

# Rooting out the evil: The stakes of addressing the structural and intersectional dimension of vulnerability in specific disaster laws

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15 June 2020

## Abstract

This article stems from a desire to initiate a discussion on the apparent discrepancy between the deeply political origins of disaster scholars' definitions of 'disaster risk' and 'vulnerability', and their widespread depoliticized use by legal scholars, policy makers, and legal practitioners. Using the *PAR framework* and the feminist concept of intersectionality to recall the radical aspects of these notions and their theoretical implications for DRR, it reviews 25 specific national disaster legislations to document how the structural and intersectional dimension of vulnerability has so far been addressed in specific disaster laws. Rather than providing the reader with definite answers, it highlights some positive patterns and raises questions on the risks associated with adopting a DRR approach emptied of its structural and intersectional dimension. By doing so, it aims to pave the way for a more sustainable reduction of risks and vulnerability.

## Introduction

The emergence in the 1970s of the academic 'vulnerability paradigm', along with the definition of 'disaster risk' as the combination of exposure to a natural hazard and the relative vulnerability to this hazard,<sup>1</sup> largely contributed to the development of the notion of 'Disaster Risk Reduction' (DRR),<sup>2</sup> and motivated subsequent international and national legal frameworks to place stronger emphasis on the prevention of disasters, the reduction of vulnerability and the enhancement of resilience.<sup>3</sup> Nevertheless, it seems that the fundamental political aspects and implications of disaster scholars' definition of 'disaster risk' and 'vulnerability' have been left outside of this mainstreaming process. Indeed, the concept of DRR, as used by policy makers and legal practitioners, appears often emptied of its structural and intersectional dimension, focusing on technical fixes, such as early warning systems, risk mapping and public awareness.<sup>4</sup> This narrow depoliticised conception of DRR seems to be reflected in the few large-scale pieces of research having examined the efforts of countries to support DRR through their laws. This paper, therefore, intends to fill an apparent lack of literature regarding the way specific national disaster laws consider and address the structural and intersectional dimension of vulnerability,

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<sup>1</sup> Gaillard, 'Vulnerability, capacity and resilience', 22(2), *Journal of International Development* (2010), 218, at 223.

<sup>2</sup> DRR is defined by the UN as "the policy objective of disaster risk management", i.e. "the substantial reduction of disaster risk and losses in lives, livelihoods and health and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries." See UNDRR, 'Disaster Risk Reduction', at: <https://www.undrr.org/terminology/disaster-risk-reduction>.

<sup>3</sup> UN DOC A/RES/44/236 (22 December 1989); UN DOC A/RES/54/219 (3 February 2000); UN DOC A/RES/60/195 (22 December 2005); UN DOC A/RES/69/283 (3 June 2015).

<sup>4</sup> Gaillard, 'Disaster studies inside out', *Disasters* (2018), at 8.

and how they could do it better. By doing so, it aims to reconnect disaster law studies with disaster studies' longstanding political agenda and to highlight a potential weakness in disaster legislations in order to build a more effective and sustainable strategy to reduce disaster risk.

For this article, I build on the well-known *Pressure and Release (PAR)* framework<sup>5</sup> and on the feminist concept of intersectionality to recontextualise the complex intersecting power dynamics shaping individual disaster vulnerability in their historical, ideological and socio-economic roots (I). After having emphasised the theoretical implications such understanding of vulnerability should have for DRR and disaster law (II), and the largely depoliticized conception of DRR characterizing the few pieces of large-scale comparative disaster law literature (III), I account for the results of an empirical study of 25 specific national disaster legislations to consider how this structural and intersectional dimension of vulnerability has so far been addressed in specific disaster laws, and how this could be done better (IV).

As a young white Western feminist whose perspective is shaped by economic, racial and geographical privileges, I am conscious that my intervention into discourses relating to disaster vulnerability and its structural root causes, especially in non-Western contexts, comes with the risk of reproducing an "imperialist DRR agenda."<sup>6</sup> I humbly hope to mitigate this risk by centring my analysis on the historic socio-economic power dynamics and imperialist ideologies working together to reproduce and maintain unequal disaster vulnerability, which, paradoxically, are the same ones allowing me to speak in this exclusive forum.

## **I. Post-disaster or structural inequalities? The structural and intersectional dimension of vulnerability**

### **The social construction of disasters**

One of the key premises of disaster studies is the fact that there is no such thing as 'natural disasters.'<sup>7</sup> While mainstream media keep portraying disastrous events as simple accidents beyond the usual functioning of society, disaster scholars have, since the 1970s, largely discredited this 'hazard paradigm' by extensively demonstrating the social construction of disasters, marking the commencement of the today prevailing 'vulnerability paradigm'.<sup>8</sup> Ever since, the definition of 'disaster risk' as the combination of exposure to a 'natural hazard' and the relative vulnerability to this hazard has been widely shared among disaster scholars (see figure one).<sup>9</sup>

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<sup>5</sup> First published in Blaikie, et al., *At Risk* (Routledge, 1994). The model was reproduced in Wisner et al., *At Risk* (Routledge, 2004). Its most recent updated version can be found in Wisner, Gaillard, & Kelman, 'Framing Disaster' in *The Routledge Handbook of Hazards and Disaster Risk Reduction* (Routledge, 2012), at 23.

<sup>6</sup> Gaillard, above note 4, at 6.

<sup>7</sup> Chmutina & von Meding, 'A dilemma of language', 10(3), *International Journal of Disaster Risk Science* (2019), 283.

<sup>8</sup> O'Keefe, Westgate, & Wisner, 'Taking the Naturalness out of Natural Disasters', 260, *Nature* (1976), 566; Douglas, & Wildavsky, *Risk and Culture* (University of California Press, 1982); Johnson & Covello, *The Social and Cultural Construction of Risk* (D. Reidel Publishing, 1989); Krimsky & Golding, (Eds.) *Social Theories of Risk* (Praeger, 1992); Blaikie et al., above note 5.

<sup>9</sup> Gaillard, above note 1, at 223.

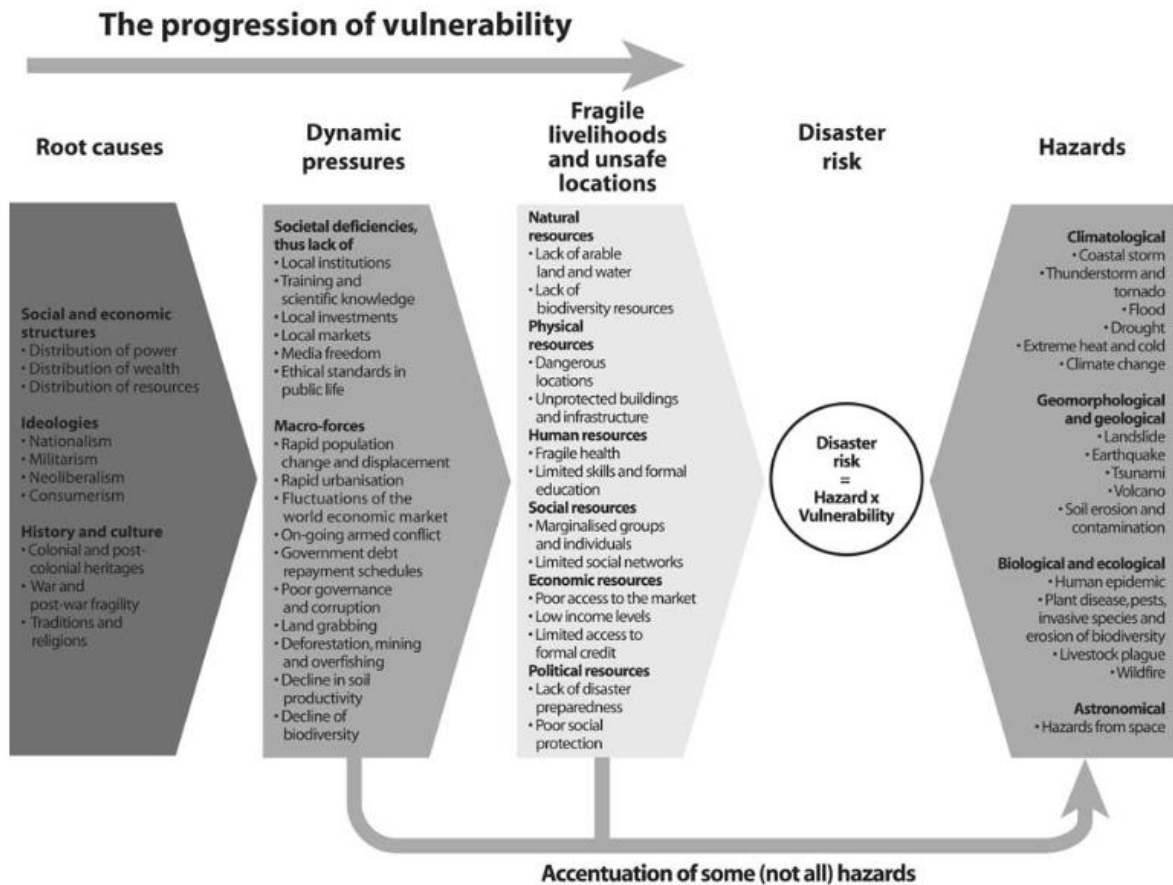


Figure 1 –The Pressure And Release (PAR) Framework<sup>10</sup>

### ‘Natural’ Hazards?

Readers should first note that even before becoming ‘disasters’, so-called ‘natural hazards’ – whether geophysical, climate-related, biological, or astronomical – are not entirely ‘natural’.<sup>11</sup> The anthropogenic dimension of climate-related hazards such as cyclones, droughts, or floods is particularly obvious, considering the influence of climate change, urban gentrification, and industrial or mineral megaprojects on their frequency and intensity.<sup>12</sup> Similarly, geohazards are not entirely extraneous to human activity; extractive oil and gas exploration, for instance, being known for inducing or triggering earthquakes.<sup>13</sup> Although this paper focuses more on the anthropogenic dimension of vulnerability, some of the ideologies and paradigms driving the human decisions at the origin of those hazards actually merge with the ‘root causes’ of vulnerability introduced below.

### Vulnerability

#### *The structural dimension of vulnerability*

<sup>10</sup> Wisner, Gaillard, & Kelman, above note 5, at 23.

<sup>11</sup> Ibid, at 24.

<sup>12</sup> See Wisner & Lavell, ‘The Next Paradigm Shift’ in *Dealing with Disasters Conference* (University of Durham, 2017), at 4; Energy and Climate Intelligence Unit, *Even Heavier Weather* (London, 2018).

<sup>13</sup> Wilson et al., ‘Anthropogenic earthquakes in the UK’, 68, *Marine and Petroleum Geology* (2015), 1.

Broadly referring to “the susceptibility to suffer damage in a potentially dangerous event, either natural, economic, or political,”<sup>14</sup> the term ‘vulnerability’ is still today subject to many (mis)interpretations. For the purpose of the following discussion, I will rely on the *PAR framework* developed by Blaikie et al.<sup>15</sup> I will therefore use the term ‘vulnerability’ to refer to the socially-constructed conditions affecting people’s differential ability to prepare for, respond to, and recover from hazardous events, resulting from the complex interaction of political, social and economic elements of history (see figure one). Although this framework is, by definition, grounded in and derives from an over-simplification of reality, it constitutes a persuasive visual demonstration of the progression of vulnerability from the root causes of everyday vulnerability in our societies – including unequal distribution of power and resources, neoliberalism, and colonial and post-colonial heritages – to the unsafe conditions contextualizing disasters.<sup>16</sup>

This framework clarifies the fact that the adverse conditions that emerge after disasters are not just the product of these one-time events. Instead, they are a continuation and intensification of historical patterns of inequality, discrimination and privilege. People already marginalised and exposed to structural violence and harm in ‘everyday times’ are more likely to suffer the most and recover less easily from a disaster.<sup>17</sup> Contrastingly, racial, cultural, economic and social privileges might give some people an easier access to the kind of resources necessary to prepare for, mitigate, and recover from the outcomes of a disaster.<sup>18</sup> This ‘structural dimension of vulnerability’ is the reason why “depending on the society and situation, social characteristics such as gender, age, physical and mental health status, occupation, marital status, sexuality, race, ethnicity, religion and immigration status may have a bearing on potential loss, injury or death in the face of hazards.”<sup>19</sup>

### ***The intersectional dimension of vulnerability***

Building on this reasoning, some feminist disaster scholars have used the concept of intersectionality to further demonstrate how this framework translates in practice.<sup>20</sup> Intersectionality posits that individuals’ life experience is shaped by complex interlocking and often mutually constituted systems of oppression and privilege, working together to produce both opportunities and forms of

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<sup>14</sup> Gaillard, above note 1, at 219.

<sup>15</sup> Above note 5.

<sup>16</sup> Although formally missing from the initial framework, feminist disaster literature has sufficiently proved that heteropatriarchy would deserve a place of its own in this non-exhaustive list. See David & Enarson (Eds.), *The women of Katrina* (Vanderbilt University Press, 2012); Dominey-Howes, Gorman-Murray, & McKinnon, ‘Queering disasters’, 21(7), *Gender, Place & Culture* (2014), 905; Seager, ‘Disasters Are Gendered: What’s New?’ in Singh & Zommers (Eds.), *Reducing disaster* (Springer, 2014); Luft, ‘Racialized disaster patriarchy’, 28(2), *Feminist Formations* (2016), 1.

<sup>17</sup> For a broad overview of such phenomenon, see for instance, in the context of hurricane Katrina (2005): David & Enarson, above note 16; Chia-Chen Chen et al., ‘Economic vulnerability, discrimination, and Hurricane Katrina’, 13(5), *Journal of the American Psychiatric Nurses Association* (2007), 257; McDougall, ‘Hurricane Katrina’, 51, *Howard LJ* (2008), 533. In the post-Haitian earthquake’s context (2010): Horton, ‘After the earthquake’, 20(2), *Gender & Development* (2012), 295; Ulysse, *Why Haiti needs new narratives* (Wesleyan University Press, 2015); Durban-Albrecht, ‘Postcolonial Disablement and/as Transition’, 4(2) *Transgender Studies Quarterly* (2017), 195.

<sup>18</sup> Ibid.

<sup>19</sup> Wisner, Gaillard, & Kelman, above note 5, at 22.

<sup>20</sup> Gault et al., ‘The Women of New Orleans and the Gulf Coast’ (*IWPR*, October 2005); David, & Enarson, above note 16; Osborne, ‘Intersectionality and kyriarchy’, 14(2), *Planning Theory* (2015), 130, at 133; Luft, above note 16, at 8.

discrimination.<sup>21</sup> Theorised without being named by Black feminist movements since the end of the 19<sup>th</sup> century, the term was finally coined by feminist legal scholar Kimberlé Crenshaw in 1989 to demonstrate how Black women were not suffering racism on one side and sexism on the other, but were at the “cross road” of these two oppressions, suffering a combination of both: the “misogynoir.”<sup>22</sup> While the analysis of Crenshaw was initially focused on the experience of Black women, taking race and gender as the main social divisions, she stated in 1991 that the concept can and should be expanded to other demographic, socio-cultural, and economic factors.<sup>23</sup>

In the disaster field, feminist disaster scholars have used intersectionality to complicate simplistic analyses of unequal experience and recovery from disasters, starting with Hurricane Katrina (2005).<sup>24</sup> By demonstrating that, depending of the context, gender may intersect with other power dynamics such as race, class, sexual orientation, age, ‘ableness’, religion, or colour, among others, to shape individual experiences of disasters, they made clear that individuals may simultaneously belong to multiple disadvantaged groups or identities, and often to both privileged and oppressed groups. This demonstration rendered therefore obsolete the simplistic and essentialist assumption that, for instance, ‘women’ or ‘people of color’, as homogeneous groups, would always suffer the most from the impact of disasters.<sup>25</sup> In addition to providing a more complex theoretical framework for grasping individual vulnerability, intersectionality proves that vulnerability assessments or reduction plans considering one of these power dynamics disconnected from the others pose the risk of reinforcing historical structures of domination instead of challenging them.

## II. Disaster law and the structural and intersectional dimension of vulnerability

This understanding of vulnerability has several fundamental yet largely overlooked implications for DRR and disaster law:

- First, it simply, yet persuasively, demonstrates that reducing risk is, indeed, possible, therefore rooting for a preventive, rather than a plain post-disaster management approach.<sup>26</sup>
- Second, it highlights the crucial need for context-specific analyses of the way complex interactions and combinations of multiple axes of privilege and oppression shape people’s social position and lived experience, and therefore affect their vulnerability and resilience.<sup>27</sup>
- Third, it demonstrates that effectively reducing disaster risks and preventing the creation of new ones will require exploring and addressing the structural root causes of vulnerability, including through reshaping current international and national legal systems which have so far allowed for the continuation of these oppressive structures.<sup>28</sup>

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<sup>21</sup> Crenshaw, ‘Demarginalizing the intersection of race and sex’, *U.Chi.Legal F* (1989), 139; Brah & Phoenix ‘Ain’t IA woman? Revisiting intersectionality’, 5(3), *Journal of international women's studies* (2004), 75.

<sup>22</sup> Bailey & Trudy, ‘On misogynoir’, 18(4), *Feminist Media Studies* (2018), 762.

<sup>23</sup> Crenshaw, ‘Mapping the margins’, 43(6), *Stanford Law Review* (1991), 1241, at 1245.

<sup>24</sup> David, & Enarson, above note 17; Gault et al., above note 20.

<sup>25</sup> Luft, above note 16, at 8.

<sup>26</sup> Kelman, *Disaster by Choice* (Oxford University Press, 2020).

<sup>27</sup> Osborne, above note 20, at 131.

<sup>28</sup> Aronsson-Storrier, ‘Sendai five years on’, 11, *International Journal of Disaster Risk Science* (2020), 1.

- Fourth, it highlights the necessity to adopt an ‘integrated’ approach to DRR, involving the efforts of a broad-cross section of public and private actors on the local, regional, national, and transnational level.<sup>29</sup>
- Finally, it indirectly demonstrates the necessity to increase financing and accountability for risk prevention and reduction.<sup>30</sup>

The last ten years have witnessed an increasing engagement of socio-legal scholars with critical disaster studies’ literature, and especially the *PAR framework*, to explore the role that law has played, and can play, in the creation and reduction of disaster risk.<sup>31</sup> Although truly commendable, these analyses remain mainly theoretical or focused on international law.<sup>32</sup> The role and potential of domestic disaster legal frameworks in this matter has therefore so far been largely side-lined.<sup>33</sup> One of the reasons for that is well expressed by Aronsson-Storrier when she states that “the reliance on the capacities of the domestic state is highly problematic as it fails to account for wider processes of the creation of risk.”<sup>34</sup> If I agree with this statement, recognizing that addressing the structural and intersectional dimension of vulnerability is a long-term project calling for a total and profound rethink of the hegemonic socio-cultural, political, and economic transnational paradigms governing our societies which cannot be undertaken by individual states alone, and probably even less likely so by specific national disaster legislations; I also agree with her when she states that “it is (...) essential to use existing tools to achieve as much progress as possible within the existing constraints.”<sup>35</sup> It is with this purpose in mind that I decided to review 25 specific national disaster legislations. My aim was to identify already existing dispositions that could be reinforced and mainstreamed into other specific disaster laws to contribute to a more structural and sustainable reduction of vulnerability and risks. I therefore disagree with the argument that focusing on States’ responsibility in addressing the structural and intersectional dimension of vulnerability would necessarily contribute to covering the transnational dimension of these phenomena, supporting, instead of challenging, their profound socio-economic and political roots, and hope to achieve the contrary here.

### III. DRR and large-scale comparative disaster law literature

In compliance with the historical ‘hazard paradigm’ considering disasters as one-off events disconnected from ongoing structural, institutional, and discursive mechanisms; national and international disaster laws and policies were, until relatively recently, largely focused on post-disaster

<sup>29</sup> Wisner, ‘Five Years Beyond Sendai—Can We Get Beyond Frameworks?’, 11(2), *International Journal of Disaster Risk Science* (2020), 239, at 241.

<sup>30</sup> Lauta, ‘New fault lines? On responsibility and disasters’, 5(2), *European Journal of Risk Regulation* (2014), 137.

<sup>31</sup> Nitrato Izzo, ‘Law, State and the Politics of Catastrophes’, 3(2), *Oñati Socio-legal Series* (2013), 221; Lauta, *Disaster Law* (Routledge, 2014); Lauta, above note 30; Lauta, ‘Human rights and natural disasters’ in Breau & Samuel (Eds.), *Research handbook on disasters and international law* (Edward Elgar, 2016); Aronsson-Storrier & da Costa, ‘Regulating disasters?’, 26(5), *Disaster Prevention and Management* (2017), 502; See Aronsson-Storrier, ‘Beyond Early Warning Systems’, 1(1), *Yearbook of International Disaster Law Online* (2019), 51; O'Donnell, ‘Vulnerability and the International Law Commission's Draft Articles on the protection of persons in the event of disasters.’, 68(3), *International & Comparative Law Quarterly* (2019), 573; Aronsson-Storrier, above note 28; Wisner, above note 29.

<sup>32</sup> Ibid.

<sup>33</sup> For notable exceptions see Manyena, et al., ‘Disaster risk reduction legislations’, 23(6), *Global environmental change* (2013), 1786; and Vink & Takeuchi, ‘International comparison of measures taken for vulnerable people in disaster risk management laws’, 4, *International Journal of Disaster Risk Reduction* (2013), 63.

<sup>34</sup> Aronsson-Storrier (2019), above note 31.

<sup>35</sup> Ibid.

management, relief, and rehabilitation.<sup>36</sup> It is the development in the 1970s of the ‘vulnerability paradigm’ that triggered the emergence of DRR, and encouraged following UN frameworks to place a stronger emphasis on prevention, reduction of vulnerability and enhancement of resilience.<sup>37</sup> This is particularly apparent with the recent *Sendai Framework for Disaster Risk Reduction (2015-2030)* which places DRR at the centre of its priorities.<sup>38</sup> Since then, more and more countries have tried to incorporate DRR in their national disaster legal frameworks.

Nevertheless, the strong political dimension of disaster scholars’ understanding of ‘disaster risk’ and ‘vulnerability’ seems to have been misplaced during the process. Indeed, following the *PAR framework*, reducing disaster risk sustainably would require addressing vulnerability at every step of its progression, including its root causes and the dynamic pressures that translate those root causes into unsafe conditions and fragile livelihoods. However, the structural and intersectional dimension of vulnerability is rarely addressed by policy makers and legal practitioners, most often using ‘DRR’ to refer to technical fixes intended to address the unsafe conditions resulting from fragile physical environment and lack of disaster preparedness (e.g. early warning systems, better constructions, risk mapping, or public awareness).<sup>39</sup> The argument is not against such measures *per se*, which are indeed crucial tools to mitigate the effects of natural hazards and reduce disaster vulnerability and risk. Nevertheless, I believe that the number of loss, injury, and death resulting from disasters annually is a sufficient proof that these measures are not enough to reduce the current risk of disaster, and, even less so, avoid the creation of new risks in the future.<sup>40</sup>

This narrow conception of DRR reverberates on the few pieces of research having undertaken large-scale comparative analyses of national disaster legal frameworks. For instance, variables used to evaluate countries’ efforts to support DRR in the 2014 multi-country study of the International Federation of the Red Cross (IFRC) seem to be in line with this approach – mainly referring to preventive measures intended to reduce the scientific/technical dimension of risk and vulnerability.<sup>41</sup> Contrastingly, the chapter on the ‘protection and inclusion of particular vulnerable groups’ in the organization’s most recent global report demonstrates a more inclusive understanding of ‘vulnerability’, recognizing that any (non-homogeneous) group that experiences pre-existing discrimination and marginalisation may be disproportionately affected by disasters.<sup>42</sup> Nevertheless, this understanding hardly comes through in the other sections. Moreover, and although it commendably initiates an analysis of some of the causes underlying the unequal impact of disasters, it still seems to be missing the opportunity to discuss their structural and systemic dimension, nor how law contributes to or could mitigate them. However, without a serious re-evaluation of the “deeply rooted historical contexts,

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<sup>36</sup> Yodmani, ‘Disaster Risk Management and Vulnerability Reduction’ (*Asia and Pacific Forum on Poverty*, 2001), at 1; Manyena, et al., above note 33, at 1787.

<sup>37</sup> Above note 3.

<sup>38</sup> UN Doc A/RES/69/283 (3 June 2015).

<sup>39</sup> Gaillard, above note 4, at 8.

<sup>40</sup> *Ibid*, at 9.

<sup>41</sup> The main variables used to evaluate ‘DRR priority’ in this report are ‘local government responsibilities’, ‘early warning systems (EWS)’, ‘education and public awareness’, ‘resource allocation’, and ‘community and civil society participation’. Moreover, if this report recognises that some ‘vulnerable groups’ may be disproportionately affected by disasters, the fact that the only elements it explicitly identifies as being able to “address underlying vulnerability” are ‘building, planning and environmental laws’ is a good illustration of its ambiguous understanding of vulnerability. See IFRC & UNDP, *Effective law and regulation for disaster risk reduction* (New York, 2014).

<sup>42</sup> IFRC, *Law and Disaster Preparedness and Response Multi-Country Synthesis Report* (Geneva, 2019), at 114.

political decisions and social structures that have produced, often cumulatively, the systemic disadvantage”<sup>43</sup> facing those so-called ‘particular vulnerable groups’, our collective ability to address the unequal experience of disasters, especially on the long-term, appears to me rather doubtful. The following analysis intends therefore to fill an apparent gap in the literature by looking at the way 25 specific national disaster laws have so far engaged with the structural and intersectional dimension of vulnerability, and how they could do it better.

## **IV. A socio-legal review of 25 specific national disaster legislations**

### **Methodology**

For this study, I undertook a systematic qualitative textual analysis of 25 specific national disaster laws. Three legal databases were used to access the laws.<sup>44</sup> Sample countries were chosen for geographical representation and to cover a variety of income-levels and exposure to natural hazards.<sup>45</sup> The selection also relied on legislations’ availability in written or translated French, English or Spanish – broader studies investigating legislations in other languages would be valuable. Relying on the five main implications drawn from the understanding of vulnerability spelled out earlier (see Section II), I designed twelve questions intended to determine the extent of priority given to the structural and intersectional dimension of vulnerability in disaster legislations [see Table 1]. I then created a synoptic table to summarize and cross the 25 sample legislations’ answers to these questions [see Table 2].

### **Limitations**

The results of this research need to be interpreted with caution mainly in two respects. First, if a textual analysis seemed to be the most appropriate methodology for this study, such method did not allow for a thorough evaluation of the legislations’ practical implementation, and therefore whether they actually facilitate DRR progress in practice. Further context-specific empirical studies in the sample countries will be necessary to address this issue. Second, this research focused on specific national disaster laws, therefore excluding the multitude of sectoral laws characterizing some countries’ disaster legal frameworks or complementing their dedicated disaster law. If the complex and intersectional nature of disaster vulnerability could make a case for sectoral laws – it could indeed be argued that DRR is a matter of ‘everyday life’ that should not be singled out in specific legislations – in practice, the multitude of sometimes contradictory laws and decrees characterizing the sectoral approach counterbalances this argument.<sup>46</sup> I personally do not see those two approaches as antinomic and believe that effective DRR requires a hybrid approach, specific disaster laws cross-referencing and supporting the implementation of relevant sectoral laws. The focus on specific laws for this study was therefore motivated by nothing

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<sup>43</sup> O'Donnell, above note 31, at 576.

<sup>44</sup> IFRC, ‘Disaster Law Database’, at: <https://www.ifrc.org/en/publications-and-reports/idrl-database/>; LSE, ‘Climate Change Laws of the World’, at: <http://www.lse.ac.uk/GranthamInstitute/climate-change-laws-of-the-world/>; PreventionWeb, ‘Disaster risk reduction in the world’, at: <https://www.preventionweb.net/countries/map#hits=20&sortBy=default&view=pw>

<sup>45</sup> World Bank, ‘DataBank’, at: <https://databank.worldbank.org/>; Institute of Regional Development Planning (IRDP), ‘World Risk Index’, at: [https://www.ireus.uni-stuttgart.de/en/institute/world\\_risk\\_index/](https://www.ireus.uni-stuttgart.de/en/institute/world_risk_index/). 2 countries of the study were excluded from this Index for lack of data: Tuvalu and Seychelles.

<sup>46</sup> ISDR, *Disaster risk reduction legislation as a basis for effective adaptation* (Global Assessment Report on Disaster Risk Reduction, 2011).



more than practical restrictions of resources and time, and broader research projects including sectoral national legal frameworks and policies will be truly valuable.

<b>Table 1 – Research questions</b>	
<b>Priority and understanding of ‘disaster risk reduction’ in Disaster laws</b>	<ul style="list-style-type: none"> <li>- Does it include traditional post-disaster management measures?</li> <li>- Does it include pre-disaster preventive measures such as risk mapping, early warning, and public awareness?</li> <li>- Does it refer to the notion of ‘Disaster Prevention’?</li> <li>- Does it refer to the notion of ‘Disaster Risk Reduction’?</li> </ul>
<b>Vulnerability assessment in disaster laws</b>	<ul style="list-style-type: none"> <li>- Does it include provisions focused on mitigating the vulnerability of some particular populations?</li> <li>- Does it include provisions on vulnerability assessment?</li> </ul>
<b>Underlying risk factors of vulnerability in disaster laws</b>	<ul style="list-style-type: none"> <li>- Does it state the importance to integrate prevention and reduction of risks adaptation in development plans and programs?</li> <li>- Does it acknowledge the fact that disaster vulnerability might partially be mitigated through the reduction of socio-economic structural inequalities and other underlying risk factors?</li> </ul>
<b>Integrated approach to prevention and reduction of risks in disaster laws</b>	<ul style="list-style-type: none"> <li>- Does it recognize the necessity to work through several levels of risk prevention and reduction (local, regional, national)?</li> <li>- Does it acknowledge the importance of a multi-sectoral approach to prevention and reduction of disaster risks, necessitating the joint work of various ministries and organisations?</li> </ul>
<b>Financing and accountability in disaster laws</b>	<ul style="list-style-type: none"> <li>- Does it include financing for prevention and reduction of risks?</li> <li>- Does it include penalty provisions in the case of a breach of state obligations for prevention and reduction of risks?</li> </ul>

**Table 2 – Structural dimension of vulnerability in national disaster legislations**

	Post-disaster management measures	Pre-disaster preventive measures	Notion of ‘Disaster Prevention’	Notion of ‘DRR’	‘Vulnerable population’ dispositions	Vulnerability assessment	Reduction of risks in ‘development plans’	Underlying risk factors	Multi-level approach	Multi-sectoral approach	Financing	State liability
Afghanistan (2012)												
Algeria (2004)												
Armenia (2002)												
Australia (2003)												
Bangladesh (2012)												
Bolivia (2014)												
Burkina Faso (2014)												
Cambodia (2015)												
Canada (2007)												
Czech Republic (2000)												
El Salvador (2005)												
India (2005)												
Italy (1992)												
Japan (1961)												
Madagascar (2003)												
Myanmar (2013)												
Namibia (2012)												
Pakistan (2010)												
Philippines (2010)												
Seychelles (2014)												
South Africa (2002)												
Tuvalu (2007)												
United States (2013)												
Vietnam (2013)												
Zambia (2010)												

YES	
NO	

## V. Analysis and discussion

Rather than summarizing all data collected, this section focuses on the five themes introduced in Table 1 to identify successes and common challenges in the incorporation of the structural and intersectional dimension of vulnerability in specific disaster legislations.

### Priority and understanding of ‘disaster risk reduction’

Without surprise, and in accordance with the historical hazard paradigm, the 25 sample legislations include provisions intended to coordinate post-disaster emergency assistance. Nevertheless, and while the notion of ‘disaster prevention’ remains more popular, this textual analysis also confirms the hypothesis that more countries include today the notion of DRR in their specific disaster legislation. Indeed, 14 of the 25 sample legislations refer to the term ‘disaster risk reduction’ or ‘risk reduction’.<sup>47</sup> In parallel, the fact that 21 laws include pre-disaster preventive measures considered until recently by the IFRC as strong indicators of ‘DRR priority’,<sup>48</sup> while some of them, such as the American *Stafford Act*, do not even mention ‘DRR’, illustrates well the lack of consensus on the meaning of DRR and its most often simplistic understanding as a synonym for preventive measures intended to reduce the scientific/technical dimension of vulnerability.<sup>49</sup> The following paragraphs will make clear that giving an explicit definition and priority to the prevention and reduction of disaster risks in disaster legal frameworks should be the priority of any country wishing to move towards a more holistic and sustainable approach to DRR.

### Vulnerability assessment

A strong option for better addressing the structural and intersectional dimension of vulnerability in disaster legislations would be to recognize the unequal experience of disasters. In the sample, 9 of the 25 specific legislations include provisions on ‘particularly vulnerable communities’, usually embodied in articles urging to prioritize ‘women’, ‘children’, ‘elderly people’, ‘people with disabilities’, and ‘poor people’ in risk reduction processes.<sup>50</sup> Although those ‘communities’ are mentioned in good faith, this reveals, as demonstrated above, a profound misunderstanding of the intersectional aspect and structural dimension of vulnerability, reducing the complex power dynamics shaping disaster vulnerability to a largely essentialist and inaccurate list of ‘vulnerable populations.’ This is well illustrated by the focus on ‘women’ as an apparent consistent category, which ignores long-lasting feminist work on both gender as a social construct, and on how instead of gender identity, it is gendered heteropatriarchal structures and norms that are determinant in the intersectional experience of disasters.<sup>51</sup>

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<sup>47</sup> Algeria (2004), art.16; Armenia (2002), art.2; Bangladesh (2012), art.13; Bolivia (2014), art.1; Burkina Faso (2014), art.3; Cambodia (2015), art.5; India (2005), art.2; Madagascar (2003), art.4; Myanmar (2013), art.2; Namibia (2012), art.1; Philippines (2010), Sec.3; Seychelles (2014), art.2; South Africa (2002), art.1; Zambia (2010), art.2.

<sup>48</sup> Above note 41.

<sup>49</sup> Australia (2003), art.23; Czech Republic (2000), chap.III; El Salvador (2005), art.6; Japan (1961), art.8; Pakistan (2010), art.8; United States (2013), sec.202; Vietnam (2013), art.5.

<sup>50</sup> Bangladesh (2012) art.27; Bolivia (2014) art.7; Burkina Faso (2014) art.6; Japan (1961) art.8; Madagascar (2003) art.4; Myanmar (2013) art.13; Philippines (2010) sec.2; South Africa (2002) art.24; United States (2013) sec.102-6.

<sup>51</sup> Seager, above note 16, at 4.

Contrastingly, the Philippines' law addresses the 'gender question' rather commendably, asserting that the state should "ensure that disaster risk reduction and climate change measures are gender responsive"<sup>52</sup> and emphasizing the importance of gender-sensitive pre-disaster risks and post-disaster needs assessments.<sup>53</sup> Similarly, disaster legislations in both Namibia and Seychelles establish 'vulnerability assessment committees' meant to "identify factors that influence risk and vulnerability."<sup>54</sup> The more systematic use of such disaggregated vulnerability and risk assessments will undoubtedly be necessary to develop and implement more sustainable people-centred and context-specific vulnerability and risk reduction strategies.

### **Underlying factors of vulnerability**

While some sample legislations include provisions stressing the importance to address the "phenomena, occurrences, activities and circumstances that cause or aggravate disasters"<sup>55</sup> and the "factors underlying disasters,"<sup>56</sup> most of them, nevertheless, fail to define those 'causes' and 'underlying factors.' Similarly, although many legislations provide for the integration of disaster prevention and mitigation measures within national or local 'development plans' – what could be considered an implicit acknowledgment of the interrelationship between disasters, poverty and unsustainable development – in practice, most of them fail to clarify their understanding of 'development.'<sup>57</sup> On the other hand, some national disaster legislations distinguish themselves by drawing a more explicit link between socio-economic inequalities and DRR. Namibia and Seychelles' legislations, for instance, both state that vulnerability assessment committees' data should "inform poverty reduction and social safety net programming."<sup>58</sup>

Going a step further, the 2003 Malagasy *Law on the national policy on risks and disasters management* recognises in its explanatory statement "the close relationship between hazards, human poverty and sustainable development."<sup>59</sup> Asserting that risk and disaster management must be integrated into development planning processes, "in particular national environmental management and poverty reduction programs,"<sup>60</sup> it lists various factors of vulnerability "increasing the impact of disasters on the population,"<sup>61</sup> including "environmental degradation" and "socio-cultural factors."<sup>62</sup> It also acknowledges the interactional aspect of these factors, for instance by stating that "population growth and rapid urbanization lead to the establishment of low-income households in risk areas particularly exposed to hazards."<sup>63</sup> Building on this model, similar preliminary explanatory provisions could be used

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<sup>52</sup> Philippines (2010), sec.2(j).

<sup>53</sup> Philippines (2010) sec.9, sec.12.

<sup>54</sup> Namibia (2012), art.13(2)(b); Seychelles (2014), art.14(1)(b).

<sup>55</sup> South Africa (2002), art.17(2); Zambia (2010), art.15(2).

<sup>56</sup> Ibid.

<sup>57</sup> Afghanistan (2012), art.8; Armenia (2002), art.14; Bolivia (2014), art.16; Burkina Faso (2014), art.3; Cambodia (2015), art.14; El Salvador (2005), art.21; India (2005), art.6(e); Madagascar (2003), art.4; Namibia (2012), art.13(2)(a); Philippines (2010), sec.2; Seychelles (2014), art.27(2); South Africa (2002), art.20(1)(c); Vietnam (2013), art.13; Zambia (2010), art.7(1)(c).

<sup>58</sup> Namibia (2012), art.13(2)(b); Seychelles (2014), art.14(1)(b).

<sup>59</sup> Madagascar (2003), *Explanatory statement*, my translation.

<sup>60</sup> Madagascar (2003), art.4, my translation.

<sup>61</sup> Madagascar (2003), *National strategy for risks and disaster management*, my translation.

<sup>62</sup> Ibid.

<sup>63</sup> Ibid.

in other specific laws to integrate academic knowledge on risk and vulnerability – including on its structural root causes and intersectional dimension.

### **Multi-level and multi-sectoral approaches to reducing and preventing the creation of risks**

The complex multi-dimensional yet highly contextual dimension of disaster vulnerability calls for a decentralized, multi-level and multi-sectoral approach to DRR. Indeed, such approach would facilitate local people's participation, accountability, transparency, and transdisciplinary measures, which are prerequisites to the dismantling of the embedded power relations and ideologies contextualising vulnerability.<sup>64</sup> On this matter, most sample countries establish national, regional, and local institutions or plans to manage or prevent disasters. Nevertheless, the implications of this multi-level approach largely depend on the priority given to risk reduction and the structural dimension of vulnerability in the law. For instance, if the Italian *National Service of Civil Protection Law* (1992) clearly states regions, provinces, and municipalities' competences in the implementation of the national service of civil protection; the fact that it simultaneously never mentions DRR nor individual vulnerability inevitably reduces the potential of this multi-level approach regarding structural risk reduction.<sup>65</sup>

Similarly, if many countries assign functions and duties to various political bodies and governmental agencies, their overall dedication to vulnerability and risk reduction is determinant in the importance this factor plays in the level of 'progressivity' of the law. Moreover, the impact of this transversal approach largely depends on which government agencies are actually included. For instance, while some legislations, such as the Vietnamese *Law on Natural Disaster Prevention and Control* (2013), assign responsibilities to 13 different ministries (including ministries of finance, labour, and social affairs);<sup>66</sup> others, such as the Czech one, focus on government agencies traditionally associated with post-disaster management such as health, transport, and environment ministries, overlooking the importance of including sovereign ministries.<sup>67</sup> Providing for local, regional, and national DRR dedicated institutions, plans and disaggregated vulnerability assessments, along with strong DRR responsibilities' for all governmental entities will undoubtedly be a key element of more holistic and sustainable vulnerability and risk reduction strategies.

### **Financing and accountability for reducing and preventing the creation of risks**

If many sample legislations include financing provisions, they nevertheless usually consist of establishing a 'National disaster management fund' covering post-disaster emergency expenses. A commendable exception is the Philippine legislation, which explicitly states that some part of its 'Disaster risk reduction and management fund' should be dedicated to the reduction of risks.<sup>68</sup> However, given the integrated multi-sectoral approach necessary to tackle the structural and intersectional dimension of vulnerability, the actual benefit of establishing a sole 'disaster fund' can be questioned. Indeed, it could be argued that "granting access to resources and means of protection in facing natural hazards rather requires regular support from the government and anchoring in everyday life."<sup>69</sup> An

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<sup>64</sup> Manyena et al., above note 33, at 1788; Wisner, above note 29, at 241.

<sup>65</sup> Madagascar (2003) might therefore be a better example of comprehensive multi-level approach, as it places risks and vulnerability reduction at its centre.

<sup>66</sup> Vietnam (2013), art.42.

<sup>67</sup> Czech Republic (2000), chap.III.

<sup>68</sup> Philippines (2010), sec.21.

<sup>69</sup> Gaillard & Mercer, 'From knowledge to action', 37(1), *Progress in human geography* (2013), 93, at 102.

additional provision forcing every governmental ministry or department to make provisions in its annual budget for disaster prevention and reduction, similar to article 49(1) of the Indian *Disaster Management Act*, 2005, could therefore be useful.<sup>70</sup>

Finally, if most sample legislations include legal penalties for individual violations of post-disaster management measures, such as obstructing the performance of an officer's functions or increasing the value of essential items in post-disaster areas;<sup>71</sup> in parallel, only 5 legislations include legal penalties for violations of obligations of legal entities, such as the state, a minister or a local government.<sup>72</sup> Yet, governmental liability provisions constitute the essential legal basis for litigation and class actions, therefore holding strong potential to force structural change upon executive powers.<sup>73</sup> Overall, accountability and financing remain, in this sense, the biggest weaknesses of specific disaster legislations. Although caution is necessary not to discourage state voluntarism and engagement, I believe that incorporating clear financing and executive liability provisions for risks' prevention and reduction in specific disaster legislations will be helpful in the quest for a more sustainable reduction of vulnerability and a better prevention of the creation of new risks.

## Concluding remarks

The previous analysis highlighted important disparities in the way specific disaster legislations have so far considered and addressed the structural and intersectional dimension of vulnerability. Indeed, if most sample legislations are heading towards a broader approach to disasters, not only focusing on mitigation and response but also on prevention and preparedness, this development often comes down to simply mentioning 'DRR' or 'disaster prevention'. Some laws from the sample distinguish nevertheless themselves by comprising a number of legal elements holding strong potential for addressing the structural and intersectional dimension of vulnerability. This is particularly the case of dispositions providing for multi-level DRR dedicated institutions, plans, and disaggregated vulnerability assessments; of provisions assigning risk prevention and reduction responsibilities to a broad sample of political bodies and governmental agencies; and of preliminary explanatory statements. Put together, such legal tools could pave the way for a more comprehensive approach to DRR and facilitate people-centred and context-specific vulnerability and risk reduction strategies, on both the short- and long-term basis. Further empirical studies will be necessary to confirm or refute the ability of these legal elements – along with more 'traditional' provisions on financing and accountability and other creative dispositions which fell beyond the scope of this study – to initiate a more structural and sustainable reduction of risks. Additional study on the role of sectoral laws in this process will also be, as I said, particularly valuable.

In any case, there is today far too much proof of the anthropogenic nature of disasters and of the structural and intersectional dimension of vulnerability for policy makers and legal practitioners to keep

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<sup>70</sup> India (2005), art.49(1).

<sup>71</sup> Algeria (2004), tit.IV; Australia (2003), part.10; Bangladesh (2012), chap.5; Burkina Faso (2014), sec.2; Cambodia (2015), chap.8; Czech Republic (2000), chap.3; El Salvador (2005), art.39; Japan (1961), chap.10; India (2005), chap.10; Myanmar (2013), chap.8; Namibia (2012), art.56; Pakistan (2010), chap.10; Philippines (2010), sec.20; South Africa (2002), art.60; Tuvalu (2007), art.30; United States (2013), Sec.314; Vietnam (2013), art.45; Zambia (2010), art.41.

<sup>72</sup> Bangladesh (2012), art.44; Czech Republic (2000), §30(1); El Salvador (2005), art.39; India (2005), art.55; Vietnam (2013), art.45.

<sup>73</sup> See Matyas, 'Towards a Legal Toolkit for Disaster Resilience & Transformation', *Disasters* (2020), forthcoming, at 14.

ignoring it. If we are serious about reducing existing risk and preventing the creation of new ones, it is time to stop avoiding long-lasting literature on disaster risk and vulnerability and be bold enough to face the implications it may have in terms of socio-cultural, political, and economic change for the future. I believe that some of the legal elements introduced above, although imperfect, constitute a good foundation on which we could build to initiate this much-needed change. In addition to being essential for building thorough and effective strategies to reduce vulnerability and disaster risk, I argue that this might represent a salutary opportunity to move towards a less-hegemonic future.

### **Acknowledgements**

I would like to thank Professor JC Gaillard for his support and feedback with this paper and Professor Gabrielle Simm for suggesting me to take part in this contest. The views expressed herein are solely mine in my own capacity.

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