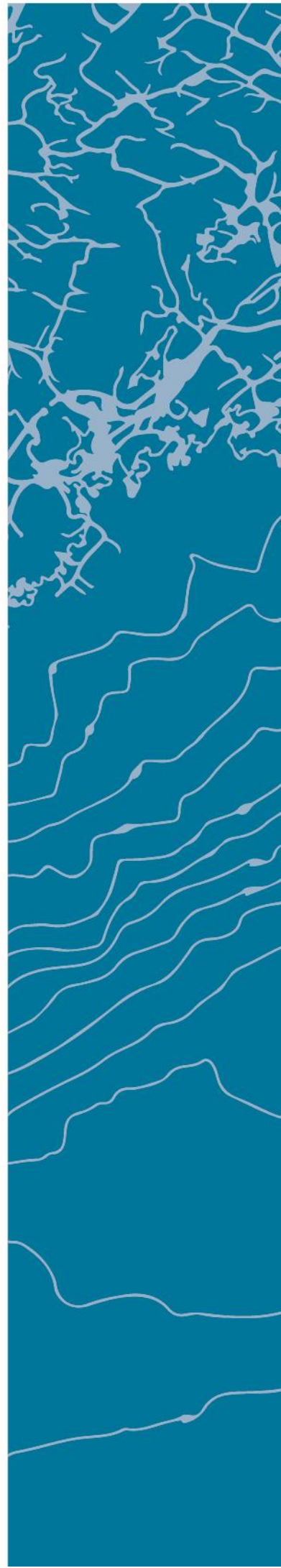# The importance of Culture and Context in Disaster Risk Reduction

A Case Study of Women in Batticaloa`s Perceptions on Vulnerability to Natural Disasters and Disaster Risk Reduction efforts

ANNE LIE NORDBERG

SUPERVISOR
SVEN ÅKE BJØRKE

Abstract

The aim of this thesis has been to assess perceptions on vulnerability to natural disasters and disaster risk reduction efforts among women in Batticaloa district, Sri Lanka. Batticaloa is one of the poorest districts in Sri-Lanka with vulnerabilities linked to linked to several factors; the impact of the war, the tsunami, and water related climate variability which again affects health and safety, water resources, agriculture and fisheries, access to services and livelihood/economic development of families and communities (Humanity & Inclusion, n. d.).

Disasters are often considered the "antithesis of human development" and referred to as natural disasters. This despite the fact that there are no such thing as natural disasters, only natural hazards that turn into disasters when vulnerable populations "get in the way" of hazards. The impact of disasters is hampering development and is unevenly distributed, with especially women being disproportionally affected. Therefore, in order to achieve sustainable development a greater emphasis must be put on disaster risk reduction efforts.

To achieve these goals a more comprehensive understanding of perceptions on vulnerability and risk, and why people live in areas associated with risk are necessary and would provide valuable contributions to research on disaster risk reduction. Failing to understand and recognize contextual and cultural factors can lead to failing or inappropriate disaster risk reduction implementations.

There is also a recognized gap in research to fully understand why the impact of natural disasters is gendered. Especially psychological issues are more frequent reported amongst women and adolescent girls. This thesis has attempted to provide more information on a recognized gap in research on why women are disproportionally affected and experience more stress in regards to natural disasters.

This thesis will claim that perceptions on vulnerability and risk in regards to natural disasters are shaped by the context and culture, and especially the impact of nearly three decades of civil war have made natural disasters appear less threatening than war. It will also point toward the importance of houses in regards to perceptions of vulnerability among the women, and suggest that temporary housing, dislocation and inappropriate and culture-insensitive housing-schemes are factors adding to understanding of why women face more psychological stress in the aftermath of disasters. This is of particular interest in Batticaloa district where matrilocal inheritance-laws traditionally have provided the women with strong ownership over land, house and assets and traditional matrilocal settlement-patterns have provided the women with "safety-nets" and increased their social capital.

Key words

Vulnerability, Women, Natural disasters, Vulnerability, DRR, Culture, Context, Housing

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First of all, this thesis would not have been possible without all the help I received from the residents of Batticaloa district. You were all amazing, informative and you showed me kindness, courage and resilience beyond my imagination. Thank you all for inviting me in and taking the time to talk to me and give me an insight in your lives that have been marked by so many hardships for many of you. I feel grateful for the tears and laughter we shared.

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Last, but not least, I need to give thanks to friends, family and colleges for the patients you have showed me and the uplifting you have provided me while I have been working with this thesis.

List of Acronyms

DCS- Department of Census and Statistics

DS - Divisional Secretariats

DM- Disaster Management

DRM- Disaster Risk Management

DRR- Disaster Risk Reduction

GN- Grama Niladhari

GoSL- Government of Sri-Lanka

IDP- Internally Displaced Persons

IFRC- International Federation of Red Cross and Red Crescent Societies

LKR- Sri Lankan Rupee

LTTE- Liberation Tigers of Tamil Elam

NGO- Non Governmental Organization

RC- Red Cross

SFDRR- Sendai Framework for Disaster Risk Reduction

SLA- Sri Lanka Army

TWS- Tsunami Warning System

UNDP-United Nations Development Program

UN-HABITAT- United Nations Human Settlements Program

UNISDR- United Nations International Strategy for Disaster Reduction

WB- World Bank

WHO- World Health Organization

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1 Introduction

Repeated disasters threaten sustainable development (United Nations Development Program, UNDP, 2008). Disasters, many of which are exacerbated by climate change and which are increasing in frequency and intensity, significantly impede progress towards sustainable development" (United Nations Office for Disaster Risk Reduction, UNISDR, 2015b).

And after a decade of highly publicized global disasters, including terrorist acts, hurricanes, tsunamis, earthquakes, disease outbreaks, industrial accidents, and fires, it is not surprising to observe growing attention to the effects of disasters and what might be done to prevent or mitigate the impact of disaster on human function and development (Bonanno, Brewin, Kaniasty, and La Greca, 2010; Comer and Kendall, 2007; in Masten, 2011).

According to UNISDR (2015b) global climate change is already modifying hazards levels and increase disaster risk through changing temperatures, precipitations and sea levels, and estimate that by 2050 40 per cent of the world`s population will live in river basins experiencing severe water stress. Particularly Africa and Asia will be affected (UNISDR, 2015b). Overall, more than 1.5 billion people have been affected by disasters in various ways, with women, children and people in vulnerable situations disproportionately affected. The total economic loss was more than $1.3 trillion. In addition, between 2008 and 2012, 144 million people were displaced by disasters" (UNISDR, 2015a), giving weight to the claim that "Sustainable development cannot be achieved unless disaster risk is reduced" (UNISDR, 2015b).

However, to be able to reduce risk and achieve sustainable development and reduce disaster risk it is important to understand the various cultural and contextual factors, which will add to the understanding on how people perceive vulnerability and risk and why they live in areas associated with risk. Understanding the culture becomes critical when it comes to designing and implementing DRR-projects, as underlying cultural aspects can work both as an enabler or a constructor. Hence, failing to understand the culture, can lead to failing disaster risk efforts.

Another critical indicator of disaster risk reduction is gender equity in disaster preparedness (UNDP, 2008). This is important because disaster statistics generally don't take into consideration the impact disasters have on different groups (Seballos, Tanner, Tarazona, and Gallegos, 2011). In addition, gender differences in response to calamity also often appear complex in the disaster literature, as girls, especially the adolescent girls, often report feeling more distress, also including post-traumatic stress (PTS) (Masten, 2011, Enarson, 2000). Although some literature addresses these gendered gap in disasters, (Anderson, 2006, in Peek and Fothergill, 2009), the reasons behind these differences is not fully understood. Generation of new information in this topic would therefore provide more and valuable insight to an area that requires more study (Anderson, 2006, in Peek, 2008).

Sri-Lanka is vulnerable to several natural hazards, which history has shown often turn into disasters. As will be explained in chapter 2 Batticaloa is one of the poorest districts in Sri Lanka with vulnerabilities linked to several factors; the impact of the war, the tsunami, and water related climate variability which again affects health and safety, water resources, agriculture and fisheries, access to services and livelihood/economic development of families and communities (Humanity & Inclusion, n. d.). It also have a complex cultural and historical context, especially regarding women`s position in society.

I therefore find Batticaloa district a relevant site to conduct a case-study on women`s perceptions of vulnerability to natural disasters and perceptions of Disaster Risk Reduction (DRR) efforts. The districts exposure to natural hazards and the ethnic composition of minority population provided a good background as well as the opportunity to unveil possible cultural and contextual aspects regarding perceptions of vulnerability. Especially one contextual factor came up repeatedly, the long civil war. Although this is a man-made disaster, not a natural disaster, it has had socio-cultural impacts that influenced both perceptions of vulnerability and resilience in the community. I therefor needed to include it in my research.

My research objective was to assess women in Batticaloa`s perceptions on vulnerability to natural disasters and perceptions of DRR, in particular those established by the government after the tsunami, with a particular focus on housing-schemes and relocation.

The general research questions this thesis aim to answer to are based on the issues presented above;

How do women in Batticaloa perceive vulnerability to natural disasters and Disaster Risk Reduction efforts?

The first steps in this research was to understand perceptions regarding both vulnerability and natural disasters, perceptions on how to decrease vulnerability and also how implemented DRR-efforts were perceived, especially those implemented by the government after the tsunami, given the impact of the disaster but also because the population in Batticaloa is a minority in Sri-Lanka and the area was severely impacted by the civil war.

Through qualitative methods the research questions was applied mainly through semi-structured interviews of purposely selected and affected women, but also focus-group discussions with both affected women and men were conducted. In addition I performed semi-structured interviews with a Government official, a Disaster Management officer from one of my research-areas and a representative from the local Red Cross. I believe this approach, as well as conducting interviews in eight different areas provided me with a good and representative selection in order to answer my research questions.

As this thesis aim to assess the affected women`s *own* perceptions regarding vulnerability, natural disasters and Disaster Risk Reduction, I found it appropriate to analyse the findings and generate concepts and categorize based on the original data, hence an inductive approach through grounded theory was applied in the data analysis. Grounded theorist`s try to explain the major concern and the surrounding context of the respondents by "interweaving activities of observing, listening, and asking to achieve a deep description of the entire reality" (Davis, 1986, in Aldiabat and Le Navenec, 2011, p.7).

Despite controversies regarding when to bring in literature-review when conducting grounded theory, I did however choose to bring forward both literature-review and theoretical framework. This was because of several compelling reasons for doing so. Literature-review and theoretical framework can justify a specific research (McGhee, Marland and Atkinson, 2007; Coyne and Cowly, 2006, in Dunne, 2010), help with contextualizing (McCann & Clark, 2003a, in Dunne, 2010), give orientation to me as a researcher (Urquhart, 2007, in Dunne,

2010) and show how the phenomena has previously been studied (Denzin,2002 , McMenamin, 2006, in Dunne, 2010).

I did apply some notions of theory and context in the presentation to generate understanding of the variation between my research areas and to provide some context for my empirical findings which are presented in Chapter 6. But previous research and theories were mainly applied in Chapter 7 where I analyse and discuss these findings through a more deductive approach seeing my findings in relation to concepts and theories presented in Chapter 4 and considered relevant to the topic of research.

Chapter 7 is divided into two sections; Perceptions of Vulnerability to Natural Disasters and Participation in and Perceptions of DRR in Batticaloa, with a particular focus on governmental implemented DRR-programs, as this enable me to answer my research question. Given the particular context and culture, generalization is difficult. I will however claim that the effect of dislocation and loss of houses have on women in regards to mental stress will be possible to generalize, although the particular inheritance-laws in the district are a very place-specific factor and make houses a vital part of the culture.

Chapter 8 will give a conclusion of the findings and give possible suggestions regarding DRR in this particular context.

2 Research Site

This chapter will justify the research site, and describe the exposure to natural hazards, poverty, livelihood and population. It will also mention the historical context with especially focus on the LTTE and the civil war and women`s position in society.

2.1 Sri-Lanka

Sri Lanka is a middle income island in the Indian Ocean, located in the path of two monsoons, which makes it vulnerable to weather related hazards. The most common hazards are floods, mainly due to monsoonal rain or the effects of low pressure systems, and droughts due to failure of monsoonal rain. The island is also prone to hazards such as landslides, lightning strikes, coastal erosion, epidemics and effects of environmental pollution ((Ministry of Disaster Management, n. d). Sri-Lanka was also severely impacted by the 2004 tsunami.
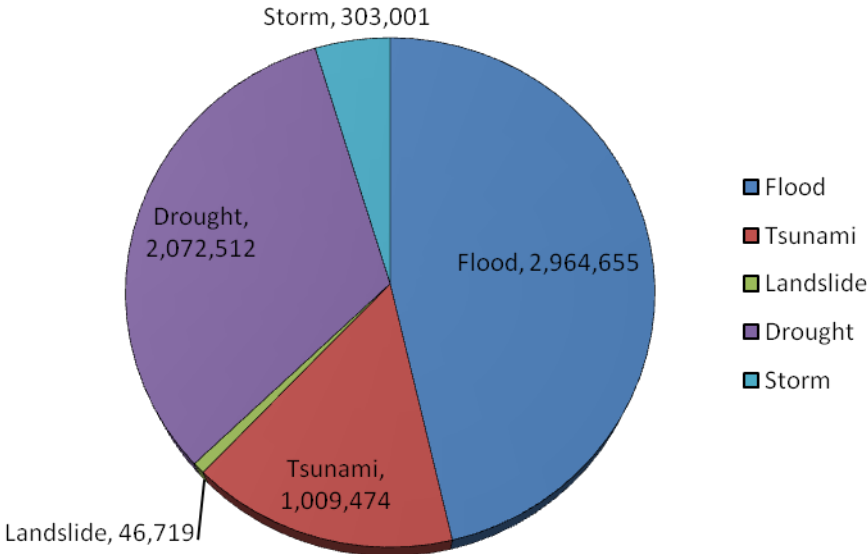
Figure 1: Hazard profile of Sri-Lanka (2004) (Source; Ministry of disaster management)

As the figure shows, flooding is the primary hazard affecting Sri-Lanka, "ranking in high deciles when weighted by both mortality and GDP" (The Earth Institute, n. d.)
The end of May 2016 again revealed the vulnerability of the country, when the heaviest rainfall in 25 years led to mudslides and flooding which caused 92 lives to be lost and made approximately 185, 000 homeless in the south west of the country. Other recent major flood events occurred in 2012 and 2014, and the vulnerability to such disasters is "highlighted repeatedly" (Ledden, 2016).

2. 2 Research Area- Batticaloa District

Batticaloa district, popularly known as the "land of the singing fish", is situated in the central part of the Eastern province. It is bordered in the North by Verugal Aru river and Trincomalee district, Bay of Bengal in the East, Ampara district in the South and South-West and Polonnaruwa in the West and North-West. It is the administrative capital of the North-East region and the district is divided into 14 Divisional Secretary`s divisions (DN), consisting of 354 Gramar Niladhari (GN) divisions and 965 villages (Batticaloa District Secretariat)
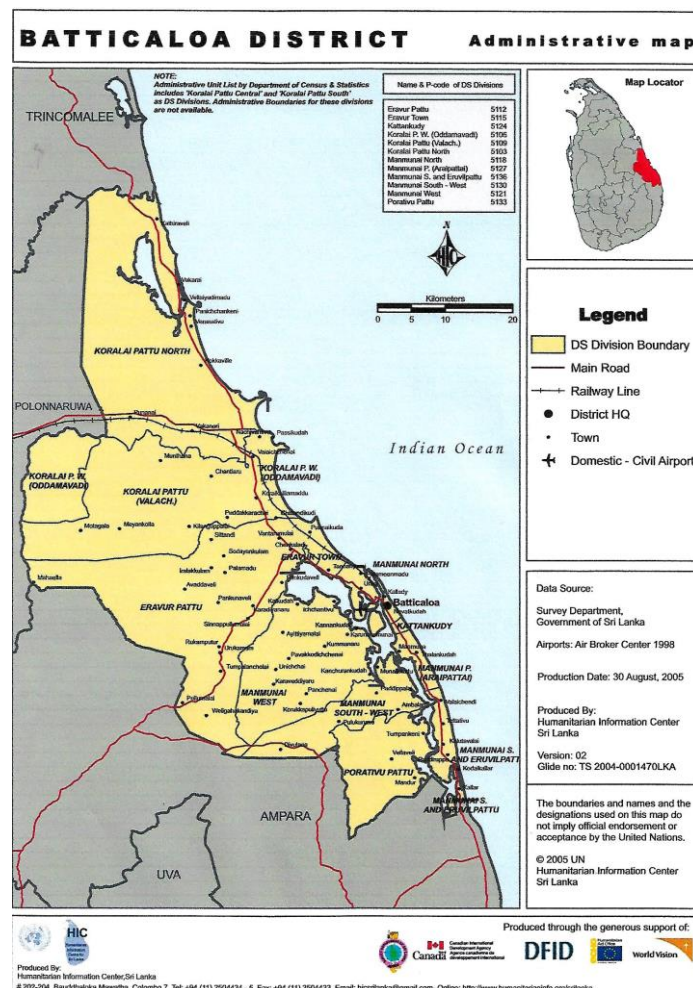
Figure 2; Map of Batticaloa (Humanitarian Information Center, 2005)

The Tamil name of Batticaloa is Matta Kalappu, meaning "flat lagoon" or "muddy swamp" (United Nations Human Settlement Program (UN-HABITAT), 2015), which is an accurate description as the district consists of flat alluvial land in the West coast, bordering the lagoons and sandy soil in the East coast.

There are three lagoons in the district, Valachechenai lagoon, Vakarai Lagoon and Batticaloa lagoon, which is a very large estuarine lagoon not only in the district, but also for Sri Lanka (UN-HABITAT, 2013). The lagoon passes through the district and the town of Batticaloa, stretching 56 km from Verugal in the north to Thuraineelavanai in the south. It has a total surface area of approximately 11,500 ha. The maximum depth of the lagoon is approximately 4m (13 ft.) (UN-HABITAT, 2013). The height of the land does not exceed 7.62 m above the sea level, which makes Batticaloa extremely vulnerable to flooding. The district flood annually during the north-east monsoon season and is water stressed during the south-west monsoon (Thillainathan, 2008).

The long coastline and the huge lagoon-systems make Batticaloa exposed to multiple natural disasters, like tropical cyclones, tsunamis and annual flooding. Several areas in the district are also exposed to saturation and sea level-rise. Situated in the dry zone, the district is also exposed to drought and vulnerable to increased temperatures. All which have severe effect on the lives and livelihood of the population of the district (UN-HABITAT, 2015). These regular events cripple the district by the human and economic cost, thus preventing economic growth, in addition to displacing many from their homes and land. The 2014 floods in Batticaloa are said to have affected over a million people" (Ledden, 2016).

2.2.1 Poverty in Batticaloa

According to World bank (WB)" Sri Lanka's efforts in reducing poverty have been praiseworthy. Excluding the Northern and Eastern provinces, headcount poverty fell from 22.7 percent to 6.1 percent between 2002 and 2012/13. In that same period, extreme poverty in Sri Lanka decreased from 13 percent to less than 3 percent in 2012/13— lower than many of Sri Lanka's neighbors, other post-conflict countries, and other comparable countries" (WB, 2017).

But despite successful decrease in overall poverty, there are still areas classified as "pockets of poverty" (WB, 2017).
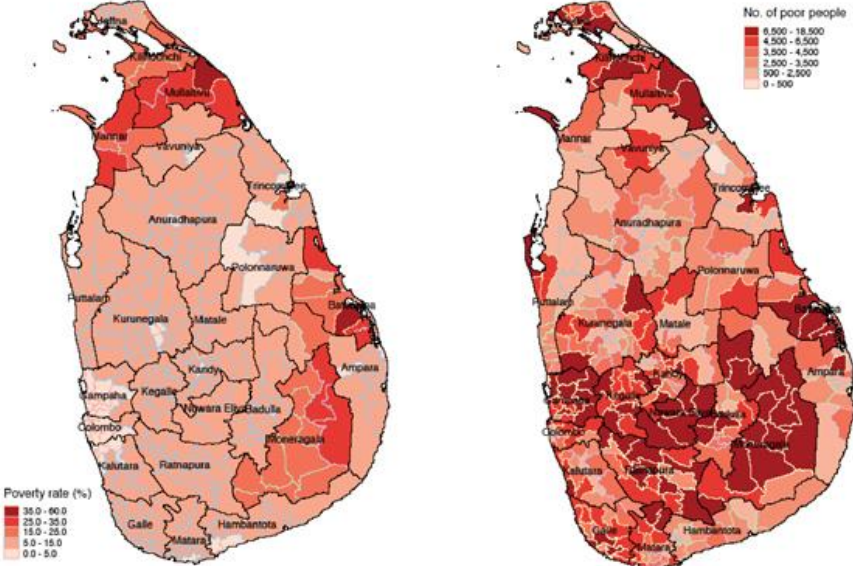
Figure 3; Map of Pockets of Poverty (World Bank)

According to data from the World Bank (2017) three main pockets of poverty remain. The first are the former conflict districts in Northern Province, Mullaitivu (28.8 percent), Mannar (20.1 percent), and, to a lesser extent, Kilinochchi district (12.7 percent). The second is Batticaloa district (19.4 percent) in Eastern province, and the last one is Monaragala district (20.8 percent) in Uva province" (WB, 2017).

Hence, Batticaloa is one of the poorest districts in Sri Lanka, and its vulnerabilities are linked to the impact of the war, the tsunami, and water related climate variability which affects health and safety, water resources, agriculture and fisheries, access to services and livelihood/economic development of families and communities (Humanity & Inclusion, n. d.)

2.2.2 Livelihood

Batticaloa also faces several socio-economic factors such as low economic performance and high poverty and unemployment (UN-HABITAT, 2015). In Batticaloa town and Kattankudy, there are some small-scale industries, like weaving, rice-milling, pottery, mat-weaving and brick-manufacturing. In addition there are a few large-scale industrial factories, based in Valaichenai and the town of Batticaloa (Thillainathan, 2008). On the outskirts of town there are also some governmental and private prawn-cultivation facilities. The main occupational sectors is agriculture, with paddy cultivation, coconut, onions, chilies, cashew, betel and vegetable cultivation as important economic activities ((Thillainathan, 2008),and the fishery industry, which takes place in the lagoons, offshore and the deep sea.

A considerable proportion of the population is dependent on fisheries and fishery-related livelihoods. Although both major sectors are vulnerable to weather related hazards such as flood and drought, the fishery community is considered highly vulnerable to expected climate scenarios because of their livelihood, temporary houses, and their settlement patterns adjacent to the sea and lagoons and their dependency on natural resources (UN-HABITAT, 2013).

Low economic performance and socio-economic factors have led to a high rate of migrant workers. According to a study by United Nations Sri-Lanka (2015) Batticaloa District, home to mainly Muslim and Tamil populations, have the highest departures in the Eastern Province. In 2012, there were 5, 894 workers from Batticaloa who departure under the category "housemaid" (United Nations Sri Lanka, 2015), which in turn also affects the socio-economic factors.

2.2.3 Population

The population is to a large degree concentrated in the narrow strip between the sea and the lagoon in the East coast. The majority is Sri-Lankan Tamil, but also Moor`s, and a small population of Indian Tamils and others (Burghers, Vedda, Singhalese and Chetti) live in the district. The more rural areas are less densely populated. The ethnic distribution in the DN-divisions is shown in the table below, illustrating the ethnic divide in the district.

DS-Division	Total (%)	Ethnicity (%)				
		Singhalese	Sri-Lanka Tamil	Indian Tamil	Moor	Other
Koralai Pattu North	100	0.69	95.64	0.00	3.67	0.00
Koralai Pattu Central	100	0.13	2.71	0.00	97.00	0.00
Koralai Pattu West	100	0.01	0.16	0.00	99.81	0.00
Koralai Pattu	100	0.55	98.85	0.00	0.09	0.51
Koralai Pattu South	100	0.03	99.67	0.00	0.30	0.00
Eravour Pattu	100	2.10	94.91	0.00	2.73	0.27
Eravour Town	100	0.00	0.11	0.00	99.89	0.00
Manmunai North	100	0.23	89.56	0.33	5.00	4.87
Manmunai West	100	0.02	99.71	0.23	0.03	0.00
Kattankudy	100	0.00	0.00	0.00	100	0.00
Manmunai Pattu	100	0.00	74.38	0.00	25.57	0.05
Manmunai South-West	100	4.30	95.70	0.00	0.00	0.00
Porativu Pattu	100	0.86	99.10	0.04	0.00	0.00
Manmunai South & Eruvil Pattu	100	0.03	99.97	0.00	0.00	0.00

Figure 4; Ethnic distribution in Batticaloa district (Department of Census and Statistics, 2012)

When referring to the Tamil population an important distinction needs to be made.
The Tamil population consists of two separate groups, the Indian Tamils and the Sri Lankan Tamils.

- *Indian Tamils* are descendants of workers transplanted from Tamil Nadu state in India during the British era, and usually live in the interior mountain areas in and around tea estates (Kuhn, 2009).
- *Sri Lankan Tamils* largely represent descendants of established Tamil populations dating back to the 19th century. The majority live in the dry zone in the North and East regions of the country, but substantial numbers also lives in the capital Colombo or have migrated to other

western countries (Kuhn, 2009). The majority of Sri Lankan Tamils are Hindu, but there is also several following a variety of Protestant denominations. There are also distinctions found within the Sri Lankan Tamils related to caste and regional identity (Bush, 1993, in Kuhn, 2009).

As illustrated in the table above, the settlement patterns of the district is to a large degree ethnic based. According to Routray and Singh (2007) this is because the Government of Sri Lanka (GoSL) policies with respect to population and development in the Eastern Province have been characterized first by a regime of ethnic transmigration of Sinhalese populations, and second by an effort to segregate all three ethnic groups into segregated zones of ethnic concentration (in Kuhn, 2009).

This ethnic divide also affected my research. Initially I was aiming at addressing the different ethnic groups, but the ethnic composition and community divide, in addition to a limited time-frame made it difficult to access all the different communities. My samples thus reflect the tables presented above, as the majority of my respondents are of Sri Lankan Tamil heritage, referred to only as Tamils. As my respondents were chosen based on purposive sampling and own vulnerability-assessments, the high number of Tamils could also be explained by the fact that "complex political ecology and history of population transfer has put large, vulnerable Tamil communities in close proximity to the coast" (Kuhn, 2009, p. 2).

2.3 The Development of LTTE and the Civil War

As before mentioned Batticaloa was severely affected by the civil war. The ethnic divide between a Singhalese and a Tamil kingdom can be traced back to colonization era. However, the first sparks of grievance emerged with policies implemented during the British rule, favoring Tamils with regards to colonial schools and civil service jobs (Scharffscher, 2011). The Tamils, who made up 22 percent of the Sri Lankan population, got disproportionate access to English education and civil services. The independence in 1948 further fueled the Tamils desire for greater autonomy and Tamil Eelam (Alexander, 2014), or a homeland for the Tamils, in the Tamil populated areas in the North and East part of Sri-Lanka.

The noticeable shifts in policies in post-colonial period , including Singhalese language laws, policies actively favoring Sinhalese and several pogroms against the Tamils carried out by Singhalese (de Silva, 1997, in Scharffscher, 2011), strengthened the Tamils perceptions of only being "a true minority in the hands of the Sinhala majority" (Alexander, 2014). Discriminating policies, and bureaucratic methods of secession, such as the system of District Development Councils, were not acceptable to the Tamils and resentment intensified. New restrictions on university entrance in the beginning of 1970 had particular impact on the Tamil population. This led some Tamil youths feel "that peaceful political agitation by the old men had got nothing for the Tamils and [that] it was the boys turn to secure [Tamil] rights," through more radical means if necessary" (Akhter, 2007, p. 107, cited in Hussain, 2010, p. 395, in Richards, 2014, p.12). Following the new university policies and constitution, Tamil youths formed the Tamil Student League (TSL), which organized protests against the discriminating policies (Sabaratnam, 2011, in Richards, 2014, p.12). In 1973 the TSL evolved into the Tamil Youth League (TYL) in 1973, the youth wing of the Tamil United Front (Sabaratnam, 2011, in Richards, 2014, p. 12). The future leader of the Liberation Tigers of Tamil Eelam (LTTE), Vellupillai Prabhakaran, participated in both leagues (the TSL and the TYL), and in 1972 Prabhakaran formed the Tamil New Tigers (TNT) with Chelliah Thanabalasingham (alias Chetti) (Sabaratnam, 2011, in Richards, 2014, p.12). On 5 May 1976 the TNT became the LTTE (Rinehart 2013: 126, in Richards, 2014, p.12) (see Richards, 2014 for more on the evolution of LTTE).

According to the LTTE constitution the members should

> "fight to establish the total independence of Tamil Eelam, to establish a sovereign and socialist democratic people's government, to abolish all forms of exploitation (particularly the caste system), to establish a socialist mode of production, to uphold armed revolutionary struggle as an extension of the political struggle, and to gradually and systematically transform guerrilla warfare into a genuine people's war of liberation"   (Sabaratnam 2011, in Richards, 2014).

Especially important for Prabhakaran was the abolishment of the caste-system. He himself belonged to the fisherman caste (Karaiyar), together with a significant number of the other members of LTTE (Richards, 2014).

Although the LTTE was formed in 1976, the war did not escalate before 1983, following the Black July riot. On July 24, 1983, thirteen soldiers were killed by the Tigers in a landmine ambush, and in turn, the Sinhalese made at large the Tamil population to pay for the mistake. In the south districts the Sinhalese "killed, tortured, and raped thousands of Tamil people "(Anderson, 2011, p. 45, in Alexander, 2014). According to Thomas (2016) the estimated death toll range between 400 and 3,000 people, and approximately 8,000 homes and 5,000 shops were destroyed making 150,000 people homeless. The economic cost of the riots was estimated at $300 million. However, the statistics often vary depending on the source (Thomas, 2016). The riots were seen as "the sparks that set the fires" (Thomas, 2016) and the war ravaged the North-East of Sri- Lanka for nearly three decades.

The Norwegian government, monitored by a coalition of EU and Scandinavian governments managed to broker a formal cease fire agreement (CFA) that was signed in 2003 (Wilkinson 2003, in Kuhn, 2009). But despite the cease-fire agreement in 2002, volatile tensions continued in Batticaloa between Vanni (Northern) Tamils and Matakaluppu (Batticaloa) Tamils, Singhalese and Tamils, and between Moors/Muslims and Tamils (Thangarajah, 2003; Fuglerud, 2003, in Scharffscher, 2011). During the ceasefire evidence suggest that also a majority of child soldiers and soldiers were drawn from the East-regions (UTHR 1993, in Kuhn, 2009). The people in Batticaloa, particularly the Tamil population, experienced violence from all sides. The violence included abductions and torture by the Sri Lanka Special Task Force, internecine killings by a Tamil force (the Tamil National Army) established during the Indian Peace Keeping Force occupation to counter the LTTE and massacres, assassinations, abductions, child conscription, and anti-Muslim pogroms by the Tamil Makkal Viduthalai Pulikal group (Walker, 2013; McGilvray, 2008, in de Mel, 2017; O`Sullivan, 1997, in Kuhn, 2009). The situation for the population in Batticaloa was not made any easier by the Karuna faction in 2004, where Vinayagamoorthy Muralidharan, known as Colonel Karuna, made a split with the leadership of the LTTE, which was always based in the Northern Province (Kuhn, 2009), which further escalated the conflict. Colonel Karuna`s hometown was Batticaloa. The split was based on Colonel Karuna`s perceptions of Eastern soldiers being sacrificed on the battleground. It is interesting to note that after the war the former LTTE-leader was given a seat at the government as Minister of National Integration and Reconciliation (Herath, 2011).

As the world's longest-running civil war, the Tamil conflict had tremendous impact on loss of life and economic growth. It is estimated to have led to the death of 70,000 people, and the displacement of one million, or 5% of the population (Wilkinson 2003, in Kuhn, 2009). In addition the costs, the particular warfare conducted in the East also had more wide-stretched impacts which had wide-stretched impact on society, as described by O'Sullivan (1997);

> "The type of warfare employed in the east, involving massacres, disappearances and identifications, seriously affected entitlements by breaking down the intangible element necessary for economic relations and the fair provision of public services—trust. This destruction of trust and the widespread suspicion and hostility accompanying it both reflected the dearth of civil institutions in the east and prevented their further evolution. So, on the one hand, the mode of warfare affects the costs of war by affecting the development or regeneration of institutions of civil society which can help supplement non-market entitlements" (in Kuhn, 2009, p.11).

2.3.1 Women in LTTE

The LTTE had a significant number of female fighters. As explained by Alexander (2014) "From the movement's inception in 1983, the LTTE has drawn tens of thousands of women into its ranks, transforming the concept of the ideal Tamil woman into one who is militarized, independent, and empowered" (Alexander, 2014). After first having been restricted to LTTEs political wing, testimonies from female ex-LTTE fighters states that women initially began to demand more active combat roles in the LTTE in 1983, following the Black July riots and the associated violence (including rape) which was perpetrated against Tamil women (Alison 2003: 39-44; Stack-O'Connor 2007: 44, 55; Wang 2011: 103-4., in Richards, 2014). However, given uncertainty of women`s capabilities among the leadership, female fighters were not used in active combat until October 1986 (Richards, 2014), but in the beginning of 1990 female combat groups like the Women's Military Wing and Birds of Paradise accounted for 30% of the militants in the LTTE (Gunawardena, 2006, in Alexander, 2014).

The women's wing was made up of various women's units, e.g. an anti-tank unit, a heavy weapons unit, and an anti-aircraft unit (Balasingham, 1993, in Richards, 2014). They were also heavily involved in the sea-tigers (the navy), the black tigers (suicide squadron) and the police-force (Richards, 2014), which all subsequently altered the socio-economic framing of the society. This will be more thoroughly discussed in section 2.4.

2.3.2 Children in LTTE

Initially LTTE did not train children under 16 years old. However , given severe losses and "to prepare for the IPKF war, the LTTE augmented its underage recruits by training one further children's unit known as the "Batticaloa 13th Batch," which was made up of children between the ages of nine and 15" (Gunaratna 1998, in Richards, 2014). Some children in-listed partly on voluntary reasons, but the number of children-soldiers was also due to the un-written rule by the LTTE that every family within their territory should contribute with one member, often a son or a daughter (Trawick 1997: 158; HRW 2004: 16; HRW 2008: 7., in Richards, 2014). If the families refused, forcible recruitment and violence were employed (HRW 2004: 16-19; UTHR 2003, in Richards, 2014).

In relation to the peace-agreement forced child-recruitment escalated, particular in the East and Colonel Karuna was quoted saying "The Batticaloa people are giving their children; you must give your money" (Ibid; UTHR 2003, in Richards, 2014, p. 33). The numbers of child-soldiers from this region was found to be 2000 as compared to 500-600 from the North (Singh, 2007, in Kuhn, 2009). This also has socio-economic impacts, as the children may have emotional distress and have lost education due to the war, which are found to impact resilience to disasters (Frankenberg, Sikoki, Sumatri, Suriastini and Thomas, 2013).

2.3.3 War and Disasters

In 2004, when the tsunami hit Sri Lanka, the eastern part of the country was already severely affected by the civil war. Several of areas of Batticaloa District, including the coastal area of Vaharai, were under LTTE control. As explained by Kuhn (2009) "Control of most of Batticaloa was contested between the Karuna faction, with GoSL support, and the LTTE" (p. 12), which again affected the level of vulnerability to natural disaster. As explained by Goodhand and Klem (2005) "Although natural disasters are in a sense "non discriminatory", war-affected countries have higher preexisting levels of vulnerability, whilst the distribution of vulnerability tends to be geographically concentrated in the areas most affected by violence" (in Kuhn, 2009, p. 7).

In addition the conflict had significantly altered the landscape. For instance, as mentioned by Walker (2013) had the costal mangroves, which could have limited the impact of the tsunami, been stripped by the SLA for security reasons (in de Mel, 2017). The war also made reconstruction more difficult and demanding. As explained by Gaillard (2007) it's the pre-existing social conditions of a group or region that experience natural disasters that determine how resilient they are in adapting to change (in de Mel, 2017). Nevertheless, as indicated by Jayatilaka, and Amirthalingam (2015), the war and displacement appeared to have created resilience among the war-affected and tsunami-affected women in the North-East region. This will be further elaborated in the analysis.

2.4 Women and Culture in Batticaloa

Traditionally women in the Tamil society lived by the "social expectations and cultural conventions of *addaccam* (modesty and silence) and *odduccam* (poise and restraint) (Alexander, 2014). And women`s mobility are said to be" monitored and controlled in public spaces and she lives under constant "scrutiny of the male population" (Sangarasivam, 2003, p. 65, in Alexander, 2014). According to Alexander (2014) men being interviewed about the gender norms of Sri Lanka, all acknowledged a woman's "lack of freedom and power". Traditional customs also makes it difficult for widows to re-marry.

This was altered during the war, as the high rate of female fighters had socio-cultural impact. The struggle for Tamil Eelam led to a radical transformation of the socio-cultural role of women, given their key role in the conflict. The transformation was especially regarding the perception of women and women`s perceptions of themselves (De Mel, in Lanham, Rowman & Littlefield, 2001, p. 206, in Alexander, 2014).

According to Gowrinathan (n. d.) periods of conflict such as the Sri Lankan Civil War "open up spaces of agency for women to cross private/public barriers and to assume new roles thereby shifting cultural norms to allow for the mobilization of female fighters" (in Alexander, 2014). And there are numerous first-hand accounts from female LTTE soldiers who emphasize the sociocultural transformation emerging from the war.

As explained by Alexander (2014) "The war provided some women – who previously may not have had the opportunity to escape the private sphere – with the chance to not only change their own lives, but also to alter societal gender norms" (Alexander,2014). "The very tenets of the women's front, the female division inside the LTTE, were constructed around gender equality and transforming the gender status quo" (Alexander, 2014). This can help explain the huge recruitment of women in the LTTE.

The Tamil women who joined the LTTE often shared the motives and ideals as the male fighters, but often also included a desire to be free from sexual violence, as rape was a frequent incidence at the time of the war (Richards, 2014). The recruitment of women was also facilitated by the untraditional view taken by the LTTE. Where the traditional view in Tamil culture and society considered the rape-victims as "polluted", the LTTE accepted them without stigma, gave protection, the means to fight back and empowerment (Stack-O'Connor 2007: 56; Herath 2012: 129., in Richards, 2014). It is however important to keep in mind that the traditional gender pattern to some degree was maintained as LTTE had separate female and male divisions (Richards, 2014).

It is interesting to note that prior to the war the Tamil language lacked any definition of empowerment specifically related to the recognition of power women have over their own lives. The word *"Ah-lu-mai"* (empowerment), created by the LTTE, acknowledge this power. *"Ah-lu-mai"* reflects the Tamil woman's newly recognized "governance, authority, and leadership" roles" (Gronfors, 21, in Alexander, 2014).

But despite notion of women`s empowerment and the reconstruction of the Tamil woman from the "traditional ideal of the auspicious, fecund wife to the androgynous Armed Virgin" (Manchanda, 2013, in Alexander, 2014), the LTTEs agenda to abolish the custom of caste and dowry did not succeed and was still practiced, although more confined and hidden. Hence, the Tamil culture still entails these cultural elements and it continues to affect the female population, also the empowered former female combatants. Former female fighters faces stigmatization and other problems related to the traditional perceptions on women. For instance, some find it difficult to marriage, as their families refuse to pay the dowry traditionally demanded in marriage negotiations on the basis that they have been in the 'militant movement' and fighting along with men (Parashar, 2017).

2.4.1 Dowry

Dowry, in the form of Kudi, is an important cultural aspect in Batticaloa. Dowry is traditionally defined as "the properties transferred by parents to their daughter, the bride, and to the groom during marriage. Assets such as houses, land and jewelry customarily go to the bride while the prospective husband may receive money" (Jayatilaka and Amirthalingam, 2015, p. vii), and are closely related to inheritance practices.

In Sri Lanka the practice differs between the Singhalese, who practice Kandyan law, the Muslims who use the Muslim law and the Tamil community practicing Thesavalami law. The Tamils and Muslims in the east of the country also use the Kudi, a matrilocal system which is related to religious festivals and marriage (Jayatilaka and Amirthalingam, 2015, p. vii). In the Tamil community, the women traditionally have had strong inheritance rights with respect to land and property (Agarwal; Savananthan; Balasingham; Wanasundera, in Jayatilaka and Amirthalingam, 2015).

The inheritance law among Tamils and Muslims in Batticaloa traditionally follows to the practice of "Kudi", a matrilocal system that transfers practically all family property, movable and immovable, to daughters in the form of dowry (cītanam) when they marry, leaving little to inherit for sons or daughters to when their parents die (McGilray, 2011, Ubeyesekere, 1968, in Jayatilaka and Amirthalingam, 2015). McGilray (2011) explains that sons get access to property through their wives and wives' parents, where they will live matrilocal during the early years of their marriage. Their own independent household in the wife`s dowry house will gradually follow children and a steady income. Her parents will construct a new dowry house (immediately adjacent if possible) to younger sisters ready for marriage, where they will move into with remaining unmarried children, thus repeating the matrilocal marriage and dowry-house cycle (McGray, 2011). The very poor are however not expected to follow this practice.

For the women there are several benefits associated with this arrangement where newly-married couples live in clusters with the bride's family, such as joint childcare and even protection during instances of domestic violence (Uyangoda and de Mel, 2012, in Jayatilaka and Amirthalingam, 2015).

This arrangement increase the bonds and add to the women`s social capital which in turn increase resilience. However, although the tradition clearly has positive sides, it also has negative sides, like exemplified by former female combats struggling to get married due to families refusing to provide dowry, as they have gone against traditional gender roles.

The tradition of Kudi has also been affected by displacement due to war and disasters because, as pointed out by Jayatilaka and Amirthalingam (2015) "Displacement, whether due to conflict, natural disasters or development, not only directly and negatively affects those who are displaced, but also can have far-reaching effects on the culture and society as a whole" (Jayatilaka and Amirthalingam, 2015, p. vii). There are also pointed out how important such cultural arrangements are to take into consideration regarding DRR. And Jayatilaka and Amirthalingam (2015) claims re-settling and housing-schemes in the district often were inappropriate because houses were often given to the men, thus disrupting a specific feature in Batticaloa.

2.5 Summary

As mentioned in the introduction Batticaloa is one of the poorest districts in Sri Lanka. The impact of the war, the tsunami, and water related climate variability increase the districts vulnerability and affects health and safety, water resources, agriculture and fisheries, access to services and livelihood/economic development of families and communities (Humanity & Inclusion, n. d.) As described in section 2.4 it also have a complex cultural and historical context, especially regarding women`s position in society. War and dis-placement due to war and disasters have had socio-cultural impacts, significantly altering women`s perceptions of traditional gender roles, but the districts cultural traditions still exist. In order to succeed with DRR in the district, cultural and context-sensitive approaches must be undertaken.

3 Main Objective and Research Questions

My main objective and research questions presented below are based on the established knowledge that disasters have a negative impact on development.

Previous literature and research on gender and disasters further leads up to the assumption that impact of natural disasters are gendered, making female more vulnerable to disasters than men.

In addition, new research strongly emphasise the importance of a more comprehensive understanding of the various contexts to be able to include the more vulnerable segments of the population, which is considered to be a valuable tool towards achieving disaster risk reduction and build resilience and thus promote development.

By focusing my research on women and assess *their* perception of vulnerability and disaster risk reduction activities, the aim of this research is to make a contribution to a identified gap in previous studies on women and disasters

3.1 General Research Question

"How do women in Batticaloa perceive their own vulnerability to natural disasters, and what is their perception of disaster risk reduction efforts"

3.1.1 Specific Research Questions

- How do women in Batticaloa district perceive their own vulnerability to natural hazards and disasters?
- How do women in Batticaloa district perceive their own ability to decrease their own and their family's vulnerability to natural hazards?
- How do women in Batticaloa perceive efforts to achieve disaster risk reduction?
- How does gender differences, ethnicity, religion, culture, in particular caste-identity, and inequalities influence women`s participation in disaster risk reduction efforts in Batticaloa according to the affected women themselves and the facilitators?
- How do women perceive government risk reduction activities, for instance those established after the Tsunami?

4 Literature Review and Theoretical Framework

This section will elaborate the various concepts and previous literature regarding disasters and how it presents a threat to sustainable development. It will present disaster risk theory, and elaborate the concept of vulnerability. It will also provide insights to why disasters are perceived as being gendered and why it is so important to include women in DRR and assess women`s perceptions in disaster research. This is important given the previous identified knowledge-gaps in research. It will also bring up various theories and models previously used in related research and a selection of the theoretical framework chosen as appropriate background for conducting this research and create a rationale for my study.

4.1 Disasters and Sustainable Development

The term disaster originate from the French word "Desastre" , a combination of two words; 'des' meaning bad and 'aster' meaning star, thus- 'Bad or Evil star' (Khan, Vasilescu, & Khan, 2008, p.43). Disasters are defined as "a sudden, calamitous event that seriously disrupts the functioning of a community or society and causes human, material, and economic or environmental losses that exceed the community's or society's ability to cope using its own resources" (The International Federation of Red Cross and Red Crescent Societies (IFRC), in Kumar, 2011, p. 2).

As claimed by Ban Ki Moon "Economic losses from disasters are out of control." (in Hillier &Nightingale, 2013, p.2), and he is right. The cost due to disasters such as earthquakes, tsunamis, cyclones and flooding are now reaching an average of US$250 billion to US$300 billion each year. Future losses (expected annual losses) are being estimated at US$314 billion in the built environment alone (UNISDR, 2015a). According to the Sendai Framework For Disaster Risk Reduction (SFDRR) disasters have over the last 10 years claimed more than 700 thousand lives, over 1.4 million have been injured and making approximately 23 million homeless (UNISDR, 2015a). More than 1.5 billion people have been affected in various ways, with women, children and people in vulnerable situations being disproportionately affected.

In addition, between 2008 and 2012, 144 million people were displaced by disasters (UNISDR, 2015a). Weather-related disasters and the number of people affected by floods and tropical cyclones have doubled and tripled since the 1970s (Hillier & Nightingale, 2013, p.1),

As stated by Hillier and Nightingale (2013) "Disasters have a devastating impact on development. Families lose homes, livelihoods and loved ones, communities lose businesses, jobs and services, children and particularly girls miss school and are at risk of early marriage – the list of impacts goes on. Disasters can cancel progress on poverty reduction" (p. 2), and affect the safety and wellbeing of persons and communities (UNISDR, 2015a), and thus present a threat to sustainable development. Sustainable development can be defined as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (International Institute for Sustainable Development, n. d). And although every country suffers from disaster, they have greatest impact on poor countries. Hillier and Nightingale (2013) states that; 86 per cent of deaths related to floods occur in low or low-middle income countries, as compared with ten per cent in upper middle and four per cent in high income countries. Moreover, it is the frequent small-scale, or "extensive", disasters", like floods, landslides and storms, that bear the responsibility for most damage to livelihoods, houses and assets, thus driving people further into poverty. Such extensive disasters bear the responsibility for a significant proportion of total disaster impact: 54 per cent of houses damaged, 80 per cent of people affected, and 83 per cent of people injured (Hillier &Nightingale, 2013, p.2).

Hence, the incidences of increasing disasters, many exacerbated by climate change, significantly impact any progress towards sustainable development, and according to Matyas and Pelling (2012) "development is fast becoming a project of risk-management, rather than one of economic growth" (p. 62). It is therefore no surprise that the United Nations Office for Disaster Risk Reduction UNISDR withhold that "Sustainable development cannot be achieved unless disaster risk is reduced" (UNISDR, 2015b).

4.2 Disaster Risk Reduction and Disaster Management

According to UNISDR "The key to understanding disaster risk is by recognizing that disasters are an indicator of development failures, meaning that disaster risk is a measure of the sustainability of development" (UNISDR, 2009a, 2011, 2013 and 2015a, in UNISDR, 2015b). Disaster risk is defined as; "The likelihood of loss of life, injury or destruction and damage from a disaster in a given period of time" (UNISDR, 2015b).

Hence, in order to make development sustainable and prevent accelerated increase in disaster risk, there is a growing consensus of the impermanent of addressing the development drivers of risk, such as climate change, overconsumption of natural capital, poverty and inequality (UNISDR, 2015b). There is however, as claimed by Twigg (2004), a problem with the use of the emotive word "disaster" because it conjures images of emergency relief and thus link disaster reduction efforts solely as humanitarian aid when it is also a very central component in development programs.

However, although being referred to as natural disasters it is important to keep in mind that "There is no such thing as a natural disaster, but disasters often follow natural hazards" (UNISDR, 2015b). Rather, as pointed out by the UNFCC Philippine negotiator Yeb Sano (2013) disasters must be considered as "(…) the intersection of factors other than physical. They are the accumulation of the constant breach of economic, social and environmental thresholds" (in Hillier &Nightingale, 2013, p. 2). This paper will use the term natural disasters with this distinction in mind.

Disaster risk is considered to be the consequence of the interaction between hazard and characteristics that makes places and people exposed. Hazard can be defined as; "A dangerous event that may cause loss of life, injury or other health impacts, as well as damage and loss to property, infrastructure, livelihoods and services, social and economic disruption and, or environmental damage" (UNISDR, 2009b, in UNISDR, 2015b). UNISDR define

Exposure are considered as "The presence and number of people, property, livelihoods, systems or other elements in hazard areas (and so thereby subject to potential losses) (UNISDR, 2015b).

As claimed by Cannon (2008) disasters only happens when vulnerable populations "get in the way" of hazards. There is however no definitive definition of vulnerable. Vulnerability can be considered as; "The set of characteristics and circumstances of a community, system or asset that make it susceptible to the damaging effects of a hazard is vulnerability" (UNISDR, 2009b and IPCC, 2012, in UNISDR, 2015b). Another definition of vulnerability from the Epson Hazard project also takes into consideration the various spectres entailed in the concept and include the coping capacity. Vulnerability is here considered as;

> "the degree of fragility of a (natural or socio-economic) community or a (natural or socio economic) system towards hazards. It is a set of conditions and processes resulting from physical, social, economical and environmental factors, which increase the susceptibility of the impact and the consequences of hazards. Vulnerability is determined by the potential of a hazard, the resulting risk and the potential to react to and/or to withstand it, i.e. its adaptability, adaptive capacity and/or coping capacity"
> (The ESPON Hazards project, 2005, p. 7)

Vulnerability is usually closely linked to poverty and marginalisation and also linked to certain stereotypies such as women, elderly and children (Cannon, 2008). But this is a problem for disaster analysis, as pointed out by Cannon (2008) leading up to downplaying or ignoring of specific characteristics of hazard risk and other factors other than poverty. He claims we must understand vulnerability as "people being vulnerable to something – natural hazards of various types – and having various social characteristics that make them likely to be harmed by a particular hazard to a greater or lesser extent" (Cannon, 2006, in 2008, p.351).

The interaction between the four concepts is expressed by the equation;

$$RISK = HAZARD \times EXPOSURE \times VULNERABILITY$$

These concepts are in turn "influenced by a number of risk drivers, including poverty and inequality, badly planned and managed urban and regional development, climate change and environmental degradation"(UNISDR, 2009a, 2011, 2013 and 2015a, in UNISDR, 2015b). The risk drivers are paramount to address, as there is evidence indicating that the exposure of persons and assets in all countries is increasing faster than vulnerability has decreased, which in turn generate new risks and a continued rise in disaster related losses. This in turn has "a significant economic, social, health, cultural and environmental impact in the short, medium and long term, especially at the local and community levels" (UNISDR, 2015a), all hampering attempts to achieve sustainable development.

It is therefore of immanent importance to understand the various risk drivers to achieve successful disaster risk reduction. Another issue brought forth by Seballos et.al (2011) is that "Disaster impact analysis often focuses on the immediate economic loss of the disaster event and the cost of rehabilitation and repair of major infrastructure – the immediate and long-term human dimensions of loss are not factored into these costs. Disaster risk reduction programs therefore tend to focus on the protection of the economy and structures rather than looking at vulnerability and difference within and between communities" (Seballos, et.al. 2011, p. 15), hence also context and culture matters in DRR.

4.3 Vulnerability

According to Baez et. al. (2010) "Disasters are the antithesis of human development" (in Seballos, et.al. 2011, p. 13). And as claimed by Secretary General of the IFRC, Didier Cherpital (2011) "Disasters are first and foremost a major threat to development, and specifically the development of the poor and most marginalized people in the world. Disasters seek out the poor and ensure they stay poor" (in Øyhus, 2016 ap. 32). Therefore "The concept of "leaving no one behind" is a powerful one" (Hillier and Nightingale, 2013, p.1).
To achieve this there is required a particular focus on equality and specific investments for the marginalised people (Hillier & Nightingale, 2013), which is paramount due to the fact that disaster risk is unevenly distributed. Because, even though disasters impact societies broadly, the residents are impacted diversely. They are not equally at risk, and not equally able to recover. Poor households are particular vulnerable, and also gender-specific effects are found (Enarson, 2000).

However, although poverty is a risk driver (UNISDR, 2015b) and thus adding to vulnerability, the value of the concept of vulnerability is in danger of becoming less meaningful because it is removed from the political and economic processes that generate some vulnerabilities (Cannon, 2008, p.350). As explained by Hillier & Nightingale (2013) vulnerability increases because of politically, socially or economically exclusion, giving some "little access to resources, influence, information or decision making" (Hillier & Nightingale, 2013, p. 2).

Hence, vulnerabilities are often categorized into physical and socio-economic vulnerability, where physical vulnerability inherit notions of whom and what that could be affected by natural hazard, like earthquake or floods, and are based on the physical conditions of people and the elements at risk in disasters (Khan, et.al., 2008, p. 46.). Socio-economic factors entail notions of e.g. poverty, marginalization, inequality and psychological factors. These two are closely connected as "The degree to which a population is affected by a hazard will not merely lie in the physical components of vulnerability, but also on the socioeconomic conditions. The socio-economic conditions of the people determine the intensity of the impact" (Khan, et. al., 2008, p. 46).

Disasters are therefor often seen as being socially constructed (Øyhus, 2016a), which lead up to considering also vulnerabilities as a social construction. However, this could be over-simplifying of a broad concept, because , as pointed out by Cannon (2008), the socio-economic condition of people will also often entail some elements of choice, making people live in areas associated with risk because of exploitive relationships and advantages linked to their livelihood (in Øyhus, 2016 a, p.34). Cannon (2008) makes a distinction based on this element of choice, from "strong" socially constructed vulnerability, to "weak" or "innocent" socially constructed vulnerability, taken into consideration the elements of choice. According to Cannon (2008) it is important to acknowledge that some disasters are "innocent" in the sense that some people choose to live with risk because of exploitive relationship and their livelihood, not because social or political factors have forced them to (Cannon, 2008). But although a disaster could be considered "innocent" or "weak" in this perspective, it must never be considered natural, as it is still socially constructed, but in a weaker manner (Øyhus, 2016a).

There is evidence of a significant degree of choice involved in living in some dangerous places, so "in terms of where people live and why they live there, we need to explore the idea that many people may live "at risk" because they want to" (Cannon, 2008, p. 351). Another important distinction is made by Cutter (1996: 530) who has pointed out that vulnerability "still means different things to different people" (in Neumayer and Plümpers, 2007, p. 2). To fully comprehend why people expose themselves to risk, we must understand the underlying cultural and psychological factors that are at play (Øyhus, 2016 a), showing a growing recognition of the importance of cultural factors and psychological in relation to DRR.

4.4 Culture and Disasters

As explained by Cannon, "People trade-off the risks they face with the benefits of their livelihood and often their desire to live in a place they are accustomed to: in other words "culture" and psychology are powerful factors that can make people willing to live in peril" (Cannon, 2008, p. 354). Originally the concept "culture" derives from the Latin "colere," which means to tend to the earth and grow, or cultivation and nurture. According to Williams (1981) "culture" has been considered one of the languages two or three most complicated word and Kluckhohn and Kroeber (1952) collected 162 different definitions of the word (in Hylland Eriksen, 1998, p.24).However, this research will use the Center for Advance Research on Language Acquisitions definition and define culture as "shared patterns of behaviors and interactions, cognitive constructs and understanding that are learned by socialization" (in Zimmerman, 2017), thus, as explained by Zimmerman, "it can be seen as the growth of a group identity fostered by social patterns unique to the group" (2017). As such, cultural factors are important to take into consideration in regards to understand perceptions on vulnerability and risk.

Cultural factors are important as they can help generate understanding to why people expose themselves to risk (Cannon, 2008, Øyhus, 2016a). In addition can the role played by cultural values and emotions add to the understanding of how vulnerability are felt, and help determine who is vulnerable. Culture is also a part of collective decisions regarding what to fear and not to fear (Douglas and Wildavsky, 1982, in Matyas and Pelling, 2012).

Thus, thinking in terms of action and intervention, available responses can be constrained or enabled due to cultural values, and makes it difficult for the various actors to switch activities or capitals, and thereby limit the coping capacity (Arce 2003 cited in de Haan and Zoomers 2005, in Matyas and Pelling, 2012). Several authors therefore maintain that in the long run, not dealing with the underlying cultural values has the potential to seriously limit adaption and resilience policies (Handmer and Dovers, 1996, O'Brien 2011, Pelling 2011, in Matyas & Pelling, 2012).

Resilience can be referred to as the "ability to respond to singular or unique events" (Kendra and Wachtendorf, 2003, p. 42, in Scharffscher, 2011), or considered as the "capacity to adjust to threats and mitigate or avoid harm" (Pelling, 2003, p.5, in Scharffscher, 2011). As explained by Wildavsky, (1988)" In the face of severe constraints, we seem to be fitted with a range of physical and psychological qualities that help us deal with the crisis at hand and "bounce back" one way or another" (Wildavsky, 1988, p.77, in Scharffscher, 2011). Another important perspective on resilience is made by Norros et al. (2008: 130) who argue that resilience is "a process linking a set of adaptive capacities to a positive trajectory of functioning and adaptation after a disturbance… we carefully did not equate resilience with the outcome, but rather with the process linking resources (adaptive capacities) to outcomes (adaptation)" (in Matayas and Pelling, 2012, p. 12). According to International Federation of Red Cross and Red Crescent Societies (IFRC) "resilience is legitimised when it adds to the wellbeing and life chances of those at risk, privileging these characteristics over higher level (e.g. national) and coarser (e.g. GDP growth) indicators of development" (in Matayas and Pelling, 2012, p. 13).

Not taken into account the different rationales, or "culture", has led many DRR efforts to be inadequate or inappropriate (Cannon, 2008). Failing to take cultural aspects into consideration can also in some cases increase vulnerability, i.e. re-settlements after disasters, if not seen in relation to established patterns of settlements linked to cultural traditions, as will be discussed later in this paper.

4.5 The Gender Perspective in Disasters

It could be claimed that "Natural disasters does not discriminate" (Hines, 2007, p. 61). But, as explained by Chakrabarty "The impact of natural disasters on human life is never entirely determined by nature. It depends greatly on economic, cultural and social environment" (Chakrabarty, n. d.). It is also well established that disasters are experienced different by men and women (Ariyabandu & Wickramasinghe, 2003; Enarson, 2000; Wiest, Mocellin, & Motsisi, 1994, in Fisher, 2010, p. 204). Disproportionally not only do women become victims of natural disasters, "but they also suffer from the impacts of natural disasters at an unequal and alarming rate" (Hines, 2007, p.63), given that a range of impacts are gendered (Ariyabandu & Wickramasinghe, 2003; Enarson, 2000; Wiest, Mocellin, & Motsisi, 1994, in Fisher, 2010, p. 204).

According to Enarson (2000) there are several gendered impacts of disasters;

- Post-disaster mortality, injury, and illness rates which are often (but not universally) higher for girls and women;
- Economic losses which disproportionately impact economically insecure women (e.g. agricultural losses of women farmers, the destruction of women's home-based businesses, limited access to post-disaster economic aid);
- Work load changes which suggest that disasters increase women's responsibilities in the domestic sphere, paid workplace, and community through the disaster cycle of preparation, relief, reconstruction, and mitigation;
- Post-disaster stress symptoms which are often (but not universally) reported more frequently by women;
- Increased rates of sexual and domestic violence against girls and women in disaster contexts.

(Enarson, 2000, p.2)

Here it must be clarified that gender does not refer to sex, but to the socially constructed characteristics of women and men. World Health Organization (WHO) refers to gender as;

> "the socially constructed characteristics of women and men – such as norms, roles and relationships of and between groups of women and men. It varies from society to society and can be changed. While most people are born either male or female, they are taught appropriate norms and behaviors – including how they should interact with others of the same or opposite sex within households, communities and work places" (WHO, n. d).

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According to United Nations (2001) gender, at the most fundamental level, is "a central organizing principle in the specific cultures and societies in which risk is constructed and disasters unfold" (in United Nations, 2001), even though not fully developed in disaster research (Fothergill, 1996), despite the fact that women are disproportionally affected by the social impacts of natural disasters (Gokhale, 2008; Enarson, 2000).

One example of gendered disproportional suffering could be exemplified by the death tolls in Sri-Lanka, Indonesia and India in the aftermath of the tsunami in 2004. In some areas the staggering amount of 80 % of the dead and missing were women (Ariyabandu, in Enarson & Dhar Chakrabarti, 2009, p.13). In Batticaloa district 56 % of the dead and missing were females (Birkman & Fernando, 2007, in Øyhus, 2016a). These variations could be explained by i.e. lacking swimming abilities, tree-climbing skills, traditional clothing limiting abilities to run and also responsibility for children and disabled. In affected regions of Sri-Lanka, as pointed out by Oxfam International (2009), tree-climbing and swimming were mainly taught to boys and men to perform tasks "that are done nearly exclusively by men" (Oxfam International 2005: 9 in Neumayer and Plümper, 2007, p. 6-7). In addition will their socio-economic status be a factor. For instance are "Widows, single or disabled women, women with low income, and those belonging to marginalized racial or cultural groups (…) particularly vulnerable" (Enarson, 2000, in Fisher, 2010, p. 905). In addition to gender, also age was an important factor regarding the casualties following the tsunami. Birkman & Fernandos (2007) records from Batticaloa indicate that elderly (61 years and older) and young people (0-10 years) represented the highest numbers of casualties (Øyhus, 2016a).

Moreover, as explained by Hillier and Nightingale (2013)"Women often face higher risks personally and (…) have to shoulder the burden of managing them on behalf of their families – eating last and least in times of food crisis, caring for injured and sick members of the family" (2013, p.2). Enarson (2012) goes on, claiming that "gender relations in disasters do put the majority of women (…) at increased risk, whether through poverty or physical challenges, racial or ethnic marginalization, insecure housing, language barriers, violence, or lack of voice—or some combination of these interwoven factors" (2012, p. 6) She also states that "Understanding these vulnerabilities and impacts from a gender perspective is the essential precondition for building on and enhancing women's leadership in crisis" (Enarson, 2012, p. 6).

According to Enarson, Fothergill, and Peek (2006) "Gendered disaster social science rests on the social fact of gender as a primary organizing principle of societies and the conviction that gender must be addressed if we are to claim knowledge about all people living in risky environments" (p. 130). One problem is, although important exceptions are found, that researchers in disasters often investigate family decisions without taking into consideration the power structures between genders, and measure economic impact without taking into consideration women`s livelihood and the informal sector (Enarson, 2012). And although men get disproportionally affected in some types of disasters, as explained by Neumayer and Plümper (2007), "the general point remains valid: social norms and role behavior will often put women at greater risk of disaster mortality, but this depends on the type of disaster and its context and at times social norms and role behavior can put men at greater risk instead" (Neumayer, and Plümper, 2007, p. 10).

As explained by Quarantelli (1998), a "focus on gender relations in disaster context is one of the contemporary forces of change in thinking and theorizing about hazards and disasters "(in Enarson, et. al., 2006, p. 132). That is why a study on women and their perceptions of own vulnerability and how they perceive DRR are important as "Seeing disasters "through women's eyes" raises new issues for planners, identifies critical system gaps, and brings gender centrally into development and disaster work" (Enarson, 2000, p.1)

4.6 Disaster Risk Reduction and Disaster Management

As pointed out by Hillier and Nightingale (2013) "Disasters are not inevitable" (p. 2). The degree of hazard, exposure and vulnerability is determined by the way governments manage and regulate public and private investments (Hillier & Nightingale, 2013). Thus, "Disaster risk reduction (DRR) measures are proven to be both highly effective and highly cost effective" (Hillier &Nightingale, 2013, p.2). Disaster risk reduction is the concept and practice of reducing disaster risks through systematic efforts to analyse and reduce the causal factors of disasters. Reducing exposure to hazards, lessening vulnerability of people and property, wise management of land and the environment, and improving preparedness and early warning for adverse events are all examples of disaster risk reduction (UNISDR, n. d,b),

and is ultimately linked to choices. "Each decision and action makes us more vulnerable to disasters - or more resilient to them (UNISDR, n. d., b).

Disaster risk reduction includes several disciplines; disaster management, which "aims to reduce, or avoid the potential losses from hazards, assure prompt and appropriate assistance to victims of disaster, and achieve rapid and effective recovery" (Warfield, 2008, in Khan, et.al., 2008., p. 48). Disaster mitigation is seen as "any action to minimise the impact of a potential disaster" (Twigg, 2004, p.13), and disaster preparedness which "refers to specific measures taken before a disaster strikes, usually to issue warnings, take precautions and facilitate a rapid response" (Twigg, 2004, p. 13). In addition, DRR is also, as established previously, a part of sustainable development, reduction of disaster risk is a vital element (UNISDR, n. d., b). However, to make such efforts efficient, assessing perceptions on vulnerability and perceptions of risk and perceptions regarding the implemented risk reduction program by the most vulnerable are valuable.

Although the SFDRR recognize that "There has to be a broader and a more people-centered preventive approach to disaster risk (and that), Disaster risk reduction practices need to be multi-hazard and multi-sectoral, inclusive and accessible in order to be efficient and effective" (UNSIDR, 2015 a, p. 9), it must be taken into consideration that participation in mitigation projects also could be gendered, based on grades of vulnerability and on the socio-economic status. This is important, because as pointed out by Hillier and Nightingale (2013), in addition to gendered issues elaborated in section 4.5, women also faces the risk of missing out on information and warning information because of their role as caregivers and lower levels of literacy. This also includes other vulnerable segments; the young, old, disable and those marginalized by ethnicity and/or caste. Hillier and Nightingale (2013) further claims that "Their systematic marginalisation means they are often less able to participate in and influence disaster prevention or management of key processes, yet they often have major capacities and skills to support risk reduction" (p.2).

Even though, as claimed by Enarson, there has been a "significant progress towards integrating gender analytically and in the field" (Enarson, 2000, p.1), there still exist failures within government agencies and NGO`s to fully consider and integrate gender as a factor in vulnerability and response, making women less able to be considered equal partners in mitigation and community-based planning in regards to disasters (Enarson, 2000).

This despite proven efficiency by women`s groups to reduce vulnerability, both at household level and community level (Hillier &Nightingale, 2013, p.2).

In this regards also cultural values matters. The aftermath of the tsunami in Sri-Lanka is an example that exposed large regional differences in participation in projects. In the south female participation reached up to 40%, while in the east with relatively more conservative socio-economic tradition the participation in recovery planning and management were as low as 10% (Enarson & Dhar Chakrabarti, 2009, p.13), showing the importance of assessing cultural values in regards to DRR as explained previously.

In addition, as pointed out by UNSIDR also the context matter, because ultimately "Capacity building, disaster risk reduction and disaster risk management are all components of developing and enhancing resilience. Disaster risk management options must recognize resilience as a process that is inherently context specific" (UNSIDR, 2015c).

This research will assess perceptions regarding participatory approaches to disaster risk reduction as well as larger government interventions.

4.7 Theoretical Framework

As my literature review has shown, there is still a lot of research needed to address the gendered perspective on disasters, and provide more comprehensive understanding of women`s vulnerability and perceptions of risk reduction efforts. This is paramount in order to fully benefit to the full extent from crucial disaster risk reduction efforts needed to achieve sustainable development.

4.7.1 Social Vulnerability approach

Naturally this research, aiming at addressing vulnerability and perceptions of disaster risk reduction efforts build upon the before mentioned disaster risk model, identifying risk as a result and a combination of hazards, exposure and vulnerability.

There is however no single theoretical lens that focus on gender and disasters research, therefore most researcher borrow ideas freely from all angles, though most start out with a social vulnerability approach (Blaikie, Cannon, Davis and Wisner, 2004; Bolin, Jackson & Crist, 1998; Hewitt, 1997, in Enarson, Fothergill &Peek, 2006).

Agder (1999) defines social vulnerability as "the exposure of groups or individuals to stress as a result of social and environmental change, where stress refers to unexpected changes and disruption to livelihoods" (p. 249). According to Singh, Eghdami, and Singh (2014) "Social vulnerability is determined by various factors such as physical, social, economic, and environmental factors or processes, which increase the susceptibility of a community to the impact of hazards. Poverty, occupation, caste, ethnicity, exclusion, marginalization and inequities in material consumption of a society or community also enhance social vulnerability"(p. 71). Singh, et. al. (2014) further points towards tendency within social systems that some, e.g. "ethnic minorities, disempowered castes or classes, religious groups, or occupations may live or work in physical areas that are relatively disaster-prone" (Singh, et. al., 2014, p. 71). Taking social status into consideration is paramount because, as explained by Satterthwaite and Mitlin (2014), social status have a direct impact on the capacity of individuals and groups to manage risk and build resilience, but this is regularly underestimated in research (in UNISDR, 2015b).

As mentioned in section 4.3 there is a relatively new paradigm in relation to social vulnerability. As previously explained Cannon (2008) has drawn a distinction between what he refers to as "innocent" or "weak" socially constructed vulnerability and "strong" socially constructed vulnerability. The distinction is founded in the elements of choice found among several vulnerable populations. Some trade of risk because of the benefits it provides them, not because they are forced to by political forces or power relations (Cannon, 2008; Øyhus, 2016a). However, elements of choice or "weak" social construction can also intermingle with "stronger" socially constructed vulnerabilities. Hence the importance of knowing the contextual and cultural factors in the particular area of study.

It is also important to assess perceptions on vulnerability, because as explained by Singh, et. al. (2014), "Understanding vulnerability requires more than simply understanding societies" past and present relations with regard to disaster and development. Vulnerability is also about people, their perceptions and knowledge" (Singh, et.al., 2014, p. 71).

In addition, perceptions of risk is important to assess, because as explained by Hilhorst and Bankoff (2006) "People`s ideas about risk and their practices in relation to disaster constitute the sextant and compass with which they measure and chart the landscape of vulnerability" (p.4, in Singh et.al., 2014, p. 71). That is why, as explained by Øyhus (2016 a) it is of utterly importance to understand what vulnerability implies for communities in regards to future risk scenarios. It is possible to analyse vulnerability at all levels, from the individual, national and up to the international level (Øyhus, 2016a, p. 22-23). And, as explained in Singh et.al (2014);

> "At least from the perspective of hazards and disasters, vulnerability is the conceptual nexus that links the relationship that people have with their environment to social forces and institutions and the cultural values that sustain or contest them. Thus, combining elements of environment, society and culture in various proportions, the concept of vulnerability provides a theoretical; framework that encompasses the multidimensionality of disasters (Blaikie et al. 1994; Comfort et al. 1999; Cutter 1996; Hewitt 1983b, in Singh, et.al., 2014, p.72).

4.7.2 Social Capital Theory

In addition to a foundation in social vulnerability-theory, the analysis of findings will also be adressing the concept of social capital in order to address perceptions on vulnerability to natural disasters.

It is well established that disasters threaten sustainable development, and the discourse regarding sustainable development has long been employing the concepts of social capital and agency (Collier, 1998; Evans, 1996; Harvey 2002; Newman & Dale, 2005, in Øyhus, 2016 a). However, according to Øyhus (2016a) the concepts could also prove valuable in disaster management studies. One example being Kirinda, Sri-Lanka, with a majority Muslim population, who succeeded in working together in the aftermath of the tsunami, thus proving high social capital in the community (see Øyhus, 2016a).

The central thesis of social capital theory in short is that 'relationships matter' (Field, 2003, p.1-2; in Smith, 2000-2009). Inherent in the concept lie notions of 'social networks are a valuable asset' (Smith, 2000-2009) and that such networks "enables people to build communities, to commit themselves to each other, and to knit the social fabric" (Smith, 2000-2009). This in turn could generate a sense of belonging, trust and tolerance amongst people, and thus be beneficial (Smith, 2000-2009.).

According to Norris et. al. (2008) "Social capital in disaster research is presented as an 'investment' in resilience enhancement" (in James, 2012, p.3).Resilience entails "anticipating, planning and reducing disaster risk to effectively protect persons, communities and countries, their livelihoods, health, cultural heritage, socio-economic assets and ecosystems" (UN, 2015, in UNDISR, 2015c). "The ideas of 'bounce back', 'spring forward' and 'build back better' are often used in the context of resilience (UNSIDR, 2015c). However, as claimed by UNISDR (2015c) "Capacity building, disaster risk reduction and disaster risk management are all components of developing and enhancing resilience. Disaster risk management options must recognize resilience as a process that is inherently context specific" (UNISDR, 2015c).

Another important issue is that although most people hold positive values to the concept of social capital and it could be considered "the glue that hold groups and societies together" (Narayan, 1999, p.1, in Øyhus, 2016, p. 2),the concept could also have negative implications. As pointed out by Narayan (1999) one negative effect of social capital, considering the ties that bind in social networks, is that it can also lead to exclusion. In addition, a lack of overlapping networks, or cross-cutting ties, among groups may result in unequal opportunities to take part in development activities (in Øyhus, 2016a, p.4).i.e. social capital can have clear negative outcomes, as ties that connect some together, also exclude others, and thus potentially threat personal freedom (Porter, 1998, in Øyhus, 2016 a, p.2). Amartya Sen sees restriction on individual freedom is a most serious concern as freedom is agency, i.e. freedom is both the primary and principal means for development (Sen, 2001, in Øyhus, 2016a, p, 2).

Also Ritchie and Gill (2007) put forward the importance of including social capital into disaster research claiming that "A first step is for disaster researchers to frame future studies using social capital as a pragmatic field concept to better determine its merit in an applied setting and further refine existing theories of disasters" (2007, p.121). Moreover, they claim that employing social capital theory to disaster research might improve understanding in regards to "perceptions of preparedness and warning, evacuation behaviour, organizational effectiveness in response and recovery, emergent organizations after a disaster, and mitigation of disaster impacts" (Ritchie &Gill, 2007, p.121).

I find this theory interesting because of personal assumptions about Batticaloa district as a somewhat "divided" community. Although being characterised as minority groups in Sri-Lanka, Tamils are the largest group in Batticaloa district, followed by Muslims, and with the Singhalese population as a small minority group. In addition my assumptions regarding a community divide also rest on Batticaloa`s position during the civil war, being a "stronghold" for the LTTE, which I assume still affect the different communities, and thus could affect bonds, bridges and agency regarding efficient disaster risk reduction efforts, as well as affecting individuals perception of vulnerability.

As explained by Øyhus (2016b) the concept of "bonds" describe relationships, or ties, within local networks (micro level networks), and "bridges" describe relationships, or ties, connecting the local networks into a more large-scale network (macro-level network).

5 Methodology

This chapter will describe and justify the methodology applied in this research; the choice of research strategy and design will be explained. The sampling process and the methods of data collection and analysis will be described and justified. The ethical considerations I encountered will be presented and discussed. In addition will the challenges and limitations I encountered while doing research in Batticaloa be discussed throughout the chapter, but also be addressed more specific in section 5.7.

5.1 A Qualitative Approach

Qualitative research is, as explained by Bryman (2012) different from quantitative research as it is more interested in words than numbers. My aim for this research was to assess women`s own perceptions regarding vulnerability and DRR, and as such being more interested in words than numbers. As mentioned in section 4.5 Enarson (2000) expressed a need to attempt to see disasters through women`s eyes, as that can "raises new issues for planners, identifies critical system gaps, and brings gender centrally into development and disaster work" (p.1). Seeing the world through the eyes of the people under study is also mentioned by Bryman (2012) as a distinct feature in qualitative research. This preposition to attempt to go beneath the surface does however imply that the people under study might see things differently than expected from the point of an outsider (Bryman, 2012), which I experienced during my research. This was especially regarding perceptions of vulnerability.

5.1.1 Epistemological and Ontological Considerations

Two main paradigms constitute knowledge: namely epistemology, i.e. "what should be regarded as acceptable knowledge", and ontology, the "nature of social entities", or "to what extent social entities should be considered as external or as a part of social realities" (Bryman, 2012). Taken into consideration my research objective, which is to achieve a closer insight into how vulnerability to disasters and DRR are being perceived by women themselves, epistemological considerations, i.e. "what is acceptable knowledge", made an interpretivist approach most appropriate. This approach "looks for culturally derived and historically situated interpretations of the social life-world" (Hughes, 2006). Ontological perceptions regarding "what is" (Hughes, 2006), made a constructivist approach most valuable, as reality is seen as being constructed by the various actors (Bryman, 2012, p.33), instead of being static and un-changeable.

Given my research question and the epistemological and ontological considerations, the research strategy found most appropriate was qualitative research. As a research strategy a qualitative approach is "inductivist, constructionist, and interpretivist" (Bryman, 2012, p. 714).

5.2 Sampling

My collection of data was conducted during 6 weeks of fieldwork in Batticaloa district. As my research is a case study with a particular focus on women`s perceptions of vulnerability, natural disasters and DRR, I considered the appropriate sampling to be purposive sampling. Hence, first Sri-Lanka, with Batticaloa as a particular case was identified because of the districts vulnerability to natural disasters. This was followed by identification of areas relevant to my research questions, i.e. areas with regular flooding and/or vulnerable to cyclones and tsunamis.

Last, I identified respondents who, through own observation, gatekeepers and prior research of the area, appeared vulnerable to natural disasters and had first-hand experience with natural hazards and disaster. This way of purposive sampling is exemplified by Bryman (2012, p. 41).

My main focus was to conduct semi-structured interviews with village women with first-hand experience of natural disasters. In addition I conducted interviews with a represent for Disaster Management in one of my research-divisions, as well as the chairman of Red Cross, Batticaloa. I also had an interview with a GN-representative holding a community meeting in one of my GN-divisions.

The advantage of including NGO and government officials was to obtain a fuller and more various picture and attempt to uncover un-regularities between what is actually felt by women themselves in relation to DRR efforts seen in relation to how government officials and/or NGOs perceive the same efforts. These interviews also validated my original observations regarding especially vulnerable areas. Having respondents in the age range from 29 to 79 years old also added to a variable selection.

Within Batticaloa district I performed interviews, both semi-structured interviews and focus groups in four District Secretariats (DS) and within these DS, eight Grama Nidhara (GN);

- West Manmunai; Kannankuda
- North Manmunai; Kallady, Palmeenmadu, Thiriumadu
- South-West Manmunai; Kokkaddicholai
- Koralai Pattu North; Mankerni, Pannichchankerni, Vaharai

Five of these GNs were rural, former LTTE-strongholds. Three GNs were during the war mainly held by the Sri Lankan Army. This distinction proved to be important and will be discussed further in analysis of data. Examining different areas was done to obtain a more varied picture regarding my topic and get as many perspectives regarding my topic as possible.

Adding several areas to my research also proved valuable as it provided me with respondents with varying experiences in regards to natural disasters, as well as varying background. Some had experienced the tsunami, some lived in areas with regular flooding.
Among my respondents were former child-soldiers, mothers of child soldiers, former migrant-workers, war-widows, some where the husbands had "disappeared". My research areas proved to have a somewhat different contextual framing, which also shaped perceptions on vulnerability and risk. The common denominator among my respondents was first-hand knowledge on natural disasters.

I was also hoping to be able to assess the other ethnic groups in the area to assess their perceptions. However, all of my purposely selected research areas had Tamil population, hence the majority of my respondents are Tamils. The exception was two respondents from the Burgher community. One obvious reason for this was that I was unable to find a gatekeeper to introduce me to the Muslim community, which represent the second biggest population in the area. The district is divided by ethnicity as illustrated in table 3. Another reason for the high number of Tamil respondents chosen through purposive sampling could be linked to previous research mentioned in section 2.2.3 which were identified the Tamil population as disproportionally vulnerable to natural disasters (Kuhn, 2009).

Many of my respondent also belonged to the fishery-community, who are identified as being highly vulnerable to any expected climate change scenario in a report issued by UN-HABITAT (2013), Their vulnerability is linked to residing in temporary houses close to the sea and lagoon banks and livelihood, as they are heavily dependent on natural resources, like fisheries.

5. 3 Collection of Relevant Data

The concept "method" refers to the tools or techniques of data collection, like questionnaires, interviews and observations (Hughes, 2006). Given several controversies regarding validity and reliability of qualitative research, this study use method triangulation as a way to ensure in-depth information, and increase the trustworthiness of the qualitative investigation (Bryman, 2012, p.392). The triangulation applied semi-structured interview, focus-group discussions and the use of secondary sources, through text and document analysis.

To obtain information from various sources regarding the topic of interest, my main focus was semi-structured interviews with affected village women. In addition I have conducted semi-structured interviews with two government officials, a NGO-representative and affected village men. This was done to obtain a fuller and more various picture and attempt to uncover un-regularities between what is actually felt by women themselves in relation to disaster risk reduction efforts seen in relation to how government officials and/or NGOs percept the same efforts. I also had three focus group discussions.

Although that came with several challenges often associated with focus-groups which will be discussed later, it provided me with a good tool to observe group dynamic first hand, hence reinforce my observations.

As mentioned was purposive selection conducted to get informants with first-hand knowledge of my research objective. I had no initial plan on the numbers of interviews, as that to a large degree would be dependent on disposition to talk to me and how many interviews it would be possible to conduct within my time-frame. In addition to my purposely selected respondents I also had more informal conversations with my translator and staff at my hotel regarding the topic. This was however only used to obtain a better picture of the context. I have also used informal information from another area to sustain a more tentative suggestion, which will be addressed in the discussion. I do however believe that my respondents….

5.3.1 Semi-Structured Interviews

The interview is probably the most widely employed method in qualitative research, often applied in the unstructured or semi-structured form (Bryman, 2012, p, 469).
The semi-structured interview usually implies a series of questions, more general in their framing than those applied in a fully structured interview, which gives the researcher some freedom to ask further questions in response to what are seen as significant replies (Bryman, 2012, p.469). According to Bryman (2012) semi-structured interviews are especially suitable in qualitative research which focus on specific topics (Bryman, 2012), which is the case in this study. In such cases semi-structured interviews will allow more specific issues to be addressed, often directed by interview guides, i.e. a somewhat more structured list of issues to address, rather than brief lists of memory prompts, often applied in unstructured interviews (Bryman, 2012). This interview-guide was however not a list of rigid questions. Given the many variables I encountered during my research I found that the more flexible I was following the interview-guide, the easier the interviews got along. And like explained by Bryman (2012), "What is crucial is that the questioning allows interviewers to glean an understanding of the ways in which research participants view their social world and that there is flexibility in the conduct of the interviews" (p. 473). Such flexibility makes it possible to vary the order of questions, following up leads, and discovering inconsistencies in answers (Bryman, 2012).

As a qualitative researchers I was interested not only in what people say, but also how that they say it, so for most interviews a complete, recorded account of the series of exchanges in an interview was available (Bryman, 2012), and then transcribed whenever possible (Bryman, 2012). A few interviews were performed without a recorder, only using notes. Intentionally I planned on using two digital audio-recording devices in case of device malfunction. This however proved to be difficult as my additional recorder provided low quality sound, so I had to rely on one digital recorder. It was also a problem handling several devices as some of my interviews took place standing. In addition to the recordings, I also kept a diary and simple interview protocols. This was done to keep track of observations, the atmosphere and key findings during the interview. I also considered this to be an extra precaution in case of device malfunction.

An apparent strength in qualitative interviews is that it enables the interviewers to "depart from any schedule or guide that is being used. As the flexibility enables the researchers to follow up interviewees' replies and could rearrange the order and wording of questions" (Bryman, 2012, p. 470), the respondent's influence the topic of interest, allowing new topics to emerge during the interview. This was often the case as I conducted research in a complex context. Former child-soldiers and war-widows stories and experiences, and attempted land-grabbing added several new topics. Some topics are beyond the scope of my research, but of great interests regarding new research on the topic of vulnerability.

Furthermore, as explained by Bryman (2012)"it can be difficult in qualitative interviewing to get people to expand further on their answers" (Bryman, 2012, p. 477), as following up on the answers provided by respondents could imply a risk that the interviewer are seen as "judgmental" (Bryman, 2012, p. 477). Throughout my interviews I needed to keep in mind that what I perceived as vulnerability was my respondent`s day-to-day reality. I was also aiming at not using any leading questions, as it was *their* perceptions, not what they thought I wanted to hear, that was the focus of this study. The huge amount of data generated through qualitative interviewing is also considered a weakness and often criticized because the analysis could be extremely time consuming in addition to complex. The findings in qualitative research are also difficult to generalize, and especially in this area great variations were found within the district.

As expressed by my translator "every place a different story", which to a large degree was true. Therefore I would emphasise the importance of context- and culture- specific information in order to succeed with DRR-efforts.

5.3.2 Focus-Group Interview

Bryman (2012) explains the focus group method as a form of group interview with several participants, in addition to the facilitator. The emphasis is on the questioning on a particular fairly defined topic and where the interaction within the group and the joint construction of meaning is of great importance (Bryman, 2012). I intentionally did not plan on conducting any focus group-interviews, but ended up with three focus-groups in three different GNs. Two of these had been organized by my contacts, while one was more random and un-organized, as my second appearance in a remote, flood-affected village collected a crowd thinking I was representing an NGO. This reflected the general opinion in that particular area, where there were huge frustration among the villagers with both the government and DRR.

But although I initially had chosen not to include focus groups as a method of gathering data as I wanted more in-debt interviews, it had benefits regarding my topic. As pointed out by Bryman (2012) it gave me the opportunity to "study the ways in which individuals collectively make sense of a phenomenon and construct meaning of it" (2012, p. 504), i.e. vulnerability, natural disasters, DRR and also the gender-relations and dynamic within the group. I therefor agree with Bryman claiming focus-groups being more naturalistic, as "focus-groups reflect the process through which meaning is constructed in everyday life" (Bryman, 2012, p.504). It enabled me to explore group-dynamic and gender- and class-relations within the group. It must however be acknowledged that it is a somewhat challenging discipline. To keep record on who says what, the group-dynamic, responses to questions, the translation and last but not least the transcribing of these interviews was time-consuming, sometimes confusing and it must be said that because of my need for translator especially in the focus groups much got lost in translation.

5.3.3 Text and document analysis

Pre-existing literature is, according to Bryman (2012, p.8) considered an important element in all research. Secondary sources i.e. previously research, statistics and surveys, was used to complement and support the data found through semi-structured interviews and focus groups and own observations, and was drawn upon to gain deeper insight. Drawing upon others' experiences will make it easier to avoid making the same mistakes, and thus be able to attain new, and potential valuable insight which could be difficult to obtain otherwise because of time and finance limitations which is often experienced while conducting fieldwork related to student projects (Bryman, 2012). I have therefor addressed relevant research regarding my topic of study.

5.4 Data Analysis- Grounded Theory

The most commonly applied theory when working with qualitative data is, according to Bryman (2012) grounded theory. Grounded theory is explained as "an iterative approach to the analysis of qualitative data that aims to generate theory out of research data by achieving a close fit between the two" (Bryman, 20012, p. 712).

As my aim was to assess women`s perceptions vulnerability, natural disasters and DRR, and a limited time frame to conduct the study, the grounded theory became the most appropriate approach. This because, as explained by David (1986) " grounded theorists try to explain the major concern (core category) and the surrounding context of participants who engaged in the activity under the study by interweaving activities of observing, listening, and asking to achieve a deep description of the entire reality" (in Aldiabat and Le Navenec, 2011, p. 7). Applying the grounded theory approach also became the most natural approach, as the replies from my respondents often revealed a cultural and historical context unfamiliar to me as a researcher. This made it necessary for me and my research to remain as open as possible to follow up leads that could answer or be relevant to my topic of research.

As explained by Bryman (2012) data analysis in qualitative studies should always be a continuous process because of the previous mentioned huge amount of data collected through this methodology, making it necessary to systematize data.

This is often done through content analysis, which is about coding and classifying data, also called categorizing and indexing. The main strategy is reducing the amount of data through a process of distillation, cutting back the less relevant parts until only the most meaningful bits remain (Bryman, 2012). Techniques used in these efforts include cataloguing and enumerating surface meanings through repetition of words. If this process is done properly, the researcher should be able to see meaning through the perspective of the study's participants, and through inductive reasoning create descriptive data.

During my fieldwork I used simple interview protocols where I recorded the setting, the atmosphere and the general disposition to talk in each interview. I also took notice of the three most important issues elaborated during the interview. In addition I kept a field-diary where I recorded my day, perceptions and observations regarding places, interviewees and the interviews themselves. This helped me sort out the relevance of the collected data and aided me through the work of generating concepts and categories. I also consider this to be important additions because recordings only gives a decontextualized version of the interview, as it lack the visual aspects of the situation, like surroundings, facial expressions and body-language (Kvale, 2001). I also transcribed and coded my findings as my research as it went along and as soon as possible, as grounded theory suggest (Bryman, 2012, p. 576). This led my research along and allowed me to pick up on emerging issues. All helped me to sort out the relevance of the collected data and put it into context.

During my analysis I transcribed all my recordings, mainly by hand-writing in my notepad, as I found that to be time-saving and easier. This was also because of problems with my computer getting over-heated and kept shutting down. All of my transcripts got writings and initial thoughts in marginal notes, making it easier for me to generate categories as my study went along. As mentioned by Huberman and Miles (1994) this process led me to think about the initial meaning of my data and reduce the amount of data I was working with (in Bryman, p. 577). This was however not a straight forward matter. Instead it was a process of repeatedly going back to the raw material, changing and altering codes and categories, changing the alteration of relevant categories and exploring possible relationships between

categories, thus making it possible to generate preliminary hypothesizes (Bryman, 2012). This process is explained by Bryman as a "constant state of potential revision and fluidity" (Bryman, 2012, p.568).

Repetitions, i.e. reoccurring topics, are one thing recommended by Ryan and Bernard (2003) to look for during categorizing of data (Bryman, 2012, p. 580), and categories were then generated around mainly repeating themes related to my initial research questions. The amount of data generated through qualitative research is, as before mentioned, considered a problem, therefore I found it helpful to generate a mind map where I organized all my categories in relation to the specific research question, while considering the various contexts I encountered.

Although grounded theory has contesting views regarding when to include literature review, I choose to include it previous to my fieldwork. This because there are several compelling reasons why some literature reviews previous to research is valuable. First; "It can provide a cogent rationale for a study, including a justification for a specific research approach" (McGhee, Marland and Atkinson, 2007; Coyne and Cowly, 2006, in Dunne, 2010). "It can help contextualise the study" (McCann & Clark, 2003 a, in Dunne, 2010) "orient the researcher" (Urquhart, 2007, in Dunne, 2010) "and reveal how the phenomenon has been studied to date" (Denzin, 2002, McMenamin, 2006, in Dunne, 2010). It is however important, as emphasized by Dunne (2010) that favoring an early literature review must not stand in the way of the researcher approaching new projects with such an open mind that it allows new and possible contradictive findings to emerge from the raw data (Dunne, 2010).

Previous research and theories were applied mainly at the last stages of analysis where also Batticaloa`s previous history and context were taken into consideration. Hence, the literature review presented in chapter 4 was applied mainly as a tool for guidance, justify my research and present the area of study, as my aim was to assess the respondents *own* perceptions regarding the given topic. This was because I wanted to use the original data in order to generate concepts not too much influenced by my own preconceptions regarding the topic.

However, I cannot claim that I managed to keep my own pre-conceptions and previous knowledge on the topic out of the data-analysis, as it is impossible to become a "tabula rasa". My own preconceptions and previous knowledge became apparent several times during my

interviews, especially pre-conceptions regarding women as being more vulnerable than men. Failing to fully know the context and culture made it necessary to remain as open as possible. This was especially apparent regarding perceptions on vulnerability.

The research design is case-study design conducted in the district of Batticaloa. As mentioned by Bryman (2012), a major limitation to case studies is that it can be difficult to generalize observations from personal experiences. However, it also has benefits. As Flyvbjerg (2006) explains "the closeness of the case study to real-life situations and its multiple wealth of details are important (…) it is important for the development of a nuanced view of reality, including the view that human behavior cannot be meaningfully understood as simply the rule governed acts found at the lowest levels of the learning process, and in much theory" (P.6). He goes on claiming that "Predictive theories and universals cannot be found in the study of human affairs. Concrete, context-dependent knowledge is therefore more valuable than the vain search for predictive theories and universals" (Flyvbjerg, 2006, p. 7). As before mentioned it is also important to know the context-dependent variables to be able to succeed with DRR implementations as the influences of such variables could be of great importance and be determents in whether or not DRR implementations are a success or a failure.

This case can be regarded as an extreme case, given the particular inheritance laws, "Kudi", practiced in Batticaloa district as well as Batticaloa`s position during the civil war, and the high number of female fighters. I do however believe some of my findings are possible to generalize, such as higher rates of emotional stress among women connected to the issue of dislocation and housing.

5.5 Methodology and Ethical Considerations

Ethics must always be taken into consideration, and are, as stated by Powell (2011), "integrally linked" with methodology. As applying ethically sound techniques could add value to the research, "methodological soundness can improve ethics" (Powell, 2011, p 3).

Ethical principles are broken down by the authors Diener and Crandall (1978, in Bryman, 2012, p. 135) to four main areas:

- Whether there is *harm* to the participants
- Whether there is *lack of informed consent*
- Whether there is an *invasion of privacy*
- Whether *deception* is involved

All of these elements were taken into consideration during my research, but not always successfully carried out due to language issues and difficulties making arrangements.

First; the issue of causing harm was of great concern as this area still have a considerable militant army presence and some themes, like for instance the incidences of disappearances, are still very sensible themes. If approached by police or the army, I feared that my informants could face difficulties sharing such information with me. Especially since I was travelling and doing research on a tourist visa. This concern was however not fully shared by my informants and many of my interviews were conducted outside houses or on the street without further consideration.

Second; Informed consent is a vital element in ethical consideration, and although I strived to make sure my translator gave my respondents all the necessary information before every interview, that was not always a success. As an attempt to correct this I made a rule to ask my respondents if they had any questions for me at the end of the interview. This was to try and correct any misunderstandings and confusions regarding the interview and its purpose. Although this would provide my informants with information regarding me and the interviews, the lack of information which became present in some interview-settings could have compromised my research to a certain degree, as respondents may have been more cautious to share information. Before departure I considered to make a consent form, but this would not have given the attempted results, as very few of my informants spoke English, and I do not write in Tamil, so I would still have been dependent on my translator to provide the information.

Third; although the first interviews felt like an invasion of privacy as the respondents were not aware that I would come, they were not bothered by this, and eager to share.

Given their relation with my first translator, it was probably more a concern for me than for my respondents. To avoid the feeling of invasion I tried to make appointments whenever possible, and made sure my translator got approval from my respondents whenever appointments were not possible. They were however all eager to share their stories.

Forth; I also encountered a situation where the villagers all thought I came from an aid organization, which lead to a shortening of my initial semi-structured interview and evolved into a focus-group interview, or spontaneous recruitment (Bryman, 2012, p. 511). The additional villagers got envious and afraid that I would only provide my first respondent with aid and also wanted to get my attention, because of this misconception and rumors that I came from an aid-organization. In this particular village there were great frustration because of a feeling of broken promises and neglect, so one of my respondents were really angry initially. However, when this misconception was sorted out, I got valuable information from the group regarding my topics of interest.

Ethical considerations also became of great importance as we frequently touched upon very personal and painful memories, related both to disasters and war. This however went very smoothly, thanks to the sensibility of my translator and the connection between me, as a researcher, and my respondents. Not following a rigid question-scheme gave my respondents the space and time to share in their own pace, and allowed me to listen to their stories and follow up with questions. Also the way I acted and dressed was considered, as I did not want to provoke. Especially covering my shoulders and knees were always considered important in interview settings.

5.6 Conducting research in Batticaloa- Challenges and limitations

I faced several challenges while conducting research in an unfamiliar context and culture. Prior to departure I made several attempts to get in contact with Care Batticaloa, as well as their main office in Colombo. I considered them relevant informants because of their primary focus on women and presumed activity in Batticaloa district. However, I did not get any feedback. It also proved difficult to obtain contact information to other INGOs/NGOs active in Batticaloa district that could be relevant to my research. The reason for this will be elaborated in the presentation of data.

During my stay I also made several attempts to establish contact with Suriya, a Women's Development Centre in Batticaloa, without success. I also attempted to locate and contact other NGOs with a particular focus on DRR and/or women, without success.

Being unable to make contacts prior to arrival delayed my research and made it necessary to conduct initial research on my own. However, I would claim it also had some benefits. First; I got to know the area very well.

Second; the areas I conducted interviews were selected based on my observations and an apparent vulnerability to natural hazards, both coastal and inland, not only areas selected by informants. Third; I got to visit some areas more than once, thus establishing really good connection with especially one focus-group. Fourth, not having any organisational influence during interviews, I believe levelled out possible power influence. Such influence in vulnerable contexts could, as I see it, possible affect the response and make respondent more eager to please or withhold information. I also controlled my own time.

As Batticaloa still have not succeeded in attempts to develop a strong tourism-sector, and also due to influence of war and culture, my initial plan to use a female translator became impossible. I found one, but although she was offered a substantial salary, it seemed that there came up a cultural catch that made this arrangement impossible. It must be mentioned that this was a college-student living with her parents. The reason behind the decline was however never properly confirmed. As English-skills were low in general and in particular among the women, I had to compromise my study to some degree and use a male translator. This I believe influenced my findings, as the research questions initially were meant to get deep assessments on female perceptions regarding own vulnerability. In group-settings I also saw a tendency with my translator to give more focus on the males, which I tried to correct by carefully redirecting the focus back to the women.

Language-barriers thus proved to be a big obstacle, and I was 100 % dependent on translator during my interviews, with few exceptions. That made it necessary to plan my interviews in accordance with my translator who had a full position as a teacher. Hence, all my interviews had to take place in the afternoon. That was also the time most convenient for my respondents. That arrangement came with several other challenges. First; the most obvious that much information got lost in translation, that was seen especially in the focus-group

discussions. Second; my fieldwork was conducted in the beginning of the rainy season, which often made transportation difficult, as well as many of my interviews were being conducted outside, Third; as it gets dark early in Sri-Lanka, conducting interviews in the evening was also a challenge. Especially while conducting interviews in an area without electricity.

I do however believe that my aim in assessing different areas and different context, as well as the variation among my respondents have generated a valid picture of women`s perceptions of vulnerability and DRR in Batticaloa, where the majority population are Tamil.

It must also be kept in mind that conducting gendered studies also comes with its own limitations. As pointed out by Reinharz and Chase (2003) "interpreting any particular woman's silence or speech is a complex task that requires a strong understanding of her social location, including her space within her community and society, the cultural constraints and resources shaping her everyday life, and her particular circumstances" (p. 77, in Scharffscher, 2011). Given the limited time-frame of my research, male translator and conducting research in an unfamiliar context, this must also be considered a limitation.

As expected, and as shown in table 3, Batticaloa is an extremely divided society, which compromised my initially attempt to assess the different ethnic groups. I was not able to gain access to the Muslim community, the Singhalese population is lower than expected and one of my key informants told me that the only Singhalese in the area was military. Hence, as with the population within the district, the majority of my respondents are of Tamil heritage, with exception of two from the Burgher community. In that regard I would claim my study to be representative for this particular area.

An interesting observation and a possible future research is assessing the apparent strong identity-formation I witnessed emerging among young girls in the town of Kattankudy, the most densely populated area in South-East Asia, through increasing use of niqab. Stronger identity-formation in the different ethnic groups in a before divided society could affect social capital.

Another limitation was that conducting interviews with government officials involve a certain aspect of risk. In particular while travelling on a tourist visa, not a research permit.

That caused me to avoid an interview with a DM-officer in Batticaloa town, as I was told he would expect money for providing me with information and that made me feel uncertain regarding further contact.

Doing research in a contextual and cultural challenging area such as Batticaloa district generated many variables and made the coding and categorization a time-demanding and difficult process. Several of my respondents had experiences related to the war that naturally increased their vulnerability, but these experiences varied from living in former LTTE-areas, to being abducted as child-soldiers and to be widower and having lost family-members during the war in what is known as "disappearances", which refers to the fact that the family never knowing what really happened to them. The context and history often made it challenging to stay on topic, as many of my respondents wanted to share stories that had given greater marks than natural disasters. This also made some of my interviews more un-structured than semi-structured. I did however also in these interviews manage to get perceptions regarding my research-questions. And as all of these incidences had relevance to my general research question regarding vulnerability, it thus became necessary to include in my research.

6 Presentation of Findings

This section will present my findings and see them in relation to my initial research questions aiming at assessing perceptions regarding vulnerability and Disaster Risk Reduction efforts, both organizational and measures taken within the particular households and communities.

I will first present findings regarding general awareness and perceptions on natural disasters. Then I will assess perceptions on vulnerability and measures taken within households to decrease vulnerability. The next section will present findings regarding participation in and perceptions on Disaster Risk Reduction and trust in Disaster Risk Reduction efforts with a particular focus on the ones implemented after the tsunami.

I will use quotes to underline my findings. The quotes will be used as first-person quotes, although I used translator in most interviews, except the one with my respondent in Red Cross and respondent from the Burgher community. This is because this thesis is about the women`s own perceptions. I have also chosen to address housing-schemes in relation to perceptions of trust in the government as the government was involved in the establishment of buffer-zones, allocation of land for re-settlements and housing-schemes as well as directing various NGOs in their housing-schemes. Government-officials were also involved in supervision of owner-driven housing schemes, where the completion of houses was found to vary from different areas.

6.1 Natural Disasters and Climate Change

All of my respondents had experienced natural disasters. Many had also survived the tsunami. This section will present findings on natural disasters and climate change and show that there is little awareness regarding climate change and the link to natural disasters among my respondents, although the majority of my respondents belonged to what would be perceived as particular at risk in regards to climate change-scenarios.

6.1.1 Natural disasters

Thinking about natural disasters, especially amongst the survivors of the tsunami, makes them scared. In a focus-group discussion this was expressed through statements like *we fear for our future life living here because of the natural disasters that may happen here again.* Another respondent claims to be *sure a disaster will cause heavy damage to those people that are living here.*

There is also a general agreement among my respondents, both tsunami-victims and flood-victims that they don't want any disaster in the future. It was also apparent that women were concerned with the suffering, lives lost and danger. One respondent says she *does not want another disaster because she cannot expect how much people will suffer from that.*

I also found a fatalistic element, as disasters are perceived as punishment or correction from God. The tsunami waves that devastated Batticaloa was explained by one woman as Gods interference to correct the class-divide, claiming *The God created everything. There were rich people, poor people, middle-class people. So because of the waves that came from the sea... That levelled everybody financially. I feel that was made by the God. He judged that the people should be equal to each other.* Interesting to note is one respondent pointing towards "unfair" judgment, in asking *So many children died. Why did God do that? Why did he not save the children? The children are innocent. They did not do anything wrong.* Another perspective in a flood-affected area explained incidences of flood as *sometimes the gods make it a little uncomfortable.*

Perspectives on natural disasters were also influenced by the context and history. For communities living in rural, former LTTE-strongholds and heavily affected by acts of war and poverty, natural disasters are considered *not that bad*. Respondents from these areas expressed that life was better than now. This was especially apparent in the tsunami-affected area of Vaharai. Although they still struggled with poverty, they now lived in permanent houses, free from war and terror. It was also found similar perceptions among the residents of Kokkaddicholai, also a former LTTE-stronghold. There was also a clear tendency among my respondents to focus on what they perceive as more pressing issues than natural disasters, especially the issue of housing.

6.1.2 Climate Change and Disasters

I deliberate choose to not include any specific questions regarding knowledge of climate change. This was because I was attempting to assess the respondents own perspectives on natural disasters and their perceptions on the subject and thus possible links to climate change-scenarios.

The only mentioning of climate change was derived from my respondents in Red Cross and Disaster Management. Among the rest of my respondents climate change was never mentioned or seen as related to natural disasters.

The general perception among my respondents regarding natural disasters was that *we do not wish for another disaster to happen again.* Hence, there appeared to be little awareness and reflections regarding the link between climate change and natural disasters among my respondents who should be considered important stakeholders.

6.2. Perceptions on Vulnerability

As explained by Birkman (2006) "Vulnerability (…) concerns the wider environmental and social conditions that limit people and communities to cope with the impact of hazard (in UNISDR, n. d., a).

My respondents, with few exceptions, were identified as being particular vulnerable to natural hazards. As explained in section 5.2 this was done through purposive sampling. Those re-located to safer areas also had first-hand experience with natural disasters. First of all the area of residence, but also the residence itself and apparent levels of poverty became determents when sampling respondents.

When assessing perceptions on vulnerability, a clear issue among my respondents was *who* was vulnerable. This will be discussed in the first section. In addition, vulnerability is a broad concept, as explained in section 4.3. I have therefore chosen to separate my findings into sections based on inductive reasoning and assess vulnerability in four categories:

- Emotional vulnerability
- Physical vulnerability
- Socio-economic vulnerability
- Socio-cultural vulnerability

6.2.1 Defining Vulnerability

Although my respondents had been exposed to natural disasters and the majority lived in areas associated with natural hazards, the question regarding perceptions on vulnerability is also about defining *who* is vulnerable.

Many of my respondents had statements that showed reflection on hazards and risk. Some reflected on who was most vulnerable, stating that *I feel that mostly children and old women are affected. When I was running, I could see a lot of dead bodies of small children. Children were stuck under three-wheelers.*

Others compared areas, claiming *(…) is not like our place. It is more dangerous. The people there cannot easily escape.* This particular area is located on a narrow strip of land between the lagoon and the ocean and was extremely hard hit by the tsunami.

Others again compared hazards; *In (…) (a newly established tsunami-village) we will not experience any cyclone or tsunami. Only earthquake can affect and cause heavy damage to us. But here, in (…) , these people will definitely suffer from the same disaster.*

Only one respondent pointed towards the traditional gender-patterns, claiming *women are mostly affected by these disasters, because the men will not stay at home all the time.*

6.2.2 Emotional Vulnerability

Emotional vulnerability will entail the perceptions I was able to assess during my research. But as explained in section 5.7 the use of a male translator might have compromised my findings, especially in regards to personal emotions.
But despite possible limitations due to social gender issues, my respondents were all eager to share their histories, and I got several strong testimonies, especially regarding the tsunami, a day most tsunami-survivors remembers as only yesterday.

On the day of the tsunami one woman remembers how she had to leave her mother behind, because she could not run as fast as them. *The water-level came up to our knees, so my mother could not run faster. She voluntary let go of my hand, prayed to the goods and told me to escape with the child. She dropped in the sea. Fell in the water.* This old woman however survived, but the family lost thirteen family-members.

Another woman remembers the everyday activities when the waves came crashing in; *I was inside brushing my teeth. First there was a little water, than it came crashing in. I got stuck in the bathroom clinging to a string as the water rose. There was a lot of barb-wire in the water and the water was colored purple.* This respondent also lost several family-members, including her daughter.

As mentioned in the introduction, women and adolescent girls often face more post-traumatic stress after disasters.
This was confirmed through my finding as several of my respondents, thirteen years after, still struggle with emotional issues, resembling post-traumatic stress (PST) from the day of the tsunami. Many are still scared and it appears to still have impact on their lives.

In some areas there are frequent *rumors that make them run for shelter.* I heard stories about recent happenings regarding young boys shouting at night making the residents in one exposed area panicking; *at night they screamed, they shouted that the water was coming. I all of a sudden woke up and I was scared and scattered.* According to my translator this particular incidence could be linked to an earthquake in Indonesia at 6.1 on Richters Scale, but this was however not confirmed.

Others report that sounds at night are perceived as frightening, and one respondent, relocated in a tsunami-village less exposed, sleeps with a torch and charger under her pillow. The sound of waves, heavy rain and thunder has a discomforting effect on these women and some admit to lose sleep during the rainy season as the sounds bring back disturbing memories. *When I hear the sound of the waves, I cannot comfortably sleep. I think about the children and shelter and everything that comes.*

Another reports that when she is alone she thinks, *I feel worried and think about all the facilities I had. I had a house with attached bathroom and so many things.* Still she feels that her husband cannot build a house with the same sense of security, claiming *still we do not have so many things. We do not have an attached bathroom.* In this particular case it is interesting to note that the house she misses was provided to her in dowry. After the tsunami, their house was re-build as a small guesthouse, with two rooms and bathrooms, mainly run by her husband as she does not speak English.

On questions regarding mental counselling after the tsunami my respondents remember some counselling being done by NGOs in the camps, some staged dramas were conducted. What appears to have been of most importance was however the social network, as expressed by one respondent; *there were a lot of neighbors living close to me.*

Other respondents living in temporary houses among tsunami-ruins in an area lacking electricity and sanitation report on sleeping together for safety, claiming *We are living in darkness,* which should be understood both figurative and literary.

Living in temporary houses increased their sense of vulnerability, as they cannot lock the doors. In addition, living in small temporary houses without water and electricity also affected cultural traditions, such as performing particular religious rituals. The particular ritual mentioned in this setting was when *a girl becomes a certain age*, the rite of passage performed when a girl reaches puberty. A rite of passage is a ritual marking a person's progress from one status to another throughout his or her life. In Tamil culture these start before the birth of the baby, and extend past a person's death (Clarke, 2012). The ritual when a girl reaching puberty involves seclusion, a particular diet, a ritual bath and then a celebration which will be the first time a girl wear a saree. All of this is believed to protect her from the evil spirits which she is particular vulnerable for at this time (Weerasooriya, 2017), hence the reference to *living in darkness*. Not being able to perform such rituals were among some of my respondents linked to perceptions of vulnerability.

Also in areas facing regular flooding fear and anxiety were found, which again seemed to be closely connected with the housing-facilities. One respondent showed pieces of clothing stuffed into cracks of her temporary housing, because *when the flood comes in, the snakes and creatures will enter. It is threatening. It is troubling me. If it was a permanent house I would not worry about that.* During flooding she tells me that the water-level in her temporary house reaches 3-4 feet, and she enter the flood-affected area regular to check on her house to make sure it has not collapsed in the water. Also valuables are moved when the rainy season sets in, thus increasing the work load.

The issue of housing was most frequently brought up in regards to perceptions of vulnerability, and will also be addressed in the next section, physical vulnerability. However, as land and houses are closely linked to the Tamil culture it also needs to be addressed as a socio-economic and socio-cultural vulnerability.

6.2.3 Physical vulnerability

Physical vulnerability describes "e.g. poor design and construction of buildings, unregulated land use planning, etc."(UNISDR, n. d., a).

As explained in chapter 2, Batticaloa is a district severely affected by war and disasters, and the district still struggles with several post-disaster issues, visible through e.g. bad infrastructure, many temporary houses and high levels of poverty. This was especially apparent in the rural areas and former LTTE-strongholds. It is however important to recognize that although war has a devastating effect on society, the link between the two are more tentative, as rural areas tends to be more poor (Bird, Hulme, More and Sheperd, n. d).

Many of my respondents lived in temporary houses, which naturally affect their sense of security.

However, I also found respondents who felt life was better than before the tsunami, and where vulnerability clearly had decreased due to permanent houses established after the tsunami and/or the end of the war. The building of the houses away from the sea, the end of the war and good risk assessments when establishing permanent houses, i.e. building them on elevated places, also decrease the risk associated with flooding. The quality of the houses however differed from colony to colony and between my areas of research. I also witnessed newly established permanent houses which still were severely affected by flood, thus indicating lack of risk-assessment.

An interesting case in a village I conducted interviews was a case of attempted land-grabbing. This is reported to happen frequently in the North-East areas following the tsunami (see Klein, 2007) and could be seen in relation to the region`s and Batticaloa`s attempt to develop the tourism-industry.

6.2.4 Socio-Economic Vulnerability

Socio-economic factors deals with issues such as poverty, inequality, marginalization, gender, social status, work in the informal sector, vulnerable rural livelihoods etc. (UNISDR, n. d., a)

With a particular focus on women, many of my respondents were widows and some had husbands or family-members with disabilities. All are factors that increase vulnerability in the main-stream research.

One respondent reports on an "extra burden", as she has the caring responsibility of her brother with Downs syndrom, whom she saved from the tsunami-waves, referred to as being like *a small child.* The greatest concern for her seems to be his special diet, as he likes milk and every month she has to buy him milk for 3000 Sri-Lankan Rupies (LKR).

The level of poverty was high among the majority of my respondent, especially those belonging to fishing-communities, who are identified as particular vulnerable (UN-HABITAT, 2013). Poverty is thus a crucial issue for many of my respondents and many receive various beneficiaries from the government.

Many are beneficiaries of the governmental Samurdhi (or Prosperity) Programme to reduce poverty in Sri Lanka through development based on public participation. Most of the resources are distributed to households as food stamps, testing for eligibility based on need. Although the program have led to reducing overall poverty rates in Sri-Lanka, it have been criticized for the unjust targeting of beneficiaries and for having a bias in distributing resources, thus failing to address those most in need and allocation funds to households outside the poverty criteria (Centre for public impact, 2017). According to my respondents the payments seem random and it is apparent that information regarding these schemes are lacking. One report on getting initially a card to buy food items on 2050 LKR, but nowadays 1000 LKR are being reduced. This has been happening for three months without the beneficiary knowing the reason why. Another in the same group facing the same difficulties and with the same living-conditions got food-stamps on 2500 LKR a month. Others report on receiving 250-300 LKR a month.

As established in section 2.2.2 Batticaloa`s low economic performance and socio-economic factors have led to a high rate of migrant workers. Two of my respondents reported on having migrated abroad to perform housemaid services. For one it was obvious due to the level of assets to have had some beneficial aspects. For the other one the living-conditions had not improved. Both reported that it had been hard work and none wanted to travel to the Gulf-states for work again. Three other respondents had husbands that wore or had been migrant workers. It appeared to be creating some hardship on the women who are left to fend for the families alone. One only sees her husband 1 month a year.

One reports on the insecurity of not knowing whether to expect any money from abroad. *If my husband fails to send me money monthly I cannot manage my daily wants, or food or other things (...) I need money monthly to take care of my child.* She would feel safer if her husband were there because *he would take care of everything.* If her husband fails to send her money she has to depend on her social network and borrow from the shop.

6.2.5 Socio-cultural vulnerability

As before mentioned the long war, and frequent disasters, appears to have created a strong resilience. Many of my respondents appear as confident and strong and among the many widows the response I got on whether they perceive women to be more vulnerable than men were, *there are many women that manage without men`s support.* Tamil culture makes it difficult for them to remarry, as their male counterparts often do. The reasons for this were reported to be *That the children does not like.* Female-headed households are in the traditional vulnerability approach perceived as being especially vulnerable (Enarson, 2000, in Fisher, 2010). The resilience however appeared to be stronger among the women in areas severely affected by war than in GoSL-areas mainly unaffected by acts of war.

Another cultural factor influencing vulnerability is the tradition of dowry, in the particular form of Kudi, practiced in this area, explained in section 2.4.1. Although this is not expected to be practiced by the very poor, I found that this is being practiced also among the poorest. In line with this tradition several of my respondents had offered their established tsunami-houses

to their daughter upon marriage and re-settle in temporary houses in areas associated with hazards.

On questions regarding the practice of dowry, as it was obvious that it had increased their own vulnerability, the women expressed satisfaction. *We feel happy about offering our houses to our children. We have to give it, and we feel happy. We feel satisfaction because it is a ritual. It is a tradition of our people.* However, on further questioning on the subject a more negative aspect of this tradition was revealed as the women asked claim *if we don't provide these things (i.e. land, house, jewelry and money, depending on financial situation) as a gift, we feel our daughters will be staying in a house without getting married.*
One respondent were totally dependent on her sister after following this practice and dreaded the day her niece got married, because than she would lose her shelter. Thus, there had been a trade-off with cultural tradition and risk.

Interest to note is that although Kudi traditionally is practiced among the Hindu and Muslim society in Batticaloa, as explained in section 2.4.1, it also were found among both one respondent belonging to the Penta-Coastal society, who provided her tsunami- house to one of her seven sisters, after losing their parents in the tsunami, and among my respondents from the Burgher community, who had given their original tsunami-house to their daughter and bought the land next door.

6.3 Perceptions on How to Decrease Vulnerability

Here I was interested in perceptions on how to household measures to decrease vulnerability. And as previously explained, I found resilience and courage among most of my respondents. However, culture, context and livelihood affect ways of life and perceptions of vulnerability. As previously explained amongst several of my respondents I found bigger concerns than natural disasters. The end of thirty years of civil war also had an influence on perceptions of vulnerability, and especially my respondents in previous LTTE-strongholds considered vulnerability as being decreased after the war.

6.3.1 Permanent Housing and Vulnerability

The importance of permanent houses and land comes up repeatedly during my study. My respondents see temporary houses and lack of basic necessities as a handicap. They strongly associate housing with vulnerability. As claimed in one focus group *nobody is ready to provide us with anything... shelter or help to live our lives successfully. So we are living here in fear and that is a great challenge for us.*

Housing was a particular concern among the women with temporary housing and semi-permanent housing, but I found feelings that linked perceptions on vulnerability and houses also among women living in permanent houses established after the tsunami and those living with family.

6.3.2 Plans for Decreasing Vulnerability

The majority reported to have no plans to decrease their vulnerability. Some however took small measures as insurance, like moving valuables and legal documents. One respondent used a stick in the sand outside the house to monitor the water-level during rain and flood-season and thus decide when it became critical. This particular house was located right next to the lagoon and after two days of rain we had to climb through a barb-wire fence to enter, as the main entrance was submerged in water.

Others in flood-exposed areas had elevated their temporary and semi-temporary houses on piles of sand to prevent the water from entering. Some had tried to build a wall against the lagoon to limit the destruction during flooding. The latter had however negative consequences for my respondent as the wall indicated financially well-being and made the family less eligible to aid during frequent dislocation because of flooding.

In an area with regular evacuation-drills my respondents felt confident that *they could run and safeguard their life*. The feeling of security was connected to both the evacuation-drills but also material circumstances, like for instance owning a three-wheeler.

6.3.3 Microfinance to Decrease Vulnerability – a Two-Edged Sword

As poverty increases vulnerability, access to micro-finance could be a mean to decrease it. And according to a Cohen (1999) "maintaining access to credit is a key risk management strategy" (p. 4). Many micro-finance institutions operate in the district, and several of my respondents had taken up one or more loans. Sri-Lankan newspaper has been addressing the issue, referring to it as "falling into the menacing trap of micro-credit" (The Sunday Leader, 2017), hence with a clear negative view.

Although my informant in Red Cross consider micro-finance to have positive and negative sides, my respondents in general had negative statements and claimed that microfinance-institutions recently had increased both the amount and the interest. Some reported, to mine and my translators surprise, that the amount offered by some companies had increased to 1 Lakhs. This is however a more tentative finding, as I did not address any micro-finance institutions due to the time-frame and the scope of my study.

According to newspapers and my respondents, suicide because of being unable to settle the loans are frequent in the district. W*hen they struggle to settle the loan it will be of great anger to them. They even have to put a rope on their neck*. High interest, multiple loans and little training and preparations in regards to the loaning institutions seems to be factors working together and generate a huge burden on the women instead of relief.

Some respondents inform about a tendency to borrow to *satisfy their own needs,* like spending the money on buying gold.

Interesting to note is that there appears to be differences between different areas, as in one area there seemed to be greater community acceptance regarding micro-finance, and all women reported to have taken up three to four different loans. In another area only one reported to have taken up micro-finance loan one time. She reported about several quarrels within her group of three women and because of difficulties settling the loan, she is not able to loan again. She had originally borrowed 30 000 LKR to buy a chili-grounder for the

betterment of her life and for development, an investment which turned out to be un-successful.

Some also pointed to the cultural factors, as women mainly stay in the house and men being the breadwinner, as the earnings from men were considered vital in settling the loan. But despite hardship revealed in settling the loans, in one focus-group discussion the micro-credit was also considered necessary, because *without such loan systems we cannot lead our lives happily.*

6.3.4 Religion and vulnerability

Religion will also have impact on perceptions on vulnerability and how to decrease it. As stated by one of my respondents *the destiny is written in the forehead,* a Tamil saying that refers to a belief that a deity comes to write the destiny of a newborn child on the forehead. The destiny often takes form as verses which predicts the most important features of a person`s life, e.g. cast-belonging, length of life, affluence or poverty. "Like the well-known concept of karma, the motif of headwriting expresses that one must bear one's fate since no amount of effort can alter it" (Kent, 2009, p.1). This fatalistic element in regards to vulnerability and natural disasters is also presented in section 6.1.1.

Respondents in the North part of the district, belonging to the Penta-Costal church also explained disasters and un-fortune with beings apart from humans, and expressed a belief in demon-activities, which my translator at the time, also a member of the Penta-Costal church, explained as being frequent in that particular area. One respondent from this area had converted after the tsunami, claiming that the social ties were weaker in the Hindu society than in the Penta-Costal community.

6.4 Living with Hazard

My respondents were all selected based on a risk-assessment of the areas they lived and worked in. This was done both by observation and through information from the respondents in DM and RC.

On questions of *why* they lived in these particular areas, albeit the risk, the most common answer was because of few choices, which must be seen in relation to the socio-economic vulnerability. But also other reasons were revealed.

6.4.1 The love of land

This aspect was found among several of my respondents, both those living in areas at risk and those relocated to safer areas in the aftermath of the tsunami. As claimed by my respondent in Red Cross, *They love the land. It`s the place they were born.*
This is further underlined by one resettled respondent who was not happy, claiming *I don't like it there, because it is unfamiliar.*

Others again had moved back to their land and lived in temporary houses to maintain their little plot allocated to them before the tsunami and thus prevent the government to re-claim the land. There was a general agreement that that could be a real possibility if they left the land un-occupied.

One respondent, a woman, 79 years old, living alone in a temporary house, reported that *I have my own land. My son has two children, so I have to take care of my own land. If I don't live in my own land, the government will take control of the land.* Interesting to note here is that all the residents in this particular area had been provided with legal papers claiming their right to the land. The land was also originally provided by the government in a housing-scheme in 1998, where they all had been provided 50.000 LKR for the establishment of houses. But still they perceive re-claiming of their land as a threat.

6.4.2 Livelihood

According to Cannon (2008) "people live in an area at risk from a natural hazard because they just do: they "have to" – for the sake of their livelihoods (p. 353).

Among several of my respondents living close to their livelihood was an important factor. *Where would we go and what would be our livelihood if we choose to leave.* Even a case

where the community was resettled only 1 km from the old village people had moved back, claiming *We have to stay here looking out for our source of income that comes from fishing.*

As pointed out by my respondent in Red Cross the lagoon is a big resource, and *most of the time the people are really happy. When the flood declines, they can come back.*

6.4.3 Culture

As the majority of my respondents were fishermen, living close to the sea and lagoons is also a part of their culture and their way of life; *although we are in danger, mentally we feel we are fishermen by profession.*
The love of land is also a strong element of Tamil culture, where land and inheritance laws are strongly inter-woven with the culture (Jayatilaka and Amirthalingam, 2015) and the traditional custom of "kudi" explained in section 2.4.1.

6.5 Perceptions of DRR-activities

Here I wanted to assess perceptions of and participation in DRR-activities.
The disaster risk reduction programs I was able to identify as operative in the area were mainly limited to evacuation-drills in some of my research areas, where other areas had none. I was also told about previous workshops and staged dramas in regards to natural disasters. The focus however seem to be on evacuation rather than mitigation.

There is also necessary to make a distinction between coastal areas and rural areas, as the coastal areas have been provided with alarm-systems (TWS) after the tsunami.

6.5.1 Safe-spots, Warning-systems and Legal Documents

According to my respondent in RC a main issue in their DRR-programs is identifying a safe-spot in every village and drilling the women to evacuate to these places and in keeping their legal documents in a "ready-to-go"-kit, to prevent them from losing them, as they are very difficult to obtain.

Many of my respondents were familiar with the safe-spots and evacuation-routes, which increased their sense of security. This was because of training. In areas with tsunami warning systems (TWA) I found a great trust in this system. Where there are regular / annual drills my respondents expressed a sense of security and confidence that they were able to escape. This is despite frequent power-cuts, especially during bad weather. The confidence in TWA is however somewhat contradicted by an incidence of huge amounts of sea-snakes being caught in the fishermen`s net and created a sense of fear because among the fishing community this was considered a bad omen /pre-warning (Rodrigo, 2017). As mentioned in section 6.2.2. Rumors also make my respondents in exposed areas run for shelter, despite an expressed trust in the alarm-system.

The more rural areas are dependent on load-speakers or megaphones to inform about disaster. Also radio has been used, but according to another study conducted in one of my research-area, the flood-alarm before the flood in 2010-2011 was not received or taken seriously with the consequence that people did not evacuate in time causing greater losses of resources (Browne, Silva, Suresh, and Few, 2014). According to my respondent in RC there are established warning systems also in more remote villages, but some of my respondents claim that there is none.

However, it appear that former GoSL- controlled areas hold the greatest confident in established government DRR. This is further linked to TWS in the areas. Some respondents report having evacuation drills with the SLA once after the tsunami. The training has made the women *sure they can safeguard their lives.*

Some also kept their legal documents in safe spots. One in a severely flood-affected area reported to keep these documents in a bag upon the ceiling. However, it was also reported that the papers did not have high priority. The first priority was to safeguard the life of her children and her family; *If I feel something is about to happen, I will not think about the legal documents or other certificates. I will only focus on saving the children…To safeguard the lives of the children and the family. Even I cannot take any money.*

However, most of my respondents did not have any such plans. It was also interesting to note that the importance of what was being referred to as *domestic usable items*, by my respondent

in Red Cross was being downplayed. These *domestic usable items* included kitchen utilities, clothes, bedsheets, and were claimed to be *not so much important.*

Social networks appears to be of great importance in the sense of security and one respondent expressed a firm belief that one boy working in an NGO would give her a call in case of an emergency, claiming *I am positive that relationship would safeguard my life.*

6.5.2 There are no NGOs

A common perception among most of my respondents is that there are no NGOs in the district anymore.
This view are backed by my search for NGOs in the area involved in DRR activities and my respondent in RC claiming that *recently, the responding organizations are getting down. There is not that much projects and the organizations are closing down*.

In addition there are problems with funding both within DM and RC, according to my respondents within the organizations. My respondent within the RC claims this lack of funding is partly because they are a national organization, thus not getting any funds from abroad, except for selected programs such as first aid or dengue. He claims *as an organization we are struggling to survive.* He further claims that the DM are not getting much financial support either, which correlate with information from my respondent in DM, leading up to only plans and unfinished projects, e.g. an unfinished flood-preventing wall in Kannankuda.

In one area I encountered great frustration because of a general perception of no help, and I was invited to come back in December to see the entire area submerged in water. According to this respondent *many people come here and observe, but nothing happens.* This respondent was angry and claimed to be tired of broken promises, and express a faith that people from Europe will come and help them.

6.5.3 Awareness on Future Plans

This research found very little awareness regarding future plans for mitigation or disaster risk reduction among my respondents.

There is also very little awareness of *who* or *which* organization that are the facilitators for drills, workshops or other DRR-activities. The common reply among my respondents on questions regarding who facilitated or provided means to help decrease vulnerability is *I don't exactly remember*, indicating a passive respondent relationship.

During my research I also witnessed a community meeting regarding future plans for improvement of facilities and permanent houses, but on question on who were making these promises a respondent claimed to have forgotten, saying *I cannot say who they were.* On further investigation it became clear that they were GN-representatives.

Only the respondents belonging to the Burgher community had a different story as they had been actively included in planning and building the tsunami-house. They remembered exactly who was facilitating and reported on close relations with the representatives from the organization. This must however also be seen in relation to their excellent English-skills, which was not found among any of my other respondents.

6.6 Participation in DRR-Activities

Here I was interested in assessing whether gender- differences, ethnicity, religion, culture or inequalities affected participation in Disaster Risk Reduction efforts.

First; Gender. According to my informant in Red Cross there is a great emphasis on including programs, with an especially focus on women as *women are the right group.* The female participation is according to this facilitator very high. Respondent in areas with frequent drills confirmed this statement and during my research I also observed a community meeting where the majority of participants were female.

This can be explained by cultural factors, as the women traditionally stay at home, while men remain the bread-winners and are out working. As expressed by my respondent in Red Cross *female are available and simply plays a key role in the household.*

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He also emphasis the role women has as teachers and claim they teach what they have been taught at workshops and seminars to their husbands and children. One respondent tells that she always brings her daughter to DRR-drills, which are conducted in this area once a year. In another one area I visited, one family had been sending their daughter to staged drama performances to increase flood-awareness. There was a great deal of pride associated with this.

In one area the children were also very eager to show me their school. Located right next to the lagoon, the school-premises flood every year making the children miss out on schooling during the flood-period. Usually the school closes 1-2 months a year, thus flooding have great impact on their education and would have an impact on the social capital in the long run. In addition to natural disasters the civil war also had an impact on education. Due to forced recruitment to LTTE the former child-soldier respondents reported to have dropped out of school at age 13 and 15 years old. One however claimed to have *offered herself* instead of her older brother was studying and the LTTE expected one member from each family. The forced recruitment was reported to have happened during the peace-process, where forced recruitment escalated, as explained in section 2.3.2. According to another respondent the LTTE created huge problems, so she was kept at home, thus dropping out of school at grade 6th. Early marriage was also reported to have been common to prevent them *to being catched* by the LTTE, all factors adding to vulnerability.

Second; Ethnicity. As I was unable to establish connections within the Muslim community during my fieldwork, I have to rely on my informant in Red Cross who claims there are no gaps between the Tamil majority and the Muslim minority in regards to DRR, as *there is established separate administrative ways*. I was however not able find any Red Crescent in the largest Muslim community, Kattankudy.

It was however established that for female Muslim participation to be high, the implementing organizations needs to be Muslim and gender-wise female. As explained by my respondent in RC this is because *Muslim females, they don't that much intervene with other male. Culturally, they are so. Tamil communities, they are not bothered by this even if they go to a male instructor the majority will be female.* In some small villages, there was however some DRR- workshops with mixed groups according to my respondent from RC.

This further underlines the divide in society. In that regard it was interesting to observe what appears to be a stronger identity-formation especially among the young Muslim women through increased use of niqab.

Third; Caste. The Constitution of Sri Lanka (1978), Article 12 (2), prohibits any discrimination against persons by reason of his/her caste, work or decent to any disadvantage with regard to access to shops, public restaurants and places of public worship of his/her own religion.(Silva, Sivapragasam and Thanges, 2009). In Sri Lanka there exist three parallel cast-systems: Sinhala, Sri Lankan Tamil and Indian Tamil (Silva, et. al, 2009). The majority of my respondents were Tamil population and Hindus. Although Hinduism practices caste-divide, it appears as caste no longer is a profound issue in Batticaloa.

On questions whether the caste-system was relevant, I was told that the system was relevant to a *certain extent*, mainly functioning organizational between which group had which temple in the villages. On questions whether this could affect participation in DRR, I was told *No. The cast system is almost broken.*

Only one respondent mentioned cast specifically, stating; *That disaster (tsunami) equally treated all the people, including children, women and men, and it didn't influence any special cast.* Although it was the only spontaneous information regarding cast that I got from my respondents, this comment reveals that some notion of cast-identity still exists.

Forth; Inequalities. I did not find any notions of inequality within programs. Inequalities were found in different areas regarding DRR-activities. Some areas have regular drills and workshops, others less frequent and some areas have never had any DRR-exercises. More remote areas experiencing regular flooding had never had any drills or any plans regarding DRR. Regarding perceptions on inequalities only my respondents belonging to the Burgher community claimed *minorities are being discriminated in Sri Lanka.* Another respondent answered *I don't know, I did not go there to see,* on question whether or not she believed there to be differences between the Tamil areas and the Singhalese areas in DRR-efforts.

6.7 Trust in Government DRR- especially those implemented after the tsunami

Here I was interested in assessing perceptions regarding DRR, especially those implemented by the government after the tsunami, and assess perceptions on trust in the government. My findings reveal a general distrust in the government, but high trust in TWS systems where present and tested and where they have regular drills. This increases the sense of security. Other areas reported on having TWS, but they had never been tested.

6.7.1 The Aftermath of the Tsunami

Respondents affected by the tsunami informed about loss of valuables, jewelry, money etc. One little girl especially mention the TV brought home by her father after working in Saudi-Arabia for six years that also got washed away by the waves. This particular girl was not even born during the tsunami. There were also stories of intense looting following the disaster. That was claimed to be items, such as jewelry, a boat and a motorbike, but also looting of corpses, as Tamils usually were thick gold necklaces and jewelry. As explained by Amirthalingam and Lakshman (2009) jewelry is worn every day by Tamil women and holds great cultural value for them, hence also very poor possess some gold for cultural reasons. Also the children`s corpses were being looted. This was reported to be mainly from the unaffected areas, but also looting performed by the SLA was reported.

One reported to have been promised his motorbike in return for helping the army with the corpses. The motorbike was however never returned.

Some claim there was no solidarity amongst the community members, as *it was everybody for them self.* But it was also emphasized that *they were all similarly affected.*

6.7.2 Perceptions of Aid following the tsunami

The first aid received was reported to come from the nearby unaffected areas, e.g. the areas in Batticaloa town. This immediate aid consisted of food items, mosquito coils and some essential items for their children. As expressed by one of my respondents *So many things they were offered by the residents living in the heart of Batticaloa.*
The other immediate aid reported was from unaffected areas in the hill side; Nuwara Eliya and Colombo, who sent trucks with food and essential items to the affected population in Batticaloa.

NGOs were vital in the direct aftermath and one respondent says she cannot forget the Red Cross Society as; *they came quickly and dressed our wounds and provided basic assistance…medication and other things.* Also in another area the Red Cross was mentioned specifically as one of my respondents express that he *strongly believes that a non-profit organization, the Red Cross, will definitively come and help them* in case of a new disaster.

According to my respondent in RC their organization was behind the construction of 6500 permanent houses, 3000 wells and 6 hospitals after the tsunami. Now the Red Cross in the area is not engaged in any mitigating construction activities. Also other programs were reported to be closing down. The organization, according to my respondent, *struggles to survive.*

There was reported great dissatisfaction with the government among most of my respondents regarding the immediate aftermath of the tsunami. Some claimed their losses were not compensated for. According to one respondent *they did nothing. I lost everything and they did nothing.* Another tells about the long ques where government representatives took records, claiming *nothing happened. We were frustrated. We were disappointed. We were cheated.*

It was also reported what was perceived an unjust distribution of items, such as bicycles for children and other items for children. Even though this respondent also had a small one, she *was not offered.* The same was the case with sewing-machines given by particular NGOs. When complaining she was told that her parents were retired government officials, and she was then considered to be better off, although her house was in ruins. Some of my respondents also claim that there were several incidences of non-affected beneficiaries who got tsunami-houses which were than rented out with profit.

Only one respondent, a widower, report some satisfaction with the government, claiming that although the government was not directly involved in helping them, the government did a satisfactory job in directing the various NGOs efforts to provide shelters, houses and all the household things. This respondent especially mentioned NORAD who was responsible for the housing-scheme and basic necessities provided in the aftermath. He reported to be *100% satisfied with the help he was given and feel it is his privilege to say thanks in the name of God.*

Here it is interesting to note that although he had been given a house following the tsunami, he now live in a temporary house in a village lacking water and electricity. The reason for this was not uncovered, and with only two sons, there appear to be other reasons than dowry.

On questions on whether there is trust in the government in a post-disaster scenario, one respondent claim that *I strongly believe that a non-profit organization, Red Cross, will definitively come and help us.* Another claim that *in some cases I have to depend on the government… when the government is providing assistance or aid, I have to depend on it. On the other hand I have to depend on me. Myself.*

Unfortunately I was unable to get any clear answers on LTTEs role in the immediate aftermath of the tsunami.

6.7.3 Dislocation

Due to both the war and natural disasters dislocation has been happening frequently in several of my research areas.

Hence, my respondents all had first-hand experience with dislocation, due to war, disaster or a combination of the two. As before mentioned the previous experiences with dislocation and war appear to have generated a form of resilience among those affected by multiple disasters. In that regard it was interesting to note an apparent difference between areas.

As mentioned in section 2.3.3 Batticaloa was divided between GoSL-controlled areas and LTTE-areas when the tsunami hit the district. This appears to have shaped perceptions regarding the dislocation, and it was my respondents from former GoSL-area, mainly unaffected by the impact of war, expressed most distress regarding dislocation following the tsunami. They also reported most dissatisfaction with their present status.

Some respondents reported very long stays in refugee-camps. One respondent, from a formally GoSL-controlled area reported to have stayed five years in a Swiss-established refugee- camp. The experience with life in a camp is described as terrible. *It was so terrible to live in that camp. I experienced a lot of tragedies that cannot be put into words. There was one toilet for ten families… and the water… I lacked for water, sanitation… so many things I suffered from.* This respondent however recognizes the difficulties government to allocate land and relocate all the victims.

6.7.4 Housing-schemes

Assessing the resettlements after the tsunami revealed several differences in the housing-schemes. There were also observed differences in quality and completion of the houses. The difference observed in finishing the houses appeared to be based on the allocation of funds and also the supervision of the construction. In especially one GoSL-area, Kallady, the supervision was properly conducted hence the houses were fully constructed.
Here it must be recognized in regards to governmental housing-schemes that several of my research areas was war-zones at the time of the tsunami.

Hence, reconstruction of tsunami affected houses through owner-driven governmental housing schemes appears to have been more successful in some GoSL-areas than in former LTTE-areas where I encountered a family living in a temporary shelter next to the skeleton of the unfinished governmental tsunami-house.

There were also found differences between governmental housing-schemes and NGOs. Some of the best houses I visited were constructed by Caritas in Vaharai, an LTTE-stronghold. Governmental housing schemes in the same area appeared as uncompleted.

There is also being reported that the financial aid from the government housing scheme was not sufficient, as the government only provided 2, 5 Lakhs of money. One respondent inform that for her house to be completed additional 7, 5 Lakhs was provided by an NGO which name is forgotten.

There are also in-conclusive findings on feelings regarding relocation in tsunami- affected areas. My respondents belonging to the Burgher community expressed satisfaction with the re-location. This particular tsunami-village was the best according to observation. The quality of the houses, the risk-assessment, ditches to prevent flooding and least but not last, a very close collaboration between the stakeholders and the NGO, who had a particular focus on the Burgher minority in Batticaloa made this housing-scheme stand out.

This particular NGO, Helvetia, had involved the Burgher community in every decision and also employed the community in construction as many belonging to the Burgher community are carpenters by profession. In this area even the wells were filled to prevent outbreak of dengue, a mosquito-borne disease. The rate of the spread of dengue increases with rainfall (UN-HABITAT, 2013).

One respondent had applied to the government to be resettled to the area her mother was resettled in because of fear, but was rejected, while some relocated did not like the new location, as it was *an unfamiliar environment.* This could be linked to the divide of the community that followed the resettlement and the importance of social network, as some families in a society which traditionally used to live in clusters found them-self uprooted and dislocated from close family. The particular area in question seems to lack proper risk-assessment as my respondent also reports lack of water in the dry season and lack of other facilities. It is also interesting to notice that although this particular area, has been identified as very likely to flood (UN-HABITAT, 2013), this was not mentioned by my respondent, indicating that flood might not be seen as a major problem compared to what is perceived as more pressing issues.

6.8 Summary of Findings

In regards to natural disasters my findings show that they are connected with feelings of fear, especially among the tsunami-survivors. None want any future disaster to happen again. Especially the women were concerned with the human suffering following disasters.

My findings also reveal a fatalistic element, as disasters are perceived to be punishment from the gods. The context and previous history were also found to shape perceptions of natural disasters, and those severely affected by the civil war considered disasters as *not that bad,* in addition to a clear tendency among my respondents to focus on what they perceive as more pressing issues than natural disasters. There were also revealed low awareness regarding the link between natural disasters and climate-change.

Perceptions of vulnerability were first of all a question of *who* were vulnerable. Vulnerabilities identified were categorized under the labels emotional, physical, socio-economic and socio-cultural vulnerabilities, with a reoccurring focus on the issue of housing in all categories, which must be seen in relation to the practice of Kudi in the district, a particular inheritance law favoring females and provide strong ownership over land and assets.

Regarding perceptions on how to decrease vulnerability small measures were taken and again the issue of housing was a main theme. But also micro-finance was brought up, as several of my respondents reported to have taken up loans. This was however perceived as mainly negative, and had led to several suicides in the district, but also considered as necessary among others. Religion also brings in a fatalistic element that could impact perceptions of DRR-efforts, through the notion that fate is written in the forehead.

Love of land, livelihood and culture were all relevant factors in why people live in areas associated with risk, but must also be seen in relation to socio-economic factors.

Participation in DRR where found to be including, with a particular focus on women as they were perceived as the right group. There were however pointed towards differences between the two main ethnic groups in the district in regards to facilitating programs aiming at women,

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as the Muslim community would require female instructors due to religious customs and traditions. Cast is said to have little influence in society, but was mentioned by one of my respondents and should not be fully excluded as an influential factor.

The DRR identified in the district was an unfinished mitigation-project in form of a flood-preventing wall, some workshops and staged dramas, and warning-systems, so the main focus was evacuation-drills, and training in identifying safe-spots and in preserving legal documents. In this regard the importance of domestic items was being downplayed by the facilitator. Some areas reported to never have had any drills or any DRR-programs, despite being affected by flooding.

There was also a common perception that all the NGOs had left the area. Financial problems were reported also in RC and DM, causing projects to close down or remain un-finished. The lack of NGOs and disaster-mitigation generates huge frustration in some areas.
On the other hand it appears that TWA generates a great deal of trust in areas where it is present and tested. Other areas report that there are alarms, but they don't know if it works because it has never been tested. Social network also adds to the feeling of trust.

Despite claims that alarm-systems have been established also in remote villages, there were found one flood-affected area that claimed there had never been any DRR or any alarm-system operative. Former GoSL-areas express most trust in DRR-systems, in particular TWA and express an increased sense of confidence due to these drills and programs. There was however expressed very low awareness in regards to future mitigation plans or DRR-activities. Little awareness was also found in regards to who or which organization had provided aid or facilitated the programs.

Stories regarding the aftermath of the tsunami tells of great material losses, massive looting, also of corpses, mainly from the unaffected areas, but also by the Sri Lankan Army (SLA). There were also feelings of low solidarity among the community members.

The first aid received came from the nearby unaffected areas and consisted of basic items. The NGOs effort are considered vital, and especially the RC are mentioned. All areas expressed a general distrust in government efforts.

Dislocation in the district has been frequent in some areas due to war, natural disasters or in some areas both. There were found different impact of this dislocation and it appeared as the mainly previously unaffected areas had the worst experience. Long stays in refugee-camps were described as terrible, but also seen in relation to the government`s difficulties to provide all the affected population with land and houses.

There were also revealed differences in regards to housing schemes, both based on the divide during the war, but also the facilitator and degree of supervision were factors explaining the differences. Perceptions on the resettlement were also varying. The greatest success was housing-schemes fully constructed by an NGO in great collaboration with the affected Burgher community of Dutch Bar, Kallady.

7 Analysis of Data

This chapter will sum up and analyse the findings presented in Chapter Six, while also applying the concepts presented in the literature review, Chapter 4.

The particular cultural and contextual background of the Tamil population in Batticaloa will be taken into account while analyzing the findings.

Based on the finding and my topic of interest, I have chosen to categorise the analysis into two sections;

- Perceptions on vulnerability to natural disasters
- Participation in and perceptions on DRR in Batticaloa, with a particular focus on perceptions on government-implemented DRR following the tsunami.

This chapter will also elaborate on the importance of houses, seen in relation to both culture, context, and DRR and the importance of integrating and understanding of the culture and context while implementing DRR.

7.1 Perceptions of Vulnerability to Natural Disasters

As established in my literature review in Chapter 4 disasters have a devastating impact on societies and women are disproportionally affected. Higher death-tolls, higher post-disaster mortality, injury, and illness rates, disproportional economic losses and the change of work load all which points to the fact that disasters are being gendered. There is also found higher rates of post-disaster stress symptoms and increased rates of sexual and domestic violence against girls and women in the context of disasters (Enarson, 2000, p.2). However, as established in Chapter 6 perceptions on vulnerability to natural disasters will be dependent on the contextual and cultural background.

First; As explained by National Research Council (1991) "The key to reducing loss of life, personal injuries, and damage from natural disasters is widespread public awareness and education. People must be made aware of what natural hazards they are likely to face in their own communities"(p.17). However, as presented in my findings, section 6.1, many of my respondents showed little awareness regarding DRR and there was no mentioning of the link between natural disasters and climate change, apart from my respondents in DM and RC. My findings thus correlate with findings from a survey on the level of awareness among the residents of Batticaloa performed in relation to the report "Batticaloa Sri Lanka: Climate Change Vulnerability Assessment". This survey established that the group most vulnerable to natural disasters, the fishery community which also makes up most of my respondents, had low awareness on basic knowledge of and causes of climate change.

They had moderate awareness on impacts of climate change and very low awareness on adaption/mitigation measures (UN-HABITAT, 2013). Identifying these communities as vulnerable go in accordance with the statement from UN-HABITAT, 2013 claiming that "The fishery community predominantly lives in shelters adjacent to coast and lagoon banks. They need to be considered as highly vulnerable groups for any expected climate change scenarios due to the insecurity of their current housing and livelihood options. Furthermore, those communities settled adjacent to the sea are heavily dependent on natural resources such as fisheries" (UN-HABITAT, 2013).

Increasing awareness among this group should be considered paramount, as low awareness could have negative impact on disaster preparedness, a vital concept in DRR which "refers to specific measures taken before a disaster strikes, usually to issue warnings, take precautions and facilitate a rapid response" (Twigg, 2004, p. 13), and disaster mitigation, seen as "any action to minimise the impact of a potential disaster" (Twigg, 2004, p.13). As claimed by Ban Ki Moon "The more governments, UN agencies, organizations, businesses and civil society understand risk and vulnerability, the better equipped they will be to mitigate disasters when they strike and save more lives" (in UNIDSR, n. d., b). Education regarding risk and vulnerabilities are also pointed out as" perhaps the most important disaster management activity for disaster-exposed communities" (Øyhus, 2016a, p. 159), and should therefore be "top-priorities" (McEntire, 2001, in Øyhus, 2016a, p.159).

In that regard it is important to recognize that for most of my respondents other issues had higher priority than natural disasters, such as lack of basic necessities, and in particular the issue of housing, which will be addressed throughout the chapter. This is a tendency that is also found in several vulnerability assessments carried out by the Red Cross/Red Crescent and NGO`s to evaluate Red Cross policies and encourage people to decrease their exposure to hazards. These assessments reveal that few people focus on the risk faced by natural hazards. Their priorities are instead related to health issues, disease, water, etc. (Cannon, 2008, p.354).

As highlighted by Lavigne et.al (2008) "(…) interpretations of disasters are highly heterogeneous and depend on local socio-historical and ethno-political contexts "(in Gaillard & Texier, 2010, p.82), and as explained in section 6.2 many of my respondents from areas ravaged by war considered war to be worse than natural disasters. In addition, as the majority of my respondents were poor, the difference in perspective can also be explained by what is pointed out by Alexander (1997) as differences between the really poor and the less poor in perceptions of natural disasters, as natural disasters for the really poor does not fundamentally change their situation (Alexander, 1997, in Øyhus, 2016a), but "merely magnify the existing social and economic trends" (Kates, 1977, in Øyhus, 2016a, p. 154).

Another interesting feature in regards to disasters is the fatalistic element presented in section 6.1.1 that could affect perceptions on how to decrease vulnerability to natural disasters, as it is "out of their hands". This fatalistic element was also found in Hambantota district, where disasters are perceived as an act of God, namely Allah or Buddha in this specific region (see Øyhus, 2016a). This was also found among the Hinduist population in Batticaloa, as well as

among the Penta-Costal society, who perceived misfortune or disasters as demon-activities. In Batticaloa it was perceived that the God created the tsunami to level everybody, and it was also mentioned specific that it did not differ according to casts. This is, as explained by Øyhus (2016a) underlining "that from a local perspective, cultural and religious factors are crucial for explaining both the causes behind disasters, but also who will suffer" (p. 136). Øyhus (2016a) goes on claiming that understanding of such cultural and religious factors "must be in place in the planning and management of future disaster and risk reduction activities" (2016a, p. 136).

Second; In regards to perceptions on vulnerability, as explained by Singh, et.al. "Understanding vulnerability requires more than simply understanding societies" past and present relations with regard to disaster and development. Vulnerability is also about people, their perceptions and knowledge" (Singh, et.al., 2014, p.71). And as established in section 6.2.1 perceptions on *who* is vulnerable does not necessary resonance with observations and established theory regarding disaster risk and vulnerability. With a particular focus on women, and encountering several widows, women with low income, and belonging to a minority population most of my respondents would traditionally be perceived as "(…) particularly vulnerable" (Enarson, 2000, in Fisher, 2010, p. 905), it was interesting to find that the majority of women themselves did not perceive themselves as being more vulnerable than men. Even the concept of vulnerability itself often needed more elaboration.

As explained by Cannon, the term "vulnerability" is often vague and confusing and characteristics of vulnerable often correlate with poverty and marginalization and pre-assumed stereotypical groups (typically the elderly, women, and children), (Cannon, 2008, p. 351), which could deteriorate the concept, which is true. However, vulnerability will often still correlate with the factors mentioned above, as these often appear as inter-woven factors, that could impact coping capacity, such as language-barriers, cultural factors, insecure housing, and being care-givers to mention some (Enarson, 2012; Hillier and Nightingale, 2013). These were all factors mentioned by my respondents in regards to perceptions on vulnerability. But, as pointed out by Wisner's (2004), "gender is just one of many social factors that affect our vulnerability" (in Scharffscher, 2011). The women in general accepted that children and old women were vulnerable, which goes in accordance with the reports of Birkman & Fernando (2007) who established that age was a factor relating to casualties (in

Øyhus, 2016a), but among the women themselves there were expressed confidence that they could safeguard their lives in a possible disaster-scenario.

As discussed in Chapter 2, the huge involvement of women in the LTTE seems to have had impact on society as a whole and women do not perceive themselves as inferior to men (see Alexander, 2014; Richards, 2014). A large number of widows among my respondents claimed they were used to fend for themselves, although widows and female-headed households are identified as particular vulnerable, as shown in Section 4.5. In addition have the large number of widows in the district altered the traditional gender-pattern as they must do work outside the house to support themselves and their family.

There were also a general agreement, in particular in the areas most affected by war, that the vulnerability had decreased since the end of the war, and that life was better, thus indicating that war is being perceived as worse as and more threatening than natural disasters.

Third; Perceptions on vulnerability was clearly linked to the place of residence and form of residence and although the majority of my respondents were identified as being vulnerable to natural hazards, they frequently compared places with theirs, thus indicating perceptions of risk assessment, which thus must be ranged from bad to worse. Why they live in areas associated with risk were explained by several intermingling reasons, like love of the land (place-attachment), livelihood and culture, which could all be considered weak social constructions, as they entail some elements of choice, as explained by Cannon (2008).

Although they are more exposed to natural disasters, it is important to recognize that the love of land, or place attachment to one's home and community are beneficial and linked to several positive health and community participation outcomes. According to Mesch & Manor (1998) high place attachment generate more social and political involvement in their communities (in Anton &Lawrence, 2014) and creates a community where people work together to achieve desired outcomes, e.g. protecting the environment (G. Brown, Red & Harris, 2002, in Anton and Lawrence, 2014). They are also more likely to work together to protect the social and physical features of their neighborhood (Mesch & Manor, 1998, in Anton &Lawrence, 2014). All this factors are features adding to their social capital, and thus of great importance in regards to DRR.

In addition, as pointed out by Aragwal (1994) "ancestral land usually has a symbolic meaning which purchased land does not: within some village communities, continuity of ancestral land also stands for continuity of kinship ties and citizenship" (Selvaduri 1976, in Aragwal, 1994).

In regards to love of land, or place-attachment, one of my focus group discussions brought up an interesting case of intended land-grabbing following the displacement after the tsunami which is reported to happen frequently in the North-East areas (see Klein, 2007). During their displacement a businessman had taken the advantage and created false documents claiming the right to their land. There were also found a fear that the government would reclaim the land if they left it un-occupied. Such perceptions were also found in research conducted by Shanmugaratnam (2005, p. 1, in Thomson, 2014).

In this particular area it was interesting to find that high levels of social capital within the group, and the ability to generate bridges, evolved into agency and as a community they fought back with aid from both GN-officials and Human Rights in Batticaloa. Here the importance of legal papers also was displayed, as mentioned in section 6.5.1. The entire community had been provided with legal documents providing ownership to the land, and because of the bridging ability Human Rights office in Batticaloa had offered to pay for their lawyer. Apparently they will all go to the court as a collected community to maintain their right to their land.

This area is of particular interest because although all the residents had been provided with tsunami-houses only 1 km inland, they had all offered their houses as dowry and losing their land would increase their vulnerability. As explained in section 6.4.1 land holds great value in the Tamil culture. In addition we find the aspect of living close to their livelihood was also an important factor, as explained in section 6.4.3. Here are found clear trade-offs between risk and benefits (Cannon, 2008). Here it is interesting to reflect on Cannon (2008) insider-outsider paradox; "most "outsiders" consider that we have to reduce people's vulnerability to hazards. Most "insiders" (especially poor people) do not distinguish between the shocks (floods, cyclones, earthquakes etc.) and their normal everyday lives" (Cannon, 2008, p. 355). However, poverty and ethnic-based settlements in addition to frequent dislocation during the war and following disasters add a stronger social construction in regards to vulnerability that must not be ignored.

It is however also important to acknowledge that although love of land, or place-attachment, has benefits it could also have negative impact on DRR-efforts as "(…) threats to a place may increase people's awareness of their attachment, and this increased awareness of attachment may lower their risk perception and influence them to want to stay in the place they are attached to, despite the place no longer being safe" (Anton &Lawrence, 2014). In addition, as explained by Arce (2003), "The commitment of households to particular livelihoods may also be non-material. Norms, taboos and cultural values can be implicated in the decision to follow particular livelihood pathways and can constrain the prospects of switching to others" (Arce 2003 in de Haan and Zoomers 2005 in Matayas and Pelling, 2012, p. 18). This was exemplified by my respondents claiming that mentally they were fishermen, and thus culturally and mentally attached to that particular livelihood.

Matayas and Pelling (2014) claim that losing such cultural identification is a price that could be perceived to be a price that is too high to pay for adaption. In this particular setting it is also important to recognize possible influence of the cast-system as well, as that used to be a determent for the particular occupations. Why people chose to move back to unsafe areas must also be understood on the basis of values among the stakeholders. There are several reasons often inter-acting with each other. Socio-economic reasons are of course a vital element, but also other values come to play, such as the love of land, familiarity, culture and livelihood. In sum, a pre-knowledge of particular contextual and cultural features must be recognized in order to succeed with DRR-programs.

Forth; as described in section 2.2.1 Batticaloa is a poor district and poverty is identified as a risk driver (UNISDR, 2015b). As claimed by Didier Cherpital (2011) "Disasters seek out the poor and ensure they stay poor" (in Øyhus, 2016 ap. 32). Among my respondents poverty was clearly adding to perceptions of vulnerability. In particular related to the issue of housing, which was a repeating theme throughout my research. As established in section 4.3. vulnerability are often seen in relation to poverty, but, as explained by Øyhus (2016a), the interaction between hazard, vulnerability and poverty are complex. And although poverty has clear links to vulnerability, and it is often the poor that suffers the most, it is important to see it in relation to not only the physical conditions, but also the social conditions (Few, 2003; Cannon, 2000 and 2008, in Øyhus, 2016a).

According to Cannon (2000) it is of vital importance to consider vulnerability as a result of the political-economic position people have in society (in Øyhus, 2016a).

An interesting example to illustrate that is put forward by Shanmugaratnam (2005) who argue that mainly socially and politically marginalized Muslim and Tamil settlements in the eastern coastal belt were affected by the tsunami (Silva, 2009:65, in Øyhus, 2016a, p. 24), with the fishery-sector disproportionally affected (Øyhus, 2016a). Their vulnerability is linked to their temporary shelters (UN-HABITAT-2013). As pointed out by a paper by Mathbor (2007) mortality from disasters is generally greatest in areas having the poorest socio-economic conditions (Guha-Sapir, 1991, in Mathbor, 2007) and research revealed that casualties were directly related to types of housing and where shelter were taken during disasters. No deaths occurred among individuals living in pucca houses (made of brick and concrete) and the ones who sought shelter in these buildings had no casualties (Mathbor et al., 1993, in Mathbor, 2007).

While considering disasters as "the antithesis of development" (Baez, et. al, 2010), the focus on permanent houses could also be considered a "quest of human security" (Øyhus, 2016a, p. 160).

There is no doubt that poverty may influence coping mechanisms, thus limiting resilience and give "little access to resources, influence, information or decision making" (Hillier & Nightingale, 2013, p. 2). However, as explained in Øyhus (2016) it is now also commonly accepted that people not simply draw on assets, but put sophisticating skills to use in managing them leading up to "a growing recognition that the poor are strategic managers of complex asset portfolios" (Moser, 1998: 5, in Øyhus, 2016a, p. 37), not just helpless victims "getting in the way" of hazards (Cannon, 2008). As mentioned by Ellis (2000) and Ellis and Freeman (2006) households facing uncertainty and the possibility of negative shocks, could deploy a livelihood diversification as a coping mechanism for risks (in Matayas and Pelling, 2012) which will often expose a "increasingly diverse portfolio of livelihood activities and assets in order to survive or improve living standards" (Ellis 2000 p.15 in Kien, in Matayas and Pelling, 2012, p. 17).

This was exemplified by respondents who used social networks to get by when monthly payments from abroad failed and also going abroad to work as housemaid, despite varying benefits.

Also the tendency to use microfinance to buy gold could be considered a coping-mechanism, as gold could be used as collateral for difficult periods (Amirthalingam, and Lakshman, 2009), like for instance failure of crops or time of weddings or other occasions. The findings by Amirthalingam and Lakshman (2009) however stress the fact that "gold jewelry is primarily a cultural asset among Tamils" (p. 13). Gold jewelry is also related to the tradition of Kudi, and selling off gold could have stigmatizing effects, indicating a lower social status and it could also affect future generations in regards to dowry (Amirthalingam, and Lakshman, 2009).

I would however claim that the way of using borrowing groups from the same village where all the women are responsible for each-others debt could possible impact the social capital negatively, as expressed by some of my respondents as quarrels between the group-members. But the action taken by my respondents, show coping-capacity. And, as explained by Matayas and Pelling (2012), "coping capacity and adaptation are certainly implicated in vulnerability and resilience, highlighting action and capacity instead of simply victimhood" (Matayas and Pelling, 2012, p. 16). Another important issue is put forward by Cannon (2008) who underline that "Much of the poverty we witness is "normal" (p.354) and people are accustomed to a livelihood that sometimes generates surplus and other times not (Cannon, 2008, p. 354).

Fifth; as claimed in Øyhus (2016) it is "very important to recognize the potential mental health impacts of disasters resulting from stress" (Durkin et.al., 1993; McMichael et.al., 2001, in Øyhus, 2016a, p. 32). And as established in the introduction and in Chapter 4.5 there are reports on women and girls showing higher rates of post-disaster stress. This was also found during my research, as several respondents expressed symptoms of stress. Fear of the sea, fear of the sound of rain, thunder and waves, and fear of creatures entering the house during rainy season were mentioned, which. I have chosen to refer to as emotional vulnerability. The emotional stress increased during rainy season, both among the tsunami-survivors and those in flood-affected areas.

For my respondents living in temporary houses the reports on fear and stress could clearly be linked to the difficulties associated with the housing-facilities and having to move valuables, and dislocate during flood and having to check that the houses did not collapse during flooding.

For my respondents in permanent houses, it appeared to be more a case of mental issues associated with the tsunami and lack of proper mental counselling in the aftermath of the disaster and uprooting of traditional living patterns and loss of their dowry-houses.

According to MacTaggart (2017) the issues of housing could affect women in different and more severe ways, leading to higher rates of depression and other mental health issues. It could also affect the people they care for as "women are the people who make families work" (MacTaggart, 2017). She further claims that "Insecure housing, or being forced to move area will affect the care women can give to their parents and the education of their children" (MacTaggart, 2017). This is interesting to note in regards to why more women struggles with mental issues following disasters. Hence, safer living-conditions could decrease the level of mental stress.

It is also interesting to note previous research conducted on 'home making' which has found that a home is not just a physical place or geographic location, but also "a series of social, historical and psychological spaces" (Perera-Mubarak; Brun and Lund; Stefanson, in Jayatilaka and Amirthalingam, 2015, p. 21).

Another important issue regarding disasters and de-location is explained by Amirthalingam and Lakshman (2009) because traditionally women "(…) most of who are housewives, spend most of their time at home. This is not the same with men—most of their working life will be spent outside the home. Therefore the loss of a home will be felt more heavily by women than by men" (p. 12).

This is of particular interest in regards to the meaning of houses for women in Batticaloa, where cultural factors have great influence, as described in Section 2.4. First of all because of the practice of dowry, in the particular matrilocal form of Kudi, explained in section 2.4.1. Kudi have a long tradition in Batticaloa and have provided the Tamil women control of assets such as house and land, although that does not mean they alone control the assets.
In addition have the custom of women residing in clusters with close family functioned as a "safety-net" and decreased the feeling of vulnerability (Amirthalingam and Lakshman, 2009; Jayatilaka and Amirthalingam, 2015). Another important factor regarding the importance of houses and property-rights is security for their children and in this particular context a reassurance that their daughters will get married.

Most of my respondents had faced dislocation, both on the grounds of the war and because of natural disasters. And, as explained by Amirthalingam and Lakshman (2009),"both these displacement settings, having resulted in similar losses, would have a similar impact on the psycho-social, as well as economic wellbeing of the affected people" (p. 5). Dislocation due to war and disaster are closely connected to emotional vulnerability and respondents remember the time spent in refugee-camps as being terrible. In particular were the problems with lack of resources, lack of water and sanitation brought up. For the mothers such lacks naturally affects their role as care-givers, thus increasing the level of stress. The lack of sufficient toilets and proper sanitation also affects the women disproportionally. In particular the lack of tight social networks in a dislocation scenario is pointed out as an adding to the difficulties by Amirthalingam and Lakshman (2009), which traditionally has worked as a "safety-net" for the women in Batticaloa, because of the residing in matrilocal clusters.

It must however also be taken into consideration that in the aftermath of the tsunami it appeared that the context of war, displacement and the tsunami had made the Muslim and the Tamil women in the North and East more resilient, and even in the camps they showed entrepreneurship. That was not found to the same degree among the Singhalese or Burger-community which had not been as affected by dislocation and war as the Tamil and Muslim population (De Mel and Ruwanpura, n.d., in Jayatilaka and Amirthalingam, 2015). As explained by Jayatilaka and Amirthalingam (2015) "Their responses to the tragedy were shaped by prior exposure to the war, underdevelopment, poverty, gender, class, caste and so on." (p. 22),which in turn has shaped the culture. As mentioned in chapter 4.4, culture add to the understanding on how vulnerability is felt and also a part of collective decisions regarding what to fear and not to fear (Douglas and Wildavsky, 1982, in Matyas and Pelling, 2012). This was especially obvious in former war-ravaged areas, as the general perception in these areas appeared to be that *disasters were not that bad*. All which gives indications towards a notion of resilience related to the total impact off both natural and man-made disasters.

Sixth; As previously mentioned, perceptions of vulnerability were also linked to lack of basic facilities, such as lack of electricity, water and permanent houses with lockable doors. These vulnerabilities could be seen simply in relation to being women and feeling unsecure when not being able to secure herself or her children appropriate.

However, the lack of such facilities were also found to have connections with tradition and culture, in the sense that some of my respondents were unable to perform particular rites of transmission thus exposing young girls to demon influences or *living in darkness.* As illustrated in section 6.4.3, the believe that demon-activities created misfortune was also found among the respondents belonging to the Penta-Costal-church in an area with high poverty where demon-activity apparently were frequent. Here is an interesting link to Cannons claim that fatalistic thinking could be linked to the material circumstances, as this was not found amongst my most affluent and educated respondents, who considered the survivors of the tsunami as *just lucky.*

Here Cannon (2008) has an interesting perspective claiming;

> "It is also essential to understand concepts of fatalism and "religious" beliefs that affect individual and group behaviour, and the circumstances in which these beliefs are dissolved by other processes: they seem to be sensitive to material changes that demonstrate that fate can be affected by human action: in other words, is fatalism used as a way to negotiate the experience of risk when the material conditions to reduce risk are absent? And does this relate to group behaviour: will an individual change his/her attitude when it is clear that they can do so without fear of being considered strange or irreverent by their peers?"(Cannon, 2008, p. 356).

In other words, does the material circumstances impact perceptions on fatalism and vulnerability? My research only had two respondents belonging to the "upper-end" of society, but among these respondents I did not find any fatalistic belief in regards to disasters. However, given the low number of respondents, it would remain a more tentative suggestion.

7.2 Participation in and perceptions of DRR in Batticaloa

As defined by UNISDR "Disaster risk reduction is the concept and practice of reducing disaster risks through systematic efforts to analyse and reduce the causal factors of disasters. Reducing exposure to hazards, lessening vulnerability of people and property, wise management of land and the environment, and improving preparedness and early warning for adverse events are all examples of disaster risk reduction" (UNISDR, n.d.a). In Batticaloa I mainly found evacuation drills, and one unfinished flood-preventing wall.

All of my respondents living in temporary houses considered permanent houses as a mean to decrease vulnerability. There were however found low awareness on ongoing housing-schemes for the most vulnerable.

My research found that participation when DRR is present is generally high, especially among the women. The traditional gender-pattern with men as the family-breadwinner makes women more available for such programs than men. However, as before mentioned a distinction needs to be made between areas with regular drills and areas without any drills, which also to some degree seems to correlate with the divide between rural LTTE-held areas and more urban GoSL- held areas during the war.

This however remains as more tentative suggestions, as lack of DRR-programs could be related to other factors, such as population density, and degree of impact from varying hazards.

As explained in section 6.61 women are recognized as keypersons in mitigating the impacts of disasters and are highly represented where programs are available. I did however find a difference in perceptions regarding value of items among the facilitators and the respondents. From a male perspective the loss of domestic usable items like blankets, clothes and kitchen utensils appear to be considered *not that important.* Women on the other hand reported on the low quality of the replacement of such losses had been and that after few years it all had to end up in the bin and mention all the things they used to have. From a male perspective it appears that the focus is on saving legal documents like birth certificates, identification documents etc. which were being giving training and awareness in preserving in case of a disaster. Although many of my respondents were aware of the importance of these documents and some kept them in safer places, the focus of these documents was down-played by the women who, in case of disaster, would focus on saving children and family. The down-playing of loss of domestic items reveal a male bias in DRR-programs.

A study by Amirthalingam, and Lakshman (2009) of Internally Displaced People (IDP) found that "women divulged that household goods like pots and pans, utensils and furniture—no matter how rudimentary they are—will be missed more by them than by the men folk. It seems that there is a sense of identity or of belonging that is associated with one's home which is very important to these women" (p. 12), hence having a value.

This connection to domestic items would be even stronger among the affected women in Batticaloa due to the particular custom of Kudi, and the fact most of the women had been brought up in their dowry-houses, a suggestion which is backed by the research conducted by Amirthalingam and Lakshman (2009). And although, as expressed in Hyndman 2008; 105), "Some would argue that the above description is aimed at strengthening the gendered "stereotyped roles in society" (Hyndman, 2008, p.105, in Amirthalingam and Lakshman, 2009), Amirthalingam and Lakshman (2009) claim there is a "possibility of a more pragmatic reason why women are more attached to these assets" (p. 12), namely the cultural importance of land and inheritance among the Tamil population in the East.

Ethnicity is also a factor in DRR, and as described in chapter 2, the Tamil population have been disproportionally affected by disasters (Kuhn, 2009), hence a particular focus should be on including them in DRR-programs because, as explained by Hillier and Nightingale, there should be a particular focus on equality and specific investments for the marginalised people (Hillier & Nightingale, 2013). In addition, as mentioned in section 5.7 I was unable to get a gate-keeper to the Muslim community and must thus base my hypothesis on own observation as well as information from my respondent in Red Cross who claimed that for Muslim women to participate in DRR-programs the programs must be culture-sensitive in the sense that they require female instructors and plain female groups as Muslim women don't interfere with unfamiliar males. The stronger Muslim identity formation observed among young women Kannankuda through increasing use of niqab have the potential to make female participation in DRR-programs more challenging unless religious and cultural aspects are taken into consideration. Hence, understanding of the context and culture becomes critical for maintaining high female attendance within the Muslim community.

This is however not claiming that religion has a negative impact on DRR. Religion and faith based organizations have a vital role to play in DRR. As explained by Gaillard & Texier (2010) "places matter and religions are always embedded in local cultural contexts" (p.82). Given their embeddedness in local community they are able to respond to emergency rapidly and usually also benefit from a high level of trust in society (Gaillard & Texier, 2010, p. 83). It is merely to point to the importance of taking into consideration various cultural and religious factors that could affect participation. There is however consensus for "a better and more sensitive understanding of the local contexts in which religions and religious practices intermingle with social, political and economic constraints.

There is also consensus for considering religion as a resource rather than a hindrance in the planning of disaster risk-reduction policies" (Gaillard & Texier, 2010, p. 83), given the before mentioned embeddedness in the communities and could be considered as adding to the social capital.

Social capital is recognized as a force to be reckoned with in regards to DRR. Social capital, or network is also, as explained in regards to matrilocal tradition in Batticaloa, section 2.4.1, vital in the perceptions of vulnerability. As illustrated in figure 4, Batticaloa is a divided society, a divide which can be traced back to ethnic-based settlement policies implemented by the government, as mentioned in section 2.2.3.

An even stronger identity-formation between the different ethnic groups could therefore have a negative effect on the social capital in the district, as discussed in section 4.6.2. Social capital is often considered "the glue that hold groups and societies together" (Narayan, 1999, p.1, in Øyhus, 2016, p. 2), but there are negative implications as well, as strong ties within groups can lead to exclusion of other groups (Porter, 1998, in Øyhus, 2016a). This can lead to a lack of overlapping networks among groups that may result in unequal opportunities to take part in development activities (Narayan, 1999, in Øyhus, 2016 a, p.4).

This is also interesting to consider in regards to notions of caste-identity. As explained in section 6.6.3 the Sri Lankan constitution prohibits discrimination on the basis of caste. And according to my respondent in RC the issue of caste is not a factor regarding participation in DRR-programs. However, Thorat and Shah (2007) claim that although caste in many respects is less significant and less visible in Sri Lanka, compared to India, some 90 per cent of the population in Sri Lanka recognize it for some purposes at least (in Silva, et.al, 2009), which makes it necessary to take into consideration when implementing DRR. As explained by Silva, et.al (2009) "the Liberation Tigers of Tamil Elam (LTTE)(…) imposed a kind of censorship on the caste system, identifying it as an obstacle to a unified Tamil ethnic homeland, and these developments made the caste system a more hidden entity, not openly addressed by society, policy and social analysis" (Silva, et.al., 2009, p. 3). Therefore, asking about caste identity in Sri-Lanka are more difficult than in India due to the prevailing public attitudes (Silva, et. al., 2009).

As presented in my findings, section 6.6 cast is said to no longer have an influence outside of religious events and does not affect participation in DRR-programs. But the issues of cast-identity were mentioned by one of my respondents and thus show that cast-divide within the community still requires some focus. This is especially important with regard to possible discrimination on the basis of cast to access information and aid. As explained by Silva, et. al. (2009) "In war and tsunami affected areas of Eastern Sri Lanka (…), caste appears to be of considerable importance in identity formation, local politics as well as in processes of social discrimination" (p. 8), hence it must be considered a possible, although hidden variable while implementing including DRR-programs in the district. Silva, et. al. (2009) further claim that cast also influence vulnerability in regards to war and natural disasters both in Northern and Eastern areas, and link this vulnerability to lack of coping abilities and limited economic and social capital. They claim "The state and nonstate actors responding to relevant humanitarian concerns appear to be unaware of caste dimensions involved even though they have serious implications for access to resources and services among the affected people" (Silva, et. al., 2009, p. 15).

Although it appeared as class, not caste created the greatest divide within communities in Batticaloa, which was also confirmed by RC, cast cannot be completely excluded as a factor adding to vulnerability. According to a study performed by Silva et.al (2009) it can be claimed that "Sri Lankan society is caste-blind rather than casteless" (p. 14). And since cast-issues are embedded in society, although more hidden , "the women may be seen as especially vulnerable group with ethnic, caste, class and gender discriminations simultaneously impacting on them" (Silva, et.al. 2007, p. 19). However, "Currently, caste is not included as a variable in any of the official data collection procedures or databases, including census, socio-economic surveys and poverty assessments". (Silva, et.al, 2009, p. 21)

This is also a possible factor in regards to inequality as an influential factor in participation in DRR- programs. As mentioned in section 6.6.4 inequality was not found within programs, but rather between my different areas of research. And as explained in section 6.6.4 it was revealed that some areas had regular drills, while other areas had never had any DRR-programs. Especially respondents in one area expressed great frustration regarding this neglect of DRR-implementations as this area experienced severely flooding every year. This feeling of neglect and broken promises could impact the important factor of trust, and the ability to generate bridges.

It is also important to recognize that as a minority in Sri-Lanka the Tamil population appears to have been disproportionally affected by e.g. the tsunami. And although I follow Cannons notions of weak and strong socially constructed vulnerability, and how people often chose to live in places associated with risk because they "want to", and trade off risk for benefits, the figures presented by Kuhn (2009) shows a disproportional impact on the Tamil population in the after-math of the tsunami. Cannons claim that the tsunami was "a relatively "innocent" disaster, in the sense that "strong" social construction (of the class-based socio-economic type) was not significant. (…) in general, inequality had not made some people more vulnerable than others" (2008, p. 352).

According to Kuhn (2009) estimation of community-level data suggest that 48 % of destroyed houses belonged to Tamil, 23 % to Muslims and 29 % to Singhalese. This was also found in the numbers of deaths (Kuhn, 2009, p.2). Tamils in Batticaloa was relatively worse affected despite being the majority population (Kuhn, 2009). The district population was 73% Tamil, but the data indicate that that 88% of destroyed homes belonged to Tamils (Kuhn, 2009, p15). Community survey data from 141 GNs also indicated that the most heavily affected Tamil communities had "substantially lower living standards than the already poor Tamil average" (in Kuhn, 2009, p. 16), thus indicating a stronger social socially constructed vulnerability. 46 % of the deaths following the tsunami were predominantly Muslim and Tamil population living in the districts of Ampara and Batticaloa on the East coast (Øyhus, 2016 a, p. 24). The fishery sector was disproportionally affected (Øyhus, 2016 a). As explained in section 7.1 this particular vulnerable group also has little awareness on climate change and adaption and mitigation measures (UN-HABITAT, 2013), indicating inequality among groups.

7.2.1 Trust in Government DRR

On the issue of trust in the government I found a general distrust in the government among my respondents. This was especially apparent regarding the aftermath of the tsunami, but also in flood-affected areas this distrust in the government was found. Stories regarding the aftermath of the tsunami tell about corruption, nepotism, looting of corpses, allocation of aid to un-affected, distribution of houses to unaffected etc. This was also found in Hambantota while conducting research for the book Recovering from a disaster- A study of the relief and reconstruction process in Sri-Lanka after the 2004 Indian tsunami (see Øyhus, 2016a).

There were also told about difficulties to come up to the same financial level as before the disaster, also explained by Dercon (2002) who claims that "years after a shock, assets employed for coping may still not have returned to pre-shock levels" (Dercon, 2002, in Matayas and Pelling, 2012, p. 16), as expressed by one of my respondents as I lost everything and they did nothing.

Only one respondent reported on having trust in the government efforts post-tsunami, but this was not as directly involved, rather as a facilitator for the operating NGOs.

NGOs have more credibility amongst my respondents, but as explained in section 6.5.1 the organisations and programs in the district are going down and funding, both within Red Cross and Disaster Management appeared to be a problem.

There were however found great trust in the TWS and evacuation-drills where present and tested. The testing of these systems however seems to vary from different areas, where one area have regular testing every December, while another area report on never having any testing of the TWS. The lack of testing seems to affect the sense of trust in the government negatively.

7.2.2 Resettlements and Housing-schemes

As established the Tamil community were disproportionally affected by the tsunami, and as claimed by Kuhn (2009) "Socioeconomic disadvantage (…) must certainly have played a role in determining the level of tsunami damage (for instance through poor coastal protections or housing) and would, in a perfect would, have suggested that a greater level of attention be paid to restoring the homes and livelihoods of such communities" (Kuhn, 2009, p. 17). The issue of housing was a repeating issue among my respondents and closely linked to perceptions of vulnerability. This was the case both among respondents unaffected by the tsunami and among those resettled or with tsunami-houses on their original land.

As explained by Øyhus (2016a) the tsunami was followed by a rush of building transitional settlements which often did not take into consideration the connection between permanent houses and communities. And as mentioned in section 2.4.1 the settlements in Batticaloa was traditionally established in clusters, thus entailing a strong social network consisting of close family which functioned as a "safety-net" for the women. Although resettlements in safer

areas were intended to increase resilience among the population to natural disasters, it is also important to keep in mind, as explained by Miller et.al. (2010), that "resilience is not necessarily a positive sum game. Building the resilience of one component can simultaneously reduce the resilience of another component or of the system as a whole (Miller et al. 2010, in Matayas and Pelling, 2012, p. 14), "or of neighbouring systems" (Matayas and Pelling, 2012, p. 14).

This is of particular importance in Batticaloa. As pointed out by Jayatilaka and Amirthalingam (2015) "Given the impact of displacement on traditional marriage practices, including dowries, it is important for aid agencies to consider local cultural traditions when designing assistance programs. Failure to recognize these traditions can have harmful repercussions on women's family life, the sustainability of their livelihoods and their security" (p. ix). They further claim that implemented DRR-programs and housing-schemes often failed to take this particular cultural tradition into consideration and the male were often registered as the house owner, thus putting the women in a more vulnerable situation (Jayatilaka and Amirthalingam (2015).

As explained in section 5.7, I faced great language-barriers in Batticaloa, and very few were fluid in English. This was found among both men and female, however among the female the skills were worse. This I would claim is related to both the long war and lack of developed tourism in the district. Language barriers are one factor mentioned by Enarson (2012) which alone, or together with other inter-woven factors, such as insecure housing, racial or ethnic marginalization or lack of voice, increases vulnerability.

In the post-disaster recovery process in Batticaloa, language barriers efficiently made the women lack voices. It appears to be regional differences, and as claimed by Enarson & Dhar Chakrabarti (2009) participation in the East were as low as 10 % in recovery planning and management after the tsunami, while in the south female participation reached up to 40 % in similar programs (p.13). As expressed by one of my respondents linguistic issues gave room for corruption and misuse of funding in the recovery following the tsunami. There was a general perception that the ones who mastered the skill of English language cheated the rest, in the sense that they were able to communicate with the aid-agencies, who on the other hand were totally dependent on locals with English skills, and the funds were allocated to non-beneficiaries. In addition to more conservative socio-economic traditions in the East (Enarson & Dhar Chakrabarti, 2009), these language barriers could explain why housing-schemes

following the tsunami often allocated the houses and land to the males, thus disturbing the cultural traditions and decreasing the traditional safety-nets for the women in the community. In this regard language barriers have probably played a role leading up to a marginalization of the women in the effort to "build back better" (Øyhus, 2016a), and should be taken into consideration to engage more women in DRR- management and reconstruction schemes. It is also useful to reflect on the distinction made by Aragwal (1994) who points to the importance of land and ownership, claiming;

> "Land has been and continues to be the most significant form of property in rural South Asia. It is a critical determinant of economic well-being, social status, and political power. However, there is substantial evidence that economic resources in the hands of male household members often do not benefit female members in equal degree. Independent ownership of such resources, especially land, can thus be of crucial importance in promoting the well-being and empowerment of women" (p. xv).

Hence, it could be claimed that inappropriate housing-schemes decreased well-being and empowerment of women in the region.

The law prohibiting settlement closer than 75 meter and the following re-settlements also led to the breaking up of the tight family-bonds existing in the traditional clusters, thus having an impact on the society's social capital. As explained by Øyhus (2016a) social capital differs from the other forms of capital; human, economic and natural, because it is relational and "can only exist and grow among humans sharing a common structure and acting in a network of relationships" (p. 39). Interesting to note in this regard is that among my respondent from the Penta-costal church, a small church-society in Batticaloa district, it appears as the common faith among its members have created a strong bond that might have replaced the bond among family-members before relocation.

However, frequent dislocation in this particular area due to war must also have had some influence in their expressed content. Where respondents from areas relatively calm and unaffected by war expressed sadness and loss thinking about their old houses as compared to the new houses, the respondents from the most affected areas expressed content with the houses and the life now, showing great variations within the district in regards to perceptions. This is also pointed out by Øyhus (2016a) who emphasise the importance of understanding the "societal distinctiveness" (p. 160). Areas, although close to each other, often have different stories and different problems, which was also found in this study and pointed out by my translator as "every place a different story".

Regarding the housing-schemes, mentioned in section 6.7.2, I found great variation in the quality of the tsunami-houses. Some had all facilities and the houses were constructed in close collaboration with the beneficiaries and were of excellent quality, with pipe-water, street-lights, and ditches to prevent flooding and also filled wells to reduce the risk of dengue. Other houses were of low quality and apparently leaking due to plastic sheets covering the roofs. In this area there were empty wells, which generate good living conditions for mosquitos and dengue-outbreaks. Others again were residing in temporary houses next to their unfinished tsunami-houses 13 years after. Such differences in housing-schemes were also found in another study performed in one of my research-areas, West-Manmunai, after the 2011 flood. The findings reveal that housing assistance varied great in effectiveness. In some areas the houses were built back much better, thus potentially causing community divisiveness, while in other areas houses in were mostly left incomplete, which sometimes threw families into debt. This study claims that when houses were completed, it was a valued and effective intervention. It did not only   contribute to recovery, but also advanced householders into a higher level of wealth. The contribution to DRR is also emphasized, due to the quality of the houses and the ability to withstand future flooding (Browne, et. al., 2014).

As mentioned by Øyhus (2016a) there were clearly a difference between the lucky ones and the unlucky ones, based on which housing scheme and which NGO they were assigned to. This also appears to be the case of flood-victims and housing-schemes. There was also great variation on supervision in owner-driven houses based on areas, leading to some areas having fully constructed houses, while others still were residing in temporary houses next to an un-finished house. Also here it appears to be a link to the war and who had control over the particular area, although this is a more tentative conclusion. It also became apparent that close collaboration between the facilitators and the beneficiaries of tsunami-houses had clear positive outcome and removed the passive recipient-element in the housing-schemes, but the success which I witnessed with my respondents from the Burgher-community could also be explained with their excellent English-skills that made such cooperation possible.

8 Concluding Remarks

As elaborated in this paper, Batticaloa is a district severely affected by disasters, both man-made and natural disasters. It is also established that disasters are never natural, but occurs only when vulnerable populations "get in the way" of disasters (Cannon, 2008). As discussed in section 2.2.1 Batticaloa is one of the poorest districts in Sri Lanka, and its vulnerabilities are linked to the impact of the war, the tsunami, and water related climate variability which affects health and safety, water resources, agriculture and fisheries, access to services and livelihood/economic development of families and communities (Humanity & Inclusion, n. d.). In particular in regards to future climate-change scenarios it is of paramount importance to reduce disaster risk. However, in order to achieve sustainable development and reduce disaster risk it is of crucial importance to understand how vulnerability and risk are perceived and why people live in areas associated with risk.

As explained by Singh, et.al. "Understanding vulnerability requires more than simply understanding societies" past and present relations with regard to disaster and development. Vulnerability is also about people, their perceptions and knowledge"(Singh, et. al., 2014, p 71). This thesis has attempted to assess women in Batticaloa`s perceptions on vulnerability and DRR and found that among the women in Batticaloa perceptions of vulnerability and risk are shaped by both the culture and context, where nearly three decades of war have shaped perceptions of gender and natural disasters appear less threatening than war. As explained in section 5.7 I was unable to find a male translator, which I believe compromised my research to a certain degree, given socio-cultural factors. I was however able to identify several perceptions of vulnerability, which I categorized into emotional, physical, socio-economic and socio-cultural vulnerability.

It became apparent that several of my respondents still have emotional issues, especially following the tsunami, as mentioned by Masten (2011) and Enarson (2000). As the reasons for this is not fully understood (Anderson, 2006, in Peek and Fothergill, 2009), it was interesting to note that all of respondents linked vulnerability to the issues of housing.

Hence proper housing is of great importance in regards to perceptions on vulnerability among the women. The issue of housing is also closely connected with the cultural tradition of dowry, or Kudi, as practiced in Batticaloa, where land and property traditionally had been transferred to daughters with a settlement pattern where families resided in matrilocal clusters, thus acting as a "safety-net" for the women and adding to their social capital, through tight bonds in the community.

Although my respondents showed reflections on vulnerability, risk and hazard and expressed fear thinking about future disasters, they still resided in areas associated with hazard and revealed that other issues were of greater importance than natural disasters, such as temporary houses and poverty. It also becomes apparent that the reasons for living in areas associated with risk consist of several, inter-woven factors, where the love of land, livelihood and culture are important factors. As explained by Hilhorst and Bankoff (2006) "People"s ideas about risk and their practices in relation to s disaster constitute the sextant and compass with which they measure and chart the landscape of vulnerability (p.4, in Singh et. al., 2014, p. 71). So despite established buffer-zones, relocation and tsunami-houses in safer areas, some people chose to move back to areas associated with risk because of the tradition of dowry and a desire to maintain and live close to their livelihood.

As explained by Cannon (2008) there is a gap between what he refers to as "outsiders" wanting to reduce peoples vulnerability to hazards, and "insiders", mainly poor people, who don't distinguish between shocks, such as floods, cyclones etc., and their every-day life, and people often trade off risks because of benefits (Cannon, 2008).

It was also interesting to find that although my respondents were being identified as particular vulnerable to natural disasters, I found little awareness regarding the connection between climate-change and natural disasters, findings that correlate with findings from UN-HABITAT (2013), especially among what is identified as the most vulnerable group, the fishery community, who are identified as particular vulnerable due to temporary houses along the shore and lagoon banks and their resource based livelihood, fishing (UN-HABITAT, 2013). Low awareness impact the ability to mitigate the impact when disasters strike and the ability to save more lives (UNISDR, n.d, a). Hence, a greater emphasis should be put on increasing awareness among this group.

Where DRR-programs were available I found that the female attendance was high, and these programs and evacuation-drills lead to increased sense of security among the women. This was especially apparent with the annual TWS-drills. There were however also areas that had TWS, but never had any drills, without the reason behind this being understood or revealed. In addition it was also pointed out that Batticaloa is a divided society, with increasing identity-formation, especially within the Muslim community, which could lead to further division of society that could impact the social capital. This stronger identity-formation within the Muslim society will require even more gender and culture-sensitive programs in order to maintain high female attendance. There are also potential factors more hidden, such as cast-identity that could potentially influence participation and voices in DRR-programs and must be recognized although being a more hidden entity. There were also found a male bias in DRR-programs, where the main focus was preserving legal documents. Although this is important, as such documents could be difficult to obtain if they get lost, it is however important to recognize that from a female perspective loss of facilities and resources, such as attached bathroom and utensils, and saving the lives of children and family where of greater importance which should not be downplayed in regards to DRR.

In regards to implementing DRR knowledge of context and culture is important because, as pointed out by Cannon (2008), "Most "outsiders" consider that we have to reduce people's vulnerability to hazards. Most "insiders" (especially poor people) do not distinguish between the shocks (floods, cyclones, earthquakes etc.) and their normal everyday lives."(p. 355). This was also found during my research as other issues appeared as more pressing than natural disasters, such as electricity, water, sanitation and especially housing. And as my findings show, despite relocation to safer areas, livelihood, love of land and cultural factors makes people trade off risk for benefits, either to pursue their livelihood or to follow the old cultural tradition of Kudi, practiced in the district or a combination of both.

Housing schemes were not fully aware of this pattern and with the exceptional low attendance of women in management and recovery, only 10 %, this custom was to a large degree overlooked with the consequence that newly established houses often were allocated in the name of the husband. Especially important is to consider the particular cultural context while implementing housing-schemes in order to decrease, not increase women`s vulnerability. As explained by Jayatilaka and Amirthalingam (2015) the housing-schemes following the tsunami did not take this into consideration, hence the houses were allocated to the males, as could therefore be claimed to being culturally insensitive.

As explained in Øyhus (2016a) "it is of fundamental importance to understand the affected communities structures and institutions, and also the local peoples knowledge, their cultural and religious beliefs" (p. 135) to assist disaster-affected communities properly and adequate. Also language-barriers were identified as a barrier preventing affected women to be properly included in management and recovery and should be taken into close consideration while implementing DRR.

Furthermore, in regards to DRR is the important notion that insiders must decide for themselves. As claimed by Cannon (2008) "We need to pay far more attention to what could loosely be called "cultural" and psychological factors, including what some might regard as fatalism, religion, group behavior, psychology. We must also face up to the gap in expectations between insiders and outsiders: those who are affected by disasters, and those from outside who come to "help" (p. 355). This is further elaborated by Wisner (2004) who rightfully claim that the "Communities themselves, and not outsiders such as international humanitarian agencies, must "decide what risks are acceptable to them and which are not" (p. 187, in Scharffscher, 2011).

This thesis therefor underline the importance of taking cultural and contextual factors into consideration when implementing DRR, as these factors both shape perceptions on risk and vulnerability and also work as enabler or limitations if implemented programs or efforts fail to take them into consideration. In this particular setting not knowing the culture can also add to women`s overall vulnerability if they are not included in DRR- management and planning. A future emphasis to decrease vulnerability in the district of Batticaloa should be on cultural-sensitive housing-schemes, including DRR-programs and good knowledge of the particular culture and religious factors that could affect participation in DRR-programs, such as an emphasis on gender-sensitive programs in areas with increasing Muslim identity formation in order to keep female attendance high and the possible influence of more hidden entities such as cast-identity. This is important as women get disproportionally affected by disasters. A more comprehensive, ethnographic study on the impact of dislocation on perceptions on vulnerability among the women would also be valuable research.

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