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Home as a catalyst for resilience

Belen Desmaison Estrada



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Home as a catalyst for resilience

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Abstract. This paper explores the meaning of 'home' in a community in the process of relocation. 'Home' is presented as a catalyst for resilience, which is explored beyond its physical dimension by exposing the social, economic, political, and cultural factors that influence resilience as well as the relationships between them and the built-environment. Relocation settlements are cities built from scratch, offering unique opportunities to enable resilience of people by transforming housing into 'homes' and propelling social development.

This paper argues that an understanding of multiplicities in terms of actors, scales, and dimensions foments the possibilities of achieving 'home' for all. The more complex, encompassing, and inclusive the concept of 'home', the more opportunities for enabling built-in resilience and achieving sustainable social development. On the other hand, the oversimplification of this complexity leads to the consolidation of already-existing patterns of poverty and vulnerability.

The case study is the community of Belén in Iquitos, located in the rainforest of Peru, which is currently in the process of relocation due to extensive flooding in the area. An analysis of the understanding of 'home' for Belenians, both in their current settlement and in the relocation proposal, hopes to clarify

the relationship between socio-economic risks and opportunities and the built-environment. Instances of inequity especially pertain more vulnerable groups like women and children whose problems, including family violence and school abandonment, may be exacerbated by spatial configurations that are deemed as 'traditional'. Additionally, a deconstruction beyond the design level of the on-going proposal hopes to illuminate the possibilities of the relocation site being appropriated as 'home' by future dwellers. The analysis of both present and future seeks to unveil vulnerabilities and opportunities in both the current reality and the proposal, allowing recommendations to increase the opportunities of attaining resilience both for the built-environment and, more importantly, for people themselves

This paper served as the baseline for the research project "'Home' as a catalyst for resilience: settlement relocation in the Amazon Rainforest" with the participation of researchers from the Pontificia Universidad Católica del Peru in collaboration with the Development Planning Unit, which began in December 2016. The project is part of the Initiative "Climate Resilient Cities in Latin America" promoted by the Climate Development Knowledge Network (CDKN), Fundación Futuro Latinoamericano (FFLA), and Canada's International Development Research Centre (IRDC).

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Acronyms en	glish /spanish	MVCS	Ministry of Housing, Construction and Sanitation; Ministerio de Vivienda, Con-
CENEPRED	National Centre of Disaster Risk		strucción y Saneamiento
	Estimation, Prevention, and Reduction; Centro Nacional de Estimación, Preven-	PCM	Presidency of the Council of Ministers; Presidencia del Consejo de Ministros
	ción y Reducción del Riesgo de Desastres	PCR	People-Centred Reconstruction
CEPLAN	National Centre of Strategic Planning; Centro Nacional de Planeamiento Estratégico	PNC	Our Cities Programme; Programa Nuestras Ciudades
COFOPRI	Commission for the Official Registration of Informal Property; Co- misión para la Formalización de la Propie-	PNGRD	National Disaster Risk Management Policy; <i>Política Nacional de Gestión del Riesgo de Desastres</i>
	dad Informal	ODR	Owner-Driven Reconstruction
CPTED	Crime Prevention Through Environmental Design	ENDISIC	National Strategy for Development and Social Inclusion 'Include to Grow'; Es-
CR	National Congress; Congreso de la República		trategia Nacional de Desarrollo e Inclusión Social 'Incluir para Crecer'
DDR DRRR FONCODES	Donor-driven approach Disaster Risk Reduction and Response Cooperation Fund for Social	SINAGERD	National System of Disaster Risk Management; Sistema Nacional de Gestión de Riesgo de Desastres
	Development; Fondo de Cooperación para el Desarrollo Social	SNPE	National System of Strategic Planning; Sistema Nacional de Planeamiento Estratégico
GBV	Gender-Based Violence	UNISDR	United Nations International Strategy for
GFDRR	Global Facility for Disaster Reduction and		Disaster Reduction
	Recovery	PNCVFS	National Programme Against Familiar
MIDIS	Ministry of Social Development and Inclusion; Ministerio del Desarrollo y la In-	11.14 DIE	and Sexual Violence; Programa Nacional Contra la Violencia Familiar y Sexual
MIMP	clusión Social Ministry of Women and Vulnerable Popu-	INABIF	Integral Family Welfare National Programme; Programa Integral Nacional
	lations; <i>Ministerio de la Mujer y las Pobla-</i> ciones Vulnerables	ZBB	para el Bienestar Familiar Lower Area of Belén; Zona Baja de Belén

1. Introduction

I see planning as an always unfinished social project whose task is managing our co-existence in the shared spaces of cities and neighbourhoods in such a way as to enrich human life, to work for social, cultural and environmental justice.

Sandercock 2003, p. 208

This paper aims to explore the meaning of 'home' in a community in the process of relocation in a disaster risk reduction scheme. The production of social housing for relocation presents a unique opportunity to build a new urban area that provides an adequate setting for the possibility of obtaining resilience and improved livelihoods for future dwellers. 'Home' is presented as a catalyst for resilience, with an understanding of the concept beyond its physical dimension by exposing the social, economic, political, and cultural factors that influence resilience as well as the relationships between them and the builtenvironment. As Oliver-Smith points out, relocation settlements allow building "a city from scratch, to attack at a local level through urban design and services the endemic problems of a rigidly stratified system." (1990, p. 16) Hence, these new settlements offer opportunities of enabling resilience of people by transforming housing into 'homes' and propelling social development.

Currently, writings on relocation and reconstruction emphasize the creation of urban spaces that can be appropriated by dwellers as 'home' (Zetter & Boano 2010, Lizarralde et al 2010, Bosher & Dainty 2011). The definitions of 'home' within this literature focus on positive aspects such as the emotional and sentimental bonds between people and place. While there is, undoubtedly, a need to create liveable spaces that break the homogeneity and standardization currently seen in many relocation sites (Lizarralde et al 2010, Bosher & Dainty 2011, Davidson et al 2007, Gilbert 2014), there is, additionally, a need to analyse the present understanding of 'home' within future dwellers. This necessity becomes evident given the existence of another body of literature that views 'home', at all its scales, as the physical manifestation of a cultural ideology that can reinforce social injustice (Kallus 2005, Blunt & Dowling 2006, Domosh 1995). For instance, Oliver-Smith describes how in Yungay, a town in Peru destroyed by an earthquake in 1970, "traditional patterns of inequality and domination in the built form" (1990, p. 9) manifested a "rigid system of social stratification buttressed by ideologies of racial and cultural superiority" (lbid, p. 11) as well as the ways in which the reconstruction project repeated some of these patterns, consolidating the subjugation of poorer inhabitants.

Hence, this paper seeks to bridge the gap between two bodies of literature discussing 'home': one that idealises it and one that studies pre-existing 'homes' to point out instances of vulnerability of specific groups within future dwellers. Understanding how different concepts of 'home', that both propel and hinder social development and resilience, can co-exist simultaneously within a specific community, requires involving its members in the process, as they are the ones that give meaning to their built-environment. This understanding will allow the formation of recommendations for the design of new sites that emphasize the positive aspects of 'home' while avoiding the repetition of unjust ones.

The case study is the community of Belén in Iquitos, located in the rainforest of Peru, which is currently in the process of relocation due to extensive flooding in the area. Belén, a settlement located near the Itaya river for nearly a century, is one of the poorest areas in the country, lacking access to water, sanitation, electricity, and other basic services. An analysis of the understanding of 'home' for Belenians, both in their current settlement and in the relocation proposal, hopes to clarify the relationship between socio-economic risks and opportunities and the built-environment. Instances of social inequality especially pertain more vulnerable groups within the community like women and children whose problems, including family violence and school abandonment, may be exacerbated by spatial configurations that are deemed as 'traditional' within the home and the shared public space. Additionally, a deconstruction beyond the design level of the on-going proposal hopes to illuminate the possibilities of the relocation site being appropriated as 'home' by future dwellers. More than a comparison, this dual analysis seeks to unveil vulnerabilities and opportunities in both the current reality and the proposal, allowing recommendations to increase the opportunities of attaining resilience both for the built-environment and, more importantly, for people themselves.

The following paper is divided in four chapters. The second chapter explores the different conceptions of 'housing' and 'home' seen in literature in DRRR, gender studies, and human geography. This chapter concludes

with an analytical framework that allows a deconstruction of 'housing', offering an understanding of 'home' as a catalyst for resilience through the identification of political, social, and spatial variables that propel autonomy and equality for all actors involved in housing production. Chapter three introduces a brief historical background of social housing in Peru and details the current reality of Belén and the city of Iquitos. Chap-

ter four applies the designed analytical framework to the proposal to identify to what extent it is creating 'homes' by allowing user appropriation while addressing pre-existing socio-economic vulnerabilities. Lastly, conclusions and recommendations on how to improve the on-going relocation process, identified thanks to the implementation of the analysis proposed, will be presented in chapter five.

2. Defining housing and home

2.1 Housing as an isolated individual commodity

The wider context: social housing and postdisaster/post-conflict reconstruction and relocation in Latin America – unhomely cities

The following discussion will concentrate in Latin America given the long-established presence of policies for the provision of social housing by central governments in the region. Since the 1990s, market-based strategies framed by a neoliberal political approach have led the provision of social housing in Latin America. Rather than a process, housing is seen as a finished commodity that must be secured at the individual level, discouraging collective action and agency (Özler 2012, p. 53). Encouraged and mostly funded by the government, houses are produced by private developers with very limited -if any- participation of future dwellers in the design process (Davidson et al 2007). Following market trends, construction companies aim to keep their costs down and maximise their profit, which often results in the production of low-quality housing -materially and spatially- in segregated areas. This production of social housing often isolates the material dwelling spatially from the rest of the city (Gilbert 2014, La Jornada 2013) and socially and economically from other factors that are vital for the livelihoods of the beneficiaries (Zetter & Boano 2010). It is this socio-economic oversimplification and spatial segregation of social housing that results in its failure to improve the living conditions of citizens in the long run. By reducing poverty alleviation to the provision of dwellings, the root social and economic causes of poverty are unchallenged (Özler 2012, La Jornada 2013). Not only that, the current provision of social housing can lead to increased poverty due to its spatial segregation, resulting in the inability of citizens to access services and employment (Gilbert 2014, McGuirk 2014).

One of the problems present in social housing provision, also present in post-disaster and post-conflict settlements, is the use of **standardized** housing and urban design that do not take into account the complexities of environmental and social contexts. Repetitive and monotonous designs leave limited space for individual adaptation and "little scope for economic livelihood activities, representing a narrow, mechanistic view of what housing really encompasses." (Zetter & Boano 2010, p. 211) Adopting a universal unit results in a limited response to

the specificities of climate, topography, local customs, and forms of living (Lizarralde et al 2010, p. 10). As Zetter & Boano explain, "top-down approaches [have] little understanding of local vernacular styles of shelter and building technologies," leaving limited space for familiarity and appropriation of the new built-environment (2010, p. 207). This alienation can result in the magnification of pre-existing patterns of socio-economic vulnerabilities by disrupting "the fragile but crucial relationship between the house as a material commodity and its spatial and social importance." (lbid)

Besides the use of rigid designs, these settlements also intensify previously existing patterns of social stigma and **fragmentation** by grouping together poor families in places usually located far from cities. This, as Gilbert explains, makes it difficult for dwellers to develop businesses near their new residencies and to access existing urban centres since the settlements are not integrated with transport networks (2014, p. 258). Thus, a large number of recent housing schemes in Latin America have benefited the construction sector but have failed to produce a city (Iracheta 2011 in Gilbert 2014, p. 257). These new settlements do not only leave root-causes of poverty unchallenged, they exacerbate them (Gilbert 2014, p. 260). Repeatedly throughout the region, this results in the abandonment of houses "due to lack of infrastructure and services or simply because they do not really respond to [users'] needs and local ways of living." (Lizarralde et al 2010, p. 6)

The inefficiency of oversimplifying poverty reduction to the provision of low-quality housing is also present in reconstruction and relocation projects in post-conflict and post-disaster situations. Moreover, in these scenarios there is another kind of oversimplification in the understanding of key terms in DRR literature: vulnerability and hazards and their relationship with socio-ecological systems. Vulnerability is defined in the United Nations International Strategy for Disaster Reduction (UNISDR) as "the characteristics and circumstances of a community, system or asset that make it susceptible to the damaging effects of a hazard." (Lizarralde et al 2010, p. 3) Hazards, in this context, refer not only to natural disasters but also to pre-existing patterns of socio-economic risks. When referring to 'natural' disasters, human influences are often overlooked because their "influences can be discrete and driven by very different socio-economic factors." (Bosher 2008, p. 7) Bosher further comments on how, by labelling

disasters as 'natural', "it becomes too easy for society, governmental institutions, and the construction sector to absolve themselves of blame." (Ibid, p. 8) Thus, similarly to the oversimplification of poverty, vulnerability to natural hazards is seen as one-dimensional.

To achieve vulnerability reduction, it becomes necessary to address not only environmental hazards but also the human factors that influence or are influenced by them (Bosher & Dainty 2011). Neglecting these factors could lead to a magnification of pre-disaster patterns of socioeconomic vulnerability (Zetter & Boano 2010, p. 207). Rather than seeing natural and human environments as separate entities, this paper seeks to emphasize the social influences on such systems. The aim is to reflect "the idea that human action and social structures are integral to nature and hence any distinction between social and natural systems is arbitrary" (Adger 2006, p. 268).

2.2 Housing as a catalyst for resilience

Resilience as the continuum of Disaster Risk Reduction & Response and sustainable development

Given the failure of current housing schemes in providing long-term solutions and opportunities to improve livelihoods, the need for a radical shift in both the process and outcome of housing provision becomes evident. Currently, there is a change in discourse in DRRR literature from vulnerability reduction to building resilience, that is, a movement away from temporary solutions towards opportunities to improve living conditions in the long-term. This shift calls for an understanding of housing provision which moves "towards a broader social and economic dimension of housing" (Zetter & Boano 2010, p. 210) in which it is seen as "a catalyst for relief and development interventions which can lead to sustainable development, particularly if the affected population is involved." (Ibid, p. 205, original italics).

While the term 'vulnerability' connotes the inability to cope with unforeseen circumstances (Adger 2006), 'resilience' refers to the ability to respond to and cope with unexpected disturbances, the faculty to selforganize, and the capacity to learn and adapt (Turner, B. 2010, Amaratunga & Haigh 2011). Thus, while vulnerability has a passive connotation referring to relief; resilience highlights humankind's natural faculty to endure, create and adjust. Undoubtedly, reducing existing physical vulnerabilities is part of the process of achieving built-in resilience. As Bosher and Dainty explain, "when pre-existing socio-economic vulnerabilities are not being reduced, a key consequence is that social resilience is unlikely to be increased" (2011, p. 8). However, enabling the long-term process of resilience,

requires improving people's current coping capacities by prioritizing social and economic development and capacity building at the individual and the community level. Furthermore, 'resilience' is considered a multi-dimensional goal since, as risks and vulnerabilities differ between different groups, each individual and group will need to adapt to different circumstances (Fig. 2.1). Section 1.4 will further elaborate on the diversity of socio-economic risks and opportunities as experienced by different groups within an affected community.

As Sliwinski explains, "reconstruction of habitats is a highly social and political issue and [...] vulnerabilityreduction initiatives directly affect development and people's livelihoods" (2010, p. 184). Therefore, from decision-making to design and implementation, there is an opportunity to go beyond the immediate physical need to provide safety by linking these efforts to longterm goals of sustainable development. For Allen, development involves considering the sustainability of the built environment by striving to "enhance the liveability of buildings and urban infrastructures for 'all' city dwellers without damaging or disrupting the urban region environment" (2009, p. 3). The design of the built environment is prioritised in sustainable development not only at the environmental dimension; it also influences and is influenced by its social context. As Oliver-Smith points out, "the longterm viability of a settlement and its potential to sustain further social development is as dependent on its arrangement in social space as it is on the cultural appropriateness of each individual dwelling or the safety of the terrain" (1990, p. 9).

Hence, seeing housing as more than the provision of a material commodity becomes necessary in achieving sustainable development and resilience. This vision coincides and perpetuates John Turner's theories, who saw housing as a catalyst for social advancement. He states "user-controlled housing (when it is also materially economic) is far superior as a vehicle of personal, family, and social growth or development than housing which is merely supplied" (1972, p. 159). Thus, user-involvement in the design and implementation of housing becomes crucial for it to become a stimulus for development, allowing appropriation of the process and the final outcome (Pelling 2007, Jabeen et al 2010). Housing that is simply given, as is the case in most Latin American countries, only reduces vulnerability in the short-term but has limited use as a catalyst for resilience. Solving vulnerability in the long-run requires resilience of buildings and, most importantly, of people. The latter comes from reducing dependency on other actors by allowing autonomy and agency in decision-making processes as they propel the capacity of self-development by enabling creativity and adaptation (Schilderman & Lyons 2011, Guzmán 2010, Boonyabancha 2012 in Boano & Kelling 2013, p. 41).

ENVIRONMENTAL COMMUNITY **HEALTH** ECONOMIC infants children adolescents **ORGANIZATION** adults local elders district women regional INDIVIDUAL poorest national international **INFRASTRUCTURE** government/NGO (HOUSING/ SOCIAL/ LIFELINES/ **CULTURAL** TRANSPORTATION) **EDUCATION** DISASTER

Figure 2.1. Resilience wheel. Source: UNISDR (2012, p. 17), modified by author

2.3 Housing as more than a 'house'

'Home' in DRRR literature

Building professionals and other decision-makers have the responsibility of [...] developing sustainable housing solutions that respect the environment, the culture and the society. It is the responsibility of these professionals to interpret [citizens'] ways of living [...] and to translate them into technical, organizational and design solutions capable of promoting long-term development.

Lizarralde et al 2010, p. 24

It is argued that greater community involvement will lead to a sense of ownership, having the potential to nurture empowerment, agency, and opportunities for the creation of autonomy (Davidson et al 2007, Lizarralde et al 2010). The use of existing knowledge for the design and implementation of new settlements is welcomed not only for these reasons but also because it foments a sense of familiarity and belonging. As Zetter and Boano explain, "the material form of the house, its particular physical location and the meanings invested in them **combine** to form emotional and sentimental bonds between

people and place" (2010, p. 209). For a house to become a 'home', as argued by Rapoport (1982), it is necessary for the users to give it **meaning**, generated through **appropriation**, understood as "the right to access, occupy and use space, and create new space that meets people's needs." (Stickells 2011, p. 215)

In this context, home is understood as multi-scalar as "everyday practices, material cultures and social relations that shape home [...] resonate far beyond the household." (Zetter & Boano 2010, p. 208, authors' italics) Given that social and economic relations and familiarisation with and appropriation of space expand beyond the private domain, home cannot be understood as an individual dwelling. Thus, going beyond the single house by including the spatial design of settlements becomes necessary to create homes. Moreover, home is not only constituted by social spaces, but by an interdependent network composed of places where daily life occurs: work, schools, markets, etc. Hence, involving future dwellers in the process of urban production becomes necessary, as they are the ones that best know what constitutes 'home' for them. In post-disaster relocations, minimising the impacts of the loss of place and home has "potentially devastating implications for individual and collective identity, memory and history - and for psychological well-being" (Ibid, p. 2010), thus hindering social development.

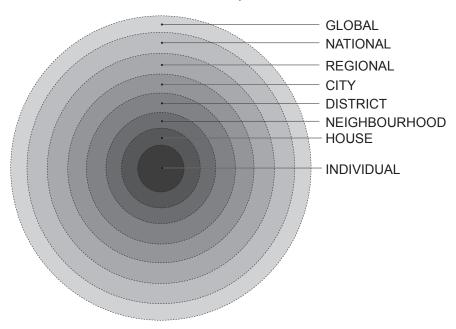


Figure 2.2. Multiple scales of home and resilience. Source: Produced by author

2.4 Home as a site of socio-economic vulnerabilities

'Home' in feminist and human geography literature

[R]eform in the housing arena is a precondition of gender equality.

Blunt & Dowling 2006, p. 10

The literature emphasizing the importance of producing a sense of home in new urban areas stresses the link between the physical space, emotions, and culture. As Miller points out "our social worlds are constituted through materiality. Objects [...] embody and communicate cultural meaning." (1998 in Blunt & Dowling 2006, p. 23) Although there are, unarguably, positive connotations when referring to home, it is important to recognise other instances in which 'home' becomes a site for violence and inequality. Given that space is culturally constructed (Blunt & Dowling 2006, p. 23), the link between materiality and culture can represent and reinforce certain cultural ideologies that result in the subjugation of some groups of people (Zetter & Boano 2009, Kallus 2005).

The existing definition of 'home' and 'culture' within DRRR literature fails to recognize that 'authentic culture' can also constitute "'historically specific dominant ideologies', or discourses produced by some groups within a given society that were made 'authoritative' by the undermining of opposing discourses." (Sanderberg 2012, p. 12)

As Sen points out, it is imperative to recognise the ways in which "culture may or may not influence development" (2000 in Sanderberg 2012, p. 6). Furthermore, as Blunt and Dowling explain, "a dominant ideology of home valorises some social relations and marginalizes others." (2006, p. 26) Thus, spaces, including those deemed as 'home', can serve as platforms that revalidate patterns of inequality and exploitation of certain groups, not only at the household level (Blunt & Dowling 2006, Domosh 1995) but also at a broader, communal level (Oliver-Smith 1990). However, housing "can design space and society simultaneously [as it shapes] people's image and identity. It is thus an efficient and powerful tool, since it allows for formal construction of a sense of place" (Kallus 2005, p. 368). Consequently, the design of houses and settlements offer the possibility of improving the living conditions of all inhabitants through the configuration of spaces that challenge cultural factors that produce inequality.

Sanderberg argues that "engaging with culture, indeed, fighting patriarchal culture is a must for feminists in Latin America in the struggle to eradicate domestic violence." (2012, p. 8) The region suffers from high rates of **gender-based violence (GBV)** as more than half of all Latin-American women suffered aggressions in their homes and 33% of women between 16 and 49 years of age have been victims of sexual abuse (UN 2010 in Miljanovich et al 2010, p. 193). In Peru, 1 in every 10 women in that same age range was victim of physical violence in one year alone (Bardales & Huallpa 2005 in Miljanovich et al 2010, p. 193) What we see in Latin America, including Peru, is a culture that justifies and naturalises violence against women, thus hindering their social development (Miljanovich et al 2010, p. 193).

Addressing GBV is of vital importance in social housing schemes, particularly those related to forced relocation and displacement. As Rodríguez and Sugranyes (2005) argue, there is a clear correlation between domestic violence and social housing schemes. Although there are multiple economic, social, and cultural factors that lead to GBV, including low levels of education, income and other livelihood factors; this section will stress the influences of the built-environment. The authors identified low-quality design, isolation from the rest of the city, lack of services, and the social stigma of grouping poor people together, as conditions that propel GBV. Forced displacement, as Zetter & Boano point out, not only accentuates existing conditions for GBV, but creates new ones that may exacerbate it. The authors mention how, in displaced settlements, "women's vulnerability to sexual exploitation, domestic violence, abuse of power, abduction and rape dramatically increases." (2009, p. 207)

Moreover, Hayden calls for closer attention to the **exclusion and isolation promoted by the standardisation of private dwellings.** The author argues that promoting more communal and visible household chores could lower the risks of domestic violence (1980, p. 175). As Cornwall explains, in certain contexts communal areas where women informally meet like courtyards around water pipes are important in enhancing solidarity and communication between them (2003, p. 1333). However, most modern housing schemes make them disappear by promoting individual provision of services per household.

On the other hand, while some shared urban spaces promote communication, others propel GBV and prevent development in certain groups. As Moser explains, there is a "strong relationship between levels of violence and crime, and inadequate infrastructure provision, much of which [is] spatially manifested" (2010, p. 87). Narrow paths, distant communal latrines, poor lighting, and close proximity to bars and brothels restrict access and mobility of certain groups, especially women, children, and the elderly. As McIlwaine points out, "spatial restrictions that violence and fear impose on urban dwellers, especially on women, have been a key issue [which affects] young women's ability to attend night school as well as general social interaction" (2013, p. 73). Poor women are often the most vulnerable to violence because "they are the most exposed to the risk of violence and least able to remove themselves from violent situations." (Kaber 1999 in McIlwaine 2013, p. 70).

Spatial design and upgrading can prevent violence, as the case of Khayelitsha, a township in Cape Town, shows. **Crime Prevention Through Environmental Design (CPTED)** was implemented to solve the high levels of violence in the area. This approach "uses the urban-specific problem of renewal and upgrading as an

entry point to address comprehensively various types of violence, including sexual abuse" (Moser 2010, p. 87). Rather than focusing on perpetrators of crime, this approach seeks to provide solutions by improving the spatial conditions where these crimes take place. It does so by enhancing "urban safety and security through effective planning, design and governance from gender perspective in cities, which [...] involves using a spatial and design perspective and includes upgrading or changing the urban infrastructure and physical fabric of the city." (lbid, p. 74)

Beyond improving the physical space, increasing the participation of women in design processes could unveil their ability to challenge their social subordination. As Zetter and Boano point out, "shelter and settlement is par excellence male-dominated in terms of concepts and personnel: the predominance of a masculinised value system exacerbates the internalised subordination of women which is characteristic in much humanitarian intervention" (2009, p. 203, original italics). Including female voices in decision-making processes would serve not only to find alternatives to spatial configurations that propel subjugation but, additionally, could lead to what Sanderberg describes as 'liberating empowerment', a process by which "women conquer autonomy, selfdetermination, as well as an instrument for eradication of patriarchy" (2012, p. 10). Thus, including women in the process has the potential to transform current cultural patterns where women's voices are not taken into account. As Kanji points out, "if development is understood as promoting the rights and well-being of the majority of people, then addressing gender inequalities is of fundamental importance" (2004, p. 55). Similarly, Guzmán, who argues that user participation in relocation and reconstruction projects challenges "dependence on assistance and paternalism, [enabling people to become] responsible for their own development" (2010, p. 325); points out how, when women participated in decision-making processes, they "revealed their capacity and potential, raising awareness that their role should be valued as they gradually [took] over the leadership of neighbourhood groups." (Ibid, p. 326)

Furthermore, the spatial configuration and social significance of home, both as private dwellings and the shared public space, can be detrimental for the social development not only of women; as they may also emphasize broader **inequalities and social stratification within communities.** As an example, Oliver-Smith documented the case of the town of Yungay, in the Peruvian highlands, destroyed in an earthquake in 1970. The town, as the author describes, was characterized "by a rigid system of social stratification [...] which justified systematic exploitation of the Indian population" (1990, p. 11) After the earthquake, a new town was constructed nearby but, rather than suggesting new spatial configurations that could foster integration, the new urban area

signified a "re-establishment of socio-economic class distinctions." (Ibid, p. 14) In the new settlement, poor peasants were located in the peripheries while wealthier people occupied areas around the central plaza, the site of main economic and social activities. In this way, the spatial design of the new town consolidated social inequality. As the author points out, "post-disaster housing reconstruction must avoid rebuilding structures which reflect, sustain and reproduce patterns of inequality and exploitation." (Ibid, p. 7) Thus, participation in decision-making processes in the production of spaces that can be appropriated by all should consider the needs and potentials of particularly vulnerable groups like women, children, the elderly, and poorer people to ensure equal chances of achieving resilience.

2.5 A home for all

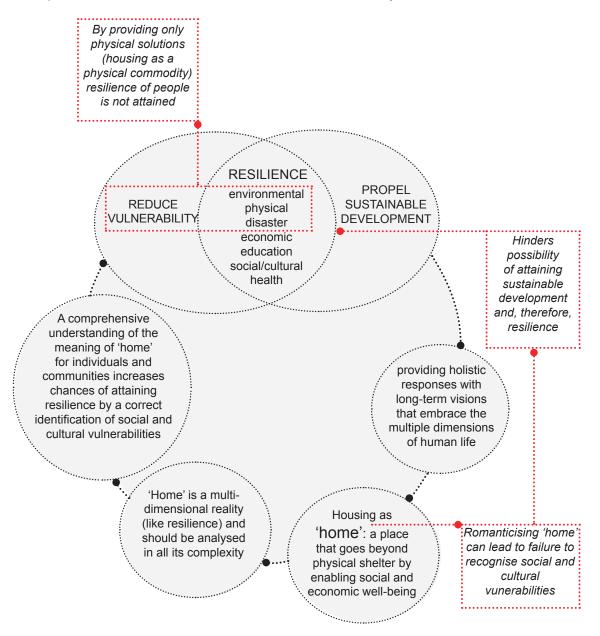
People-centred approaches to the creation of 'home'

Architecture not only provides space in which to live but also offernew perspectives and opens up new horizons on how to live.

Boano & Kelling 2013, p. 54

The process and implementation of social housing can foster social development and resilience but can also lead to the consolidation and exacerbation of existing so-

Figure 2.3. Multiple dimensions of home and resilience. Source: Produced by author



cial fragmentation and inequality. The previous sections sought to illuminate factors to consider in spatial design in addition to the social implications of housing production to enable the transformation of society and culture to allow development for all. It is argued that the creation of 'homes', that is, spaces that can be appropriated by infusing them with meaning, can lead to such opportunities. Based on the literature review, a summary of elements required for the production of 'homes' is presented (Table 2.1).

As Schilderman and Lyons (2011) point out, relocation and reconstruction projects should consider "not just the rebuilding of houses, but also of livelihoods, local markets and social capital." For this, the authors present a People-Centred Approach (PCR) (Ibid, pp. 225-229) that calls for the involvement of people in decision-making processes from the beginning stages. **User involvement** becomes the most important factor in the creation of 'homes', as it enables people's resilience by decreas-

ing dependency on other actors and propels self-organisation and adaptation. Therefore, this section will discuss diverse approaches to participation in the production of new settlements.

Identifying opportunities and conditions to avoid in DRRR projects, requires including people's understanding of home, resilience, and vulnerabilities in decision-making processes. For this, workshops in which users can express their understanding of these concepts can be fomented in the diagnostic phases. Cornwall (2003) suggests ways to assure that marginalised groups' voices are heard by others. For instance, she suggests the creation or use of spaces in which these groups feel more comfortable. The conditions of these spaces will vary depending on context; some may feel more comfortable in private areas while others prefer public arenas. It is the role of practitioners to identify not only vulnerable groups but also where they are more willing to communicate. Additionally, scheduling activities in times that better suit these groups

Table 2.1. Requirements for the production of 'home'. Source: Produced by author

	Creating 'homes'
	Assessing what makes people vulnerable : physically, socially, environmentally, and economically
People's resilience Autonomy and	Encouraging user participation in all stages: diagnosis, design, implementation, and maintenance
agency	Enabling inclusion of all people: women, children, elderly, poorest among the poor
	Allowing capacity building to decrease dependence on other actors.
	Certifying correct maintenance of dwellings and shared public spaces
	Allowing and assisting future expansions
	Designing inclusive urban spaces that can be used by all
Resilience of the built-environment	Ensuring connectivity between settlement and the rest of the city
Flexibility and adaptability	Identifying spatial and architectural patterns that propel user appropriation
	Incorporating spaces for improving livelihoods in the project: provide more than residential areas
	Identifying and avoid replicating spatial patterns that foster inequality at the household and urban scales

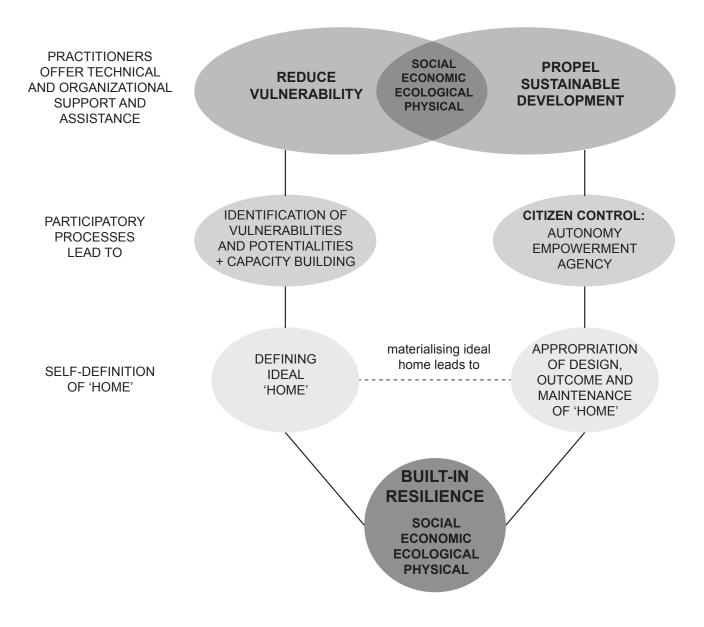
helps to promote their participation. For example, carrying out activities with children after school hours or visiting women after preparing lunch will provide better opportunities than scheduling events in times that conflict with their daily activities (p. 1333). Another important factor is **building people's capacity to speak, their confidence, and awareness of their rights**, for which Cornwall suggests including the presence of facilitators like gender-progressive NGOs (lbid, p. 1330).

Including **children** in the process leads to the formation of personal agency at a young age, making it part of their individual development. Additionally, children's willingness to learn has a positive influence on adults. For instance, Nobuto (2012) argues how theatre workshops not only fomented a greater sense of unity among children in Bangkok, they helped them to develop coping strategies

in disasters, which they later showed to adults, raising their awareness in the issue. Thus, participatory workshops are useful not only to identify vulnerabilities and opportunities, they also propel disaster awareness and build coping capacities.

Moreover, coordinating activities in multiple groups ensures that everyone has a voice. True participation requires collaboration between diverse voices working together at the intersection of common goals. As Miessen points out, collaboration is "where change can occur, frameworks of difference can flourish, and the creativity of the multiplicity can generate productive practices." (2010, p. 99) **Collaboration also avoids homogenization**, as choosing one representative at an early stage can minimise some voices by not offering everyone the opportunity to express their thoughts. Allowing multiple voices to be heard prevents oversimplification of

Figure 2.4. 'Home' and resilience. Source: Produced by autor.



complex realities and propels the identification of vulnerable groups that may not be considered as such, like marginal men (Cornwall 2003, Kanji 2004). Finally, including everyone in participatory processes requires that all future dwellers not only listen to but also move forward the interests of marginalised groups. Therefore, working with men and other powerful members becomes of vital importance (Cornwall 2003, p. 1333). This can be achieved with workshops that build their awareness of the importance of the inputs of marginalised groups in the functioning of society.

Thus, user participation leads to the formation of social spaces for development (fig. 2.4). The production of housing and new settlements that reflect users' definition of 'home', requires citizens' involvement beyond the diagnosis phase by promoting their participation in the design, implementation and monitoring of the project. As Guzmán points out, one of the most repeated problems in reconstruction and relocation settlements in Peru were house expansions that were poorly illuminated, ventilated, and constructed, which consolidated the population's vulnerability to health-problems and future natural hazards (2010, p. 333). The author argues that constant monitoring of the project, carried out by users themselves by enabling them through capacity building and the provision of technical assistance for future expansions, can avoid the replication of previously existing patterns of physical vulnerability.

2.6 Analytical framework

Enabling 'home'

What are the necessary conditions for the creation of 'home' for people undergoing processes of relocation? After analysing different perspectives of 'home,' this paper proposes engaging all users in its definition to allow the identification of already-existing social and cultural potentialities and vulnerabilities as well as enabling capacity-building in the formation of the built-environment, thus allowing the possibility of co-producing a refinement of 'home' that turns it into a catalyst for resilience.

Disaster-Risk Reduction schemes, like the proposed case study, offer a unique opportunity for the analysis of 'home' in already-existing urban settlements since the traditional space which people call 'home' is available to study. This paper will analyse both the on-going relocation project designed by the Peruvian Ministry of Housing, Construction and Sanitation (MVCS) and the existing built-environment and culture in Belén to determine to what extent each is providing opportunities to achieve resilience for all actors involved.

Conditions for the creation of 'home' were identified based on the literature review which allowed the formulation of the following research questions: For the proposed scheme:

The understanding of 'home' as a catalyst for development and vulnerability reduction calls for an identification of the approach towards resilience, which is understood as a long-term development goal. How do government institutions define **resilience**? How does the proposal reflect this definition? What scope is there for it to be modified?

'Home' is understood as the appropriated space that allows the production of citizen agency and, for this to happen, **participation** of users in the process is crucial. How are decision-making processes influenced by future dwellers?

If 'home' is seen as a space that is able to adapt to the everevolving needs of its users across time, requiring a **flexible design** of the built environment. How does the proposed design allow adaptability and appropriation? How have changes in time been contemplated in the proposed scheme?

Understanding 'home' as a multi-scalar process that expands beyond the single dwelling requires a clear identification of **broader socio-economic relationships** between the settlement and the rest of the city. How does the proposed scheme address already-existing macro scale relationships between Belenians and the city of Iquitos?

For the current reality:

'Home', is understood as a place that provides equal opportunities for development, in which people's multiple definitions of the term are taken into account. Are all Belenians currently enjoying fair **opportunities for personal and communal development?** How do different groups within the community understand the concept?

'Home' at the urban scale is understood as a place that fosters social development and celebrates the heterogeneity of its inhabitants through spaces that ease user mobilisation and appropriation. To what extent does the current **spatial configuration of the settlement and the city foster inclusion?**

From these questions, a matrix was designed to structure the analysis of the case study (Table 2.2). It aims to identify to what extent both the current reality and the proposed scheme are strengthening resilience and the ways in which they consolidate social inequality to propose recommendations for the production of 'homes'. This paper argues that an understanding of multiplicities in terms of actors, scales, and dimensions foments the possibilities of achieving 'home' for all. The more complex, encompassing, and inclusive the concept of 'home', the more opportunities for enabling built-in resilience and achieving sustainable social development. On the other hand, the over-simplification of this complexity leads to the consolidation of already-existing patterns of poverty and vulnerability.

Table 2.2. Proposed variables for analysis. Source: Produced by autor.

'Home' in	\	/ariables	Conditions	
Proposed Scheme Spatial Design Policy	Policy	Approach to resilience	Reduce vulnerability One-dimensional	Relief-to-development continuum Multi-dimensional
		Decision- making processes	Top-Down One actor	Participatory Multiple actors
	Design	Built- environment	Standardized and frigid One repetitive design	Flexible and responsive to context and time Multiple and adaptable designs
	Spatial	Spatial	Urban connectivity	Isolated Settlement seen as one unit
Current Reality	Socio-economic reality and physical conditions	Develop- ment oppor- tunities	Subjugation of certain groups (women and children) Unequal opportunities	Safe haven for all Equal opportunities
Current	Socio-econ and physica	Built- environment	Inadequate provision of infrastructure Difficult appropriation and mobilisation	Inclusive urban patterns Accessible and safe

Implications

Consolidation of poverty and vulnerability patterns

Enabling resilience and social development

3. Peru & Belén

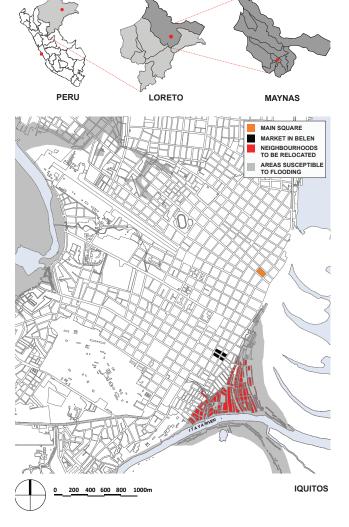
3.1 Peruvian social housing & Disaster Risk Response policies

Tensions between self-built approaches & neoliberalism

[The] 'supreme political issue of our time' [...] is the choice between heteronomy (other-determined) and autonomy (self-determined) in personal and local matters.

Turner 1976, p. 13

Figure 3.1. Location of Belén and Iquitos. Produced by author.

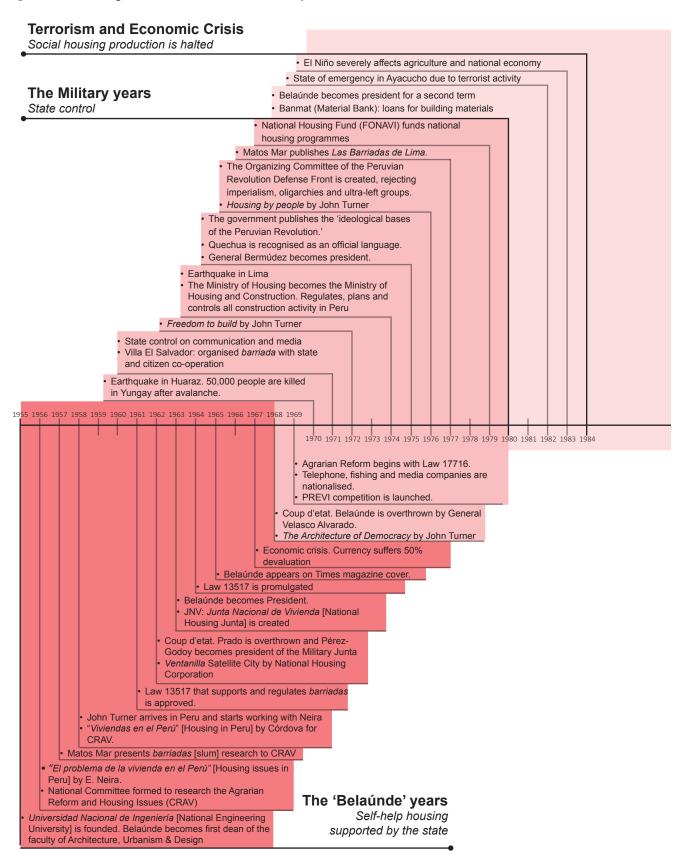


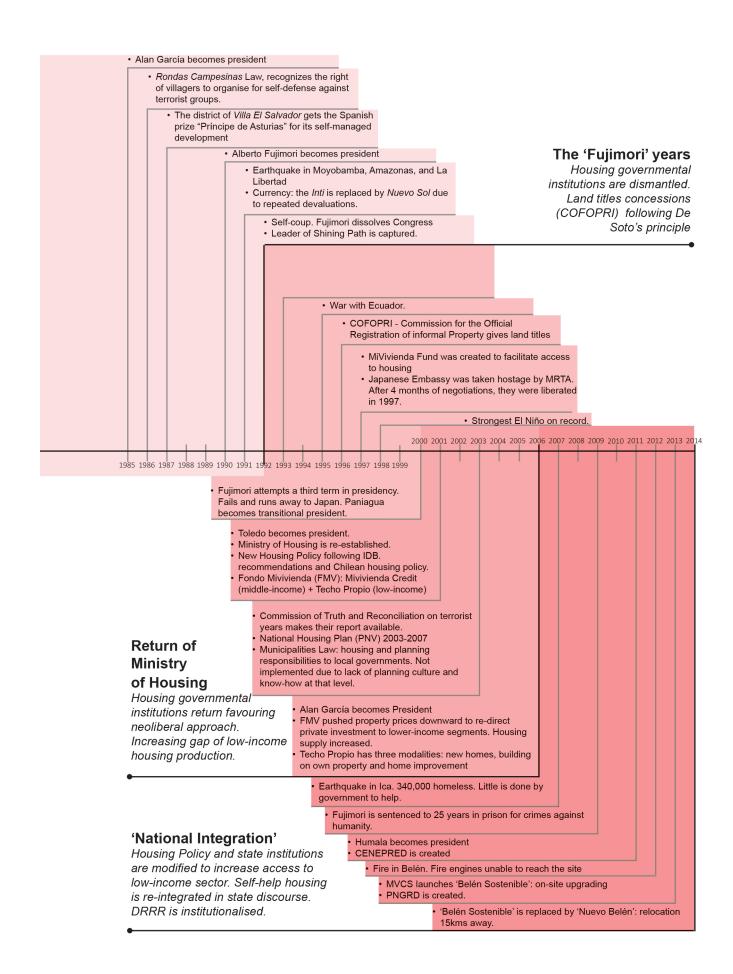
Before analysing Belén, Peruvian Housing and DRR policies will be discussed to reveal the contemporary understanding of 'home' and resilience in Peru. The country has the third largest housing deficit in Latin America, which is mainly qualitative and not quantitative, that is, rather than lacking new houses, the existing infrastructure is of poor quality and needs improvement (Fernández-Maldonado 2014, p. 271). Housing policies have undergone various changes over time (fig. 3.2) to find solutions to these problems. This section will highlight the more significant tendencies for the present analysis.

Peru pioneered assisted self-built approaches in housing policy during the 1960s and 70s (Bromley 2002) and slowly moved away from that scheme adopting, like other countries in the region, a **neoliberal approach** that invites the production of large-scale social housing by private developers (Fernández-Maldonado & Bredenoord 2010)1. Currently, there is a clear disconnection between the desire for social inclusion of different socio-economic sectors (MIDIS 2014) and the goals of private developers to maximise their profit, leaving unattended the provision of adequate housing for the poorest sectors of the population (Calderón 2015). Fernández-Maldonado (2014) argues that, to achieve social integration and development, reintroducing governmental assistance to self-help housing is necessary to reach lower-income citizens while encouraging autonomy and greater user participation. Additionally, she argues for the necessity of going beyond providing assistance to individual households by integrating neighbourhood upgrading and local development plans in housing policies (Ibid, p. 280), which refers back to the multiple scales of 'home'.

Finally, the author criticises the excessive centralisation in decision-making processes, which leaves little room for input from local governments and citizens. She describes how "higher-level government officials have imposed top-down, sectoral policies and spatial interventions" (Ibid, p. 278) leading to "no clear vision to orient the growth and development of cities." (Ibid, p. 277) As Bromley concludes, "Peru's principal problem was, and still is, **political centralism** seeking to co-opt and control local initiatives" (2002, p. 290). However, recent efforts for decentralization have been made in DRRR policies. Run by the National Centre of Disaster Risk Estimation, Prevention, and Reduction (CENEPRED), the National System of Disaster Risk Management (SINAGERD) was established in 2011. Additionally, CENEPRED

Figure 3.2. Housing in Peru in context. Produced by author. References: Fernández-Maldonado 2014, Kahatt 2014





created the National Disaster Risk Management Policy (PNGRD) in 2013. These programmes and institutions seek to create and establish interdisciplinary and multi-sectorial approaches to DRRR by bringing together, among other actors, the Ministries of Housing, Construction, and Sanitation (MVCS), of Development and Social Inclusion (MIDIS) and of Women and Vulnerable Populations (MIMP), that are of particular importance for the current case study.

The ideal of achieving resilience with the participation of multiple stake-holders, and a desire for long-term development and autonomy, are present in these recently developed policies and laws. For instance, PNGRD (fig. 3.2) highlights the importance of comprehensive and concerted strategies for DRRR (CENEPRED 2013), having as a main objective increasing resilience by reducing vulnerability and fostering equity and inclusion. By fomenting inclusion and capacity-building (MIDIS 2014), recent policies move away from dependency by championing autonomy as a requisite for development, thus challenging the centrality described by Fernández-Maldonado (2014), Guzmán (2010), and Bromley (2002). These policies offer a comprehensive vision in which all voices are equally represented and treated, hence setting the path for a comprehensive understanding of both resilience and development. The following chapter will analyse the extent in which these ideals are being implemented in Belén.

Box 3.1. Principles included in PNGRD. Produced by author. Reference. CENEPRED 2013

Principles included in PNGRD

- **Subsidiarity:** having decision-making processes as close as possible to citizens and local governments
- **Equity:** in generating development opportunities and access to basic services
- Permanent action: constantly monitoring risks.
- **Self-help:** recognizes that the best help is that which comes from the individual and the community.
- **Gradualness:** DRRR is seen as a sequential process.
- Systemic: processes should be multi-sectorial and comprehensive to guarantee transparency, effectiveness, consistency, coherence, and continuity.

3.2 Belén

A site of co-existence of multiple meanings of 'home'

The chosen case study is the community of Belén (fig. 3.3 & 3.4), in the city of Iquitos in the rainforest of Peru. In December 2014, the Peruvian congress passed Law Nº 30291 to relocate 13,385 inhabitants away from their current location on the skirts of the Itaya river due to constant flooding in the area (MVCS 2015). The settlement has been in that area for over eighty years and flooding has been a recurrent factor since before Belén existed. Eiselen visited Iguitos nearly 60 years ago, describing Belén with homes that stood "on piles or float on balsa rafts [thus adapting] to the shifting height of the river" (1956, p. 179), which are construction technologies still used today. In recent years, floods have increased both in terms of height and periods of time (MVCS 2014). For this reason, MVCS decided to relocate inhabitants of the "Zona Baja de Belén" (ZBB) [Lower Area of Belén] to an area located 15km away from their current location in the periphery of Iquitos (RPP 2015).

Belén is located in the heart of Iguitos and its link with the rest of the city is evidenced by the presence of a large market in the area, where the majority of the population of ZBB earns their living by selling fish caught in the nearby Amazon river and agricultural products grown on lands across the Itaya river (Casapia et al 2007). Additionally, ZBB has become a main tourist attraction for visitors in Iquitos due to its picturesque setting (MINCETUR 2010), becoming a source of income for people beyond the settlement. In spite of this strong bond with the rest of the city, Belén is one of the **poorest areas in the country**, with chronic malnutrition of 35% of children, high rates of school abandonment in children and high rates of teenage pregnancy (MVCS 2015). Additionally, ZBB is situated in the department with the highest rate of family violence in Peru (Miljanovich et al 2010); in a city with an increasing presence of sexual tourism, which includes the sexual exploitation of children (La Razón 2011, Peru21 2015)2.

The annual festival of Belén, which recently celebrated its tenth anniversary, is organised by the Gesundheit Institute and other NGOs and provides workshops and activities for the community, with an emphasis on children, to discuss these problems and learning, while playing, strategies to solve them³. Similarly, the annual water festival in Itaya, organised by the Bernard van Leer Foundation, aims to decrease family violence and river pollution by working with children (La Mula 2015b).

ZBB currently **lacks access to water and sanitation facilities**, using the polluted river for both waste disposal and untreated water supply, resulting in health problems like diarrhoea. Furthermore, houses are 99% built without technical assistance using wood, leading

to unsafe building conditions prone to fires (MVCS 2015). Additionally, access to the area is restricted in times of flooding, as it is only accessible by boat or walking on precariously built elevated sidewalks, which resulted in children and elders drowning and the inability of fire engines to reach it in case of fires. Media has continuously depicted the area as an impoverished and hopeless slum and a centre for infections and diseases (América TV 2015), resulting in the stigmatisation of its inhabitants by other people living in Iquitos despite the fact that they are also a well-organised group that wishes to have greater participation in and knowledge of processes that directly affect their lives. This is reflected by the existence of neighbourhoods with elected local leaders (fig. 4.1) (MVCS 2015), that meet every Tuesday in a newly formed committee with leaders of the market to discuss the relocation project and its impacts; they have so far been unable to meet with representatives of MVCS (Silva 2015).

Additionally, due to low incomes per family, a large percentage of children, which represent 34.4% of the population in the district, are forced to work to earn a living. A suggested 70% of children from low-income households in Iquitos are currently working in the streets selling products like candies and cigarettes (El Comercio 2011). This, plus continuous health problems and partial closure of some schools during the wet season, make it difficult for children to assist classes. In spite of these circumstances, their willingness to improve their living conditions is made clear with campaigns like "Niños al rescate" [Children to the rescue] in which children are trained as lifeguards that patrol the river. With this initiative, the number of deaths caused by drowning was reduced to zero in 2014 (TV Peru 2015).

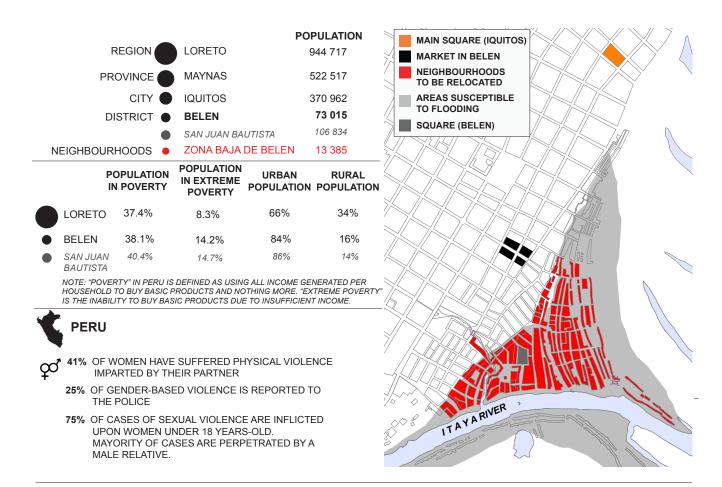
Thus, Belén presents a harsh reality in which the condition of the built-environment hinders the possibility of achieving social development in addition to certain behaviours that affect certain groups within Belenians. The lack of basic services and the amount of pollution in the area results in high rates of infectious diseases, particularly in children, and the precarious self-built public infrastructure limits their mobilisation. Additionally, high rates of family violence, teenage pregnancy (twice the rate of Loreto), and increasing sexual tourism, make it difficult for women to attain proper education, as shown by the fact that in Loreto only half of them are able to complete highschool⁴. On the other hand, this community shares a long history with Iquitos, showing a great level of inter-dependency between the city and

the community. Moreover, their adaptation to their surroundings and their willingness to improve is shown not only by the built-environment itself, with houses specifically designed to sustain floods, but also by the activities they perform collectively to improve their quality of life. Hence, Belén represents a dual reality of 'home' which urges improving their living conditions while respecting social ties and recognising potentialities for attaining resilience which are already in place.

The decision to relocate the community came after a failed attempt to rebuild houses in a project named "Belén Sostenible" [Sustainable Belén] (Gestión 2013, CR 2014). The project, with an initial investment of approximately £39.5 million, was abandoned according to MVCS, because ZBB will suffer increasing flooding in the future and it was too costly for the national government to introduce proper water and sanitation services (MVCS 2015). The project was introduced in 2013 by MVCS and promised to build over 2,000 adaptable housing units in the area where ZBB is currently located. Additionally, it included the provision of basic services and improving shared public areas with upgraded elevated walkways for better access (Andina 2013, Foros Perú 2014). MVCS argues that, as there is currently no technical nor operational capacity to implement the technical solutions in sanitation suggested for Belén Sostenible, the project could not be sustained in the long-run (MVCS 2015). Thus, rather than taking the opportunity as a learning experience that could help to develop alternatives not only for Belén but for other communities with a similar situation, the Ministry opted to abandon the project. Belenians argue that the money that is going to be used for the relocation project should be invested in continuing Belén Sostenible (Silva 2015).

Nuevo Belén [New Belén], the current relocation project with an investment that halves the previous one, was approved in December 2014 in Lima without prior consultation to residents and local authorities (Ibid). The project contemplates relocating people by the end of 2016 to a site located in the district of San Juan Bautista, an area with higher percentages of poverty and extreme poverty than Belén. Belenians are against the decision to relocate them since they feel that their livelihoods as well as their traditional ways of life will be destroyed (El Comercio 2015a). Additionally, they request greater communication with the government since all the decisions are being taken without consulting them directly (Silva 2015, La República 2015). The proposal will be analysed in the following chapter.

Figure 3.3. Belén at a glance. Source: Produced by author. References: Casapia et al 2007, Miljanovich et al 2010, Silva 2015, MVCS 2015, Zabalketa n.d., Perú21 2015, La Razón 2011, Diario Crónicas Iquitos 2015.



LORETO

REGION WITH HIGHEST RATE OF FAMILY VIOLENCE IN PERU (INCLUDES PHYSICAL, SEXUAL, AND PSYCHOLOGICAL VIOLENCE)



12.4% OF WOMEN 15 YEARS OR OLDER IS ILLITERATE

- **26.6%** OF WOMEN BECOME MOTHERS WHEN THEY ARE BETWEEN 15 TO 19 YEARS OLD
- 1% OF THOSE WOMEN ARE HEADS OF HOUSEHOLD
- 32.9% OF CHILDREN BETWEEN 1 AND 5 YEARS-OLD HAVE SUFFERED PHYSICAL VIOLENCE FROM BOTH PARENTS
- 12.4% OF MEN DO NOT EARN OWN INCOME
- 36.1% OF WOMEN DO NOT EARN OWN INCOME
- 61.3% OF MEN AGED 17+ HAVE COMPLETED HIGHSCHOOL
- 49.1% OF WOMEN AGED 17+ HAVE COMPLETED HIGHSCHOOL

IQUITOS

MAIN PROBLEMS IDENTIFIED IN THE CITY [NO SPECIFIC FIGURES WERE FOUNDFOR THE RESEARCH]

- SEXUAL TOURISM
- PROSTITUTION (HIGH PERCENTAGE OF MINORS)
- DRUG TRAFFICKING AND CONSUMPTION
- JUVENILE DELINQUENCY
- CHILDREN AND TEENAGERS WORKING INFORMALLY (70% OF CHILDREN LIVING IN POOR AREAS WORK)

BELEN

51.7%

48.3%

AGE GROUP

0-14		34.4%
15-29		29.6%
30-49		24.3%
50-59	5.8%	
60+	5.3%	

MAIN MODE OF TRANSPORTATION



DRY SEASON

₩ET SEASON

*DIFFICULT ACCESS FOR LARGER VEHICLES

) HEALTH

- **40%** NEWBORN BABIES SUFFER MALNUTRITION (TWICE THE NATIONAL AVERAGE)
- **56.3%** OF FEMALE TEENAGERS (15-19 YEARS) ARE ALREADY MOTHERS (TWICE THE REGIONAL AVERAGE)
- **20.9%** OF THE POPULATION SUFFERS SEXUALLY TRANSMITTED DISEASES
- 38.2% OF INFANTS SUFFER ACUTE RESPIRATORY INFECTIONS
 - 9 HEALTH CENTRES IN THE DISTRICT COMMON DISEASES INCLUDE: LEPTOSPIRO-SIS, MALARIA, & DENGUE



EDUCATION

- 63% OF CHILDREN AND TEENAGERS (0-14 YRS) ARE CURRENTLY ENROLLED IN SCHOOL (15481 OUT OF 25121)
- 3.6% OF TEENAGERS AND YOUNG ADULTS (15-29 YRS) ARE CURRENTLY ENROLLED IN TECHNICAL SCHOOLS (780 OUT OF 21604)
 - 156 SCHOOLS (NURSERY, PRIMARY AND SECONDARY)
 - 3 TECHNICAL SCHOOLS
 - 0 UNIVERSITIES

ECONOMIC ACTIVITIES

- **26.7%** INFORMAL RETAILERS
 - SELL THEIR PRODUCTS AT SQUARE IN BELEN
- 16.4% AGRICULTURE
 WORK ON LANDS ON OTH
 - WORK ON LANDS ON OTHER SIDE OF THE RIVER. PRODUCE CASSAVA, CORN, PLANTAIN AND FRUITS. SELL THEIR PRODUCTS IN THE MARKET
- 8.2% TRANSPORT
- 7.7% MANUFACTURING INDUSTRIES
- 5.6% CONSTRUCTION
- 4.5% TEACHING
- 30.9% OTHER

ZONA BAJA DE BELEN (18.3% OF DISTRICT OF BELÉN)

99% OF HOUSES BUILT WITHOUT TECHNICAL ASSISTANCE

MAIN CONSTRUCTION MATERIAL: **WOOD**HIGH RISK OF FIRE, EXCACERBATED BY DIFFICULT
ACCESS OF FIRE ENGINES IN THE AREA

HOUSES ON STILTS OR FLOATING ON BALSA WOOD

CONNECTIVITY BETWEEN THEM IN WET SEASON: PRECARIOUSLY BUILT **ELEVATED SIDEWALKS**. LEADS TO **DROWNING OF CHILDREN AND ELDERS**

80% OF HOUSES LACK ELECTRICITY
NO SEWAGE SYSTEM. SHARED LATRINES.
DISCONTINUOUS WATER PROVISION.
78% HAVE LAND TITLES
5-7 PEOPLE PER HOUSEHOLD: OVERCROWDING

NUMBER OF INTERIOR ROOMS PER HOUSEHOLD: ONE: 39%



ELEVATED SIDEWALKS

TWO: 36% THREE+: 36%

Figure 3.4. Daily life in Belén. Source: All images by author.







Table 3.1 Comparison of 'Belén Sostenible' and 'Nuevo Belén. Source: Produced by author. Reference: Foros Perú 2014, MVCS 2015, Gestión 2013, Silva 2015.

Project Name	Belén Sostenible (2013)	Nuevo Belén (2014)
Projected Investment by the National Government	Million £ 39.5 Million	Million £ 20.5
Number Of Housing Units	2050	2590
Cost Of House For Future User	£ 150	€0
Distance From Original Site	0 Km	15 Km
Area Per Housing Unit	38m²	40m ²
Interior Compartmentalization	Yes	Yes
Expandable Units	Yes	Yes. Up To Two Vertical Floors.
Provision Of Water, Sanitation, Electricity	Yes	Yes
Other Services	Parks, broadwalks, piers, broader streets, elevated walkways	Parks, health centre, market, sport facilities, schools, playgrounds, technical innovation centre, shopping centre

NOTES TO CHAPTER 3

¹ For a more detailed historic review see Appendix 1

^{2.} No official statistical data is currently available

^{3.} For a more information visit: http://www.belenproject.org/

4. Can 'Nuevo Belén' be a home?

4.1 Analysis

The definition of **resilience** in Peruvian law is the capacity to "assimilate, absorb, adapt, change, resist and recover from the effects of dangers or threats, as well as increasing capacity to learn and recover from previous disasters" (PCM 2011)1. The link between the project and the goal of resilience remains unclear as 'Nuevo Belén' emphasizes reducing people's physical vulnerability to floods by moving them to what MVCS considers a safer area but does not address how to solve Belenians aforementioned socio-economic vulnerabilities nor how to increase people's coping capacity to both physical and social risks in the long-run. The absence of these considerations is highlighted by the lack of updated social and economic information such as specific figures on GBV in the area and reasons for its prevalence, the costs that the relocation project will inflict upon Belenians and the city of Iquitos, and low levels of education. Over-simplification of vulnerability reduction through housing provision is reflected by MVCS being the only ministry taking decisions regarding the relocation process (fig. 4.2)2. Thus, the current proposal runs the risk of worsening the current living conditions of Belenians by separating them from already-existing livelihood sources, failing to provide well-developed alternatives, and not contemplating strategies to reduce socio-economic vulnerabilities.

Given that PNGRD champions multi-sectorial approaches to DRRR projects, as stated in the systemic principle (CENEPRED 2013), encouraging the participation of other ministries like MIMP and MIDIS could help to develop strategies to tackle socio-economic vulnerabilities and, therefore, increasing the chances of achieving resilience in its multiple dimensions. For instance, MIMP has developed the National Programme Against Familiar and Sexual Violence (PNCVFS) which seeks to protect women, children, and adolescents from violence through the implementation of programmes and help centres³. Additionally, the same ministry runs the Integral Family Welfare National Programme (INABIF) which seeks to guarantee individual welfare and development through capacity-building focusing in people in social risk⁴. Similarly, MIDIS has developed the National Strategy for Development and Social Inclusion 'Include to Grow' (ENDISIC) which "prioritizes those facing the greatest poverty and vulnerability" (MIDIS 2014, p. 13) with goals for different age groups -infants, children, adolescents, and the elderly- to battle specific vulnerabilities and risks. Incorporating these programmes and strategies could help to achieve the relief-to-development continuum discussed in section 2.2.

Greater participation of other actors, including citizens themselves, is also encouraged by the PNGRD. The policy recognizes self-help as the most timely and appropriate support for both the individual and the community (CENEPRED 2013). Therefore, the very limited participation of Belenians in decision-making processes (Silva 2015), in addition to an overall unawareness of what those decisions entail (América TV 2015), comes as a surprising outcome of the current approach to the relocation project. MVCS is in the process of hiring a sociologist to serve as a mediator between the ministry and Belenians, which, according to Silva, is a tactic used by MVCS to make Belenians accept their proposal, rather than proposing opportunities for dialogue (2015). This, as Till explains, leads to citizens being "beguiled by the term participation into a sense of feeling good whilst in fact being passive in the face of decisions already made my experts" which he deems as manipulation through "imposition under the false guise of inclusion" (2005, p. 3). Moreover, MVCS is proposing Belenians to build their own houses to generate new sources of income (América TV 2015). However, that is only a temporary action unless those skills are used to generate new sources of employment and could even be considered political co-option by transferring some of the costs on to the beneficiaries (Cooke & Kothari 2011, p. 6). This kind of participation, far from encouraging empowerment and autonomy, perpetuates the dependency of Belenians on others to improve their own lives.

Furthermore, the **limited participation of local governments**, at the district, provincial and regional level, goes against the systematic and subsidiarity principles of the PNGRD (CENEPRED 2013). Not only that, their absence in discussions hinders the opportunity for them to learn from the experience and being better prepared to deal with disasters in the future, although the Ministry identified lack of technical knowledge at the local level as one of the failures of 'Belén Sostenible' (MVCS 2015).

Given the existence of policies that not only point out the importance of participation but also delineate ways for its implementation in social projects, as the case of Belén, and the fact that the project is still in process; unifying

IQUITOS

BELEN

Amendar

RELOCATION
SITE

Parano

Parano

RELOCATION
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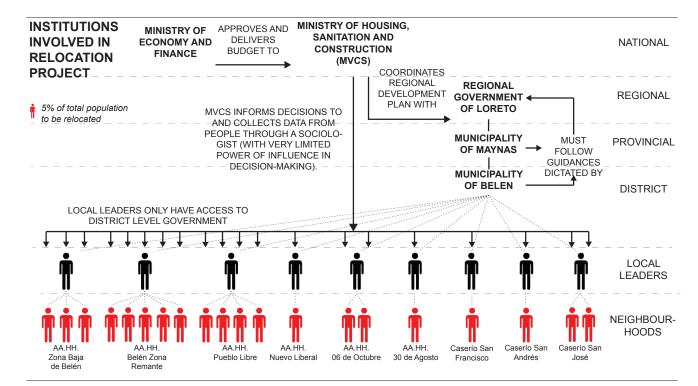
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Figure 4.1. 'Nuevo Belén'. Source: Produced by author. Reference: MVCS 2015.

SCHEDULE FOR RELOCATION PROJECT

	RESE.	ND.	PROMOTION AND AWARENESS	ORGANIZATION AND SOCIAL DEVELOPMENT	RELOCATION	GUIDANCE AND SUSTAINABILITY
	DES	IGN	INFORMATIONAL AND PARTICIPATORY WORKSHOPS IDENTIFYING PARTICULARITIES OF EACH HOUSEHOLD	- STRENGHTENING CAPACITIES AND SOCIAL MANAGEMENT - TECHNICAL WORKSHOPS: CONSTRUC- TION, CARPENTRY, ELECTRICITY - WORKSHOPS FOR TOURISM AND ECOLOGY - JOBS FAIR	- ASSIGNATION OF LOT PER HOUSEHOLD - TRANSFERINGUSERS TO NEW SETTLEMENT (ONLY ONCE IT HAS BEEN COMPLETED)	- SOCIAL MONITORING
	MAR	APR	MAY JUN JUL AUG SEP OCT NOV DIC	JAN FEB MAR APR MAY JUN JUL	AUG SEP OCT NOV DIC	JAN FEB
2	015		20	16	20	17

NOTE: NO DETAILS HAVE BEEN GIVEN AS TO HOW THESE ACTIVITIES ARE GOING TO BE ORGANIZED OR IMPLEMENTED NOR WHO WILL BE IN CHARGE



management efforts between different governmental institutions and procuring a better dialogue with Belenians is not only possible but should be encouraged both to follow development goals as specified in ENDISIC and achieve built-in resilience as specified in PNGRD.

Limited participation also hinders Nuevo Belén's flexibility, adaptability, and possibility of appropriation. Since users are not involved in the design process, the proposed units, as well as the overall urban design, are standardized and monotonous5; thus failing to reflect cultural and environmental particularities, factors that should be protected according to the resettlement law's equality principle (CR 2012). Historical construction technologies such as houses on stilts or floating on balsa wood are completely absent in the proposed design. Furthermore, this repetitive design fails to recognise differences within future dwellers, treating them as a homogenic group. This decision seems as a setback when compared to 'Belén Sostenible' which had better chances of being appropriated since it offered improvements on already existing conditions while offering familiar settings (Foros Perú 2014). Moreover, the upgrading project took advantage of already-existing public services and safeguarded the relationship between Belenians and the rest of the city by allowing a continuation of their livelihoods.

Additionally, the proposed houses, with an area of 40m2, result insufficient for families that are conformed, in average, by six people (MVCS 2015). This is despite the fact that MVCS identified **overcrowding** as a recurring problem (Ibid). According to MVCS, the proposed houses can be expanded vertically (Ibid). However, it is not clear who will finance these future expansions, which are rather urgent given the limited space provided, and if technical assistance and monitoring will be provided to ensure that these expansions are carried out safely, to avoid replicating previously existing physical vulnerabilities.

Furthermore, the project includes the provision of a health centre, schools, police station, shopping centre, a church, a market, and a centre for technological innovation (PNC 2015). The provision of such facilities depicts an effort in providing basic services and incomegeneration opportunities, thus representing a better solution than simply providing housing. However, these additional services will not be immediately implemented as MVCS' first priority is to provide housing. It remains unclear when will these services be implemented, which will depend, according to MVCS, on the availability of each public entity in charge of their provision (MVCS 2015). Not having these services available from the onset seriously jeopardizes the livelihoods, health, education, and security of future users as they will find themselves far away from the infrastructure and institutions that currently provide these services while lacking alternatives nearby.

In addition, numerous relocation and reconstruction projects in Peru show neglect of public spaces years after their completion since both the users and the local authorities lack funding for their maintenance (Guzmán 2010, p. 320). Given the high levels of poverty in Belén, it is important to question how these facilities are going to be maintained in the long-run; particularly the shopping centre, the green areas and the various roads which are proposed even though the majority of Belenians do not own a car. As Gilbert points out, by grouping together poor people in one area, it is difficult for them to earn a living since they are unable to develop businesses without clients that can afford their services (2014, p. 257). This is especially true for Belenians that will be relocated to a poorer area than ZBB. For the correct functioning of these services, it becomes necessary to maintain the relationship between the community and the city to keep the livelihoods of Belenians afloat, which would entail bringing people from Iquitos into the new settlement or to ensure accessibility to the city for Belenians. It remains unclear what measures are being taken to ensure the continuation of these socio-economic relationships.

Moreover, 'Nuevo Belén' came about, according to MVCS, because 'Belén Sostenible' was too costly. However, it seems that the costs calculated only involve those that affect the national government. No analysis has been made as to what would be the costs to Belenians and the city of Iquitos if the inhabitants of ZBB are relocated. Even if all services are properly implemented, ties between relocated citizens and Iguitos will remain. What will be the repercussions to their sources of income? How will their absence affect the market and citizens that buy their products there? How many jobs will be lost in the tourism industry if ZBB no longer exists? What would be the costs for them to reach Iquitos once they have been relocated? Answering these questions requires, once again, active participation of future users as well as incorporating the voices of other inhabitants of Iquitos to have a more clear understanding of the possible impacts of the relocation.

If Belenians are moved, what will happen to the area currently occupied by them? What will happen to those that do not wish to be relocated? There are speculations of a plan by the national government to develop the area into a touristic broadwalk (Gestión 2014). This alternative development plan presents ulterior motives that may be pushing forward the relocation (Silva 2015). This possible motive is aligned with what Watson, referring to the increased number of idealised urban development projects in Africa, describes as a vision which implies "a concern with the importance of a city in relation to other cities rather than the extent to which it functions for its citizens" (2013, p. 11) and which has resulted in "a steady worsening of the marginalization

and inequalities that already beset these cities" (Ibid, p. 1) by the systematisation of forced evictions and displacements. Since no information has been given about what MVCS plans to do with those who wish to remain in lands that are legally recognised as theirs, it is hard to speculate their fate. Furthermore, no information has been given about the options for those 22% of people living in ZBB that do not have a land title as they are not entitled to receive a house in Nuevo Belén.

Lastly, the project's schedule contemplates phases for organization and social development as well as guidance and sustainability (fig. 4.1). Although the concepts are there, and are accompanied by clear attempts of putting them into practice by carrying out workshops and monitoring, the schedule only provides a plan until February 2017, thus indicating that there is a **lack of a long-term vision** for Nuevo Belén. Capacity building, monitoring and development are continuous processes that need to be carried out for periods longer than the ones currently specified. Thus, there is a pressing need for a longer term vision with clear goals to assure the sustainability of the project and its possibilities of fostering resilience.

The analysis of the extent in which 'Nuevo Belén' offers opportunities for the creation of homes is summarised in table 4.1.

4.2 Results

Both the proposed relocation and the current settlement present drawbacks that hinder their possibilities of being appropriated as 'home' and becoming spaces that foster resilience in all inhabitants (Table 4.2). However, all factors analysed present social, spatial, and institutional opportunities that can be incorporated into the proposal to avoid the consolidation of vulnerabilities that Belenians currently face. The project, still in process, is being designed within a broader political framework that champions an understanding of development and resilience that shares many characteristics with the definitions presented in this paper. Therefore, it seems that there is not only room for change but that this change is necessary to ensure that the project improves the chances of building resilience of future users while following national development strategies and achieving political goals.

Figure 4.2. Actor diagram of 'Nuevo Belén' as presented by MVCS. Source: MVCS 2015. Translated by author.

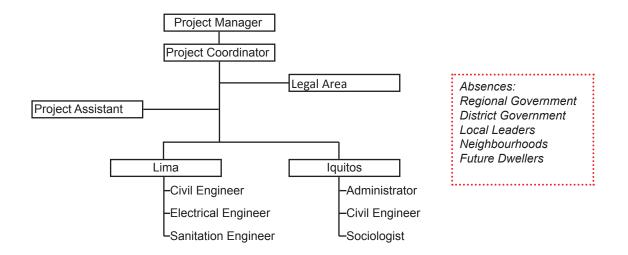


Table 4.1. Creating 'homes' in 'Nuevo Belén. Produced by author. Reference: MVCS 2015

Creating 'homes' in Nuevo Belén				
Resilience in	Conditions for resilience	Nuevo Belén		
	Assessing what makes people vulnerable: physically, socially, environmentally, and economically	Lacking information of social and economic vulnerability. Focus on physical and environmental aspects with little acknowledgment of inter-relationship with socio-economic systems.		
People Autonomy and	Encouraging user participation in all stages: diagnosis, design, implementation, and maintenance	Limited participation of users. Understood as making them accept decisions already taken by the government.		
Autonomy and agency	Propelling inclusion of all people: women, children, elderly, poorest among the poor	No mention of efforts to include vulnerable minorities in decision-making processes.		
	Allowing capacity building to decrease dependence on other actors	Technical workshops, job fair, workshops for tourism and ecology are contemplated in the programme. Short period allowed. Encouraging other potentialities not contemplated.		
	Certifying correct maintenance of dwellings and shared public spaces	No mention of long-term vision of new settlement. Only includes planning for two months after relocation has been carried out.		
	Allowing and assisting future expansions	Expansions contemplated. No mentioning of monitoring or provision of technical assistance to assure they are carried out safely.		
	Designing inclusive urban spaces that can be used by all	Project contemplates provision of communal services and provides easier accessibility to children and elders but does not provide all these spaces from the start.		
The built- environment	Ensuring connectivity between settlement and the rest of the city	No details have been given as to how this will be achieved.		
Flexibility and adaptability	Identifying spatial and architectural patterns that propel user appropriation	Standardised housing that does not take into account differences within future users nor particularities of vernacular architecture in the area. Very small units that do not solve current overcrowding.		
	Incorporating spaces for improving livelihoods in the project: provide more than residential areas	Spaces for livelihoods will be provided in a later, unspecified stage. No strategies to solve immediate impact on current livelihoods.		
	Identifying and avoid replicating spatial patterns that foster inequality at the household and urban scales	Physical vulnerability is avoided by using proper construction techniques and standards. Social vulnerabilities and their relationship with the built-environment have not been studied/mentioned.		

Table 4.2. 'Homes' in Belén. Produced by author.

'Home' in	١	/ariables	Conditions		
	Policy	Approach to resilience	Reduce vulnerability One-dimensional		Relief-to-development continuum Multi-dimensional
p _o o		Decision- making processes	Top-Down One actor		Participatory Multiple actors
Proposed Scheme Spatial Design	Design	Built- environment	Standardized and frigid One repetitive design		Flexible and responsive to context and time Multiple and adaptable designs
	Spatial	Urban connectivity	Isolated Settlement seen as one unit		Incorporated to broader city networks Settlement seen as part of more units
Current Reality	Socio-economic reality and physical conditions	Develop- ment oppor- tunities	Subjugation of certain groups (women and children) Unequal opportunities		Safe haven for all Equal opportunities
Current	Socio-econ and physica	Built- environment	Inadequate provision of infrastructure Difficult appropriation and mobilisation		Inclusive urban patterns Accessible and safe
Implications		ations	Consolidation of pover vulnerability patterns	ty and	Enabling resilience and social development

NOTES TO CHAPTER 4

- 1. Author's translation
- 2. This is emphasized by the sole mention of MVCS as the national entity in charge of the relocation project in Law N $^{\circ}$ 30291 (CR 2014b)
- 3. MIMP (Ministerio de la Mujer y las Poblaciones Vulnerables) (n.d.) Programa Nacional Contra la Violencia Familiar y Sexual [Online] Available at: http://www.mimp.gob.pe/index.
- php?option=com_content&view=article&id=783&Itemid=415> [Accessed on 20/07/2015]
- 4. MIMP (n.d.) INABIF [Online] Available at: http://www.inabif.gob.pe/portalweb/institucion.php [Accessed on 20/07/2015]
- 5. For more information visit: http://www.vivienda.gob.pe/pnc/newcbelen.html

5. Conclusions & recommendations

Building upon the discourse on DRRR projects that calls for the necessity of providing future users the possibility of infusing social housing projects with personal meaning as a pre-requisite to achieve development and resilience, this paper sought to refine this meaning to ensure that it includes the voices of all members of the community. Active user participation and engagement in the process provide opportunities for going beyond relieving immediate physical needs by transforming housing projects into catalysts for development and resilience. A deconstruction of the meaning of already-existing homes allows the identification of physical, social, and economic vulnerabilities and potentialities while a reconstruction of the concept, particularly present in relocation or reconstruction projects, grants opportunities to build capacities that enable autonomy and agency in future users.

Analysing Belén showed that the criticisms presented in DRRR literature are found in the proposed relocation project, despite the fact that current laws and policies call for a different approach that is more inclusionary and with a long-term vision. As Gilbert points out, offering free housing does little in improving the living conditions of future users as it fails to address socio-economic vulnerabilities such as their lack of a decent income (2014, p. 260). On the other hand, the identification of social and physical vulnerabilities in the current settlement showed that achieving development and resilience is difficult in Belén, particularly for women and children, thus showing the dangers of romanticising the concept of 'home' as understood by Belenians. Therefore, risks, especially those that are intrinsic components of the current realities of 'home', should be identified to avoiding inequalities in development opportunities necessary for achieving resilience.

How to identify these risks? This paper finds that the current available data is insufficient to formulate a holistic understanding of existing vulnerabilities and opportunities. For instance, there is no analysis of the social reasons behind the elevated numbers of GBV in the area nor for school abandonment, conditions which lead to vulnerability. This gap is additionally reflected on the lack of a developed plan to tackle these vulnerabilities in the current proposal. To move beyond solving immediate physical vulnerabilities, a first step is **involving other institutions and professionals** that have experience dealing with social and economic risks. For instance, inviting institutions like MIDIS or MIMP that have social programmes –PNCVFS, INABIF, ENDISIC-that can be implemented along with the housing project.

Additionally, creating spaces for dialogue between MVCS and Belenians is crucial, which can be achieved by asking them directly what they consider 'home' and what do they perceive as vulnerabilities and resilience. To achieve this, workshops can be carried out following the recommendations outlined in section 2.5 to allow all voices to be heard, particularly those of women and children. Moreover, a detailed plan of the capacity-building workshops that will be offered by MVCS is needed and, rather than imposing particular activities that the Ministry deems relevant, these workshops could reflect the interests of the community to be better adapted to their needs. These capacity building workshops could also include activities for children, since in them lays a great opportunity to introduce positive changes from an early age.

Additionally, engaging with **local leaders** could help to break the barriers between the community and MVCS. Enabling their capacity to represent others as well as their capacity to speak would result beneficial for the community and the Ministry. Currently, MVCS portrays leaders as having personal interests and unwillingness to cooperate (MVCS 2015), which is neither constructive nor helpful for the on-going project and contradicts Silva's description of their self-organisation in committees and their desires to engage in dialogue (2015). Furthermore, inviting **local governments** to participate can help them to increase their knowledge in DRRR, enabling their coping capacity and, hence, forming an institutional understanding of resilience.

Having a comprehensive understanding of the cost of relocation to actors beyond MVCS, gained with a greater analysis of the relationships between Belenians and Iquitos, can lead to the discovery that it would be better to offer alternative solutions to relocation that do not signify such a social and economic burden and disruption of people's lives. Alternatives can include being relocated in a safer area closer to their current sources of livelihoods or analysing the ways in which upgrading of the current settlement can occur parallel to current interests in transforming the area into a touristic boulevard.

Furthermore, providing **multiple design options** for the new settlement could be beneficial to increase the chances of user appropriation. For this, universities and building and design professionals could be invited to participate by working with future dwellers to come up with alternative design proposals. The current projected investment

of £20 million allows space for the study of multiple alternatives that promote opportunities of further dialogue and the possibility of obtaining designs better adapted to users' needs and culture. This would, additionally, benefit designers by providing them a learning experience while preparing more professionals in DRRR.

After depicting the weaknesses in the relocation proposal and illuminating the potentialities and tight relationships between Belenians and the city of Iquitos, this paper hopes that the recommendations mentioned above are taken into account by MVCS, which has shown great willingness to improve the current housing production in the country. The government has shown an interest in addressing the difficulties that Belenians have endured since the foundation

of the settlement and this paper has attempted to depict ways to better achieve that goal. Relocating entire communities should be considered as a last resort, when no other options are available, as it limits citizen's ability to withstand hardships, severely disrupts people's lives, and leaves little room for innovation and endurance.

Natural hazards like earthquakes, floods, and the multiple risks that events like El Niño will cause, will continue to be present in the nation's -and the region's- future. Thus, enabling capacities to withstand these events in both citizens and institutions becomes a first priority in development goals. Improving 'homes' by re-introducing their emotional, social, and economic significance offers a platform to achieve these crucial goals.

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Appendix 1

Brief history of peruvian social housing of the last 60 years

The production of social housing during the 1960s and 70s was largely influenced by architect and president (1963-1968) Fernando Belaúnde, who believed that "[I]ocal problems can and should be solved locally" and that the role of the government should be to "help he who helps himself" (Belaúnde 1965 in Bromley 2002, p. 283) During this time, various authors and political leaders promoted **communal activity**, arguing that it was an intrinsic element of Peruvian idiosyncrasy as expressed in indigenous traditions and heritage in which "communal organization and ownership were emphasized." (Bromley 2002, p. 281) Similarly, arguing for decentralization, Guzmán argues for the reinstatement of Ayni, a Quechua term for cooperation, solidarity, and collective work which Andean communities value "as a strategy for survival and cultural unity" (2010, p. 341) in DRRR projects.

The emphasis on local solutions and communal activity in Peru gained international attention due to the presence and influence of **John Turner** in Lima during that time. The central premise of assisting self-building was the believe that "helping households in the different stages of their home building activities [had] a more significant effect in quality of life that the delivery of new homes" (Fernández-Maldonado & Bredenoord 2010, p. 343). For Turner and Belaúnde, the importance of a building was not how it looked but how it serves the owners' needs. In 1968, Belaúnde was overthrown in a military *coup d'etat* which was followed by years of social and economic crisis that put a halt to social housing production which were then followed, in the 1990s, by a political reform that dismantled all housing institutions (Fernández-Maldonado 2014)

The ideals of citizen autonomy and agency over living conditions that ought to be physically manifested in buildings that grew and evolved across time were the main drivers in the creation of the most internationally acclaimed Peruvian social housing project: PREVI. The Experimental Housing Project (PREVI) was carried out in Lima between 1968 and 1975 and, over 40 years later, the majority of the original beneficiaries still reside in the houses they received, which is highly unusual in social housing projects. As McGuirk points out, its success was that "it was designed as a platform for change. The houses were not the end but the beginning. As frameworks for expansion, they evinced one of the key principles of the

barriadas, which is that a house is a process and not a static object." (2014, p. 75) Appropriation of the project by the dwellers was not only encouraged at the individual household scale; a well-thought design of the shared public space -pedestrian streets, alleys and little squarescreate a feeling of unpredictability and "the illusion of an organic piece of city." (Kahatt 2011) The success of the project is evidenced by the fact that residents did not move out as their financial situations improved. As their quality of life improved, so did the material conditions of the housing project. Each house was altered according to the needs of each family, which was allow and fomented from the onset, since the architects were asked to provide prototypes that could be altered in time. As McGuirk explains, PREVI "was conceived as a formal neighbourhood that could grow upwards informally" (2014, p. 72).

In spite of its successes and given its experimental nature, PREVI was difficult to be repeated, as shown by the fact that there are no more projects of similar nature in Peru. However, its existence shows that it is possible to avoid the frigidity that results from standardisation through the creation of "affordable neighbourhoods on a human scale that are adaptable and walkable" (lbid, p. 79); thus illuminating alternative paths for the production of social housing. The first phase of the project was finished in 1975 and, due to a coup d'etat and the years of social and economic crisis that accompanied it, the following stages of PREVI were never carried out and the production of social housing in general was halted.

The departure of state involvement in the production of social housing was exacerbated in 1993 when a new Constitution stopped recognizing housing as a right and institutions involved in its production were dismantled (Fernández-Maldonado & Bredenoord 2010, p. 344). During that decade, the government set up COFOPRI (Commission for the official Registration of Informal Property), an institution that sought to regularize property and that remains, to this day, the world's largest programme of its type, having granted more than 1.8 million land titles up to 2009 (Fernández-Maldonado 2014, p. 274). The institution was created following Hernando De Soto's economic theory, which aimed to "promote access to the financial system with the title as collateral; to promote housing investment, thanks to secure tenure; and the development of a city-wide real-estate market." (Fernández-Maldonado & Bredenoord 2010, p. 345) Although it was unsuccessful in activating investment, COFOPRI is considered successful as a first step towards progressive development due to secure land tenure (Ibid). However, progress was limited given the fact that it was not accompanied by assistance in housing improvement nor policies for neighbourhood upgrading (Fernández-Maldonado 2014, p. 274)

In 2001 the Ministry of Housing was reinstated and the production of social housing was reactivated. This was done following the principles of Chile's housing reform, which supported the financial and construction sectors more than meeting the housing needs of the poor (lbid, p. 275). Dwellers accessed housing through loans, leading to a deficit in the production of housing for the poor by benefiting mostly middle-income groups that could afford

them. As Calderón points outs, private construction companies gained more profit from the production of middle-income housing and so showed little interest in providing home for those that needed it the most (2015, p. 43). During the mid 2000s, the deficit in the production of housing for low-income sectors lead to the creation of programmes within MVCS targeted specifically for this sector like **Mivivienda**, which provides loans which can be used for on-site upgrading as well as for the provision of technical assistance. With this, progressive housing schemes are reappearing in national policies, providing "the most realistic alternative to face the huge housing demand from lower-income households" (Fernández-Maldonado & Bredenoord 2010, p. 350).

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