The discord between discourse and data in engendering resilience building for sustainability[1]

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Abstract

This paper explores how gender is considered in the resilience discourse, and the extent to which there is an evidence base to support the targeting of women in resilience programmes. The paper provides an overview of the approaches adopted in the fields of gender and development and gender and environment, and the critiques of these approaches. Mainstream approaches to engendering policy and practice are charged with being essentialist and instrumentalist, drawing on women's 'natural' attributes and altruism, placing women at the service of the policy agenda, rather than served by it. Despite these critiques it highlights how these approaches have been borrowed by 'newer' policy arenas such as disasters and within this, resilience building. An analysis of the gendered language in resilience highlights a contradictory discourse, presenting women as vulnerable and as agents for change, and an explicit instrumentalism. The paper notes that in the disaster resilience discourse much of the focus actually remains on vulnerability, problematising this and how vulnerability/resilience are defined and measured generally, and in gender terms. The pseudo-scientific constructions of 'objective' knowledge at the base of much policy are critiqued from a feminist theoretical and practical perspective. It concludes that there is no reliable evidence base on which to base any policy moves to 'engender' resilience. As such the focus on women in resilience must be based on gendered assumptions and/or other policy aims, and as such the inclusion of women in resilience building is more about efficiency, than about equality.

Key words: Instrumentalist/ism; vulnerability; objectivity; climate change; disasters

Introduction

The notion of sustainability has gained great traction over the last decade, culminating in the 2030 Agenda for Sustainable Development (from herein the Agenda) and related Sustainable Development Goals (SDGs). The Agenda highlights both sustainability and resilience as key issues for international development, noting in the preamble: "we are determined to take the bold and transformative steps which are urgently needed to shift the world on to a sustainable and resilient path". The dominant resilience discourse in the

Agenda is related to disasters, and aims to reduce vulnerability to climate related shocks (see Goal 11 and Target 1.5 of Goal 1). Resilience is also explicitly mentioned in Goal 13 which aims to 'promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities' (13.b).

Least developed countries and small island developing States, along with landlocked developing countries and African countries, are also highlighted in the International Disaster Risk Reduction framework - the Sendai Framework - as vulnerable (paragraph 41). Considering vulnerability at the micro level, both the SDGs and Sendai recognise women as a marginalised and a vulnerable group and women are the focus of one of the SDGs (Goal 5) which aims to 'achieve gender equality and empower all women and girls'. However, the gendered discourse in the 2030 Agenda more generally is not so much about what the Agenda can do for women, but what women can do for the Agenda. Point 20 in the Agenda is a good example of this, noting that "realizing gender equality and the empowerment of women and girls will make a crucial contribution to progress across all the Goals and targets". Similarly, Sendai constructs women as a 'resource' for disaster risk reduction noting "women are critical to effectively managing disaster risk, and designing, resourcing and implementing gender-sensitive disaster risk reduction policies, plans and programmes".

This 'instrumentalist' approach to gender is an approach most strongly associated with the World Bank (see Chant and Sweetman, 2012) who began promoting 'engendering development' in 2001. The Bank's interest in gender equality arose from research that demonstrated that societies that discriminate by gender tend to experience slower economic growth and poverty reduction than societies that treat men and women more equally, thus arguing that social gender disparities produce economically inefficient outcomes (World Bank, 2001). It has been suggested then, that rather than gender equality being a goal in itself, gender equality is promoted as an efficient way to bring about other goals – here economic growth and poverty reduction (Bradshaw 2008; Bradshaw et al 2019; Chant 2016). While it might be argued it does not matter why women are being targeted by development policy and practice, as long as they are being targeted, efficiency arguments may lead to the wrong interventions being chosen, since the best outcomes for economic growth are not necessarily the best outcomes for women and girls (Prügl 2017). Such policies may improve the lives of individual women and girls by helping them overcome the barriers they individually face, but do less to remove the structural barriers which reproduce gender inequality (GDN 2012). While the World Bank had been heavily critiqued in terms of

its instrumentalist gendered approach, as the discourse of the SDGs highlights, many UN agencies also adopt such an approach (see Bradshaw et al 2015).

The Bank's interest in gender was the outcome of research which provided an evidence base to justify such action. The SDGs seek to be 'evidenced' and monitor actions and outcomes. The indicator heavy nature of the SDGs has led to a resurgence of interest in available data, set within a context of the desire for evidence driven policy (see Cornish 2015; Goldenberg 2006 for critique). In contrast, the evidence base for a gendered approach in the disasters and climate change policy arenas, or the lack of available evidence, has been an on-going concern (see Bradshaw and Fordham 2013; Seager 2009). In the absence of strong evidence is has been suggested that instead gender policy on climate change and disaster risk reduction has borrowed from approaches to engendering development, and the resultant gender discourse has been critiqued (Arora Jonsson 2011; Bradshaw 2013, 2104).

This paper will explore how gender is considered in the resilience discourse, and the extent to which there is an evidence base to support the targeting of women in resilience programmes[2]. The paper begins by providing the wider gender and development context and critiques of mainstream approaches to engendering policy and practice as instrumentalist. It then considers the nature and extent of the engendering of the resilience discourse. The next sections examine the discord between the discourse and the available data to support this discourse. It places a consideration of measuring resilience/vulnerability generally within the context of wider feminist critiques of the construction of 'scientific' knowledge and 'objectivity'. The final section considers the existing gendered evidence from which to develop policy – highlighting how little we know. While the discourse promotes a gendered approach, there is little or no gendered data to support this.

Instrumentalist gender discourse

A relatively new concept, gender has emerged as an alternative way of understanding the ways in which men and women are positioned in society, and how the roles that men and women are expected to fulfil are socially constructed. In contrast to the concept 'sex' which highlights biological difference, gender challenges the static nature of the differences between men and women. It focuses on the social and cultural meanings that govern what it

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[2] From the outset it should be noted the focus of the paper on women as a group and as they relate to men is not because we understand women to be a homogenous group, nor because we see the world in binaries. It is because, as the paper will demonstrate, the dominant discourse is a binary discourse that pays little attention to intersectionality. Equally, where 'gendered' data is available it is at best merely disaggregated by sex.

means to be a man or a woman, and suggests the possibility for change. While women are part of a gender analysis, gender then should not be limited or reduced to women alone, but should focus on the unequal power relations between men and women and boys and girls. (see Bradshaw 2013 for discussion of gender as a concept in the disaster context).

However, while it is accepted gender is about more than 'women' it is often reduced to a focus on women, and the first approach adopted by the UN was actually named the 'Women In Development' approach (see Kabeer 1994 for discussion of WID/GAD). The approach, as the name suggests, sought to better integrate women into what was constructed as a benign development process. The approach was critiqued for its focus on women only and its rather narrow understanding of 'empowerment' as being achieved via women's education and employment. WID led to projects such as providing a source of clean water for girls to carry home after school, which were aimed at improving girls' school attendance. This was critiqued as, while ensuring that girls can both collect water and attend school may improve school attendance, it does not question why it is girls who are responsible for collecting water, and at the expense of their schooling, and may reinforce rather than challenge gender stereotypes.

In the 1980s the Gender and Development (GAD) tradition emerged from critiques of WID. It focuses on gender roles and relations that are at the basis of women's exclusion from development, and problematises the nature of development. GAD projects are more holistic, not just focussing on income and education but also giving special attention to the oppression of women in the family. GAD projects seek to address what both Molyneux (1985) and Moser (1993) defined as women's 'strategic gender interests'. So instead of seeing the solution to women's low participation in agriculture as being educating women in modern farming techniques, for example, it seeks to eliminate the institutionalised discriminations around land rights that deny women access to land ownership.

In the 1980s the Women, Environment, and Development (WED) approach emerged which drew on the WID tradition and was critiqued in the same way. In particular 'ecofeminist' constructions of women as closer to nature (Shiva 1988) were critiqued as 'essentialising' – that they prioritised biology as an overarching explanatory variable (see Leach 2007 for discussion of WED/GED). This critique of prioritising 'natural' characteristics over socially constructed and materially based gendered divisions, led to the Gender, Environment, and Development (GED) approach in the mid 1990s. This paralleled the move in development toward a GAD approach by applying gender analysis tools to the environment.

From the the early 1990s concerns were raised by those working on gender and development and gendered environmental issues around how gender had been operationalised in practice. For example, Jackson (1996) suggested the need to 'rescue gender from the poverty trap', critiquing the World Bank as using women's 'natural' altruism for poverty reduction ends. She also noted that in the enviornmental policy arena the 'women closer to nature' discourse had allowed the World Bank to play on the 'naturalness' of what are ultimately socially constructed gender roles to appropriate women's unpaid labour in activities to protect the environment (Jackon 1993). In both policy arenas essentialist ideas of women as altruistic carers formed the basis for instrumentalist interventions that not only relied on, but reinforced, these 'natural' feminine characteristics. Despite the many years of feminist critique of such policies, and those that promote them (see for example Prügl 2015; Roberts 2015), this policy approach not only remains, but has been 'exported' to other policy arenas.

At the end of the 1990s academics and practicioners were suggesting women's inclusion in development could be as problematic as their exclusion, yet in the field of disasters studies as Fordham noted (1998: 127), the incorporation of a gender focus into projects and academic analyses had often not advanced much further than revealing the situation of women. Over the last 20 years much more gender and disasters literature has emerged and gender is a more central disaster policy concern, however, it remains very much an essentialist policy discourse and practice (see Bradshaw and Fordham 2013). This is perhaps not surprising given, despite recognition that disasters are socially constructed not naturaly occuring, the term 'natural disaster' remains in common usage in policy and practice (#NoNaturalDisasters campaign).

In the gender and environmental field, despite hopeful beginnings and the rich literature on gender and environmental concerns that has been produced since (see Bradshaw and Linneker 2014 for review), at the new millenium with the move from a focus on 'the environment' broadly defined to a focus on climate as the central discourse, there emerged a 'strange silence' on the gender dimensions of climate change, particularly in global policy discourse (MacGregor 2010). The climate discourse is one of sustainability and the focus on 'planetary boundaries' and the earth's 'carrying capacity' constructs it as gender neutral. The planetary boundaries discourse is a scientificic discourse with carrying capacities constructed as 'objective fact' by those working in the field - who still tend to be men (Bradshaw 2019). Yet while male knowledge is used to construct the problem, the solution is constructed as lying with women. In these constructions 'the problem' is over population and the related 'solution' is limiting women's fertility. However, overpopulation is presented

not as a global but a localised problem, with Africa being constructed as problem, due to 'high' (set against a Western norm) fertility rates. The policy rhetoric suggests investing in family planning services will meet (poor) African women's unmet desire for contraception and has been presented as addressing women's rights. However, it does not address the structural causes that deny women the right to make decisions over their own bodies, something fundamental for achieving gender equality goals. Reducing fertility will, however, increase the number and productivity of the female workforce, bringing economic growth gains, and as it will reduce population growth these gains will be magnified in per capita economic growth terms. It will also impact on the carrying capacity of the earth, reducing (in low income countries) the number of people with whom the world's resources need to be shared. Women are then both vulnerable, constructed as victims needing help, and virtous, the agents for change (Arora Jonsson 2011). This double construction of women as virtous-victims is echoed in the resilience discourse.

Gendered resilience discourse

The UNDP are a good example of what is a common discourse on gender and resilience. On their 'gender, climate and disaster resilience' pages they note: "women are differently and disproportionately affected by climate change and disasters" and that "at the same time, women are powerful agents of change" and further that "[women] can be strong advocates and contributors to climate action and sustainability." Linking resilience with sustainability there is a discourse of women as at the same time both vulnerable and agents for change. They go on to implicitly explain why women's agency is key: "women's involvement in key disaster risk reduction initiatives, including for early warning, contingency planning and long-term recovery, is also critical for building community resilience to disaster." The focus is not on women's assumed vulnerability and addressing this through building women's resilience, but on women as key actors in building community resilience.

This instrumentalist language is more usually associated with the World Bank and the Bank sponsored Global Facility for Disaster Reduction and Recovery (GFDRR) as we might expect explicitly spells out 'why women' as it notes: "Yet women's actual and potential contributions, including their leadership as first responders, and their central role in community stability and resilience, continue to be largely untapped assets in crisis recovery." This 'untapped asset' discourse echoes language from the 2001 engendering development discourse and the Bank's then emerging poverty focus. This move to focus explicitly on women to deliver development policy aims has been termed the 'feminisation of obligation and responsibility' (Chant 2008b) whereby women are at the service of the policy agenda, not served by it (Molyneux 2007).

The GFDRR in its guidance notes talks of women as 'resilience champions' and uses the notion of 'promoting women's empowerment for broader resilience strengthening'. In the operating principles on gender the key issues and linkages are clearly articulated: "significant evidence shows that despite gender-differentiated vulnerabilities, women and girls are also powerful agents of positive change during and after disasters. Women's empowerment is therefore an important approach to build broader community resilience and contribute to sustainable development." Thus 'despite 'gender-differentiated vulnerabilities' (that seemingly can be ignored) women and girls just need to be 'empowered' to be the agents of change for community resilience, and in this way they will ensure sustainable development.

The gendered resilience discourse is interesting in its explicit construction of women as a means to achieve wider goals. While in other policy arenas this tends to be implicit, here it is clearly articulated that women are the means to build resilience of others/the community. The discourse is rather contradictory as it highlights women's vulnerability as at the same time promoting women as the means to improve community resilience, constructing women as both vulnerable and as agents for change. As the discourse is common across a number of agencies, it suggests there is an evidence base underpinning this suggestion that although women are more vulnerable, they are also the best means to build community resilience. The next sections consider if such an evidence base exists, beginning with the goal to build 'community resilience'. It frames this review of evidence within a discussion of what constitutes evidence, and feminist critiques of dominant notions of how we construct knowledge and how we 'know' the world.

Data and discourse
Tiernan et al (2019) from their review of themes in disaster resilience literature and international practice since 2012 highlight that there is as yet no consensus as to 'what community resilience is, how it should be defined and what its core characteristics are', with mixed definitions appearing in the scientific literature, policies and practice. Patel et al's (2017) review of 62 publications focussed on 'community resilience' produced a similar conclusion as they identified 57 unique definitions of the concept. Furthermore, Ostadtaghizadeh et al. (2015) note how few studies have actually provided practical models or assessments that enable the measurement of resilience. Tiernan et al (2019: 65) conclude that although there have been extensive efforts to accurately and clearly define resilience, the debate should be seen to be 'well-explored if not settled' accepting that due to the multi- faceted nature of resilience, there is no single, consistently applicable definition.

This multifaceted nature of resilience has led Levine et al (2012) to caution, that the drive for quantification can 'de-contextualise resilience', particularly where it fails to account for factors operating at multiple levels - household, national, international.

The desire to know through numbers, to homogenise and quantify the world, has long been critiqued in feminist writings. In recent years the move to so called evidence-based policy, which began with the Evidence Based Medicine (EBM) movement, has similarly been critiqued. Goldenberg (2006: 2622) notes the term 'evidence-based' has a ring of obviousness to it which makes it difficult to argue against, and suggests that evidence-based approaches are attractive to many because they propose to 'rationalise' complex social processes. She suggests they do this through "the positivistic elimination of culture, contexts, and the subjects of knowledge production from consideration, a move that permits the use of evidence as a political instrument where power interests can be obscured by seemingly neutral technical resolve". In her critique of EBM she notes, "feminist critiques of science are driven by a deep concern that the abstractions made in the names of scientific objectivity, generalisability, and predictability harm women" (Goldenberg 2006: 2627).

At the heart of feminist critiques is the notion of 'objectivity' which constructs some knowledge as 'fact' and which is then used to justify policy and practice with little questioning of how the knowledge was produced. Harding (1993: 71) suggests objectivity is actually a 'mystifying notion' useful and appealing to dominant groups. Feminist epistemologies of science have demonstrated that the ideals of the 'objective' autonomous knower—the dislocated, disinterested observer—are actually those of a small, privileged group of educated and prosperous white men, whose material circumstances allow them to see themselves as neither gendered nor raced. As Code (1993: 22) argues, 'objectivity' is then "a generalization from the subjectivity of quite a small group" but as this small group has power and prestige, their experiences and normative ideals become generalised across the social order.

The suggestion of the possibility of objective knowledge produced from an 'outside-of-nature' and 'perspective-free' viewpoint is something which feminists and others have contested. In the early 1980s, Sandra Harding and colleagues wrote the first significant collection of articles on feminist epistemology, suggesting gender to be a variable in conceptions of rationality leading to a critique of 'masculinist' constructions of knowledge and the notion of 'objectivity'. Traditional models of 'scientific objectivity' were critiqued as dividing subject from object, knower from known, assuming a view from nowhere, while claiming to be everywhere equally (Haraway 1991). Instead it was suggested knowledge is

always 'situated', always local and limited, suggesting an 'embodied objectivity' (see Harding and Hintikka 1983). Such epistemological concerns led to many feminists favouring more qualitative methodologies and an approach to research that accepts knowledge and knowing as subjective (see Fonow and Cook 1991).

While this might seem a rather abstract ontological and epistemological discussion, how the world is 'known' and how social reality is constructed has implications for policy and practice. As Code (1993: 19) argues, despite the disclaimers, hidden subjectivities produce the dominant epistemologies and sustain their hegemony, and thus gender is a variable in conceptions of rationality (Harding and Hintikka 1983). Within this the issue of what counts as evidence is a key concern and Nelson (1993) has argued that any call for evidence relies on a specific conception of what constitutes evidence. At the international and national level both the disaster and particularly the climate change agendas are more 'scientific' than social agendas, and this helps define the specific conception of what constitutes evidence. They are largely masculinised fields of enquiry, and thus privilege quantitative knowledge constructed by men over more qualitative and local knowledges of women (Alston and Whittenbury 2013). The 231 unique indicators of the SDGs highlight the persistent underlying positivist discourse in development also, setting artificial, but seemingly objective, measures of 'development', 'sustainability' and associated levels of resilience needed to achieve and evidence these. Inherent in measures of resilience and sustainability is the notion of risk. While often presented as an objective 'fact', risk is a subjective construction and in climatic terms the 2°C target expressed 'acceptable' climatic risk and was presented as having been arrived at via scientific reasoning. However, as Seager argued in 2009, it is in fact underpinned by a 'framework of values based on power' and as such is a more subjective view of acceptable risk promoted by those with power, than objective fact**.**

Such 'objective' measures also influence who is seen to be vulnerable and/or resilient. The Sendai Framework (paragraph 41) refers to 'disaster-prone developing countries' and defines these countries as encompassing "least developed countries, small island developing States, landlocked developing countries and African countries, as well as middle-income countries facing specific challenges" (UN GA, 2015).[3] It is interesting that while the MICs are suggested to be vulnerable to 'specific challenges' those countries that are classified as 'least developed' and the whole of Africa is presented as vulnerable to all and any hazard. The most obvious explanation for rendering the whole of Africa as 'disaster

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[3] The Sendai Framework makes a total of five mentions of these countries – see paragraphs 8, 17, 19, 41 and 47.

prone' seems to be that many (16) of the African nations are classified as landlocked developing countries (LLDCs) and that the majority of LDCs (32 out of 47) are located in Africa. One of the main criteria for classifying a country as an LDC[4] since 1999 has been the Economic Vulnerability Index (EVI)[5], an index compiled by the UN Department of Economic and Social Affairs (UN-DESA). It measures vulnerability 'to economic and environmental shocks' (CDP, 2015: 51) and vulnerability is seen as a 'common thread that runs across all LDCs' (UN-ORHLLS, 2018: iv). One of the eight elements that make up the EVI is 'victims of natural disasters' as a percentage of the total population (UN-DESA, 2020). Such language suggests these countries as in a 'natural' state of defenceless. The 'State of the Least Developed Countries' Report (UN-ORHLLS, 2018) which monitors the progress of LDCs had as its 'special theme' in 2018 on 'vulnerability and resilience'. It uses the term 'natural disasters' throughout the report. This is perhaps indicative of the failure of the UNDDR 'to update and widely disseminate international standard terminology' as proposed in the Hyogo Framework (UN, 2005: 9). However, it may also be indicative of a continued construction of some countries as 'naturally' vulnerable to disasters.

The experiences and normative ideals of Code's (1993) 'objective autonomous knower', the reasoning of these dislocated, disinterested observers, here renders other countries and continents vulnerable. The pseudo-scientific construction of the index while 'mystifying' to some, is for others evidence on which to base generalising and essentialising policy. Rendering whole nations, and in the context of the Sendai Framework a whole continent as 'vulnerable', justifies Western interventions to 'help', while the naturalistic discourse invisibilises the role of those Western nations in historically constructing that vulnerability (Bankoff 2001). Despite a discourse of vulnerability and victims, the focus on the 'natural' and the implicit notion of countries as naturally 'disaster-prone' means it is presented largely as a gender-neutral discourse. Despite one measure of the EVI being 'victims' of disasters, that is people, the data is not disaggregated by sex. The lack of gendered data from which to know the world and the position of women in that world, which would be needed to inform any policy that focusses on women is largely missing. This is not just in terms of resilience/ vulnerability but women more generally are 'absent' from data, despite the gendered

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[4] The other criteria are population size, Gross National Income per Capita and the Human Assets Indicator Index.

[5] The recognition of the importance of vulnerability in classifying countries, particularly in terms of LDCs, has led to more recent discussions on how structural vulnerability should be measured in terms of climate change and socio-political vulnerability measures (Guillaumont, 2020). With the international focus on climate change, one of the new measures being recommended by Guillaument is the Physical Vulnerability to Climate Change Index (PVVCI), which is constructed along similar principles to the EVI and has been developed since 2011 (Feindouno and Guillaumont, 2019).

discourse that draws on this data. In gender terms we know more about what we don't know about women, then what we do know.

Measuring gender difference

The indicator heavy nature of the SDGs has led to a resurgence of interest in available gendered data, and Agenda 2030 pledges to (17.18) 'increase significantly the availability of high-quality, timely and reliable data disaggregated by income, gender, age, race, ethnicity, migratory status, disability, geographic location and other characteristics relevant in national contexts' and that follow-up and review processes at all levels will be 'people-centred, gender-sensitive, respect human rights and have a particular focus on the poorest, most vulnerable and those furthest behind' (point 74e). The number - 231 – of agreed indicators related to the SDGs sets a particular measurement challenge, and this is also a gendered challenge. In 2017 nearly 80% of the gender equality indicators of the SDGs either lacked data or did not have accepted standards for measurement, presenting significant challenges for national statistical systems in many countries (UN Economic and Social Council 2017). While data is only available for 20% the of the key gender indicators across the SDGs, UN Women estimate that of this available gender data, over 76% was generated before 2010, with only 22% of gender-specific indicators being regularly produced worldwide (Data2X 2019). One-third of the minimum set of 52 indicators proposed by the UN to track progress on gender issues cannot be generated internationally due to lack of either conceptual clarity, coverage, regular country production or international standards. Only 3 of the 14 proposed SDG indicators for gender equality and the empowerment of women are currently widely available (Data2x 2019).

Even for the key SDG1 aimed at eliminating poverty, there is an issue in terms of (lack of) gendered knowledge. The notion that poverty has a female face, or there is a feminised and feminising poverty, is a good example that if we say something often enough, and if enough people say something, then it becomes 'true'. Relentless repetition in academic publications, policy and programme documents and pronouncements, as well as popular/social media has constructed the '70% of the world's poor' statement from the UN Beijing conference of 1995 as 'fact' (Bradshaw et al 2017). As recently as 2016, the Deputy Director of UN Women suggested that sustainable development is not possible if the 'feminisation of poverty' continues (Puri, 2016). Yet in Progress of the World's Women report a year earlier, UN Women themselves had accepted, albeit in a footnote, that 'the much cited "factoid" that 70% of the world's poor are women is now widely regarded as improbable' (UN Women, 2015:307, 92n) and noted that 'it is unknown how many of those living in poverty are women and girls' (UN Women, 2015:45, Box 1.4). Since the '70% of the

world's poor' statement of 1995 it has then taken twenty five years not to refine our knowledge, not to be able to say poverty has increased or decreased, not to present a more nuanced understanding of deprivation, but instead it has taken twenty five years to say 'we don't know' (Bradshaw et al 2019b).

In disaster terms the situation is even worse. There is a lack of gender data and evidence to support many statements on the supposed feminised impact of disasters, statements such as the UK's Department for International Development's suggestion that "female headed households are among the most asset poor and have been found to be the most affected by natural disasters" (DFID 2004). Both components of this statement can be critiqued. The notion of female heads as the 'poorest of the poor' has been contested as long as it has been suggested (see Chant 1995; 2008a,b). We perhaps know even less about the second component of DFID's statement – that women are most affected by disasters. Taking the most obvious and easiest measure of disaster impact – deaths – our knowledge varies from vague suggestions that more women than men died during the 2003 European heat wave (Pirard et al., 2005); to specific claims that "of the 140,000 people who died, 90% were women" in Bangladesh cyclones (Ikeda, 1995); to the now infamous 'women, boys and girls are 14 times more likely than men to die during a disaster' (attributed to Peterson 2007). This latter figure, like the '70%' statement, has been reproduced in countless publications and repeated so often it is taken as fact, but the evidence basis for the claim is actually missing. The most robust evidence base for a 'feminized disaster mortality' claim comes from research by Neumayer and Plümper (2007) and this suggests that in situations of greater inequality, there is greater chance that more women will die than men. That is not to say more women than men die from hazard events due to biologically being a woman or their natural attributes, but that when there are higher levels of socially constructed gender inequalities, there are higher female mortality rates. Importantly, this conclusion was reached by applying a sex disaggregated correlation analysis to two national level data sets from various countries - one on mortality and one on 'disaster' events. That is, not from analysis of a gendered mortality due to disaster data base, because we do not have gendered data sets on disaster mortality which we can analyse.

Given the paucity of data on gender and disasters to explore how gender 'advancement' relates to disaster losses, we considered two macro level data sets – an EM-DAT based average disaster death rate per 100,000 population, and the UN's 2018 Gender Development Index. Data was only available for both variables for 146 countries. It is important to note that these are macro level data sets and data is about countries rather than people. As the graph suggests, disaster losses are negatively associated with the GDI,

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in that countries with a high GDI i.e. showing greater gender equality, tend to have lower disaster death rates, while low gender equality is associated with high disaster death rates. However, the category of 'medium-low' gender equality highlights the relationship is not that simple, as it, like high gender equality, is also associated with low death rates. Thus, that by increasing gender equality we will reduce disaster losses cannot be assumed.

Graph 1 here

The evidence base that drove the engendering development movement does not underpin moves to focus on women in disaster risk reduction, nor related fields such as resilience. Standardized data on gendered resilience does not exist, not least due to definitional issues. Much data analysis uses macro level data sets to draw gendered conclusions but as the data collection methods were not gendered, there is a question around the extent they can provide gendered evidence on which to base policy. Research that merely disaggregates by sex is used to inform initiatives, but it often reproduces stereotypical understandings of sex differences, which can harm rather than promote gender equality (Bradshaw 2018). That being said, even when data potentially could be disaggregated by sex e.g. in the EVI, it is often not disaggregated by sex. While the discourse suggests a desire to 'do gender' it is not backed up by actions, and the data on which to base the discourse is absent. In a scienticized discourse, an evidence-based policy context, an indicator driven world, this seems an odd absence.

Even data around women's greater vulnerability is limited and gendered knowledge on the most fundamental issue of poverty remains questionable. Despite the lack of an evidence base, the discourse of disasters is a 'women as vulnerable' discourse, and the discourse of resilience adds women as agents for change to the vulnerability rhetoric. There is no data to support either supposition. If we have no evidence to say women are more vulnerable, instead something else is driving this policy focus. That the resilience discourse explicitly presents women as agents of change for their communities, leads to the conclusion that the gendered resilience building discourse is not about building women's resilience, but about women building community resilience. It is not about micro level improvements in women's lives, but macro level policy outcomes. There is then no need to 'know' about women and their vulnerability/resilience as long as we have the (macro level) evidence to demonstrate that policy interventions focused on women bring desired (macro level) policy outcomes. The lack of evidence around women's situation and position is not an accidental omission, it is not needed if the policy concern is better community resilience, not women's well-being.

Conclusions

Much of the available data on development and disasters is macro level data and used to categorise places rather than people, i.e. classifying countries as 'less developed'. These measures of development include measures of vulnerability including 'victims' of 'natural disasters'. Despite the obvious flaws, such classifications label countries underdeveloped and in the disaster policy arena the Sendai Framework uses such classifications to render a whole region as 'vulnerable'. Despite the rhetoric of resilience, the focus then remains on vulnerability, and it is assumptions of vulnerability that seems to guide this classification as much as the evidence. Within this there is little attention to differences between countries and no attention to differences between people within countries.

While the data does not exist to give an accurate picture of the extent or nature of gendered vulnerability, women are assumed to be more vulnerable to 'disaster'. Their assumed vulnerability is the justification for a focus on women, but women's socially constructed altruism explains their importance for resilience. The institutional resilience discourse is unashamedly instrumentalist in its stated aim to 'empower women' in order to build community resilience and as such it is doubtful this approach to engendering resilience and sustainability will bring gender equality gains. But then, that is not the aim, and in this context 'evidence' might get in the way of the assumptions that drive and justify policy that benefits from using women to deliver wider policy aims.

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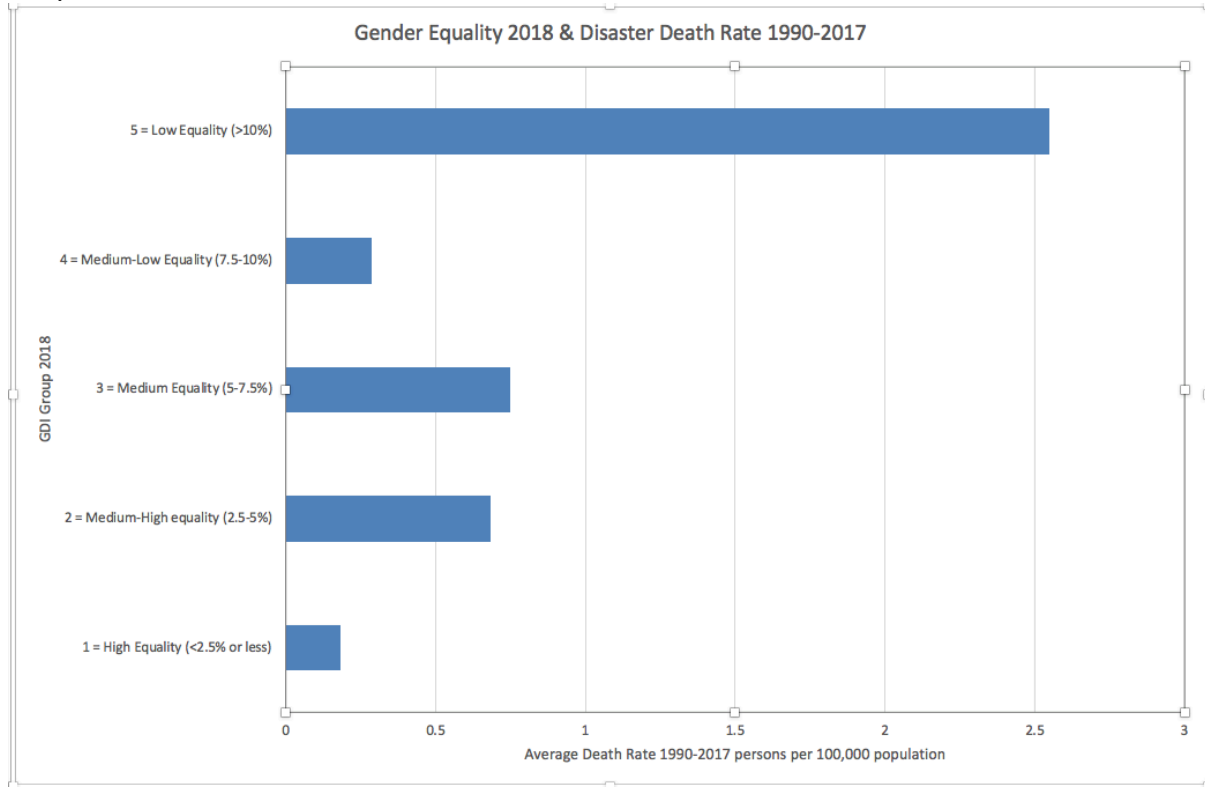
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Graph 1

Graph title: Gender Equality 2018 & Disaster Death Rate 1990-2017

Y-axis (GDI Group 2018):
- 5 = Low Equality (>10%)
- 4 = Medium-Low Equality (7.5-10%)
- 3 = Medium Equality (5-7.5%)
- 2 = Medium-High equality (2.5-5%)
- 1 = High Equality (<2.5% or less)

X-axis: Average Death Rate 1990-2017 persons per 100,000 population