Flood Resilience Alliance

Flood Resilience Measurement for Communities (FRMC)

Sex, age and disability in flood resilience interventions

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Lydia Darby (Practical Action), Daniela Donia (Plan International), Seona McLoughlin (Concern Worldwide), Magdalena Richter (Concern Worldwide) and The Alliance Gender Working Group

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1. How to use this resource

Gender, age, disability and other forms of social exclusion influence disaster risk. Therefore, interventions that consider these elements are critical to achieving a positive outcome for all affected groups in our flood resilience programme work.

This resource covers:

- Analyzing sex, age and disability (SAD) disaggregated data as a starting point to understand and highlight barriers that different groups of people might face related to flood resilience, such as access to services and early warning systems.
- Analyzing disaggregated data on the Flood Resilience Measurement for Communities (FRMC) platform.

It specifically looks at designing, improving or retrofitting our interventions based on data and information we already have. It does not offer advice or methods for collecting that data, which can be done using other tools, such as context analysis, gender and inclusion assessments, or FRMC local questions.

Additional Resources on Gender and Inclusion:

See other FRMC Guides in the series on this topic, such as the *Inclusion & resilience primer* and the *Gender and inclusion guidance for field workers.*

2. Disaggregating sex, age and disability data

Reliable, consistent, and disaggregated data is essential to inform decision-making and enable well-targeted investments. Without disaggregated data, we cannot track if interventions are improving lives. Interventions that do not explicitly consider SAD data are more likely to increase the marginalization of vulnerable people, for example elderly women or children with disabilities. Interventions need to be informed by the FRMC process, but we must account for, and consider, the needs of different groups of people to design these in the most inclusive way.

Institutionalizing the systematic collection, use, and reporting of disaggregated data, including SAD data, is a useful starting point to help us target our actions to improve vulnerable people's resilience to climate hazards. It supports us in leveraging their voice, agency and leadership in resilience interventions. It is important to remember that vulnerable people – such as the elderly or people with disabilities – are not homogenous groups and have different degrees of vulnerability or resilience to floods.

Our focus should be on creating tangible benefits for the people we work with. **This requires a strong emphasis on the use of disaggregated data to improve programming.**

Disaggregating data alone is not enough to achieve inclusive interventions. Its collection and use are helpful starting points, but we should also use gender assessments, participatory vulnerability capacity assessments (PVCAs) and other tools to further inform our work, continually reviewing, monitoring and adapting. We should seek out allies and change-makers, including partnerships with organizations focused on the rights of people such as women, the young or elderly, or people with disabilities. We should be inclusive in the design and implementation of interventions themselves.

2.1 How to use disaggregated data

To reduce inequalities and to practise inclusive development and disaster risk reduction, we must first understand the discrimination and disadvantages people face. Various aspects of a person's identity or barriers to power, such as ethnicity, gender, religion, disability, or sexual orientation, shape their experiences of advantages and disadvantages as well as discrimination and privilege, and therefore their vulnerability and resilience.

Disaggregated data is a necessary tool for inclusion as it helps reveal significant disparities and provides key information when designing interventions and tailoring them to the needs of diverse groups.

Disaggregating data tackles the assumption that general progress means progress for everyone. It helps us to understand vulnerability better, so that we can prioritize actions

that benefit people with different identities or in different situations. This increases our impact and determines the quality of our work.

As a part of the FRMC process, teams collect and disaggregate data by SAD. **However, simply having the data will not lead to transformative change. SAD data can be a first step in informing flood resilience interventions that are sex-, age-, and disability-sensitive or transformative, and empowering for vulnerable groups.** We can do this by considering if we need to adapt our interventions to account for the needs of, for example, elderly women with mobility challenges or people with hearing disabilities.

Having disaggregated data can also support us in our advocacy messaging. It ensures that our understanding of the issues faced by certain groups is based on strong, demonstrable evidence. This in turn gives programmes credibility with external audiences and improves the quality of the work we carry out.

2.2 An intersectional approach to data

Data disaggregated by SAD helps unpack gendered risks and effects of climate hazards, and our flood resilience interventions. **In addition to collecting SAD data, we can, and should where possible, also choose to look at other possible characteristics of vulnerability or power dynamics, such as caste, ethnicity, religion, and location, and how these interact.**

Marginalized groups are not all equally and uniformly vulnerable. Therefore, understanding and considering how multiple intersecting marginalized identities can shape vulnerability and resilience is critical (Brown et al, 2019b; Darby, 2021). Intersectionality emphasizes 'the constant renegotiation of power relations and how individuals and groups can experience both power and oppression simultaneously' (Lovell and Twigg, 2019). An intersectional approach to data identifies inequalities within and between groups of people based on how multiple factors of a person's identity come together, and looks at ways of reducing inequality.

This includes using intersectionality as a lens to reflectively examine data practices, data processes, and institutions. The data value chain describes the process through which data creates value (Global Partnership for Sustainable Development Data, N.D.):

- Who has been included in identifying what data to collect and how to collect it?
- Who is doing the analysis, and what do they know about intersecting inequalities?
- How can data be combined and used to tell a story of intersecting inequality and influence policy?
- How has inequality been reduced and how do we measure this?

3. Inclusive data

The UK's Department for International Development (DFID) states that inclusive data is data that:

- covers all people;
- is routinely disaggregated;
- is collected in an inclusive manner, ensuring that there are no systematic biases and that no vulnerable groups are systematically excluded, for example those living outside of households. (DFID, N.D.)

It is important to remember that throughout the FRMC process, we must avoid one-sided, extractive data collection. By communicating the data back to communities, we can help to validate it, as well as illustrate the needs of different types of people. This process can be empowering and help people to articulate their own needs more clearly.

3.1 Sex

The FRMC offers three categories: female, male, other.

Gender-sensitive or gender-transformative climate programmes that are grounded in sex-disaggregated data and evidence are not just a priority; they are also a smart approach to ensuring climate resilience and improving gender equality (IUCN, 2021).

When we disaggregate the data, it should be based on actual data about our beneficiaries rather than estimates or models. This data can lead to a greater understanding of how men and women engage with, and perceive, challenges and opportunities in their communities. It shows the gendered impacts of stressors, such as floods, on men and women in the community, and whether it is indeed the women who are shouldering the greatest burdens. We might see how many female-headed households are in the community or how many women engage with certain livelihood activities.

It is important to be aware that the male-female binary may fail to capture the gender identity of a number of people. To match our evolving understanding of gender, a more comprehensive and inclusive approach to gender disaggregation could be adopted. This means asking survey respondents for information on their gender identity in a multinomial, rather than binary, way (RTI International, 2021). Collecting and analyzing this data will contribute to understanding and reducing stigma.

Early warning systems
By including women and men in the design of early warning systems (EWS) and evacuations, we can develop specific measures to ensure women's safety and security.

A gender-aware EWS has explicit consideration and understanding of the specific ways in which gender affects a particular EWS differently (in a particular context), and any differential impacts of the EWS on different gender groups.

A next step can be moving to a gender-sensitive EWS, with some adaptations to activities to improve the impact on marginalized gender groups. A gender-sensitive EWS ensures disaster preparedness, and response and contingency planning proactively considers gender, making some adaptations to respond to the specific needs, concerns, and capabilities of marginalized gender groups.

A gender-transformative EWS proactively (re)designs approaches, policies, and practices to reduce gender-based inequalities and to meet the needs of all people. *Brown et al, (2019b).*

3.2 Age

The FRMC uses three age categories for respondents: 15-25, 26-50, over 50.

Disaggregation by age is critical for understanding and addressing inequalities for younger children, adolescents, and the elderly in communities vulnerable to flooding. Age-disaggregated data helps to identify resilience gaps more precisely and enables more targeted programming for closing these. People in the 26-50 age group are usually those most involved with development or disaster risk reduction (DRR) programming. While the FRMC does not engage with adolescents under the age of 15, there is still an opportunity to canvass their perspectives when designing interventions. One such example is Plan International's work in flood resilience and menstruation education for young people in El Salvador (Tejada et al, 2021).

Children and youth

According to UNICEF, one billion children – nearly half of all children globally – are at 'extremely high risk' due to the impacts of climate change (UNICEF, 2021a). They face a deadly combination of exposure to multiple climate shocks and limited access to services that build their resilience. When children and young people are excluded from resilience-building efforts, participatory planning, and youth-led decision-making, their potential to contribute is overlooked. Children's and young people's participation in issues that affect them is part of their fundamental rights (Article 12, Convention on the Rights of the Child). We must therefore strengthen the resilience of children and young people by increasing their knowledge on climate change adaptation measures and enhancing their meaningful participation in our flood resilience programmes and interventions.

> In my family my mother with her partner are the ones who make the decisions. I try not to think about the decision making of your home because only adults can give their opinion. Also, I feel that those who decide, do not take into account the opinion of adolescents.
>
> Brown et al., 2019b

Older age

There are four key reasons for older people's heightened vulnerability in the face of climate-related shocks, according to HelpAge International (2014):

- The physical decline that comes with ageing, which can include poor health, mobility, sight, and hearing.
- A lack of adequate services for older people, both daily and in emergency situations.
- Age discrimination, which excludes and isolates older people, and often violates their rights.
- Poverty levels among older people, which are often exacerbated by a lack of social protection mechanisms and livelihood opportunities.

However, older people often have more generational knowledge, including experience, knowledge, and skills that are vital to understanding local environmental hazards and historic risk profiles. Older people have capacities to contribute to flood resilience and can be strong agents of change.

Combining generational and indigenous knowledge with modern scientific approaches

Older people can contribute to observations as part of an EWS and should be encouraged to share their predictions on weather patterns using traditional, indigenous methods. HelpAge has seen many examples of older people using indigenous early warning methods, such as describing how insects leave their hiding places shortly before a volcanic eruption, how birds sing when a tsunami is approaching, or how livestock mating habits can change when rains fail and a drought is looming. These warnings can be very accurate, with a strong predictive nature. This knowledge is in danger of being lost, as modern scientific EWS methods tend to have more objective validity and therefore carry more weight. By establishing a dialogue between these two groups of knowledge holders, indigenous early warning signals can feed into centrally managed EWSs, promoting genuine two-way learning.

Evacuating people with mobility constraints

The mobility constraints of older people and people living with disabilities need to be taken into consideration when identifying or building evacuation centres. There can be specific challenges involved in evacuating frail, older people or those with mobility constraints, depending on the type of hazard and the speed of onset. Where time allows, evacuation plans should include organized support and transportation of older people who are not able to evacuate by themselves. Where there is only a matter of minutes to evacuate (as in the case of a tsunami warning, for example), the challenges will be much greater. Evacuation teams or emergency services from the army are unlikely to reach older people in good time, so evacuation support that is much closer to their homes would need to have been identified. People with hearing or mental impairments might not notice early warning signals. A buddy system, whereby each of these individuals has a designated person who can alert them, can overcome this challenge and ensure that these

vulnerable people get the help they need to move to safer ground or protect their home and assets once an early warning signal is issued. (HelpAge International, 2014).

3.3 Disability

The FRMC asks:

In the case of a flood, would you have difficulty with any of the following:

- *Walking approximately 100 meters (330 feet) to evacuate?*
- *Hearing a flood alarm?*
- *Seeing, because of a visual impairment?*

The DFID's Disability Framework 2015 estimates that globally one in seven people have a disability and one in four households include someone with a disability. People with disabilities are often discriminated against and left behind in their communities, facing challenges and stigma around employment, healthcare, and education. Many people with disabilities remain hidden – sometimes intentionally by their families due to shame, sometimes simply due to the inaccessibility of spaces beyond their home. Because they are so hidden, we often assume disabilities to be more uncommon – and less limiting in access and opportunities – than they actually are.

It is important to think about the following considerations when designing interventions that include people with disabilities:

a) Disability is not a binary either/or categorisation, it is a continuum – in some environments an impairment may be more disabling, in others less so.

b) Disability is diverse. There is a wide range of disabilities, and different impairments have different impacts in terms of visibility, access, and opportunities.

c) People can experience multiple disabilities, and some disabilities may result in unique abilities, too (for example, a heightened sense of hearing in blind people).

Determining whether a programme is reaching and successfully serving people with disabilities requires disaggregation of data by disability status.

To design effective interventions for people with disabilities, we must look within the data to examine and reflect on the impacts and issues for the different types and severities of impairment. For example, people with mobility impairments are likely to require different adaptations than people with visual impairments. On disability, it is useful to remember the rallying call 'nothing about us, without us', ensuring that people with disabilities are not excluded from decisions that directly affect them.

Using disability data to inform flood resilience interventions
We can adjust our interventions for people with certain disabilities to ensure the infrastructure meets their needs. For example, by considering who in the community has a disability, we can make sure safe shelters are accessible, spacious and have

privacy. We can also account for certain disabilities in our dissemination of climate information and EWS messages, using different formats so they can be accessed by everyone at risk in the community.

In a community where SAD data is accurately collected and analyzed, a community disaster committee that might be responsible for evacuations during flood events can effectively support vulnerable people with mobility issues, including elderly people, people with disabilities, pregnant women, and young children. Collaboration between community disaster committees and people with disabilities can also help break down the stigma associated with disability and promote people's leadership and agency.

Things are slowly changing but there is still a long way to go before the issues we face will be understood, let alone addressed. There are around 5,000 physically disabled and blind people in Bardiya alone. Of these, 3,000 won't even know there are committees and meetings taking place. This is because many are home- or bed-bound, yes, but more than that, it is because disability is most common among the poor, and with poverty comes many other impediments…

Brown et al, 2019b

Both Hira and Mr Kandel agree that the first step towards helping people with visual impairments and other disabilities is to collect and maintain data on things like who (people with special needs are), what (their special needs are), and where (they live). The next step would be to work out what kinds of tools, skills, and information would help people living with disabilities to evacuate and move around easily. 'The able will always be able to run for their lives. Us, disabled, need to be enabled to do the same'.

Brown et al, 2019b

Thinking beyond sex, age and disability

Collecting data and thinking about identities and power relations beyond SAD, such as caregiving responsibilities, ethnicity, language, location or livelihoods, can inform our interventions design. In reality, it is impossible to do everything. Local knowledge gained through the community engagement and FRMC processes is essential for having the right conversations about which vectors of exclusion are most prominent in the context in which we are working. For example, in South Asian contexts, caste may be especially prominent, while in South America, it may be indigenous identity.

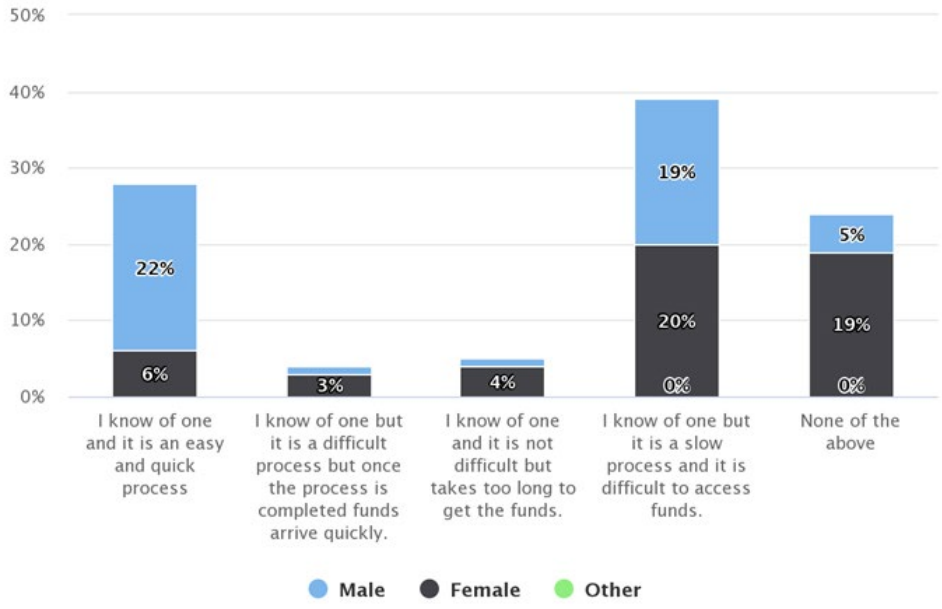
For example, climate information or early warning messages might not reach the most excluded households who might not have access to mobile phones, radio or television, especially in remote rural or extremely deprived areas. Some groups may speak different minority languages, so sharing targeted information in different languages, through different media, may improve inclusivity and impact.

3.4 Analyzing disaggregated data on the FRMC platform

The FRMC platform offers an option to view disaggregated data for all household-level data. Reviewing this data during the data analysis phase is incredibly valuable to ensure interventions are tailored to the needs of the different groups, as already explained in the sections above.

In the sample FRMC study below, households' representatives were asked whether they know of a government fund that provides funding after a flood. As chart 1 shows, most men know of an existence of such a fund and believe accessing it is an easy process. Most women, on the other hand, believe that the process is slow and difficult to access. This might suggest that there are barriers to access for women, potentially linked to such issues as differences in education levels, time commitments required to apply for funding, or other underlying barriers, which would need to be explored further.

Chart 1: Do you know of a government fund or any other fund that provides funding after a flood and if so, how quickly can people access the fund?

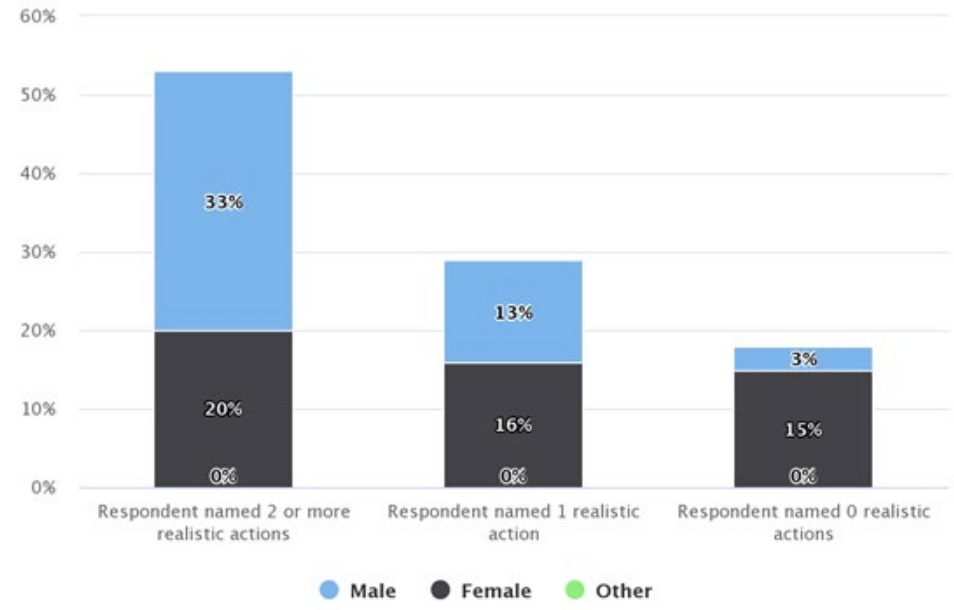


Limitation of data analysis

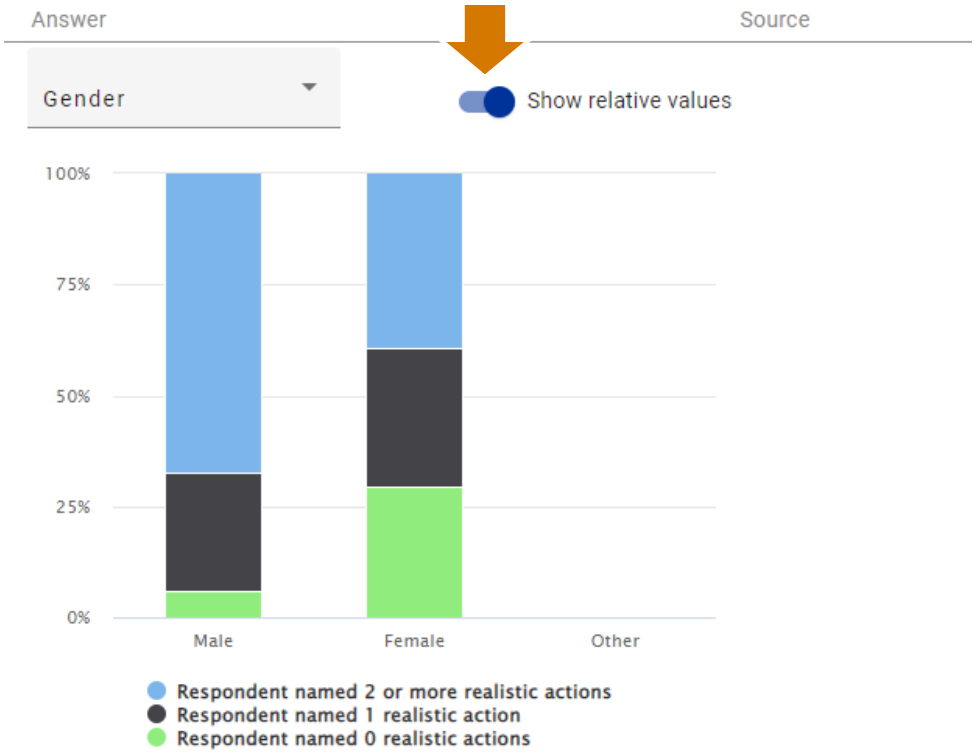
It is essential to note that the use of disaggregated data on the FRMC platform comes with an important limitation. The first automatic view of the disaggregated data does not represent data disaggregated within each group (i.e., within female respondents or male respondents only) but shows a proportion of respondents who provided a given answer as a percentage of all respondents interviewed.

For example, Chart 2 shows the responses to the question ‘What actions do people in this community take to protect their homes, other types of property, vehicles, valuables or work equipment from being damaged in the event of a flood?’. All percentages add up to 100 per cent, and the chart shows all the responses available for all genders.

Chart 2: What actions do people in this community take to protect their homes, other types of property, vehicles, valuables or work equipment from being damaged in the event of a flood?



In order to view the data disaggregated within each group, we need to select the option 'Show relative values' to the right of the disaggregation drop-down menu.



The use of this option allows us to view the proportion of men (as a percentage of all male respondents) and women (as a percentage of all female respondents) who provided each of the response options. If we point with the cursor to the individual bars, we will be able to see the exact percentage values for each answer. **When we want to compare data between different groups, relative values should be used.**

In the example above, if we compare the differences between the two groups based on relative values, we can see that men are significantly more likely to know two or more realistic actions to protect their assets (67% of men vs. 39% of women). **We can also see that almost 1 in 3 women could not suggest any realistic actions to use during a flood, while this was only the case for 1 in every 11 men.**

Do:
Analyse whether there are major differences to how different groups answered certain questions as this might highlight prevailing inequalities. In order to see the accurate data disaggregation, select 'Show relative values' option.

Do not:
Use the percentages directly from the first view option.

Data disaggregation can be used as a starting point to explore barriers in access to services for a specific group in more detail. If such barriers are observed in the data collected, the following sample questions can be used for further analysis:

1. Which questions in the FRMC tool have shown significant differences between men and women? When compiled, are there any noticeable trends?
2. Based on the data collected and our knowledge of the community, what barriers to access to the available services do women face?
3. Are there any other programmes in the area addressing these barriers?
4. Can our programme integrate aspects of promoting gender equality and if so, in what form? If not, how do we ensure our programme is at least gender-sensitive?
5. Are there any advocacy activities we could add to the programme to ensure an increased awareness of these barriers among stakeholders?

Please note: if gender equality is a key component of your programme, a comprehensive gender analysis is recommended.

Validating the data with the community

When collecting data on different groups of the population, we should go back to these groups to validate the information collected. For example, when sharing the results of the FRMC with communities, we should take the opportunity to ask women whether these findings ring true, and how we can adapt interventions to ensure they meet their needs.

We can also ask communities about the key stakeholders associated with the barriers to gender equality and social inclusion (i.e., those who hold power and influence, and/or discriminate, as well as those who are discriminated against), and how they can be included in project interventions.

During the validation process, the results can then be challenged by women or other vulnerable groups. Results might be challenged due to a change in the meeting dynamics, and members of vulnerable groups feel the need to provide a different answer, or there is a bias in the data that needs to be analyzed. Thus, it is important to

validate the data in a safe space where women and people with disabilities and of different ages feel they can speak openly about the results and not fear backlash if they agree with the data.

If the considerations on the validation process mentioned above were taken into account and there are still challenges to the results, we need to ask probing questions to determine why women or other vulnerable groups do not agree (for example, do they not experience the same barriers? Was the question unclear or misleading?). This will help us further understand if there is a potential bias in the data.

Using the data and evidence for advocacy and policy

Comprehensive, quality SAD-disaggregated data can be an essential tool for evidence-based policy dialogue. The effective use of existing data is critical to strengthen evidence-based programming and policy development. All too often, existing data and research are not fully utilized in advocacy or policy because of, for example, capacity gaps, communication barriers, or low political incentives to use evidence. SAD disaggregated data is important in advocacy and policy because it identifies barriers that are faced by vulnerable groups and solutions to address gaps in existing laws and policies. Evidence-based policy uses findings from SAD disaggregated data to support in the development of advocacy messages and helps policymakers to address the gaps in existing government policies, ensuring they promote gender equality and inclusion.

4. Resources

Brown, Sarah, Mirianna Budimir, David Lau, Jenny Nizama, Miluska Ordoñez, Alison Sneddon and Sujana Crawford Upadhyay (2019a) *Missing voices: experiences of floods and early warning from marginalized women in Nepal and Peru*, https://wrd.unwomen.org/explore/library/missing-voices

Brown, Sarah, Mirianna Budimir, Alison Sneddon, David Lau, Puja Shakya and Sujana Uapdhyay Crawford (2019b) *Gender transformative early warning systems: experiences from Nepal and Peru*, https://wrd.unwomen.org/explore/library/gender-transformative-early-warning-systems-experiences-nepal-and-peru

Gelders, Bjorn (2015) *Good practices and barriers in the use of data for policy and advocacy on ageing in Asia-Pacific*, https://www.developmentpathways.co.uk/wp-content/uploads/2018/05/Good-practices-in-use-of-data-for-policy-and-advocacy_Jan2016.pdf

Concern Worldwide (2018) *Breaking the barriers. Engaging men and women to promote gender equality*, https://www.concern.org.uk/knowledge-hub/engaging-men-and-women-promote-gender-equality

Darby, Lydia (2021) 'Back to basics: gender equity and social inclusion in flood resilience', 15 July, https://floodresilience.net/blogs/gender-equity-and-social-inclusion-in-flood-resilience

DFID (N.D.) 'DFID's guide to disaggregating programme data by disability', https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/530605/DFID_s_guide_to_disaggregating_programme_data_by_disability.pdf

Fehringer, Jessica (2017) 'Demystifying disaggregated data: factors that affect collection and use of sex- and age-disaggregated data', 29 June, https://www.slideshare.net/measureevaluation/demystifying-disaggregated-data-factors-that-affect-collection-and-use-of-sex-and-agedisaggregated-data

Global Partnership for Sustainable Development Data (N.D.) A primer on an intersectional approach to data, https://www.data4sdgs.org/sites/default/files/file_uploads/JN_1286_IDC_KP_Primer_8pp_A4.pdf

HelpAge International (2018) *Sex, age and disability disaggregated data. SADDD minimum standards & guidance*, https://www.helpage.org/silo/files/sex-age-and-disability-disaggregated-data.pdf

HelpAge International (2014) *Disaster resilience in an ageing world: how to make policies and programmes inclusive of older people*, https://www.unisdr.org/2014/iddr/documents/DisasterResilienceAgeingWorld.pdf

International Federation of Red Cross and Red Crescent Societies, 'Resilience library: sex and age-disaggregated data', https://www.rcrc-resilience-southeastasia.org/tag/sex-and-age-disaggregated-data

IUCN (2021) ‘Climate change is not gender neutral’, 3 June, https://www.iucn.org/news/gender/202106/climate-change-not-gender-neutral

Lovell, Emma and John Twigg (2019) ‘Intersectional approaches to vulnerability reduction and resilience-building’, https://odi.org/en/publications/intersectional-approaches-to-vulnerability-reduction-and-resilience-building/

PLAN International (2016) ‘Counting the invisible: using data to transform the lives of girls and women by 2030’, https://plan-uk.org/file/because-i-am-a-girl-2016-counting-the-invisiblepdf/download?token=u2So9CKR

PLAN International Australia, CBM Australia and Nossal Institute Partnership for Disability Inclusive Development (2015) ‘Practice note: collecting and using data on disability to inform inclusive development’, https://www.cbmuk.org.uk/wp-content/uploads/2016/05/plan-cbm-nossal_disability-data-collection-practice-note_july2015_1607.pdf

RTI International (2021) ‘Gender disaggregation of data in international development programs: a conversation with Rajeev Colaço and Stephanie Watson-Grant’, 15 December, https://www.rti.org/insights/gender-disaggregation-data-international-development

Sightsavers, ‘Everybody counts’, https://www.sightsavers.org/programmes/everybody-counts/

Tejada, Carlos, Cristina Pérez, Manuel von der Mühlen (2021) *Flood resilience and menstruation education for young people in El Salvador*, https://floodresilience.net/blogs/flood-resilience-and-menstruation-education/

The Disability Data Portal, https://www.disabilitydataportal.com

UNICEF (2021a) ‘Children uprooted in a changing climate: turning challenges into opportunities with and for young people on the move, https://www.unicef.org/media/109421/file/Children%20uprooted%20in%20a%20changing%20climate.pdf

UNICEF (2021b) ‘The climate crisis is a child rights crisis: introducing the children’s climate risk index, https://www.unicef.org/media/105376/file/UNICEF-climate-crisis-child-rights-crisis.pdf

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