Coping with Disasters in Small Municipalities:
Women's Role in the Reconstruction of Salgar, Colombia

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In den vergangenen zehn Jahren ist die Häufigkeit und Intensität von Wasserkatastrophen in Südamerika gestiegen. Trotzdem gibt es auch in den betroffenen Gemeinden eine beträchtliche Widerstandsfähigkeit, die häufig auf sozialen Strukturen und Netzwerken basiert, die von Frauen geleitet werden. Im Jahr 2015 wurden bei einem plötzlichen Erdrutsch und einer Überschwemmung 100 Menschen getötet und die Gemeinde Salgar (Kolumbien) weitgehend zerstört. Diese Längsschnittstudie untersucht die Rolle von Frauen im Wiederaufbauprozess. Es basiert auf vier Feldarbeiten, die zwischen 2015 und 2018 durchgeführt wurden. Die Ergebnisse zeigen, dass Frauen während und nach der Katastrophe eine wesentliche Rolle für Salgars Erholung spielten. Sie waren an politischen Rollen, technischen Aktivitäten, der Entwicklung von Gemeinschaften, sozialer Vernetzung, wirtschaftlichen Aktivitäten und der Erholung im eigenen Land beteiligt. Diese Ergebnisse zeigen, dass Frauen, während sie besonders anfällig sind, auch soziale Strukturen schaffen und aufrechterhalten, die die Genesung erleichtern.

Introduction

Located in the coffee-growing region of Colombia in the Andean Mountains, the town of Salgar is home to about 20,000 inhabitants (DANE 2018). In 2015, torrential floods and landslides caused by heavy rains killed about 100 people and destroyed most residential areas in the municipality (Figure 1). Authorities quickly put in place a new comprehensive reconstruction and vulnerability-reduction plan that included building 308 housing units (UNGRD 2015). A broad economic, psychological, and social recovery plan accompanied these projects.

What was the role of women in the recovery and reconstruction process in Salgar? What can we learn from their participation in the reconstruction activities? This article seeks to answer these two questions. It builds on a longitudinal case study conducted between 2016 and 2018, including interviews with eighteen residents, four government officers, and eight NGO representatives. It also builds on the use of resource mapping, a GIS (Geographic Information System), and secondary source analysis. The article first presents our theoretical framework, which combines the notions of *critical vulnerability* and *critical resilience* with a focus on gender roles. It then presents preliminary results, and discusses their practical and theoretical implications.

Critical vulnerability, resilience, and gender

Climate change and variability (CCV) is exacerbating the effects of weather- and water-related hazards in many cities around the world, including small cities where the effects of floods and landslides are considerable (UNGRD 2015).

Poor communities in small and remote South American municipalities are particularly vulnerable to CCV, especially women in small cities located in the Andean Mountains. In this study, we rely on two main concepts to understand the effects of CCV. Additionally, how various parts of society responded to them in Salgar: *critical vulnerability* and *critical resilience*.

Critical vulnerability contends that CCV is much more than a natural phenomenon. Instead, CCV is intimately tied to structural social, economic, cultural, and political conditions, all of which can either mitigate or strengthen the effects of a disaster, as well as a given community's exposure and sensitivity in the face of disruptive change (Wisner et al. 1994, Hewitt 1997, Hoffman and Oliver-Smith 2002). From this perspective, CCV-induced disasters are not merely disruptions to the normal social order, but to some degree, also the *product* of disruptions (Davis 2006).

Critical resilience refers to a society's ability to adapt to hostile environments and disturbances. It includes the process of creating both healthy relationships between the natural and built environments, and among the political and socio-economic contexts (Folke 2005).

Adopting the notions of *critical vulnerability* and resilience emphasises the adaptive capacities of local actors and individuals evolving in informal settings. We understand such settings as places and circumstances wherein individuals, households, and communities develop

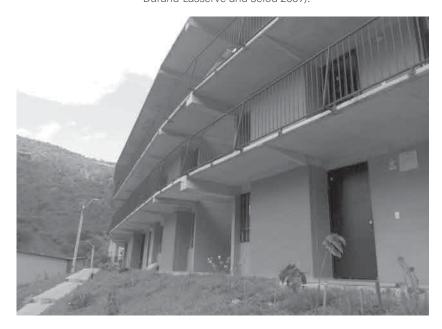**Figure 1:** A general overview of the 2015 disaster. Source: The Authors
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Figure 2: La Habana recon-
struction project. Source:
The Authors

Women are particularly vulnerable to CCV-related risks
(World Health Organization 2014). They are less likely than
men to have an influence on policy, or to be formal deci-
sion-makers themselves (Aguilar 2009). They are also less
likely to own property or have access to welfare, credit,
or formal employment (Chant 2013). Additional family re-
sponsibilities (such as child and elder care) limit women's
ability to move and find better jobs and housing condi-
tions in other places.

Women and their businesses often lack access to credit,
which makes them less likely to rebound after a crisis
(Alston 2014). In many places, women face higher unem-
ployment rates than men, and women and their busi-
nesses often lack access to credit, which makes them
more unlikely to recover. Women are also more frequently
victims of male-inflicted violence and aggression (Kratzer
and Le Masson 2016), which undermine their psycho-
logical health and well-being (World Health Organization
2014). In addition, the needs of women and girls, including
health needs and protection from sexual and domestic
violence, often get little attention after disasters (UN-Hab-
itat 2012b).

Nonetheless, many of the adaptive strategies that emerge
in informal settings are initiated or led by women, who
play a crucial role in building the social networks that
make such strategies possible (UN-Habitat 2012ª, b). In
fact, women are central to adaptation processes in infor-
mal settlements, due to their significant roles in informal
and semi-formal strategies related to water management
(such as access, collection, and treatment), sanitation,
urban agriculture, environmental protection, caregiving,
credit, business development, and street security (Denton
2002, Moser 2012, Nussbaum 2007).

The reconstruction process in Salgar

Immediately after the flood and landslide, the mayor of
Salgar convened a meeting between numerous agencies
to discuss a responsive plan. The tragic loss of 100 lives
and 300 houses in the disaster quickly became a matter
of national interest, in part thanks to communication ef-
forts by Salgar's mayor-led organisations. Considering the
high critical vulnerability of the municipality, a group of
both public and private organisations became involved in
the reconstruction process (UNGRD 2015).

These involved the government (including the president's
office, regional government, city government, and Na-
tional Agency for Risk Management – UNGRD), non-profit
organisations (including Corporación Antioquia Presente
and Fundación Berta Martínez de Jaramillo), and several
companies (such as Argos, Atletico Nacional, and Corona)
and landowners (mainly from Salgar's prominent Jaramillo
family).

intertwined response mechanisms to local conditions and
sets of adaptive measures to secure access to basic ele-
ments and to improve their general wellbeing in the face
of hostile conditions (Œuvre Durable 2017). In this sense,
informality is an attribute and a way of doing things within
a given system that encompasses economic activities,
governance structures, and built-environment produc-
tion processes (Hansen 2001, Hernández-García 2013,
Hussmanns 2004, Lizarralde and Root 2008, Werna 2001).
Informality typically refers to bottom-up activities that are
developed outside or in parallel to institutionalised proce-
dures and standards, while often overlapping or co-exist-
ing with formal plans and programmes – and thus blur-
ring the "formal/informal" divide (Doherty and Silva 2011,
Durand-Lasserve and Selod 2009).

Figure 3: La Florida recon-
struction project. Source:
The Authors

Three reconstruction projects were put in place to build
278 housing units using national governmental resources:
two urban projects, La Habana (Figure 2) and La Florida
(Figure 3), and one rural project, La Pradera (Figure 4). The
design was directed by a public organisation, Empresa de
Vivienda de Antioquia (VIVA). During the design phase, the
agency held a series of workshops together with the com-
munity of Salgar in order to consider the region's housing
patterns. The predominant participation of women was

evidence of their interest in the future of their families in the occupation of these homes. In total, 14,000 m² of housing area were built with an investment of about $7 million (of which $5 million was funded by the Ministry of Housing, $1 million by the Ministry of Agriculture, and $1 million by UNGRD – all figures in US dollars). The total cost of the reconstruction works (housing and infrastructure) was about $10 million.

Additionally, a private initiative called Aldea La Margarita (Figure 4), led by a former Colombian president and an NGO called Corporación de Empresarios del Sudoeste Antioqueño, managed to build 30 rural housing units (over a total of 2000 m²). After the disaster, housing was one of the local residents' top concerns.

La Pradera, La Habana, and La Florida housing projects were led by partnerships between the public and non-profit sectors, while Aldea la Margarita, with 30 housing units, was led by a private-nonprofit partnership. Partners shared information, financial resources, activities, and capacities to achieve shared and complementary goals that would have been unattainable had they acted separately. These partnerships were forms of social alliances capable of generating mutual benefits (Bryson, Crosby, and Stone 2006, Fundación Corona 2010, Waddock 1988).

Such cross-sector alliances, whether led by the government or the private sector (and sometimes also led by women), turned out to be effective. Additionally, most reconstruction projects included some measure of community participation, in which women made up the majority of participants.

Parallel to the reconstruction projects, non-profit partners established between 2015 and 2018 offered psychosocial interventions for about 350 families affected by the disaster (1000 people total) to strengthen the social fabric (CAP 2015, Optima 2018).

These nonprofit partners developed participative processes with the community to expand their capacities to overcome the disaster and reinforce ongoing local initiatives such as environmental protection. Psychosocial intervention explored issues of identity, local ways of life, female empowerment, and responses to the topography and weather. NGOs also provided financial and technical support, income-generation activities, and entrepreneurial services, including subsidies and $10,000 in seed capital to 32 business development initiatives. The design of Aldea La Margarita Village, for instance, included specific spaces for income-generation activities (in this case, coffee production processes).

Backyards were devoted to growing food and conducting small agricultural activities. These issues were especially crucial as the torrential rains had also affected the household economy. As a consequence of this approach, the seed capital, and the women-led initiatives, the social fabric was rebuilt with some additional learnings about living in new habitation units, which brought about a new way of appropriating them.

The role of women in recovery and reconstruction in Salgar

In Salgar, approximately 30% of the women are heads of their families – a rather high proportion in the context of small Colombian cities (DANE 2018). This situation is the result of violence in the region over the past few decades, which killed an average of two people per 1000 inhabitants yearly. Women are frequent victims of violence, to such extent that strategic plans to address this kind of violence were included in the municipality's two most recent development plans.

Informal recovery strategies led by women emerged early in the reconstruction process. Women led two community initiatives through five local government-recognized community groups (Juntas de Acción Comunal), including a recycling campaign and one devoted to environmental protection.

Local women also led the creation of Salgar's foremost non-governmental environmental protection organisation, Mesa Ambiental. This organisation has autonomy over its project development, and is currently the central organisation for defending the environment in the region.

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Figure 4 La Pradera reconstruction project. Source: The Authors

Furthermore, women benefited from about 60% of the subsidies and seed capital provided between 2015 and 2018 (Antioquia Presente 2018). It is estimated that about 80% of the initiatives led by women are still active (Antioquia Presente 2018), showing their resilience. In 2016, the national government allocated resources ($100,000) for the design of an early warning system. This system was installed in the municipality with the intention of strengthening the strategies of preparation in the event of a future emergency. To design the system, the government first had to determine the most vulnerable areas in the town. Their studies found that a significant area of the municipality (approximately 15%) is located in areas where a disaster like 2015's would result in the same or greater destruction, were it to happen again. However, the population is now better prepared than it was in 2015.

For instance, the psychosocial attention they received from 2015 to 2017 made residents better prepared to cope with a potential tragedy. According to representatives of the NGO Antioquia Presente, a significant number of women participated in the psychosocial workshops they developed in Salgar. This shows the central role played jointly by government agencies, non-profit organisations, and entrepreneurial women in Salgar in promoting changes from the inside out, in a similar way to that identified by Moreno and Shaw (2018).

In Salgar, women's leadership emerged from several circumstances. First, women are now often household heads, as a consequence of the changes in patriarchal cultural relations due to violence; and second, the participation of women in public and communitarian roles is growing. Since the moment the flood and landslides took place, women have played the major role; they led the non-profits that participated in the reconstruction, and several local initiatives have emerged through women's leadership. Understanding the particular role of women sheds light on factors that can contribute to improving informal initiatives.

Discussion and conclusions

This study shows that Salgar's local economic activity played a significant role in the recovery process. The rural housing reconstruction projects were designed with agriculture in mind as the primary source of income for the families. Community participation also facilitated the local appropriation of the housing reconstruction initiatives.

Although both men and women participated actively in the reconstruction process, women led and maintained projects after the disaster. Due to past violence (that has killed thousands of men) and other cultural factors, including generational change, many families in the municipality are now headed by women.

These women, therefore, often acted as the family representative when receiving housing solutions during the reconstruction process. Hence, the reinterpretation of women's role in the family further contributed to their leadership of both formal and informal initiatives. The process highlighted their role and potentised it; this was facilitated by the workshops and psychosocial interventions that were delivered by the involved non-profit organisations. The results presented underline the role that female leaders typically play during and after natural disasters, and also emphasise the capacity of women to overcome barriers related to their historical vulnerability. The role of women in reconstruction initiatives is reinterpreted in this case, moving away from the previous passive roles that were evidenced by reports of mistreatment (including lack of autonomy, and lack of training).

Women are leaders and take a leading role (during and after disasters) as head of the family; furthermore, some of them still actively participate in the public sector and continue to lead initiatives related to the environment and sustainability. Learning achieved by the readers of this paper about these initiatives can lead to considering their transfer to other contexts in the Global South.

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See the next article for biography of Danielle Labbé and Benjamin Herazo.