EMERGENCY MESSAGES.

Code the response to the closest option in the list below. Check one box only

Communicated in person	<input type="checkbox"/>
Phone call received	<input type="checkbox"/>
SMS received	<input type="checkbox"/>
Television	<input type="checkbox"/>
Radio	<input type="checkbox"/>
Internet	<input type="checkbox"/>
Other	<input type="checkbox"/>
I don't remember	<input type="checkbox"/>

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NOW I AM GOING TO ASK YOU SOME QUESTIONS ABOUT WHAT YOU DID DURING THE [*the natural hazard emergency selected in question 9.7*]

10.9 What did you do during the?

IN THIS QUESTION I AM NOT GOING TO READ OUT THE OPTIONS. I WANT YOU TO TELL ME IN YOUR OWN WORDS WHAT YOU DID DURING THE?

Code the response to the closest option in the list below. Check one box only

I went with my gut instinct	<input type="checkbox"/>
I followed the plan agreed with other people in my house	<input type="checkbox"/>
I waited to be told what to do or I asked what to do	<input type="checkbox"/>
I did nothing / I prayed	<input type="checkbox"/>
I don't remember	<input type="checkbox"/>

10.10 What did you do to save yourself at the moment when the happened?

IN THIS QUESTION I AM NOT GOING TO READ OUT THE OPTIONS. I WANT YOU TO TELL ME IN YOUR OWN WORDS HOW YOU SURVIVED THE?

Code the response to the closest option in the list below. Check one box only

I evacuated to a evacuation point/safe place independently	<input type="checkbox"/>
I evacuated to a evacuation point/safe place with some help	<input type="checkbox"/>
I was rescued by an official and transported to a safe place	<input type="checkbox"/>
I stayed home	<input type="checkbox"/>
I did not manage to reach a safe place but I survived	<input type="checkbox"/>
I don't remember	<input type="checkbox"/>

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10.11 Did you go to an emergency shelter?

Check one box only

<input type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> I don't remember

NOW I AM GOING TO ASK YOU SOME QUESTIONS ABOUT THE LONG TERM AFTER THE [the natural hazard emergency selected in question 9.7].

10.12 This question is about your disability and the

Check one box only

<input type="checkbox"/> Your disability was caused by the..... (If you checked this box, go to question 10.14)
<input type="checkbox"/> Your disability was made worse by the.....
<input type="checkbox"/> Your disability was not affected by the.....

10.13 Did you acquire a new type of disability as a consequence of the

<input type="checkbox"/> Yes
<input type="checkbox"/> No

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10.14 In the long term, were you affected mentally or emotionally by the

<input type="checkbox"/> Yes
<input type="checkbox"/> No

10.15 Were the important people in your life seriously affected by the

<input type="checkbox"/> Yes
<input type="checkbox"/> No

10.16 Did your house and land sustain any significant damage from the

Check one box only

<input type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> I don't remember

10.17 Did you or your household get help to recover over the long term after the

Check one box only

<input type="checkbox"/> Yes (go to next question, 10.18)
<input type="checkbox"/> No (go to question 10.19)
<input type="checkbox"/> I don't remember (go to question 10.19)

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10.18 If yes, who did you get help from?

IN THIS QUESTION I AM NOT GOING TO READ OUT OPTIONS. I WANT YOU TO TELL ME IN YOUR OWN WORDS WHO YOU GOT HELP FROM. YOU MAY HAVE RECEIVED HELP FROM MORE THAN ONE PERSON, BUT WE ONLY WANT TO KNOW THE ONE THAT MATTERED TO YOU THE MOST.

Code the response to the closest option in the list below. Check one box only

A member of the household	<input type="checkbox"/>
Friend	<input type="checkbox"/>
Neighbour	<input type="checkbox"/>
Official	<input type="checkbox"/>
NGO/CSO/DPO	<input type="checkbox"/>
Religious leader/Community leader	<input type="checkbox"/>
Other	<input type="checkbox"/>
I don't remember	<input type="checkbox"/>

10.19 Compared to before the, is your life now generally:

Check one box only

Pretty much the same as before	<input type="checkbox"/>
Better than before	<input type="checkbox"/>
Worse than before	<input type="checkbox"/>

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THANK YOU FOR YOUR TIME. WE ONLY HAVE ONE LAST QUESTION,

11. Do you have an assistive device for your disability?

Check each one that applies — you must check one box in each row

For seeing	<input type="checkbox"/> Yes	<input type="checkbox"/> No
For hearing	<input type="checkbox"/> Yes	<input type="checkbox"/> No
For walking	<input type="checkbox"/> Yes	<input type="checkbox"/> No
For communicating	<input type="checkbox"/> Yes	<input type="checkbox"/> No

THANK YOU VERY MUCH. THIS IS THE END OF THE SURVEY.

The research has been funded by Australian AID through the Australian AID Development Research Awards Scheme under an award titled Promoting the inclusion of people with disability in disaster management in Indonesia.

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Annex II: The DiDR tool (carer form)



Disability Inclusive Disaster Resilience Tool

Promoting the Inclusion of People with Disabilities in Disaster Management in Indonesia

Professor Gwynnyth Llewellyn
Dr Filippo Dall'Osso
Dr Michelle Villeneuve
Sarina Kilham

CARER SURVEY FORM
Version 1.1
March 2015

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READ THESE INSTRUCTIONS BEFORE YOU START EACH INTERVIEW

WHO IS THE INTERVIEWER?

- Only one surveyor should undertake the interview
- Before you get to the house of the respondent, decide who will undertake the interview.
- If the surveyor who undertakes the interview gets too tired to continue, the other surveyor must take over and complete the interview.

HOW TO INTRODUCE YOURSELF?

I AM [say your name], AND SHE/HE IS [say the name of your colleague]. WE WORK FOR ASB. WE ARE HERE TO DO AN INTERVIEW ABOUT DISABILITY AND NATURAL DISASTERS WITH YOU.

BEFORE STARTING, THERE IS SOME INFORMATION YOU NEED TO KNOW [show the PIS]. WOULD YOU LIKE TO READ IT YOURSELF, OR DO YOU WANT ME TO READ IT TO YOU?

[Once the consent form is signed]

THE INTERVIEW WILL TAKE APPROXIMATELY 1 HOUR. PLEASE FEEL FREE TO ASK QUESTIONS OR TO TAKE A SHORT BREAK AT ANY TIME.

WHO IS THE INTERVIEWEE?

- The survey is to be completed with the carer. We need to know the perspective of the person with a disability they assist.

HOW TO ASK THE QUESTIONS?

- The questions are numbered and written in bold. You must read the question as it is written in the survey.
- The script that you read out is written in upper case and LOOKS LIKE THIS.

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WHAT SHOULD YOU DO IF THE PERSON DOES NOT UNDERSTAND THE QUESTION?

- Read the question as it is written in the survey; if the respondent does not understand the language of the question, read it again. If the respondent still does not understand, use the survey that is written in the local language to ask the question again.
- If the respondent does understand the language, but does not understand the meaning of the question, you can explain the question in your own words.
- If the respondent still does not understand the question – write clearly next to the question: "respondent did not understand the question" and move to the next question.

DO RESPONDENTS HAVE TO ANSWER ALL QUESTIONS?

- All respondents must be asked all questions. Sometimes a respondent **may not want** to answer. This could be because it is distressing, or painful or embarrassing.
- Respondents can refuse to answer a question – see Participant Consent Form (point 5). If this happens write clearly against the question: "respondent did not want to answer this question"

HOW DO YOU MAKE A CHANGE ON THE SURVEY FORM?

- If you make a mistake on the form, or if the respondent changes their mind, double cross out the mistake and check the correct box. Make this **very clear** to help the data input person at ASB.

WHAT IF THE RESPONDENT ASKS YOU "ARE THERE OTHER ACTIVITIES PLANNED"?

- Here is your answer: "this interview is only for the purpose of the research, and no further activities are planned at this stage".

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1 Data Collector

A. INFORMATION ON DATA COLLECTOR ¹			
A1. Name	1.	A2. Phone	1.
	2.		2.

B. GENERAL INFORMATION	
B5. Form No. (Filled by ASB)	__ __ __ __
B6. Location	District : Sub-district : Village:.....
B1. Consent Form to Participate in interview signed?	1. Yes () 2. No ()
B2. Time start WIB
B3. Time finish WIB
B4. Date of interview (date/month/year)/...../2015

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2 Socio-Demographic and Cultural Information

C. INFORMATION ON THE PARTICIPANT	
C1. Name	..........
C2. Age:.....year-old (Precise/ approx.) choose one	
C4. Sex	<input type="checkbox"/> 1. Male <input type="checkbox"/> 3. Female <input type="checkbox"/> 2. Others
C5. Marital status	<input type="checkbox"/> 1. Not married <input type="checkbox"/> 2. Married <input type="checkbox"/> 3. Divorced <input type="checkbox"/> 4. Widow(er)
C9. Education background	<input type="checkbox"/> 2. Never attended school <input type="checkbox"/> 3. Completed formal education <input type="checkbox"/> elementary school <input type="checkbox"/> Junior high school <input type="checkbox"/> Senior High school <input type="checkbox"/> University degree (D3/S1/S2/S3) Year <input type="checkbox"/> 4. Dropped out of school <input type="checkbox"/> elementary school <input type="checkbox"/> Junior high school <input type="checkbox"/> Senior High school <input type="checkbox"/> University degree (D3/S1/S2/S3) Level Year.....
C8. Daily activity (can tick more than one)	<input type="checkbox"/> 1. Currently attend school (continue C81x) <input type="checkbox"/> 2. Work (continue C82x) <input type="checkbox"/> 3. At home (continue C83x)
C81x. Level of education (only if ticked 'currently	<input type="checkbox"/> elementary school <input type="checkbox"/> Junior high school

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attend school')	<input type="checkbox"/> Senior High school <input type="checkbox"/> University degree (D3/S1/S2/S3) Level:..... Year:
C82x. Occupation (Only if ticked 'work'). <i>Can tick more than one.</i>	<input type="checkbox"/> 1. Civil servant <input type="checkbox"/> 2. Private sector employee <input type="checkbox"/> 3. Daily labour, please specify..... <input type="checkbox"/> 4. Entrepreneur, please specify..... <input type="checkbox"/> 5. Farmer <input type="checkbox"/> 6. Others, please specify
C83x. At home (Only if ticked 'at home')	Please describe
C10. Address	..........
C10b. Sub-village	.....
C10a. RT/RW	.....
C10c. Village	.....
C11. Phone number	..........
C12. Additional information to find the address	
F1. Have you ever participated in any disaster risk reduction/disaster preparedness activities?	<input type="checkbox"/> Yes <input type="checkbox"/> No

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3 Washington Group Short Set of Questions

Questions	No difficulty	Some difficulty	A lot of difficulty	Unable to do it at all	Do not know/ Not answer
Do you have difficulty seeing, even if wearing glasses?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you have difficulty hearing, even if using a hearing aid?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you have difficulty walking or climbing steps?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you have difficulty remembering or concentrating?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you have difficulty with self-care, such as washing all over or dressing yourself?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Using your usual (customary) language, do you have difficulty communicating? (for example, understanding or being understood by others)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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4 Building vulnerability

This section is to be completed only by the Survey Team without discussion with the respondent. It is better to complete this section before rather than after you do the interview.

4.1 What is the main construction material of the building?

Check one box only

Bamboo, clay, tin, mud or other temporary materials	<input type="checkbox"/>
Wood	<input type="checkbox"/>
Well cemented bricks or natural stones	<input type="checkbox"/>
Concrete	<input type="checkbox"/>

4.2 How many stories does the building have?

Check one box only

One	<input type="checkbox"/>
Two	<input type="checkbox"/>
More than two	<input type="checkbox"/>

4.3 Is the first floor of the building elevated with respect to the ground?

Check one box only

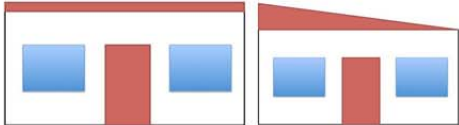

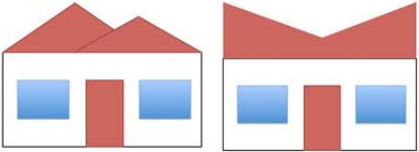
No, same level as the ground	<input type="checkbox"/>
Yes, there are a few steps or a ramp to get into the building	<input type="checkbox"/>
Yes, the entrance is at the second floor (the first floor is used for animals, tools, bikes, storage or other non-residential purpose)	<input type="checkbox"/>

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4.4 What is the shape of the roof?

Check one box only

<p>Flat or almost flat <i>Examples:</i></p> 	<input type="checkbox"/>
<p>Pitched and simple <i>Example:</i></p> 	<input type="checkbox"/>
<p>Pitched and complex <i>Examples:</i></p> 	<input type="checkbox"/>

4.5 What is the roof material?

Check one box only

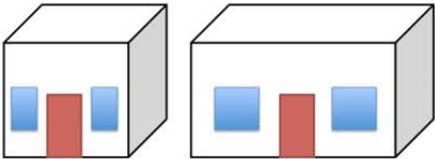
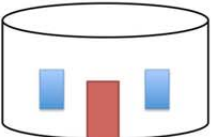
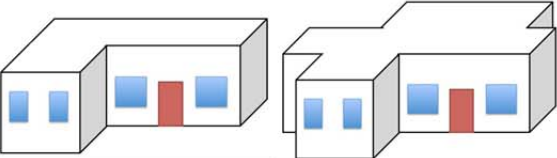
Clay, tin or other temporary materials	<input type="checkbox"/>
Wood	<input type="checkbox"/>
Tiles or concrete	<input type="checkbox"/>
Not visible	<input type="checkbox"/>

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4.6 Which one of the following shapes best describes the building?

Check one box only

<p>Square or rectangular <i>Examples:</i></p> 	<input type="checkbox"/>
<p>Round or oval <i>Example:</i></p> 	<input type="checkbox"/>
<p>Complex, with many sides and corners <i>Examples:</i></p> 	<input type="checkbox"/>

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5 Attachment to the place of living

IN THIS SECTION, I AM GOING TO ASK YOU QUESTIONS ABOUT THIS HOUSE AND THE HOUSEHOLD OF THE PERSON WITH A DISABILITY.

5.1 In regards to this house, does the person with a disability or their immediate family:

Check one box only

Rent this house	<input type="checkbox"/>
Own this house	<input type="checkbox"/>
Other	<input type="checkbox"/>

5.2 Who lives in this house with the person with a disability?

Check each one that applies – you must check one box in each row

Child/ children under 18 years old	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Older person/ persons over 60	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Someone else with a disability	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Animals essential for the household's economy	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Pets	<input type="checkbox"/> Yes	<input type="checkbox"/> No
The person with a disability lives alone	<input type="checkbox"/> Yes	<input type="checkbox"/> No

5.3 How many years has the person with a disability lived in this house?

Check one box only

<input type="checkbox"/> Most or all of his/her life
<input type="checkbox"/> Only in the past few years

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6 Participation in community

THIS IS A NEW SECTION. NOW I AM GOING TO ASK YOU QUESTIONS ABOUT THE PARTICIPATION OF THE PERSON WITH A DISABILITY IN THE COMMUNITY. I WILL BE ASKING YOU TO COMPARE THAT PERSON TO THE OTHER PEOPLE IN THE VILLAGE. EACH QUESTION HAS FIVE OPTIONS. YOU CAN ONLY CHOOSE ONE OF THESE OPTIONS.

THESE ARE THE OPTIONS: "NO PROBLEM", "SMALL PROBLEM", "MEDIUM PROBLEM", "LARGE PROBLEM". THE LAST OPTION IS: "IRRELEVANT, OR I DON'T WANT TO, OR I DON'T HAVE TO". YOU DO NOT HAVE TO REMEMBER THESE OPTIONS NOW, AS EVERY TIME I ASK YOU A QUESTION I WILL READ ALL THE FIVE OPTIONS TO YOU.

Check one box per row – you must check one box only in each row

Participation Scale Compare the person with a disability to the other people in the village	No problem	Small problem	Medium problem	Large problem	Irrelevant, or I don't want to, or I don't have to
6.1 For the person with a disability, compared to other people, finding any type of paid work (formal or informal) is?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.2 For the person with a disability, working as hard as other people is? (same hours, type of work etc)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.3 For the person with a disability, earning money/producing goods for the family in a similar way to other people is?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.4 For the person with a disability, travelling outside the village/neighbourhood as much as other people do is? (except for treatment) e.g. bazaars, markets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.5 For the person with a disability, taking part in activities as much as other people do is? (e.g. sports, chatting, meetings etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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6.6 For the person with a disability, taking part in community or religious affairs as much as other people do is?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.7 For the person with a disability, gaining or maintaining the same respect as other people in the community is?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.8 For the person with a disability, taking care of him/herself (appearance, nutrition, health, etc) as well as other people is?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.9 For the person with a disability, visiting other people in the community as often as other people is?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.10 For the person with a disability, compared to other people, entering into or maintaining a long-term relationship with a life partner is?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.11 For the person with a disability, visiting public places in the village/neighbourhood like schools, shops, offices, market and tea/coffee shops as often as other people is?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.12 For the person with a disability, doing household work in his/her home as other people do is?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.13 For the person with a disability, helping other people (e.g. neighbours, friends or relatives) is?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.14 For the person with a disability, feeling comfortable to meet new people is?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.15 For the person with a disability, feeling confident to try to learn new things is?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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WE HAVE BEEN GOING FOR SOME TIME NOW. BEFORE I START THE NEXT SECTION, WOULD YOU LIKE TO TAKE A SHORT BREAK?

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7 Natural hazards that could affect the person with a disability in the future

IN THIS SECTION, I AM GOING TO ASK YOU ABOUT NATURAL HAZARDS THAT YOU THINK COULD AFFECT THE PERSON WITH A DISABILITY IN THE FUTURE. THIS IS NOT ABOUT WHAT HAS HAPPENED TO THEM IN THE PAST, THAT COMES LATER IN ANOTHER SECTION.

7.1 Which of these events could be a danger to the person with a disability and their household in the future?

Check each one that applies – you must check one box in each row

Column A: Question 7.1			Column B: Question 7.2: Rank
Earthquake	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
River Flood	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Storm	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Drought	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Tsunami	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Volcano Eruption	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Lahar	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Landslide	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Wild Fire	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Heat wave	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Tornado	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Hail	<input type="checkbox"/> Yes	<input type="checkbox"/> No	

7.2 Which of the events you answered “yes” to in Question 7.1 are the greatest danger to the person with a disability?

Rank only the top 3: 1 = most dangerous -> 3 = least dangerous.

Please complete Column B in the Table above.

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8 Natural hazard emergencies

THIS SECTION IS ABOUT WHAT THE PERSON WITH A DISABILITY WOULD DO IN A NATURAL HAZARD EMERGENCY IN THE FUTURE, AND THEIR PREPAREDNESS.

8.1 Who would the person with a disability rely on during a natural hazard emergency?

IN THIS QUESTION I AM NOT GOING TO READ OUT OPTIONS. I WANT YOU TO TELL ME IN YOUR OWN WORDS WHO THE PERSON WITH A DISABILITY WOULD RELY ON DURING A NATURAL HAZARD EMERGENCY.

Code the response to the closest option in the list below. If the respondent says a person's name, ask them who that person is. Check one box only

A member of the household	<input type="checkbox"/>
Friend	<input type="checkbox"/>
Neighbour	<input type="checkbox"/>
Official	<input type="checkbox"/>
Religious leader/Community leader	<input type="checkbox"/>
Other	<input type="checkbox"/>
No one	<input type="checkbox"/>
Faith	<input type="checkbox"/>

8.2 Is there a government emergency service provider who would help the person with a disability during a natural hazard emergency?

Check one box only

<input type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> I don't know

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8.3 Is there an emergency kit ready at this moment? An emergency kit is a special bag containing for example medications, water and food for a couple of days, a battery-operated radio, a torch, a mobile phone.

Check one box only

<input type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> I don't know

8.4 Is the house of the person with a disability connected to an electricity supply, with the electricity available under the roof of the main building?

<input type="checkbox"/> Yes
<input type="checkbox"/> No

8.5 Is the house where the person with a disability lives connected to a water supply, with the water supply available under the roof of the main building?

<input type="checkbox"/> Yes
<input type="checkbox"/> No

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8.6 At what level of the house does the person with a disability spend most of their time?

Check one box only

First floor	<input type="checkbox"/>
Second floor	<input type="checkbox"/>
Third floor or higher	<input type="checkbox"/>

8.7 Has the person with a disability and the people in their house agreed on a plan on what to do in a natural hazard emergency?

Check one box only

<input type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> I don't know

8.8 What would the person with a disability do in a natural hazard emergency?

Check one box only

Go with his/her gut instinct	<input type="checkbox"/>
Follow the plan agreed with other people in his/her house	<input type="checkbox"/>
He/she would wait to be told by someone what to do, or he/she would ask someone	<input type="checkbox"/>
He/she would do nothing, or he/she would pray	<input type="checkbox"/>

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8.9 What could prevent the person with a disability from leaving their house in a natural hazard emergency?

IN THIS QUESTION I AM NOT GOING TO READ OUT OPTIONS. I WANT YOU TO TELL ME IN YOUR OWN WORDS WHAT COULD PREVENT THE PERSON WITH A DISABILITY FROM LEAVING THE HOUSE IN A NATURAL HAZARD EMERGENCY.

Code the response to the closest option in the list below. Check one box only

He/she does not think he/she would be able to reach a safe place	<input type="checkbox"/>
Wouldn't leave his/her family/animals	<input type="checkbox"/>
Wouldn't leave his/her house and belongings	<input type="checkbox"/>
Nothing would stop him/her	<input type="checkbox"/>
Told by someone in his/her family/household to stay home	<input type="checkbox"/>
He/she would not want to go to the evacuation point / emergency shelters	<input type="checkbox"/>
No one would help him/her / He/she would be left behind	<input type="checkbox"/>
Other	<input type="checkbox"/>
Faith	<input type="checkbox"/>

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9 Learning about natural hazards in the community

THIS SECTION IS ABOUT THE WAY THE PERSON WITH A DISABILITY COULD RECEIVE INFORMATION ABOUT NATURAL HAZARDS IN THE FUTURE.

9.1 What sources of information would the person with a disability trust to be educated about natural hazards?

Check each one that applies – you must check one box in each row

Official	<input type="checkbox"/> Yes	<input type="checkbox"/> No
NGO/CSO/DPO	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Religious leader/Community leader	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Television	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Radio	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Internet	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Newspaper	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Other	<input type="checkbox"/> Yes	<input type="checkbox"/> No

9.2 Does the person with a disability have a personal mobile phone?

<input type="checkbox"/> Yes
<input type="checkbox"/> No

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9.3 During a natural hazard emergency, from whom would the person with a disability prefer to receive emergency messages such as warnings or evacuation orders?

IN THIS QUESTION I AM NOT GOING TO READ OUT OPTIONS. I WANT YOU TO TELL ME IN YOUR OWN WORDS FROM WHOM THE PERSON WITH A DISABILITY WOULD PREFER TO RECEIVE EMERGENCY MESSAGES.

Code the response to the closest option in the list below. Check one box only

A member of the household	<input type="checkbox"/>
Friend	<input type="checkbox"/>
Neighbour	<input type="checkbox"/>
Official	<input type="checkbox"/>
NGO/CSO/DPO	<input type="checkbox"/>
Religious leader/Community leader	<input type="checkbox"/>
Other	<input type="checkbox"/>

9.4 During a natural hazard emergency, how would the person with a disability prefer to get emergency messages such as warnings or evacuation orders?

IN THIS QUESTION I AM NOT GOING TO READ OUT OPTIONS. I WANT YOU TO TELL ME IN YOUR OWN WORDS HOW THE PERSON WITH A DISABILITY WOULD PREFER TO GET EMERGENCY MESSAGES

Code the response to the closest option in the list below. Check one box only

Being communicated to in person	<input type="checkbox"/>
Receiving a phone call	<input type="checkbox"/>
Receiving a SMS	<input type="checkbox"/>
Television	<input type="checkbox"/>
Radio	<input type="checkbox"/>
Internet	<input type="checkbox"/>
Other	<input type="checkbox"/>

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9.5 Has the person with a disability experienced any natural hazard emergencies in the last ten years?

Check one box only

<input type="checkbox"/> Yes (go to next question, 9.6)
<input type="checkbox"/> No (go to question 11 on the last page of the survey)
<input type="checkbox"/> I don't know (go to question 11 on the last page of the survey)

9.6 Which of the following natural hazard emergencies has the person with a disability experienced in the last ten years?

Check each one that applies – you must check one box in each row

Earthquake	<input type="checkbox"/> Yes	<input type="checkbox"/> No
River Flood	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Storm	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Drought	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Tsunami	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Volcano Eruption	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Lahar	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Landslide	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Wild Fire	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Heat wave	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Tornado	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Hail	<input type="checkbox"/> Yes	<input type="checkbox"/> No

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10 Lived experience of the past natural hazard emergency selected in question 9.7

IN THIS SECTION I AM GOING TO ASK YOU QUESTIONS ABOUT THE
 THAT YOU SAID AFFECTED THE PERSON WITH A DISABILITY
 THE MOST. THE FIRST FEW QUESTIONS ARE ABOUT THE WEEKS OR MONTHS
 BEFORE THE.....

10.1 Did the person with a disability already have an emergency plan prepared?

Check one box only

<input type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> I don't know

10.2 Did the person with a disability already have an emergency kit prepared?

Check one box only

<input type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> I don't know

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10.3 Did the person with a disability already have their house prepared to resist the

Check one box only

<input type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> I don't know

10.4 In the weeks or months before the, did the person with a disability receive any help in preparing themselves or their home?

Check one box only

<input type="checkbox"/> Yes (go to next question, 10.5)
<input type="checkbox"/> No (go to question 10.6)
<input type="checkbox"/> I don't know (go to question 10.6)

10.5 If yes, the person with a disability received help from:

Check each one that applies – you must check one box in each row

A member of the household	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Friend	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Neighbour	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Official	<input type="checkbox"/> Yes	<input type="checkbox"/> No
NGO/CSO/DPO	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Religious leader/Community leader	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Other	<input type="checkbox"/> Yes	<input type="checkbox"/> No

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NOW, THE NEXT QUESTIONS I WILL ASK YOU ARE ABOUT THE DAY OF THE
[the natural hazard emergency selected in question 9.7]

10.6 Did the person with a disability receive any emergency message about the such as alerts, warnings or evacuation orders?

Check one box only

<input type="checkbox"/> Yes (go to next question, 10.7)
<input type="checkbox"/> No (go to question 10.9)
<input type="checkbox"/> I don't know (go to question 10.9)

10.7 If yes, who were the emergency messages from?

IN THIS QUESTION I AM NOT GOING TO READ OUT OPTIONS. I WANT YOU TO TELL ME IN YOUR OWN WORDS WHO THE EMERGENCY MESSAGES WERE FROM.

Code the response to the closest option in the list below. Check one box only

A member of the household	<input type="checkbox"/>
Friend	<input type="checkbox"/>
Neighbour	<input type="checkbox"/>
Official	<input type="checkbox"/>
NGO/CSO/DPO	<input type="checkbox"/>
Religious leader/Community leader	<input type="checkbox"/>
Other	<input type="checkbox"/>
I don't know	<input type="checkbox"/>

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10.8 How did the person with a disability receive the emergency messages?

IN THIS QUESTION I AM NOT GOING TO READ OUT OPTIONS. I WANT YOU TO TELL ME IN YOUR OWN WORDS HOW THE PERSON WITH A DISABILITY RECEIVED THE EMERGENCY MESSAGES.

Code the response to the closest option in the list below. Check one box only

Communicated in person	<input type="checkbox"/>
Phone call received	<input type="checkbox"/>
SMS received	<input type="checkbox"/>
Television	<input type="checkbox"/>
Radio	<input type="checkbox"/>
Internet	<input type="checkbox"/>
Other	<input type="checkbox"/>
I don't know	<input type="checkbox"/>

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NOW I AM GOING TO ASK YOU SOME QUESTIONS ABOUT WHAT THE PERSON WITH A DISABILITY DID DURING THE[*the natural hazard emergency selected in question 9.7*]

10.9 What did the person with a disability do during the?

IN THIS QUESTION I AM NOT GOING TO READ OUT OPTIONS, I WANT YOU TO TELL ME IN YOUR OWN WORDS WHAT THE PERSON WITH A DISABILITY DID DURING THE

Code the response to the closest option in the list below. Check one box only

He/she went with his/her gut instinct	<input type="checkbox"/>
He/she followed the plan agreed with other people in the house	<input type="checkbox"/>
He/she waited to be told what to do or he/she asked what to do	<input type="checkbox"/>
He/she did nothing / he/she prayed	<input type="checkbox"/>
I don't know	<input type="checkbox"/>

10.10 What did the person with a disability do to save him/herself at the moment when the happened?

IN THIS QUESTION I AM NOT GOING TO READ OUT OPTIONS. I WANT YOU TO TELL ME IN YOUR OWN WORDS HOW THE PERSON WITH A DISABILITY SURVIVED THE

Code the response to the closest option in the list below. Check one box only

He/she evacuated to a evacuation point/safe place independently	<input type="checkbox"/>
He/she evacuated to a evacuation point/safe place with some help	<input type="checkbox"/>
He/she was rescued by an official and transported to a safe place	<input type="checkbox"/>
He/she stayed home	<input type="checkbox"/>
He/she did not manage to reach a safe place but survived	<input type="checkbox"/>
I don't know	<input type="checkbox"/>

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10.11 Did the person with a disability go to an emergency shelter?

Check one box only

<input type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> I don't know

NOW I AM GOING TO ASK YOU SOME QUESTIONS ABOUT THE LONG-TERM AFTER THE [the natural hazard emergency selected in question 9.7].

10.12 This question is about the person's disability and the.....:

Check one box only

<input type="checkbox"/> Their disability was caused by the (If you checked this box, go to question 10.14)
<input type="checkbox"/> Their disability was made worse by the
<input type="checkbox"/> Their disability was not affected by the

10.13 Did the person with a disability acquire a new type of disability as a consequence of the?

<input type="checkbox"/> Yes
<input type="checkbox"/> No

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10.14 In the long-term, was the person with a disability affected mentally or emotionally by the

<input type="checkbox"/> Yes
<input type="checkbox"/> No

10.15 Were the important people in his/her life seriously affected by the

<input type="checkbox"/> Yes
<input type="checkbox"/> No

10.16 Did his/her house and land sustain any significant damage from the

Check one box only

<input type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> I don't know

10.17 Did the person with a disability or his/her household get help to recover over the long term?

Check one box only

<input type="checkbox"/> Yes (go to next question, 10.18)
<input type="checkbox"/> No (go to question 10.19)
<input type="checkbox"/> I don't know (go to question 10.19)

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10.18 If yes, who did the person with a disability get help from?

IN THIS QUESTION I AM NOT GOING TO READ OUT OPTIONS. I WANT YOU TO TELL ME IN YOUR OWN WORDS WHO HE/SHE GOT HELP FROM. HE/SHE MAY HAVE RECEIVED HELP FROM MORE THAN ONE PERSON, BUT WE ONLY WANT TO KNOW THE ONE THAT MATTERED THE MOST TO HIM/HER.

Code the response to the closest option in the list below. Check one box only

A member of the household	<input type="checkbox"/>
Friend	<input type="checkbox"/>
Neighbour	<input type="checkbox"/>
Official	<input type="checkbox"/>
NGO/CSO/DPO	<input type="checkbox"/>
Religious leader/Community leader	<input type="checkbox"/>
Other	<input type="checkbox"/>
I don't know	<input type="checkbox"/>

10.19 Compared to before the , the life of the person with a disability is now generally:

Check one box only

Pretty much the same as before	<input type="checkbox"/>
Better than before	<input type="checkbox"/>
Worse than before	<input type="checkbox"/>

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THANK YOU FOR YOUR TIME. WE ONLY HAVE ONE LAST QUESTION.

11. Does the person with a disability have an assistive device for his/her disability?

Check each one that applies — you must fill-in one box in each row

For seeing	<input type="checkbox"/> Yes	<input type="checkbox"/> No
For hearing	<input type="checkbox"/> Yes	<input type="checkbox"/> No
For walking	<input type="checkbox"/> Yes	<input type="checkbox"/> No
For communicating	<input type="checkbox"/> Yes	<input type="checkbox"/> No

THANK YOU VERY MUCH. THIS IS THE END OF THE SURVEY.

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Annex III: The DiDR tool review panel

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