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# Asian Cities Climate Resilience

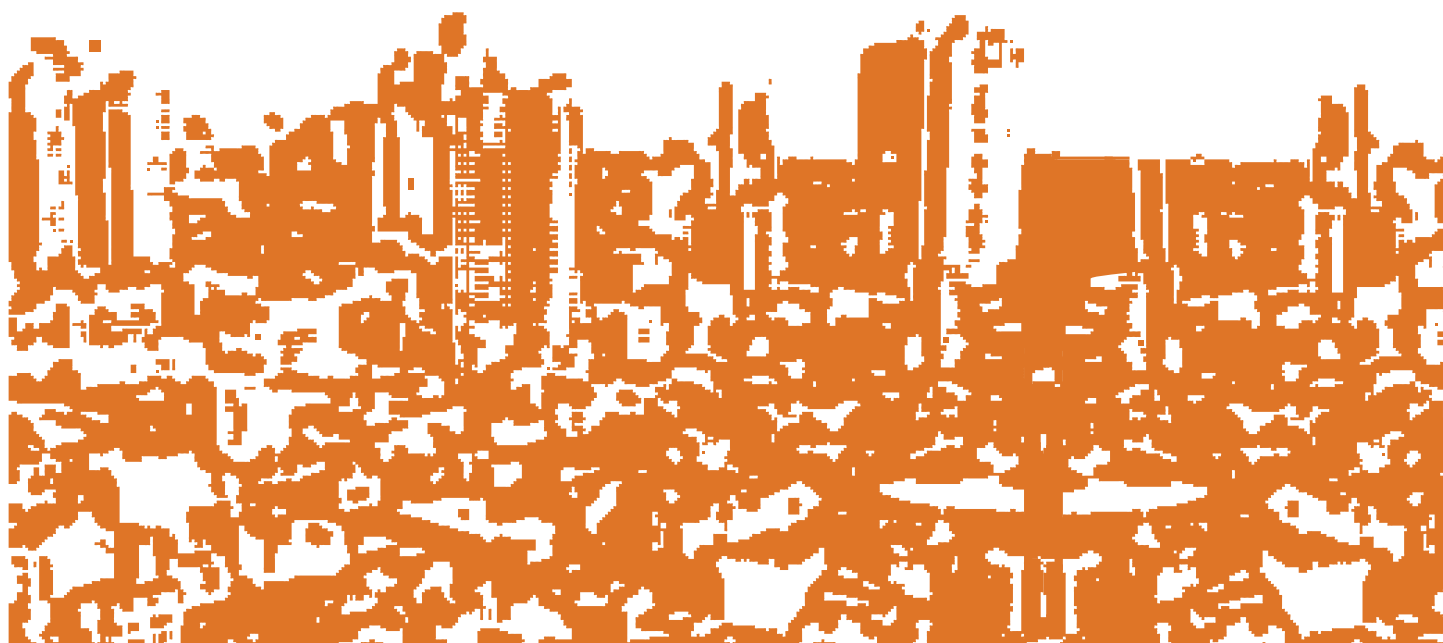
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## **Gender analysis in building climate resilience in Da Nang**

### **Challenges and solutions**

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Unless otherwise specified the source for the figures is data from the stakeholder consultation developed into figures by the authors.

# Abbreviations

ACCCRN	Asian Cities Climate Change Resilience Network
CCA	Climate Change Adaptation
CDKN	Climate and Development Knowledge Network
CFSC	Committee for Flood and Storm Control
CSRD	Center for Social Research and Development
DRR	Disaster Risk Reduction
IFRC	International Federation of Red Cross and Red Crescent
IIED	International Institute for Environment and Development
IPCC	Intergovernmental Panel on Climate Change
ISET	Institute of Social and Environmental Transition
IWE	Institute for Water and Environment
MONRE	Ministry of Natural Resource and Environment
NG	Non-Governmental Organisation
UN	United Nations
UNDP	United Nations Development Program
VBSP	Vietnam Bank for Social Policies
WED	Women's Environment and Development Organisation
WU	Women's Union

# Abstract

Although the legal framework for gender equality exists in Vietnam, gender mainstreaming in climate change planning and action have not yet been fully realised and addressed by local actors. In Da Nang, a gendered view to climate resilience building was also a new approach for the city and local authorities and vulnerable communities. This study examines the gender issue through the climate resilience lens within the context of Da Nang to see how gender and its link to climate change was locally perceived and at what level(s) gender equality and women's role were appreciated and incorporated into climate change planning and action.

The study applied the Resilience Framework provided by the Institute for Social and Environmental Transition (ISET) to examine the linkages of gender and climate change resilience building. Three key components of this Framework, *Agent*, *Institution* and *System*, were then used to analyse the data collected from the stakeholder consultations and field survey. The key research findings include (i) in Da Nang, gender relations have recently been given a positive signal; (ii) the lack of specific instructions on gendered relations is likely to cause local actors to underestimate the importance of gendered interventions in practice; and (iii) the greater vulnerability of women is not merely due to social or gender biases but also because of their own physical weaknesses.

Three important policy implications generated from the study are (i) the necessity of improving women's capacity to address their vulnerability; (ii) the necessity of having supportive mechanisms to enable full participation of women in planning and decision making; (iii) the necessity of integrating gender-sensitive indicators into plans and strategies to guide gendered interventions in practice.

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# Contents

<b>About the authors</b>	<b>2</b>
<b>Acknowledgements</b>	<b>3</b>
<b>Abbreviations</b>	<b>3</b>
<b>Abstract</b>	<b>4</b>
<b>1 Setting the scene</b>	<b>6</b>
1.1 Gender and vulnerability	7
1.2 Climate resilience in the light of gender equality	9
<b>2 ‘True gender equality’ and the need for gendered implementation</b>	<b>11</b>
<b>3 What shape gender analysis for climate resilience in Vietnam?</b>	<b>13</b>
3.1 System: impacts of climate change and socio-cultural norms on women and men	14
3.2 Institution: effects of CCA policies, plans and actions on women and men	16
3.3 Agent: roles of women and men in vulnerability reduction and resilience building	19
<b>4 Research objectives</b>	<b>20</b>
<b>5 Research design</b>	<b>21</b>
5.1 Resilience approach	21
5.2 Data collection	22
5.3 Data analysis	24
<b>6 Findings and discussions</b>	<b>25</b>
6.1 System	25
6.2 Institution	30
6.3 Agent	33
<b>7 Conclusion</b>	<b>38</b>
<b>References</b>	<b>40</b>

# 1 Setting the scene

Impacts of climate change on cities are mainly related to climate-related disasters such as floods, storms or extreme weather such as heat waves (Alber, 2011). Coastal cities are usually more vulnerable than non-coastal ones because they are more likely to be impacted by floods, storms, sea level rise and salinisation (Alber, 2011). In the low-elevation coastal zones where human settlements are frequently located, people are more vulnerable to the rising tides and flooding compared with inland cities (McGranahan *et al.*, 2007; Balica *et al.*, 2012). In developing countries, urban population growth tends to increasingly focus in coastal areas where the rising tide may potentially create more impact on human settlements (McGranahan *et al.*, 2007). In such coastal cities, low-income people will be more vulnerable than high-income people because their settlement locations are frequently in disaster-prone areas and their housing and livelihoods are not stable and resilient to climate change (Dodman *et al.*, 2013).

Climate change impacts are likely to exacerbate gender inequality and enlarge gender gaps if coping and adaptive strategies underestimate the importance of gendered interventions and the necessity of gender mainstreaming in planning and implementation. Gendered analyses play an important role in recent debates and discussions related to climate change in assessing the gendered impacts of climate change and the gendered outcomes of resilience and adaptation strategies (Sultana, 2014). The gendered analysis in this study examines climate change impacts on gender groups, the effects of climate change policies, plans and actions on such groups, and the role and capacity of gender groups in climate vulnerability reduction and resilience building. Gendered analysis not only clarifies which gender groups (men or women) will act as agents of change but also for understanding power relations between men and women in decision making with regard to climate change (Sultana, 2014).

However, these relations and imbalances are not adequately analysed in Vietnam (OXFAM, 2009). Therefore, this study aims to further the gender analysis through the lens of building urban resilience, with a focus on one of the most vulnerable cities of Vietnam – Da Nang City.

*“Gender equality may be further undermined via both climate change implications as well as adaptation strategies that do not meaningfully engage with gender analyses.” (Sultana, 2014: 379)*

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## Figure 1: Da Nang City – The Study Area – is facing challenges in urban development associated with climate change



Source: Tran Tuan Anh

### 1.1 Gender and vulnerability

Women are among the most vulnerable groups to climate change due to various reasons including gender-insensitive traditional social norms or limited access to basic resources (Nibanupudi and Khadka, 2015; Panda *et al.*, 2014) (other vulnerable groups include the poor, children and elderly). This is in part because poverty is gendered. Women head about 40 per cent of the poorest urban households across the world (UNDP, 2009). In some developing countries, this percentage may be higher, such as in the Philippines where 80 per cent of slum householders are women (Jenrich *et al.*, 2009). In Vietnam, generally, and Da Nang, particularly, no one knows how many households from the poorest group are female-headed but, as deduced from the Women Union (WU) projects<sup>1</sup>, the number of female-headed households within the poorest group may be relatively high: nearly half of beneficiary households in the WU housing project funded by the Rockefeller Foundation were female-headed. In Vietnam, generally, and Da Nang, particularly, women are consequently recognised as one of the groups most affected by climate-related shocks and stresses such as floods, typhoons or droughts (MONRE, 2008; Da Nang People's Committee, 2014). Yet women's traditional knowledge and practices are, in most cases, valuable to the identification of effective climate change responsive strategies and actions (Alston, 2013).

<sup>1</sup> For examples, the Storm-resistant Housing Revolving Loan project from 2011–2014 funded by the Rockefeller Foundation or the annual microcredit programs to support people's livelihoods development, with a focus on female-headed or -included households



Women's greater vulnerability is also because their roles and needs are underestimated or neglected in planning and action, even though they are a key labour force for most production and development activities (Resurreccion, 2011; UN Vietnam, 2009). Power relations and gender roles in livelihood and income-generation activities have a substantial influence on the vulnerability and adaptive capacity of individuals, households and communities (OXFAM, 2009). For example, in India, women are not effectively included in climate resilience finance frameworks so they lack the resources to invest in adaptation (Panda *et al.*, 2014), while in Sri Lanka, women are not taught how to swim and climb trees, which means that their survival rate is much lower than men during tsunamis (Nursey-Bray, 2014). In Bangladesh, early warning information is usually transferred between men, while women are expected to stay at home and wait for men's decisions in response to climate events (Wong, 2012). In the Philippines, severe impacts of the 2009 typhoons Ondoy and Pepeng on women resulted in the government passing two laws on gender mainstreaming to ensure that future disaster risk reduction and climate change adaptation measures are gender sensitive and responsive (Congress of The Philippines, 2009 & 2010).

Modern Vietnam is influenced by historically patriarchal and feudalised social norms and biases, whereby women are often limited to in-family tasks such as caring for children, food preparation or logistics, whereas development planning and important decisions are mainly made by men without accounting for other perspectives or priorities. These barriers have hindered women in actively engaging in community events and activities and tackling social matters. Decisions are commonly made through consultations, meetings and dialogues where males are normally the majority of participants (UN Vietnam, 2009). Furthermore, in the organisational structure of Committees for Flood and Storm Control (CFSC) – the key government-based stakeholder to plan and implement coping measures at multiple levels – there are often more men than women, and heads of these committees are frequently male regardless of the supportive policy environment and advocacy about gender equality. In Vietnam, climate and disaster risk management frameworks are often unclear or vague in terms of the role and contribution of women and men in planning and implementation (eg housing interventions, finance interventions). Therefore, women are frequently more vulnerable than men due to inequitable power relations, where men often have a stronger voice and more influence in decision-making forums (Nibanupudi and Khadka, 2015; Panda *et al.*, 2014).

Finally, different actions taken by men and women in response to disasters are also influenced by gender norms and social biases (Resurreccion, 2011). For example, in Vietnam, men are often responsible for strengthening the house and protecting human life, while women are commonly in charge of preparing food and water in anticipation of a disaster happening (UN Vietnam, 2009). Based on case studies of many Asia-Pacific countries including Vietnam, Alston (2013) expressed concerns about post-disaster situations, where gender equality and women's engagement and empowerment are likely to be negatively affected through loss of control over natural resources, means of production, information and decision making. These impacts also potentially exacerbate women's vulnerability to future climate hazards such as storms and floods. Chaos and increased needs of housing, food and clean water after disasters may put more pressure on women because a higher work burden is assigned to them, since they are expected to look after children or sick family members while maintaining the wellbeing of their family (UN Population Fund and WEDO, 2009).

It is therefore essential to have gender-sensitive strategies for strengthening the resilience of at-risk/affected communities against climate change impacts (UN WomenWatch, 2011). There seems to be a lack of comprehensive research on gender and its relation to vulnerability and resilience (Alber, 2011) even though gender is one of the critical contributors to vulnerability (Alston, 2013). The Intergovernmental Panel on Climate Change (IPCC) emphasised the differential impacts of climate change on different gender groups, of which, women are usually the most vulnerable (IPCC, 2007; UN Population Fund and WEDO, 2009). In urban contexts, women also have greater sensitivity to climate change and natural disasters than men due to their lower levels of access to critical resources (Alber, 2011; OXFAM, 2009), such as land ownership, credit, information, healthcare services, income-generation activities, education and training, and decision-making processes (Alston, 2013). Rapid urbanisation without sufficient consideration of social aspects including gender equity is likely to underestimate or overlook gender and women's empowerment issues. Thus, building climate resilience for rapidly urbanised cities such as Da Nang needs to be informed by gendered analyses and incorporate women's roles and inputs in strategies, planning and practical actions for vulnerability and risk reduction.

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## Figure 2: Women are often bounded by their own home and family's tasks



Source: Tran Tuan Anh

Recent literature on the link between gender and disaster management seems to consider women as disaster victims rather than disaster responders (Nursesey-Bray, 2014) and, therefore, has not sufficiently captured their role and potential contribution in vulnerability reduction and risk management. There are a few examples in different countries (see Nibanupudi and Khadka, 2015; IIED, 2013; Archer, 2012) where women have been empowered to take a leadership or central role in responding to and recovering from natural disasters. However, in Vietnam, women's roles are still underestimated, which limits their scope to contribute to risk reduction interventions. Therefore, this study aims to examine the role of women and their potential contribution in reducing climate and disaster risks and strengthening household and community resilience to climate change.

### 1.2 Climate resilience in the light of gender equality

Resilience is frequently linked with underlying social relations of power, in which the issue “of resilience for whom... and by whom” has emerged (Friend and Moench, 2013: 107). Different rights and roles of different gender groups may inform and shape different levels of vulnerability and resilience. Friend and Moench (2013) pointed out the issue of *power and voice* in shaping urban resilience, as decisions are often made through dialogues and exchanges where multiple stakeholders/actors are involved and collaboratively define resilient solutions and actions. In these decision-making processes, power relations have a critical influence that is likely to enhance or weaken the resilience of an individual (eg a household) or a system (eg a community). Building climate resilience requires not only preparation for coping with shocks and stresses associated with climate change, but also engaging with gender issues and women's empowerment to reduce particular vulnerabilities (OXFAM, 2009).

Most definitions of resilience frame the concept as the capacity of an individual or system to bounce back or return to normalcy after a shock or stress without changing its basic functions (IFRC, 2012; ISET, 2012; Pendall *et al.*, 2010). Such definitions may not be compatible with gender equality and women's empowerment (Resurreccion, 2011). A 'return to normalcy' may mean the continuation of forms or functions that are not gender-sensitive or gender-inclusive. Some publications (for example, Satterthwaite and Dodman, 2013; Chelleri *et al.*, 2015) propose the concept of 'bouncing forward', so that resilience entails a shift towards greater inclusion and prosperity. Resilience is also context-specific and shaped by socio-economic and cultural conditions of a community or a region. For example, social norms and biases on gender equality and women's right and power will vary between countries or even among communities within a country.

Misconceptions of resilience may lead to a limited understanding of how to cope with or adapt to natural hazards effectively. To avoid such misconceptions, it is necessary to quantify resilience into specific and obtainable objectives (Quinlan *et al.*, 2015). The research team's experience with previous projects in Vietnam show that it is hard for local actors to fully understand the meaning of resilience, perhaps in part because there is no Vietnamese word or term to fully translate the concept<sup>2</sup>. They usually equate 'resilience' with withstanding shocks or with adaptive capacity. Recent local discussions on responding to climate change recommended that it is important to avoid focusing on terminology. Instead, it is essential that people without professional knowledge and field experience understand the contextual or underlying meaning beyond resilience. There are some concerns about the translation of theoretical frameworks on climate resilience into practice since most up-to-date theories and concepts on disaster risk reduction and climate change adaptation is desk-based and commonly shared in academic forums where the number of practitioners and policy-makers is relatively limited<sup>3</sup>. To this extent, it is necessary to have understandable and measurable indicators or tasks to explain and capture *resilience*, and to ensure that such indicators or tasks are shaped by the social and natural conditions of the given community or society. This research is accordingly an effort to concretise *resilience* through the gender lens to provide a comprehensive and in-depth understanding of what *gendered resilience* actually means in the context of Vietnam and how to achieve *gendered resilience* in practice, with a focus on Da Nang City.

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2 Based on the participants' perceptions in the Province-level Workshop on Climate Resilience organised by the College of Economics, Hue University on 26 November 2015

3 Based on the participants' perceptions in the Workshop on Climate Resilience Building organised by CSRD in Hue City (Vietnam) on 9 December 2015.

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## 2 ‘True gender equality’ and the need for gendered implementation

Gender equality is widely regarded as an important principle or objective for social development, but translating it into practice is still problematic. Mai (2009) emphasised the term ‘*true gender equality*’ (*bình đẳng giới thực chất*) to indicate the real impact and influence of so-called gender-based or gender-sensitive strategies and practices. There seems to be a gap between paper-based gendered recommendations and practice-based gendered interventions: specifically, gender seems to be heavily discussed in papers and documents but addressed in a limited way in practice. For example, the roles of men and women are not sufficiently noted and addressed in the operation of governmental administrative agencies and departments (Mai, 2009). This research aims to provide a reliable gendered analysis in relation to climate change resilience building in order to tackle current gender-related gaps and support the engagement of women in planning, decision-making and resilience-building agendas.

Building adaptive capacity to climate change is seen as part of climate resilience enhancement (IFRC, 2012). However, effective adaptation may face gender-related problems if gender is not taken into account, particularly in terms of the following gendered aspects:

- **Impact:** different climate change impacts on men and women (eg storm or flood impacts)
- **Finance:** different levels of poverty, access to resources and costs of adaptation for men and women
- **Cognition:** different levels of awareness and understanding between men and women on climate change and resilience performance
- **Action:** different measures used by men and women for resilience purposes
- **Institution:** different levels of accessibility to information and social events and different levels of engagement in decision making between men and women

(Based on Alston, 2013; Jones, 2010)

Through a current gender-supported legal system, the national government of Vietnam has emphasised the importance of mainstreaming gender issues in socio-economic development as well as in climate change adaptation (CCA) and disaster risk reduction (DRR) plans and actions. Since 2007, the national government has commissioned the Ministry of Labour, War Invalids and Social Welfare to manage gender equality related issues. The *National Target Program to Respond to Climate Change*, which came into effect in 2008, views gender equality as one of the main principles for implementation (MONRE, 2008). The legal framework to advance gender equality and women’s role in planning and implementation has been improved in recent times, notably through the Law on Gender Equality promulgated in 2006, the *National Strategy on Gender Equality* for 2011–2020 and the *National Target Program for Gender Equality* for 2011–2015. Although the legal and policy environment is ready for practical actions, recent interventions on CCA and DRR are yet to catch up the spirit of the policy environment: gender analysis is still seen as the identification of gender-related vulnerabilities, rather

than a way to mainstream gender considerations in vulnerability assessments, development planning and decision making. In addition, information and data related to gender issues are still limited and not regularly updated to guide gender-sensitive practices in Vietnam (Mai, 2009). While human resources for reaching gender equality have been prepared at multiple levels, implementation of gendered actions in practice is still limited and the voice and power of women in planning and decision making is relatively limited compared with men (Mai, 2009).

There were several governmental and non-governmental programs/projects where the beneficiaries included female-headed households (for example, preferential credit programs provided by the Vietnam Bank for Social Policies, vocational training done by NGOs and low-income housing projects implemented by WU). These are intended to support the most vulnerable, who are often women. But it is essential to also consider the gender balance of labour costs and payments, social and medical insurance and recruitment between men and women because recent publications (for example, OXFAM, 2009; UN Vietnam, 2009; Resurreccion, 2011) have revealed a predominance of men to women in such matters. Moreover, the proportion of female participants in administrative and management boards and committees is still low and unable to meet the growing women labour force in multiple sectors (Lan, 2014). This raises concerns about the scope for gender equality in organisational structures, decision-making processes and development agendas: as outlined earlier, women are viewed as victims and recipients, rather than as agents and actors.

The above discussion demonstrates that power relations and gender equality are still problematic in Vietnam, even though gender imbalances have been recognised for a long time and fully prioritised by the legal and policy environment. This poses questions about the translation and transfer of gender-focused standards into practice, particularly in DRR and CCA interventions. This research is an effort to tackle this problem by providing a comprehensive and practical gendered analysis in the light of climate resilience, with a focus on Da Nang – one of the most climate-exposed cities in Vietnam.

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### 3 What shape gender analysis for climate resilience in Vietnam?

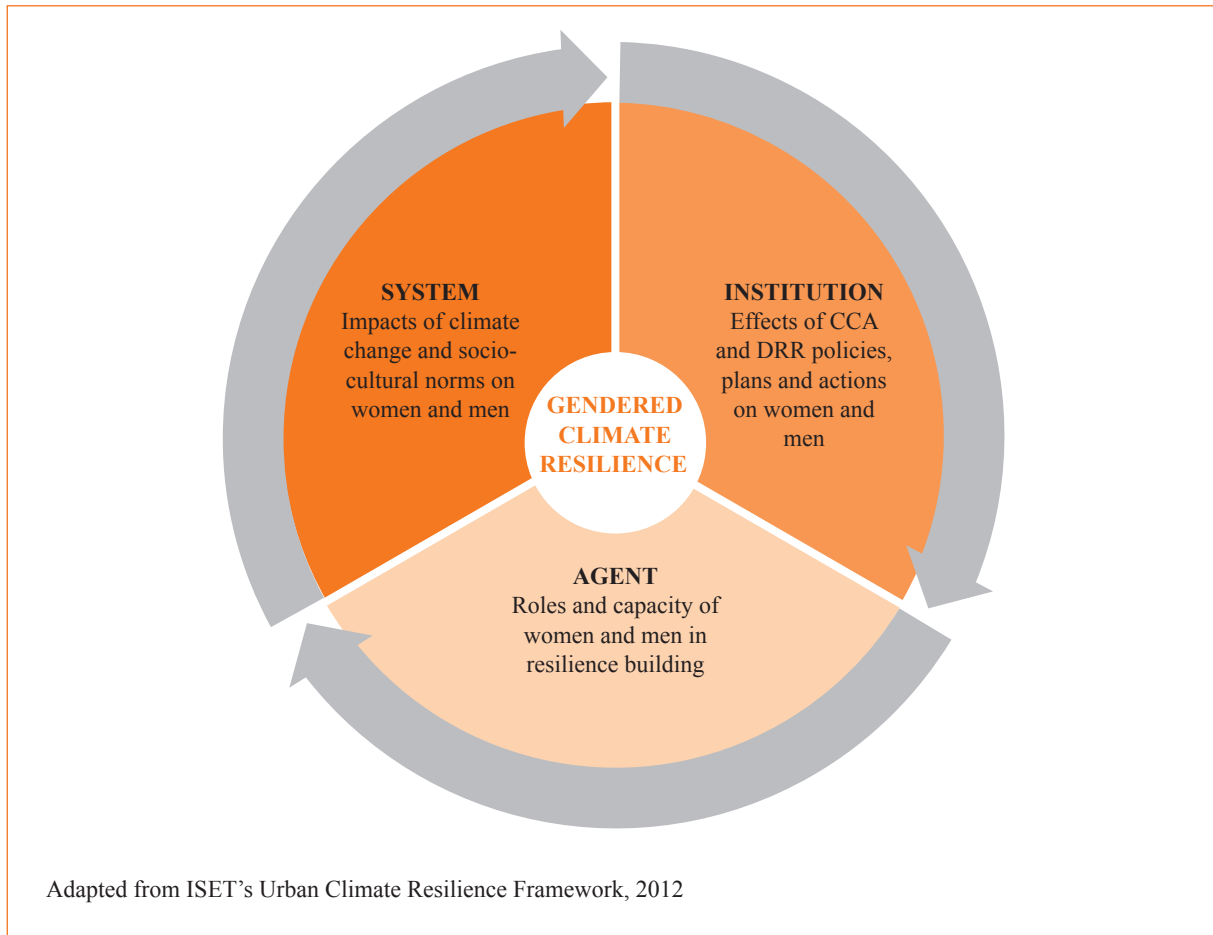
Although gender-related problems are clearly observed in Vietnam, not many publications in the country have analysed power relations and gender roles sufficiently. Thus, it is crucial for this study to provide a thorough understanding on gender first before proposing the way to incorporate and mainstream gender in climate change planning and implementation. To achieve this, concepts and definitions on gender need to be specific, clear and understandable to a wide range of stakeholders, particularly the local actors (eg households, community members, or local authority staff) who have limited background and knowledge on gender and its link to climate vulnerability reduction and climate resilience building.

Based on the review of relevant literature (eg Fisher and Mohun, 2015; Salehi *et al.*, 2015; UN Vietnam, 2009; Da Nang People's Committee, 2014; MONRE, 2008), gender analysis for climate resilience building within the Vietnam context can be captured into three main areas: (i) impacts of climate change and socio-cultural norms on women and men, (ii) effects of CCA and DRR policies, plans and strategies on men and women, and (iii) roles and capacity of men and women in resilience building. In fact, these three areas tend to be similar to the three components of the Urban Climate Resilience Framework proposed by the Institute for Social and Environmental Transition (ISET) in 2012 where the three components – agent, system and institution – can correlate to the three areas above, as follows:

Table 1: A gendered view of the three core components of urban climate resilience suggested by ISET (2012)

System	Institution	Agent
Impacts of climate change and socio-cultural norms on women and men	Effects of CCA and DRR policies, plans and strategies on men and women	Roles and capacity of men and women in climate resilience building

Figure 3: Three core components of urban climate resilience in relation to gender analysis



ISET's Urban Climate Resilience Framework, defined by the three core components of *agent*, *system*, and *institution* (Figure 3), functions as the umbrella to inform and shape resilience-building strategies and practices within Asian developing contexts, including Vietnam. This research draws on this framework to examine and analyse gender and its relation to climate resilience within the context of Da Nang City.

### 3.1 System: impacts of climate change and socio-cultural norms on women and men

The climatic and socio-cultural systems usually generate different impacts on men and women. Climatic factors such as heat, humidity, rain, wind or a mix of these factors may affect human health, especially to those who are not physically strong such as women, children and the elderly, while socio-cultural factors such as social norms, cultural biases or power relations may generate appreciation or underestimation of the public towards a social/gender group (eg the men/male or women/female group). These two systems (climate and socio-culture) are closely linked in the context of social development and climate change, but may possibly support or restrict each other, and may reduce or exacerbate gender gaps and associated problems.



## Figure 4: Women often have a greater work burden at home



Source: Tran Tuan Anh

For women, climate change is likely to increase their work burden, exacerbate their vulnerability and reduce their resilience to future climate risks unless climate change planning and strategies are gender-sensitive. Six clear impacts of climate change on the gender groups have been identified from the literature review, as summarised in Table 2.

These gendered climate change impacts are likely to be observed in Da Nang, especially when a climate event happens (for example, Typhoon Nari in 2013). However, these impacts have not been mentioned sufficiently in Vietnamese publications. In the matrix of the vulnerability assessment for Da Nang provided by IWE (2009), women are considered one of the most vulnerable groups to climate change but the types of vulnerability and climatic impacts they are facing have been not determined.

In Vietnam, social and cultural conditions also have a critical influence on gender and the inclusion of women in social matters. Due to the country's long history of feudalism where women received relatively low respect and appreciation in society<sup>4</sup>, gender equality is still problematic and more stresses are placed on women compared with men. Some local proverbs persist that show the gender inequality and the social bias towards the role of women, such as “*đàn ông xây nhà, đàn bà xây tổ*” (men build house, women build wellbeing). During the 19<sup>th</sup> and early 20<sup>th</sup> centuries, the rights and potential of women were not appreciated, and their education was designed to help them understand their role and task in supporting the wellbeing of families, communities and society – not to equip them to engage with important or major matters of community and society (Chi, 2013). During the post-feudal period, French colonisation changed some social norms and biases towards women. During that time, the role of women was increasingly realised and respected, and they

<sup>4</sup> The idea “*trọng nam, khinh nữ*” (value men above women), inherited from Confucianism, had dominated the feudal society of Vietnam at that time (1802–1945).



could participate in social events and activities and take some important positions in society (Chi, 2013). The history of Vietnam, with its many social changes and transformations, has a critical influence on conceptions and viewpoints towards gender equality and the role of women. Since 1986 – the time the country has been opened to the outside world – the role and capacity of women has been increasingly recognised and incorporated in development planning and implementation.

**Table 2: Climate change impacts and their gendered linkages**

Climate change impacts		Gender linkages
1	Health impacts	<ul style="list-style-type: none"> <li>■ More women died or injured compared with men due to their weaker physical health</li> <li>■ Greater work burden on women due to their responsibility for sick or disabled persons</li> <li>■ Women have less access to health services because they face higher levels of poverty</li> <li>■ Higher levels of violence against women due to men’s patriarchal thinking and behaviour</li> </ul>
2	Livelihoods changed	<ul style="list-style-type: none"> <li>■ Increased work burden on women because more time is required for food production and water provision due to negative climate impacts on natural resources, particularly woodlands and water sources</li> <li>■ Resource scarcity, which means more stress on women to ensure sufficient feeding and caring for others (eg caring for sick or injured family members)</li> </ul>
3	Impacts on education and income generation/job opportunities	<ul style="list-style-type: none"> <li>■ Women have limited access to basic resources that increase adaptive capacity (information, credit, land ownership)</li> <li>■ More girls drop out of school due to social biases towards boys, so they lack the information, tools and confidence to engage in CCA activities</li> <li>■ Priorities of women are underestimated or neglected due to underrepresentation in decision-making forums</li> </ul>
4	Migration increased due to climate stresses (eg flooding)	<ul style="list-style-type: none"> <li>■ Male out migration increases, leading to an increase in female-headed households</li> <li>■ Greater workloads for women and girls</li> </ul>
5	General difficulties faced by the family after disasters (eg being displaced, no money, no food, no secured home)	<ul style="list-style-type: none"> <li>■ Women are more likely to be the victims of domestic and sexual violence due to men’s patriarchal behaviours</li> </ul>

Based on WEDO, 2008; UN Vietnam, 2009; Brody et al., 2008

## 3.2 Institution: effects of CCA policies, plans and actions on women and men

Vietnam was one of the earliest countries to sign and ratify the *United Nations Convention on the Elimination of all Forms of Discrimination against Women*, and to localise this Convention into appropriate national laws and regulations, especially through the legal documents mentioned above. This Convention was promulgated by the United Nations in 1979 and approved by Vietnam in 1982. In Vietnam’s Law of Gender Equality (2006) and the National Strategy for Gender Equality for 2011–2020 (Vietnam Government, 2010), gender equality is basically demonstrated in the two following aspects:

■ **Participating in state and governmental administration**

- *Right to be appointed*
- *Right to run for election*
- *Right to be trained, educated*
- *Right to join policy making*
- *Right to foster gender equality in state administration*

■ **Participating in community/social activities**

- *Right to monitor/supervise*
- *Right to join unions, committees, boards...*
- *Right to vote*
- *Right to discuss and propose*
- *Right to join referendum*
- *Right to implement policies*
- *Right to foster gender equality in community and society*

This legal basis has strengthened the role of women by providing them with more opportunities to engage in societal and public decision-making and activities, and to improve their knowledge, experience and skills for meeting these duties and job requirements.

Gender equality is widely mentioned in national adaptation programs of developing and least developed countries but not really addressed by practical actions, commitments, and specific guidance on how to mainstream gender (Fisher and Mohun, 2015). In these contexts, women are often viewed as victims rather than responders or contributors (Fisher and Mohun, 2015). Commitments and practical guidelines for gender equality and mainstreaming are still not available or are not widely used in such countries, including Vietnam, although gender equality and women's empowerment is usually listed as one of the main goals of climate change planning and implementation.

National regulations on the shorter retirement age of women compared with men<sup>5</sup> have affected employment opportunities for women and reduced their likelihood of promotion to higher positions. The proportion of women in well-paid jobs is relatively low compared with men (Lan, 2014). According to UN Vietnam (2009), female migrants usually get lower-paid jobs compared with male migrants in this country. In addition, women are less likely to be employed in manual-based workplaces because they are not as strong as men. This badly affects the financial stability of households, particularly the female-headed ones, increasing their vulnerability and hindering their resilience to future climate risks.

The limited translation of gender equality into practice, in part due to the lack of detailed instructions and guidelines for implementation, is possibly also a result of the generality of gender laws and policies. In the *Da Nang City Climate Change Resilience Action Plan* for 2011–2020 (Da Nang ACCCRN City Team, 2010), gender equality and gender mainstreaming is not clearly addressed and identified. Gender consideration is still focused on female-headed households in general terms without specific guidance of how to concretise this objective with practical actions. In Da Nang's vulnerability assessment, gendered impacts of climate change and gendered vulnerability are not clearly identified (IWE, 2009). Social impacts of climate change in Da Nang identified by the report mainly relate to the affected livelihood of the poor, rural-to-urban migration, health and sanitation, and relocation. Most of the identified vulnerabilities of the city focus on tangible areas such as urban traffic road systems, irrigation systems or water supply systems (IWE, 2009). In the *Master Plan for Socio-Economic Development of Da Nang Towards 2020* approved by the Prime Minister in 2010<sup>6</sup>, gender equality and women's participation are still not adequately considered. Therefore, there has been a lack of specific

<sup>5</sup> Current regulated retirement ages in Vietnam: 55 years old for women and 60 for men (Labour Law, 2012)

<sup>6</sup> Decision No. 1866/QĐ-TTg approved by the Prime Minister on 8 October 2010

guidelines to guide and shape gender-sensitive plans and actions of climate resilience in Da Nang, such as what proportion of females should be on climate and disaster management boards or in what ways men and women can equally share their voice, power, opinions, rights and responsibilities towards decision making and practical actions.

We assessed the gender sensitivity and awareness of CCA plans and policies developed at the city-scale. Such policy documents tend to scope the gender issue down to the identification of women and girls as vulnerable to a changing climate. Within this sense, females are seen as the disaster victims rather than disaster responders and contributors, which is unlikely to promote women's strengths and capacity for better resilience building and community development.

As explained by OXFAM (2009), limited women's participation in decision making and dealing with important community/social matters generally results from two main causes:

■ **Existing work burden**

For women, a full workload at home and within their community hinders them from engaging in social activities/ events including CCA and DRR. (The impact of these social norms is detailed in Section 3.1.)

■ **Discriminations in legal documents and policies**

Rates of women's engagement are often lower than men's (eg The Election Law in Vietnam stipulates that there should be a minimum of 20–30 per cent of women representatives on the People's Council). Local credit institutions, such as local banks, tend to prefer lending money to male-headed households (OXFAM, 2009) because they believe that such households are likely to earn more income than female-headed ones and, hence, will find it easier to repay loans. There are only a few banks that require both men and women to sign on loan application forms (OXFAM, 2009). This also influences some credit projects on CCA and DRR where women have less access to credit resources to improve their response and adaptation capacity.

Currently, six months of maternity leave is officially offered and currently in effect (previously it was four months). The national government is in the process of drafting a new policy where a husband can take leave to assist his wife while she is on maternity leave. This shows that gender goals are gradually being transformed and transferred into practical interventions in Vietnam, and that the government and wider public are increasingly acknowledging the rights of women.

Da Nang is currently developing the city's resilience strategy for the next five years (2016–2020). The imminent publication of this policy framework is the rationale for this study, which is intended to provide evidence about gender relations and the role of women in building urban climate resilience for this city. Four focus areas have been already identified in the strategy, as illustrated in Table 3 below.

**Table 3: Four focus areas of climate resilience building for Da Nang from 2016 to 2020**

Focus Area 1	Focus Area 2	Focus Area 3	Focus Area 4
Improve the safety and resilience of vulnerable households to storms and climate disasters	Strengthen employment opportunities for rural and migrant households	Identify suitable mechanisms to ensure the provision of green infrastructure for flood management and urban resilience	Integrate public communications and shared data through information technologies to better prepare for emergencies and loss reduction

Gender is important to all the focus areas and hence needs to be examined and analysed as a complementary indicator of the city's resilience strategy.

### 3.3 Agent: roles of women and men in vulnerability reduction and resilience building

Urban climate resilience is more likely to be achieved once all social groups including women fully participate in planning, decision making, and implementation (Gaillard and Mercer, 2012; Hayles, 2010). In Vietnam, women play an important role in maintaining the wellbeing of their families and communities but, frequently, receive limited appreciation. They are also the ones present in the community when climate disasters such as storms or floods happen, while men are away from home working in other provinces/cities. Due to lack of education, skills or confidence, female participants in CCA and DRR planning may also not be as vocal or influential as male ones. In short, the inclusion of women in planning and decision making does not always ensure the outcome of gender-sensitive plans and strategies (Fisher and Mohun, 2015).

In addition, female groups also have fewer opportunities for education and career development in the Vietnam context (OXFAM, 2009). Accordingly, attendance rates of female students in schools and universities are still not equal to male ones. The proportion of female students who leave school early is also higher than males. Employers usually prefer recruiting men because they are physically stronger than women, at least for manual labour. Some recent newspaper articles<sup>7</sup> show that there is an increasing trend of female unemployment due to dismissals by employers in response to financial hardship.

Recent projects implemented in Da Nang (eg WU housing project<sup>8</sup>, CDKN project<sup>9</sup>, ACCCRN project<sup>10</sup>) have improved gender equality and women's engagement in planning, accessing fundamental resources (eg information, finance, technology) and decision making. For example, in the storm-resistant housing project implemented by Da Nang Women's Union (2014), gender issues were widely addressed throughout the project, such as:

- 320 households have their houses upgraded structurally within three years (2011–2014), mainly the households headed by or including women/female member(s)
- 23 local saving groups operated and managed by women, and
- More than 700 staff of Women's Union, local Committee for Storm and Flood Control, local saving groups were trained about climate change, disasters and housing microcredit for storm preparedness.

Another example is the 2014–2015 project 'Intensifying the capacity of the Committee for the Advancement of Women against Domestic Violence on Women and Girls', funded by the Spain's Peace and Development Organisation<sup>11</sup>, which was implemented in three communes/wards of Da Nang (Hoa Cuong Bac Ward, Hoa Khuong and Hoa Phong Commune) to (i) raise public awareness and intensify the capacity on gender equality and (ii) prevent violence on women and girls.

However, gendered analysis is still not sufficient to fully support the gender mainstreaming in development planning and implementation. The review of gender literature (eg MONRE, 2008; Vietnam's Gender Equality Law<sup>12</sup>, 2006; UN Vietnam, 2009; OXFAM, 2009; Diep, 2013) shows that the participation and empowerment of women is one of the key targets to ensure gender equality for the whole country. However, the insufficient attention paid to gender in the development strategies of Da Nang may indicate weak links between national or 'umbrella' regulations on gender and context-specific plans and strategies (ie city development strategies and climate action plans). This gap poses the challenge of concretising gender-related principles and goals, as well as of clarifying inputs, tasks and outputs to ensure locally appropriate gender equality.

7 *i.e.* <http://www.nhandan.com.vn/quoituan/phong-su/item/28927702-viec-lam-cho-phu-nu-nong-thon.html> ; <http://www.worldbank.org/vi/news/press-release/2012/10/01/jobs-cornerstone-development-says-world-development-report> (both in Vietnamese language)

8 Source at <http://i-s-e-t.org/resources/major-program-reports/typhoon-resilience-in-vietnam.html>

9 Source at [http://cdkn.org/resource/da-nang-typhoon-intensity/?loclang=en\\_gb](http://cdkn.org/resource/da-nang-typhoon-intensity/?loclang=en_gb)

10 Source at <http://accrn.net/blog/improving-resilience-workers-heat-stress-da-nang-vietnam>

11 The organisation website at <http://www.pazydesarrollo.org/>

12 Source at [http://moj.gov.vn/vbpq/lists/vn%20bn%20php%20lut/view\\_detail.aspx?itemid=14854#](http://moj.gov.vn/vbpq/lists/vn%20bn%20php%20lut/view_detail.aspx?itemid=14854#) (in Vietnamese language)

## 4 Research objectives

As mentioned in the previous sections, women are likely to have a substantial contribution to make to vulnerability reduction and resilience building in Da Nang. However, their roles have only been addressed in a limited way in CCA and DRR planning and implementation, especially in recent risk management projects in the city. This shortcoming necessitates this research into gendered power relations to better understand gendered vulnerability and how to incorporate gender into resilience building plans and strategies. Within this sense, this study focuses on three key objectives:

- To understand the current contributions of women to building climate resilience in Da Nang
  - To find out the potential roles taken by women in building urban climate resilience, and the benefits of enabling women to assume these roles, and
  - To propose a gender-sensitive operational framework in which the role and social status of women can be strengthened through resilience planning and implementation.
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# 5 Research design

## 5.1 Resilience approach

This research applies a *gender-sensitive approach* where men and women receive balanced consideration in all phases of the project, from gathering and analysing data to generalising into research findings and policy implications. This approach is intended to help this study answer the following questions:

- What are the common and different roles and responsibilities of women and men in vulnerability reduction and climate resilience enhancement? What is their comparative status in the household and within the community? How have women and men's roles changed or transformed in recent years?
- What are the strategic and practical gender needs and capacities of women and men, and are those normally considered separately in the analysis of needs, formulation and implementation of climate resilience enhancement activities? What is the effect, or potential effect, of addressing women's and men's needs and capacities separately and collectively?
- Which local organisations involved in building urban climate resilience take, or may take, primary responsibility for promoting gender roles and improving gender relations, specifically in strengthening the roles and status of women in resilience enhancement?

To answer these questions, the data collection and analysis were theoretically based on the Urban Climate Resilience Framework presented by ISET (2012). The three core components (agent, system and institution) of this framework were respectively examined through a gender lens to understand the roles and contributions of women in strengthening urban climate resilience for Da Nang (Table 4).

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Table 4: Three resilience components and their relation to gender addressed by this study

System	Institution	Agent
Impacts of climate change and socio-cultural norms on women and men Impacts of urban infrastructures on men and women	The construction and implementation of CCA and DRR policies and plans Effects of CCA and DRR policies, plans and actions on men and women	Roles and capacity of men and women in climate resilience building
<ul style="list-style-type: none"> <li>■ Storms</li> <li>■ Floods</li> <li>■ Other climatic impacts</li> <li>■ Social norms and biases</li> <li>■ Public spaces/green parks</li> <li>■ Public buildings for evacuation</li> <li>■ Information and communication systems for CCA and DRR</li> </ul>	<ul style="list-style-type: none"> <li>■ National policies, plans and actions</li> <li>■ City-scale policies, plans and actions</li> <li>■ District/ward's policies, plans and actions</li> </ul>	<ul style="list-style-type: none"> <li>■ Awareness of women and men</li> <li>■ Skills and capacity of women and men</li> <li>■ Rights and responsibilities of women and men</li> </ul>

(Based on ISET, 2012)

## 5.2 Data collection

The research combined a desk study with a field investigation in Da Nang City, Vietnam. Initially, a review of relevant policy and legal documents was undertaken to gain an overview of the current situation of resilience planning, practices and gender relations. Primary data collection methods comprised a series of consultations with different groups of men and women in vulnerable wards/communes, and interviews with representatives of government departments and other public organisations at the city, district and ward/commune levels.

To collect a wide range of opinions and perspectives from different stakeholders, there were two multi-stakeholder consultations to capture the opinions and perceptions of CCA and DRR actors in Da Nang. The first consultation was conducted in January 2016 with 10 participants and the second consultation was done in March 2016 with 16 participants. The first consultation was to shape the research themes and questions that are responsive and appropriate to the context of Da Nang, and the second consultation was to collect information and data for further gendered analysis and interpretation. Participants in these consultations were the key persons in various governmental agencies/departments of Da Nang City at the time, and directly involved in or responsible for the work of planning and action on climate change of the city. For example, participants represented the city's Department of Construction, Centre for Disaster Preparedness, Socio-economic Development Institute, Women's Union, Climate Change Coordination Office, and Department of Labour, Invalids and Social Affairs. In addition, both male and female staff from these departments were invited to ensure a perspective from both men and women on each interview question. In general, gender is not a new notion for them but in the lens of climate change, most of them believed that it is quite a new approach to examine and analyse the linkage between gender and climate change resilience building.



Figure 5: Stakeholder consultations on gender and climate change in Da Nang in January and March 2016



(Source: Tran Tuan Anh)

These stakeholder consultations were supported by two types of household interview involving different participants:

1. Semi-structured or in-depth household interviews were undertaken using a set of predetermined, open-ended questions to prompt discussion. These interviews, which focused on adult women and men, looked at their relationships with one another, young people and elderly household members. In these interviews, the general and particular roles of women within the community and household were explored. Their roles and status in relation to extreme climate events were also investigated.
2. Structured household interviews were held via household questionnaires. This component addressed specific aspects of the roles and social status of women in resilience building in the study areas. The focus of data collection and analysis was therefore at both the household and community levels.

Figure 6: Household interviews conducted in Da Nang in November 2015



Sixty households were qualitatively interviewed, of which half were economically ‘poor’ and half were ‘near poor’<sup>13</sup>. Households were randomly selected from the list of poor and near poor households in two extremely climate-exposed wards: Man Thai and Hoa Hiep Bac. The inclusion of poor and near poor households ensured that the study focused on highly vulnerable groups of the city, which face greater exposure and vulnerability to climate change compared with higher-income ones. Both the husband and wife of each household were invited to join the interview at the same time but in some households only the husband or wife was available because the other was away from home for various reasons (eg work in another province, back to hometown, sick, etc.). However, the number of male and female respondents in the household survey was nearly equal, 47 and 51 respectively, thus ensuring a near gender balance.

### 5.3 Data analysis

Data collected from the fieldwork were analysed against the three components of urban climate resilience (agent, system and institution) mentioned previously. In terms of *agent*, the strengths and weaknesses of women and men were analysed to identify what roles they could take in the process of vulnerability reduction and resilience building. The operations of groups trained for climate change adaptation was also examined to see whether gender roles and equity are incorporated or not. In relation to *system* and *institution*, the legal systems and the socio-economic structures of the city were examined through the gender lens to assess whether gender has been addressed and mainstreamed in planning and action.

In particular, the component *agent* shapes the data analysis and interpretation through human-related aspects such as the awareness, role and ability of men and women in tackling problems related to climate change. The components *system* and *institution* underpin the gendered analysis through examining social norms and biases, urban infrastructure, and policies, plans and actions on climate change, with a focus on Da Nang City.

In the Urban Climate Resilience Framework developed by ISET (2012), some form of needs analysis precedes the activities of concerned organisations. Gender needs analyses could look at both practical needs and strategic needs. This study examined whether these processes are commonly undertaken, and, if so, what effects could be asserted with regards to climate resilience activities, or, if not, what the potential modifications to common resilience practices could be. The findings could inform:

- Organisational gender policies
- Organisational gender awareness and staff capacity, and
- The social-cultural norms affecting gender and climate resilience.

These three factors are interrelated and together can encourage or inhibit gender sensitivity when building climate resilience. The first and second factors can be analysed for the impact on an individual *agent* and on wider *institutions*. Good policies, high awareness and strengthened capacities may, in particular, lead to including women in needs analyses and decision making. The third factor may, however, be the most decisive and the most complex to investigate. This is at the core of *systems*: it is about traditions and values of citizens, which in turn determine expectations, behaviours, laws and policies relating to gender.

<sup>13</sup> National poverty standards:

Poor = income per capita per month  $\leq$  700,000 VND (rural) or 900,000 VND (urban)

Near poor = income per capita per month = 700,000–1,000,000 VND (rural) or 900,000–1,300,000 VND (urban)

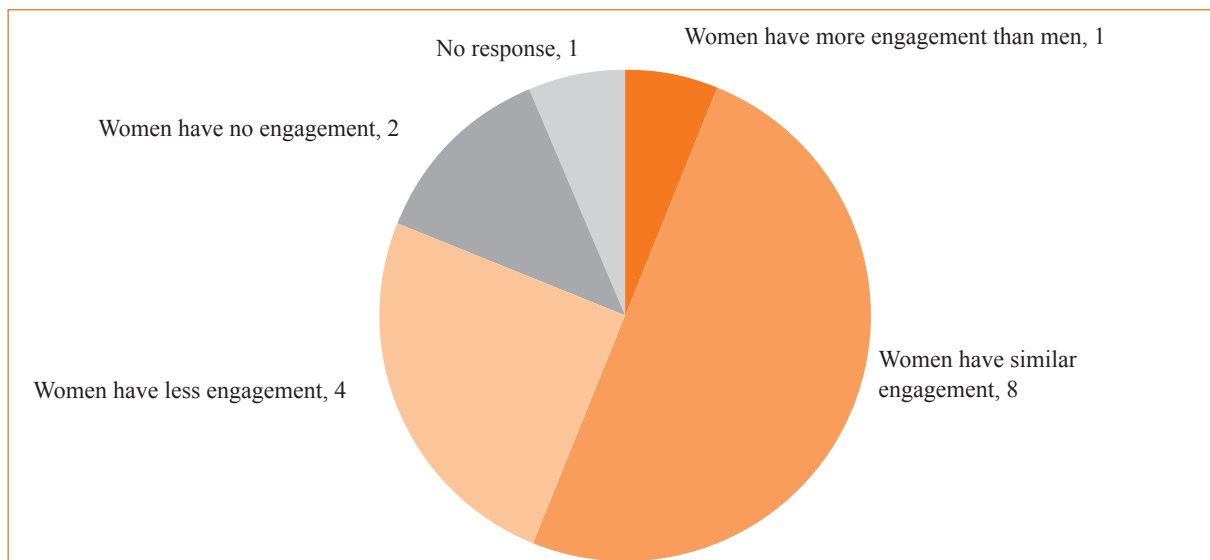
(Based on the Decision No. 59/2015/QĐ-TTg promulgated by the Prime Minister on 19 November 2015)

# 6 Findings and discussions

## 6.1 System

Half of participants (eight out of 16) in the stakeholder consultation supposed that women and men have an equal degree of engagement in community and social activities related to climate change (Figure 7). Some respondents explained that women are supported by their unions and associations such as Women's Union, the Committee for the Advancement of Women, or the Politics-linked Group of Women where they can participate in social activities/works and voice their opinions and thinking. Four out of 16 participants indicated that women have less engagement than men in climate change-related activities at the community level due to their work burden in families and/or jobs outside of the home.

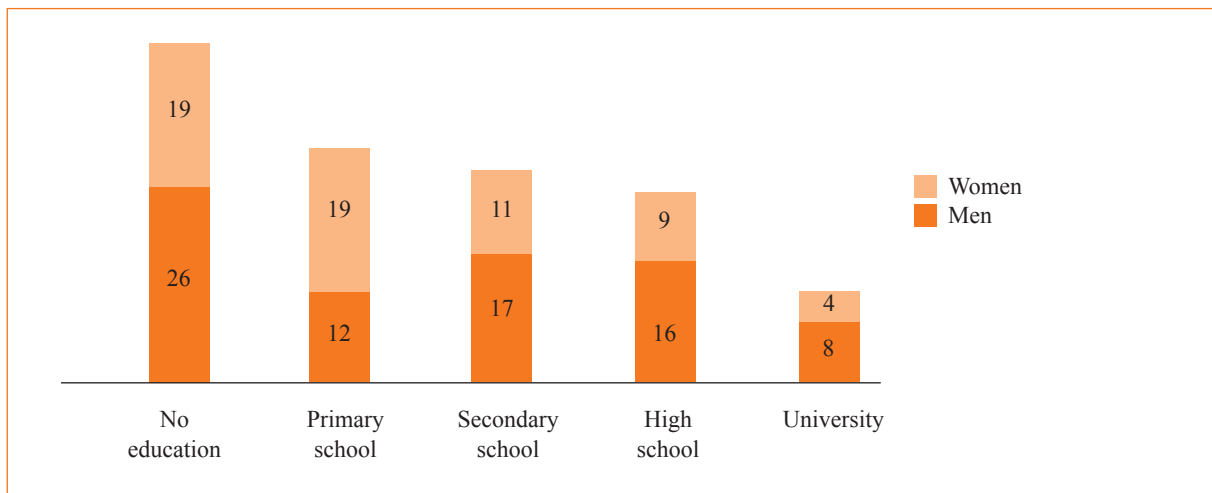
Figure 7: Observed degree of women's engagement compared with men's in social activities related to climate change adaptation



Regarding the social norm that wives should not be more educated or more professionally successful than their husbands, 11 out of 16 participants from the stakeholder consultation agreed that this bias still exists but that it is not taken that seriously. Yet the household interviews revealed that men are more likely to have completed secondary school, high school and university, while women are more likely to have attended primary school or had no formal education (Figure 8). The lower level of education hinders women seeking to comprehend and engage with social and development issues, including CCA and DRR. It is also one of the reasons that women are less confident when participating in social activities and giving

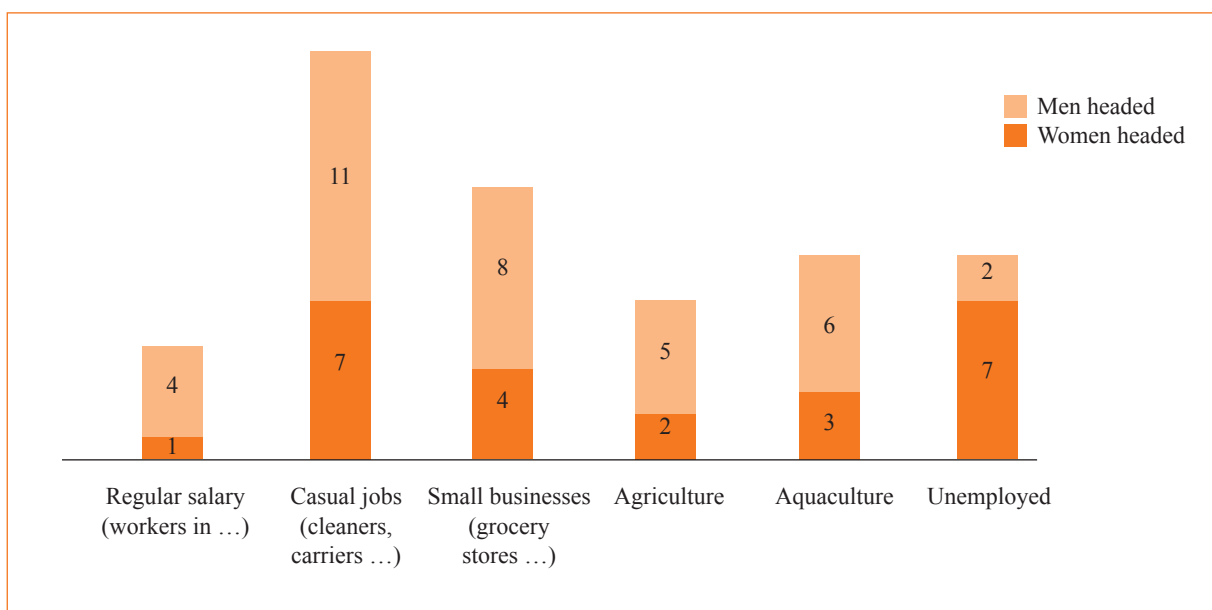
their opinions. In addition, the low level of education constrains women's opportunities to hold higher positions in society, such as well-paid jobs, a factor that can contribute to reducing their vulnerability.

Figure 8: Number of men and women with different levels of education, drawn from household interviews



Participants explained that gender bias mainly relates to the perception that housework is mainly done by women, because caring for children is the work of women while men are frequently responsible for earning money outside the home. This belief is supported by the household interviews, where the number of men responsible for income generation in families is higher than women (Figure 9) and where males are still proving to be the main paid labour force in families.

Figure 9: Number of men and women generating income from different livelihoods in the interviewed households

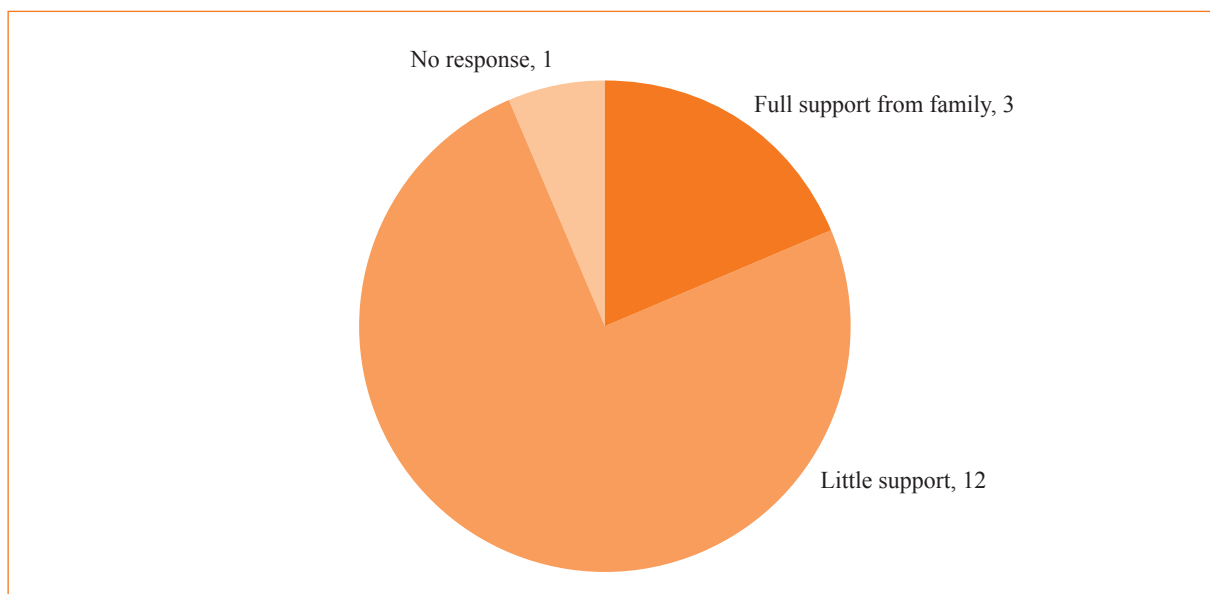


This gender bias is arguably the legacy of previous social norms, where feudal structures did not equally respect women. However, thanks to the increasing level of education of both men and women among other social changes, this gender bias is gradually being reduced and is not significant at this moment in the context of Da Nang. Three out of 16 participants supposed that this gender bias is still critical in some families. Only one person stated that this gender bias does not exist at all.

More than half of the respondents (nine out of 16) believed that there has been no discrimination at all between men and women in CCA planning and action in Da Nang. Men and women were perceived to have equal roles and responsibilities in the work of planning and action in response and adaptation to climate change. Only three respondents said that this discrimination is still noticeable, since the approval process of plans and actions on climate change was still mainly done by men. They noted that gender issues are still not clear to implementers in plans and strategies on climate change and, hence, do not really enable the active engagement of women in practical implementation.

Twelve out of 16 respondents believed that women still received little support and encouragement from their families to participate in social activities for climate change response and adaptation (Figure 10). They said that the work burden in families is the biggest barrier to women joining such activities because they have limited or no time left after completing family tasks.

Figure 10: Degree of family support given to women to help them join climate change adaptation activities



The household interviews further indicated that the workload on women was slightly greater than on men when a climate event (a storm or flood) happened because women were often in charge of cleaning the house and furniture/appliances, cooking and feeding the children, and caring for other family members. These responsibilities become more arduous with environmental hazards. Although men spent less time working in households after disasters, they were frequently responsible for other work such as repairing the house and/or damaged parts, cleaning the site, recovering produce tools and generating income. Men and women therefore have different roles and responsibilities in the aftermath of disasters. One participant said:

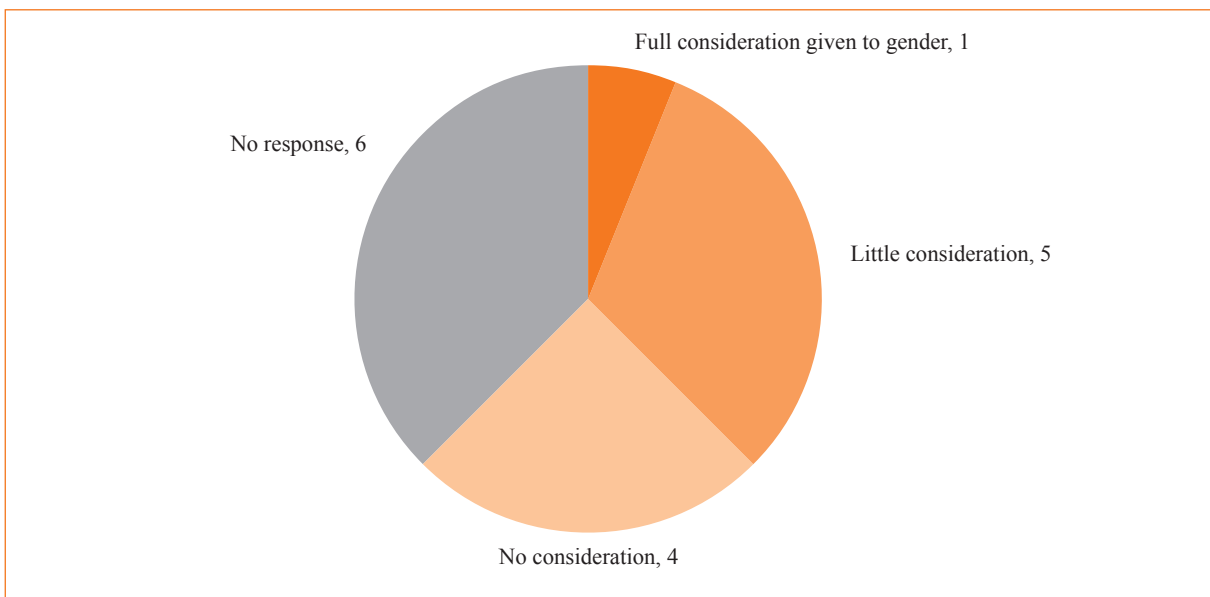
*We [husband and wife] shared all the works of our family after Typhoon Nari [in 2013]. I [the husband] was responsible for replacing some blown-off roof covers and repairing doors and windows while she [the wife] had to clean the house and take care of two children for their health, wellbeing, and going to school. (HI 24)*

The stakeholder consultations revealed that the awareness campaigns on gender, gender equality and gender mainstreaming in responding and adapting to climate change was not done effectively in Da Nang. Nine out of 16 respondents supposed that this work was done at a moderate/medium degree (mainly through communicative posters, boards, and slogans in local meetings), while six respondents stated that this work was rarely done. Respondents said that the messaging was still limited to general sayings and lacked specific instructions on how to enable or achieve gender sensitivity in practical actions. The household interviews revealed that propaganda on climate change response and adaptation were well done at local level but the issue of gender was typically mentioned insufficiently or even neglected.

Community members and households could realise the issue of gender and gender equality but mostly within the boundary of their household family (eg links between husbands and wives). They found the concept of climate change hard to translate into their everyday life and, therefore, it was not easy for them to link the gender issue with climate change impacts and responses.

It was implied from the stakeholder consultations that the design of public spaces and green parks in hazard-prone areas paid limited attention to gender issues. Nine out of 16 respondents believed that there was a little (five respondents) or no (four respondents) consideration to gender in the formation of such public spaces (Figure 11). The main reason for this, they said, is the lack of gendered regulations for the design of such public spaces and the limited propaganda on gender.

Figure 11: Degrees of gendered consideration in the design of public spaces/green parks in vulnerable areas

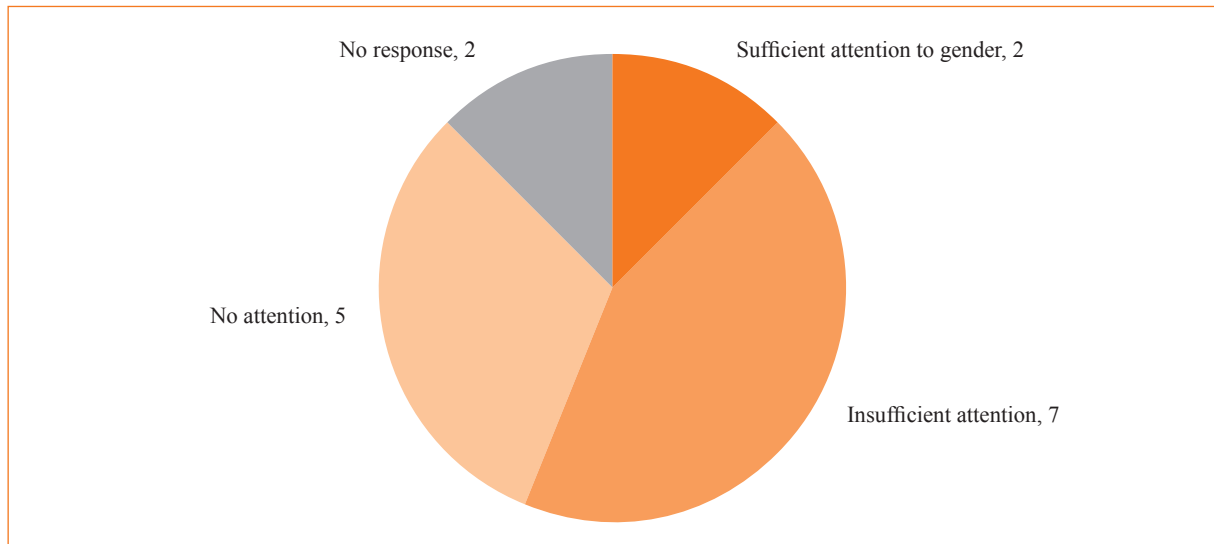


Nearly half of respondents (seven out of 16) said that gender issues, particularly for evacuation purposes, were already mainstreamed in public buildings but not sufficiently (Figure 12). The main reason for the shortfall is due to the temporary use of existing office buildings or schools for disaster evacuation, rather than buildings designed with these safety considerations in mind, so that gender sensitivity was sometimes addressed in a limited way. Five respondents did not think there was a gendered consideration in such buildings because, when deciding to build these buildings, the focus was usually on equipping sufficient facilities for evacuation purposes and, hence, little attention was paid to other issues such as gender sensitivity. For examples, spaces for women and men are often not clear or separated except for toilets.

Most respondents in stakeholder consultations believed that there was a sufficient consideration to gender in the construction of urban infrastructure and utilities such as roads, dykes, water supply, drainage and electricity. They said the main reason was the common purpose of such facilities in serving the wider public, which includes all gender groups.

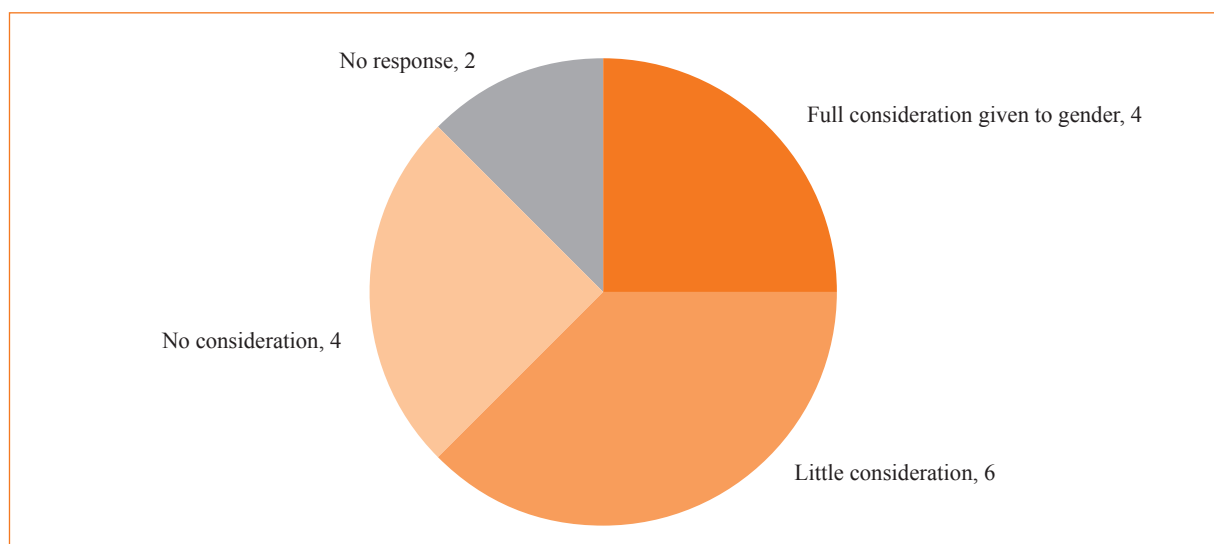


Figure 12: Degrees of attention to gender in public buildings for evacuation purposes in vulnerable areas



There are also different opinions about the extent of gender consideration in the formation of climate change information and communication systems, such as early warning systems (Figure 13). One group of respondents (four persons) thought that, although the term *gender* is not clearly mentioned in the content of transmitted information/messages, gender sensitivity seemed to be reflected in directions and orders. For example, women are often seen as one of the most vulnerable groups that need to be evacuated first in early warning messages, or men were usually encouraged to stay on site when disaster happened to respond to sudden cases thanks to their stronger physical health. On the other hand, the other group of respondents (four persons) did not think there were gendered considerations in such information and communication systems.

Figure 13: Degrees of gendered consideration in the formation of information and communication systems (eg early warning systems)



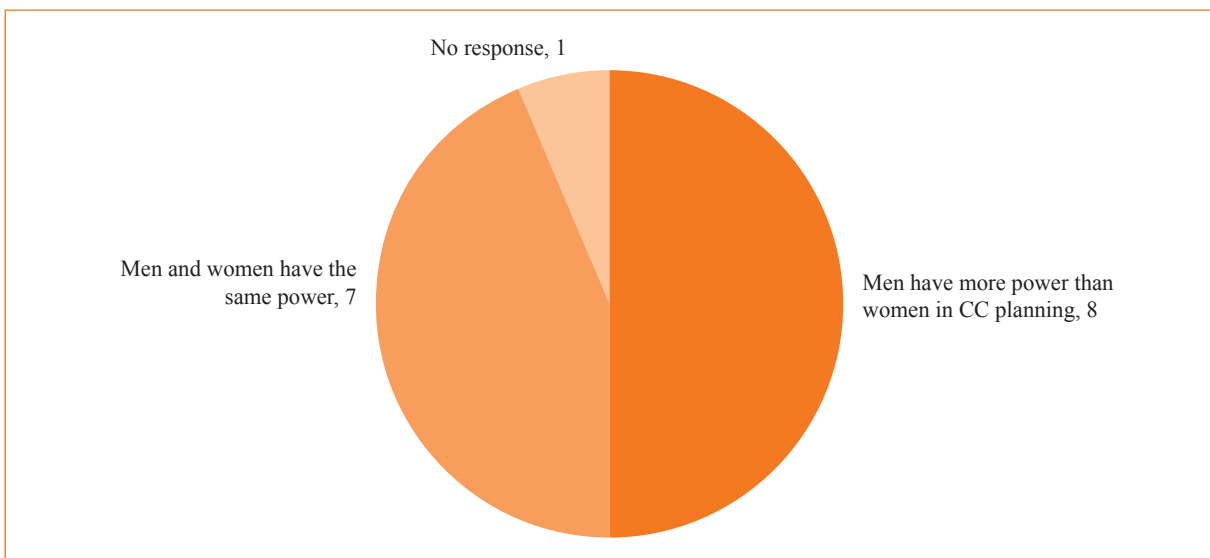


It was widely agreed by the respondents that the overall purpose of gender analysis in building climate resilience is to reduce vulnerability of vulnerable groups to future climate risks (nine out of 16 respondents), to fully promote the capacity of men and women in resilience building (five out of 16) and to balance benefits, needs, and responsibilities between gender groups (two out of 16). They noted that gender analysis plays an important part in climate resilience building since it is part of policy analysis to support the design of gender-sensitive policies, plans and actions that can enable the achievement of gender equality in practice.

## 6.2 Institution

The stakeholder consultations indicate that there were different perceptions of the power and authority of men and women in climate change planning and decision making. Eight out of 16 respondents believed that men have more power than women, mostly because of the higher number of men on steering committees on climate change. The other seven respondents supposed men and women shared the same authority and roles in climate resilience planning and decision making, largely thanks to the widespread engagement of Women's Union in developing and implementing plans and strategies on climate change (Figure 14).

Figure 14: Perceptions of gender relations and power in planning and action for climate change response and adaptation

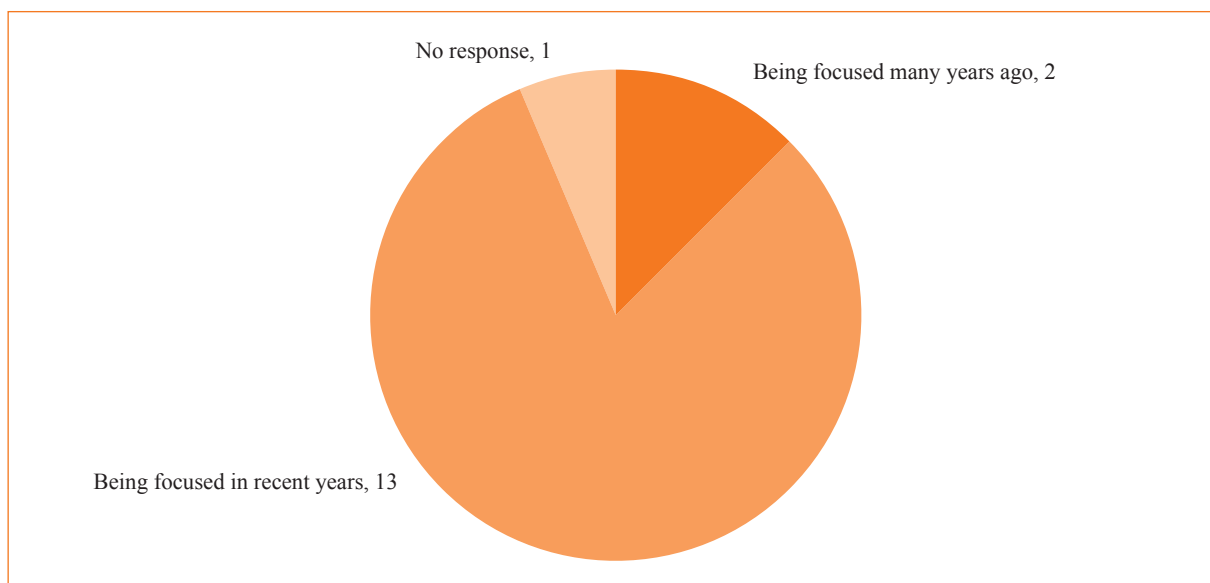


The stakeholder consultations showed that both men and women are regarded as having equal roles and responsibilities in monitoring and managing the implementation of policies, plans and strategies on climate change (11 out of 16 respondents agreed with this claim). It was explained that this was not only due to the widespread engagement of Women's Union in monitoring policy/plan implementation, but also because of an increasing involvement of female staff in the responsible administrative departments/units.

Social norms/biases around gender were not considered to have a significant effect on the construction and implementation of plans and policies on climate change. Nine out of 16 respondents supposed that there was a relatively little effect. Some respondents highlighted that although there were frequently more men than women on decision-making boards, their decisions were always made with regard to the wellbeing and benefit of other gender groups, especially women and the elderly. Although well-intended, this reinforces the patriarchal culture where the voices of women are not fully appreciated.

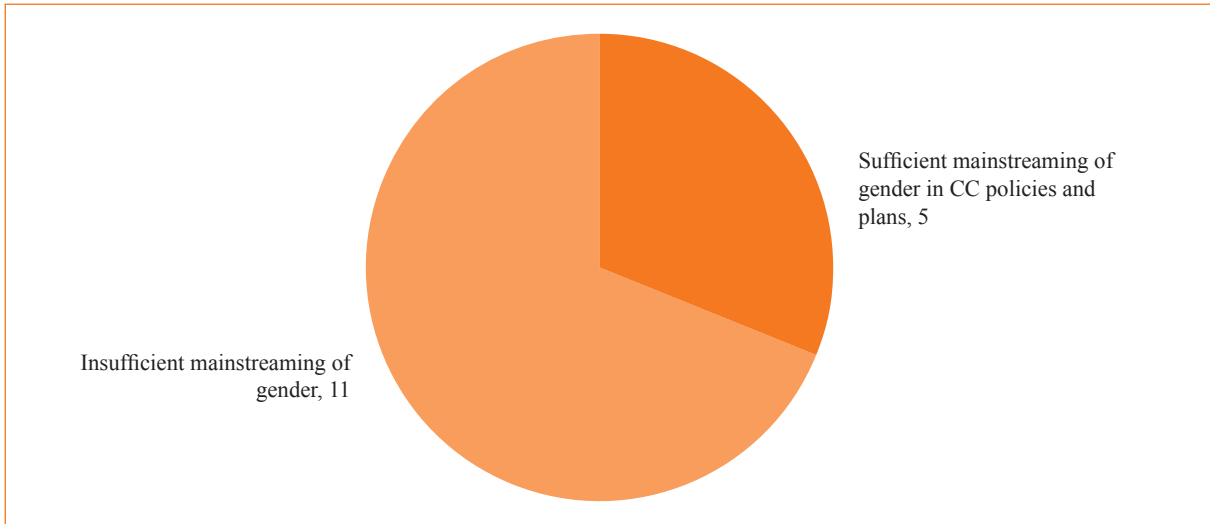
The stakeholder consultations indicate that, in recent years, the awareness and capacity of women on climate change response and adaptation have been improved, and gradually enabled the involvement of female groups in the design and implementation of climate change policies and plans. Thirteen out of 16 respondents in stakeholder consultations showed their agreement with this statement (Figure 15). They said an increasing number of awareness campaigns and training programs designed for women, such as the training sessions for Women's Union on locally managed microcredit in safe-housing credit projects, were an attempt to provide women with better knowledge and confidence when engaging in planning and policy making in terms of climate change.

Figure 15: The focus on improving women's awareness and capacity on climate change in relation to time



Most respondents (11 out of 16) believed that gender has still inadequately mainstreamed in recent policies and plans on climate change (Figure 16). According to some participants, climate change policies in Da Nang do not lack gender consideration because both men and women were involved in planning these policies. In addition, these respondents emphasised that gendered notes or the term 'gender' were not always mentioned in climate change policies because these policies were designed for all (the wider public) and there was no need to clearly mention women or men in such policies. It was widely agreed by respondents that gender priorities were not clearly shown in *terminology*, but already mainstreamed in climate change policies, as found above. This is problematic if women's different needs and priorities are not adequately captured in the final text, which is likely when they are a minority among decision makers. Other participants emphasised that the participation of both men and women in planning does not always mean 'gender mainstreaming' because 'gender mainstreaming' is a process, not an end-use product, where a sequence of actions for gendered analysis, gendered planning and gendered implementation were necessarily incorporated.

Figure 16: Degrees of gender mainstreaming in policies and plans on climate change

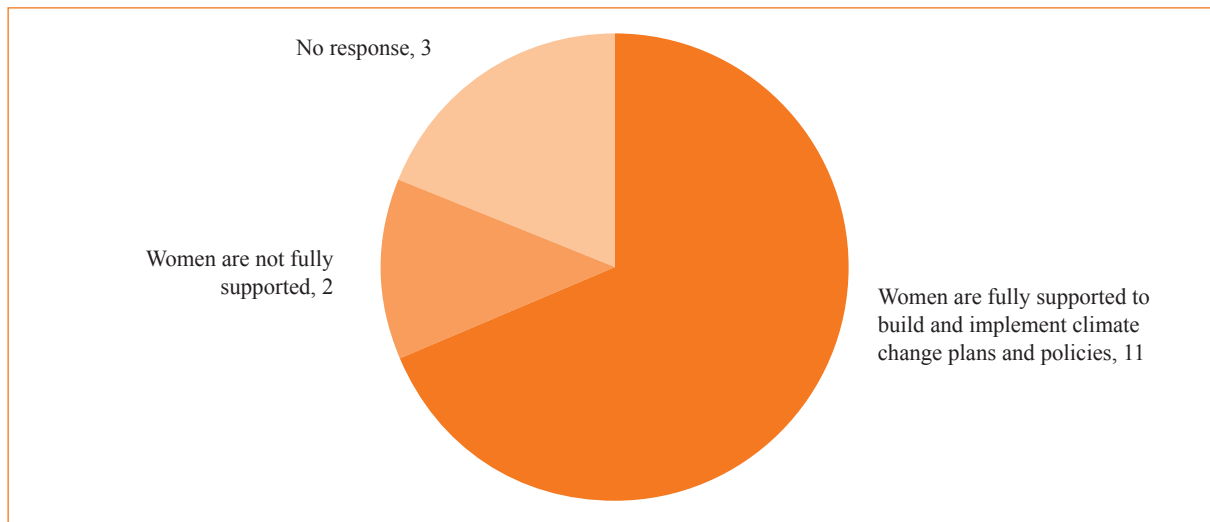


Based on the group discussion with ward authority representatives, female-headed households were increasingly the targets of development programs/projects, especially the ones provided by Women's Union, such as the microcredit revolving loan program for storm-resistant housing in Da Nang. Seventeen out of 60 households interviewed who were involved in this project said that their life has been significantly improved thanks to the project's interest to the female-headed or -included families. Such households said they hoped that similar projects in the future would create more opportunities for women to escape poverty and to enhance their role in the community and society. In addition, the establishment of local saving groups managed by WU and ward/commune authorities was also an effective and gender-sensitive approach, because being a female-headed or -included household was one of the eligible conditions to join the saving groups.

There was a widespread agreement in the stakeholder consultations that women were fully supported in having their contribution/input to the construction and implementation of climate change policies (11 out of 16 persons agreed) (Figure 17). In particular, women were frequently encouraged to participate in multi-stakeholder consultations and climate change-related training, to voice their opinions and share their experiences, and to review and give feedback on climate change plans and policies before approval.

However, as highlighted by most householders in the interviews, there seemed to be limited consideration of gender issues in local action plans for coping with natural disasters and climate change – except that women are recognised as one of the most vulnerable groups needing a timely evacuation when a climate hazard (a flood or storm) is forecast. Most action plans viewed women as disaster victims and, therefore, pushed them into a passive status when facing climate stresses and shocks. In addition, concepts of *resilience* recently adopted by local administrative systems were inclined to the 'return to normalcy' paradigm, but did not realise that 'normalcy' may entail gender problems (eg more men than women in decision making, limited inclusion of women's voices in planning, limited access to fundamental resources for women). This mindset may perpetuate gender gaps if gender-sensitive approaches are not included.

Figure 17: Degrees of support given to women to enable their contribution/input in building and implementing plans and policies on climate change

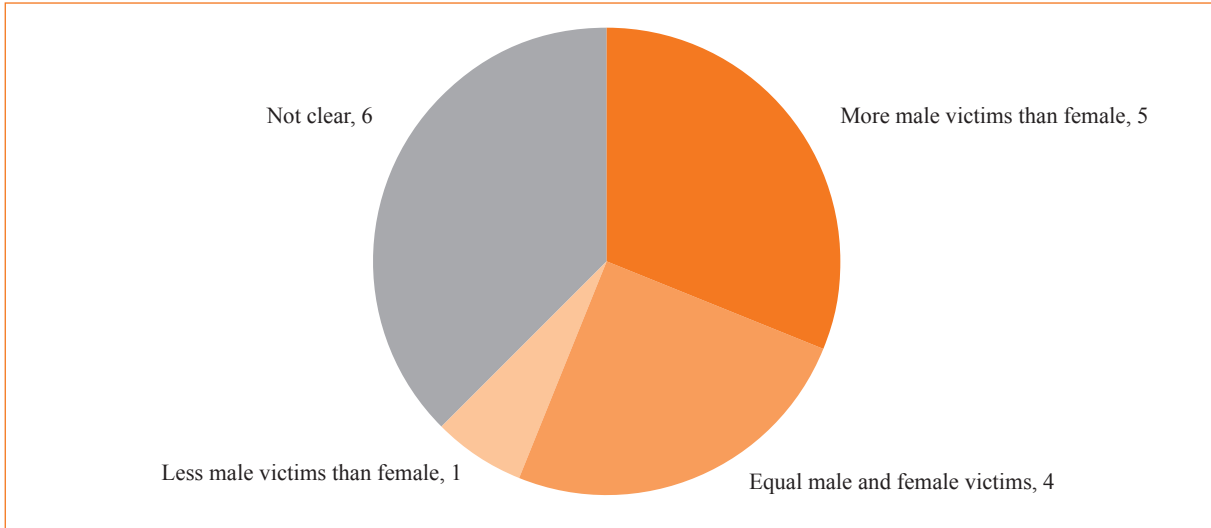


To some extent, although the legal system and policy environment for gender equality are not sufficiently translated into local plans and actions, some recent projects on climate resilience have started to consider gender issues, and viewed greater inclusivity as one of their desired outcomes. However, such priorities are still the exception, and frequently measured according to the number of female-headed households benefitting from a project rather more nuanced gendered effects and outcomes.

### 6.3 Agent

Six out of 16 participants were not clear about how events such as typhoons impacted men and women differently. This is, in part, because damage reports often do not specifically mention gender (eg reports on human loss are just total deaths and injuries without separating how many men and women are in each group) (Figure 18). Five out of 16 participants believed that male victims were possibly higher than female ones because men often stayed on site when disaster happened to respond to unexpected cases while women (with children and elderly people) were already evacuated to safe places. Most respondents indicated that human loss following natural disasters is measured in terms of the total amount of fatalities and casualties without clarifying how many victims are male and female. These respondents mainly assess the disaster impact within their administrative area or sector on men and women through personal experience or observation. This means they are unlikely to come to any conclusion about gendered impacts at a large or citywide scale.

Figure 18: Estimated comparison of male and female victims after recent typhoons



However, according to group discussions with local authorities and civil society organisations, loss of human life was relatively low in recent climate events. Climate-induced damage mainly impacted household assets (eg household appliances, livelihood, production tools) and public infrastructure (eg traffic roads, drainage systems, power stations). Thus, climate change impacts on women and men are chiefly in indirect ways such as more work pressures or higher rates of unemployment on a particular gender group rather than how many men and women were killed or injured by climate events. The household interviews demonstrated several indirect impacts of climate change on women and men (Figure 19). Depending on each type of damage/loss, men and women bore a greater or smaller share of the impacts of climate change. For example, housing damage put more workload on men, while the shortage of clean water placed more pressure on women.

There was also a widespread agreement (nine out of 16 participants) during the stakeholder consultations that women have their own particular strengths, different from men's, which are valuable to climate change response and adaptation (Figure 20). It was supposed that women are frequently good at awareness-raising activities and in mobilising the masses to join community and social events/works for resilience building. Women also show their sensitive care, interest and approach to tackling social difficulties associated with human behaviours and attitudes, such as convincing people to follow adaptive measures or disseminating disaster information/messages to at-risk households.

Additionally, the household interviews indicated that there are a number of prioritised actions taken by men and women in response to climate change/natural disasters in which *strength-required actions* such as repairing shelter or moving household items to safe places were appropriate to men while *non-strength-required actions* such as saving money or preparing food were suitable for women (Figure 21).

The stakeholder consultations also showed that the degree of women's involvement in climate change response and adaptation activities at the city level was still limited to *participation* (10 out of 16 respondent agreed with this), while some (six respondents) believed that women's involvement was more than *participation* since they also provided significant inputs to such activities (Figure 22).

Figure 19: The gender split of the work burden after disaster damage and loss

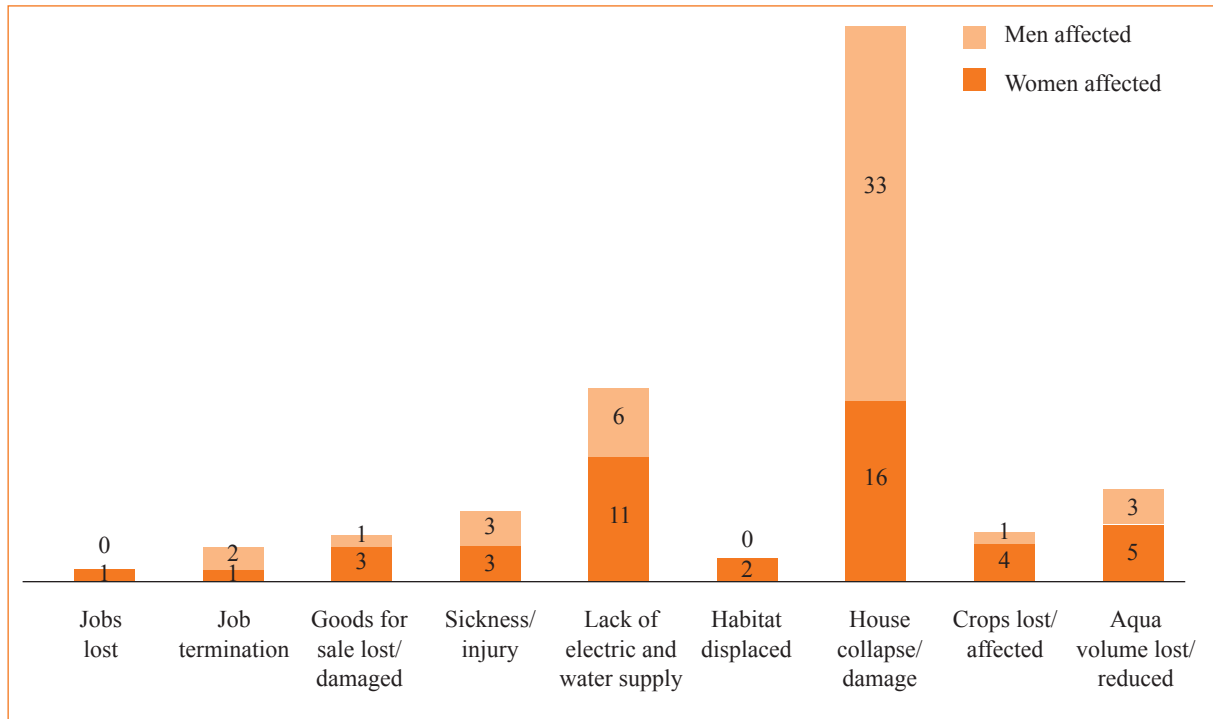


Figure 20: The contribution of women’s strengths to climate change response/adaptation

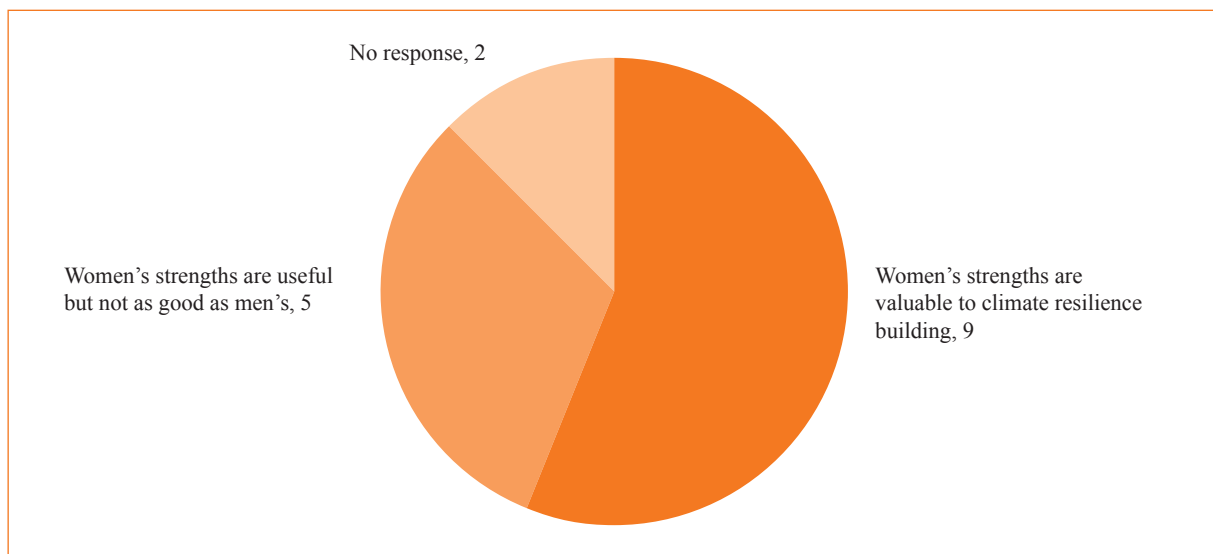


Figure 21: Gendered roles and responsibilities within households in preparation for natural disasters

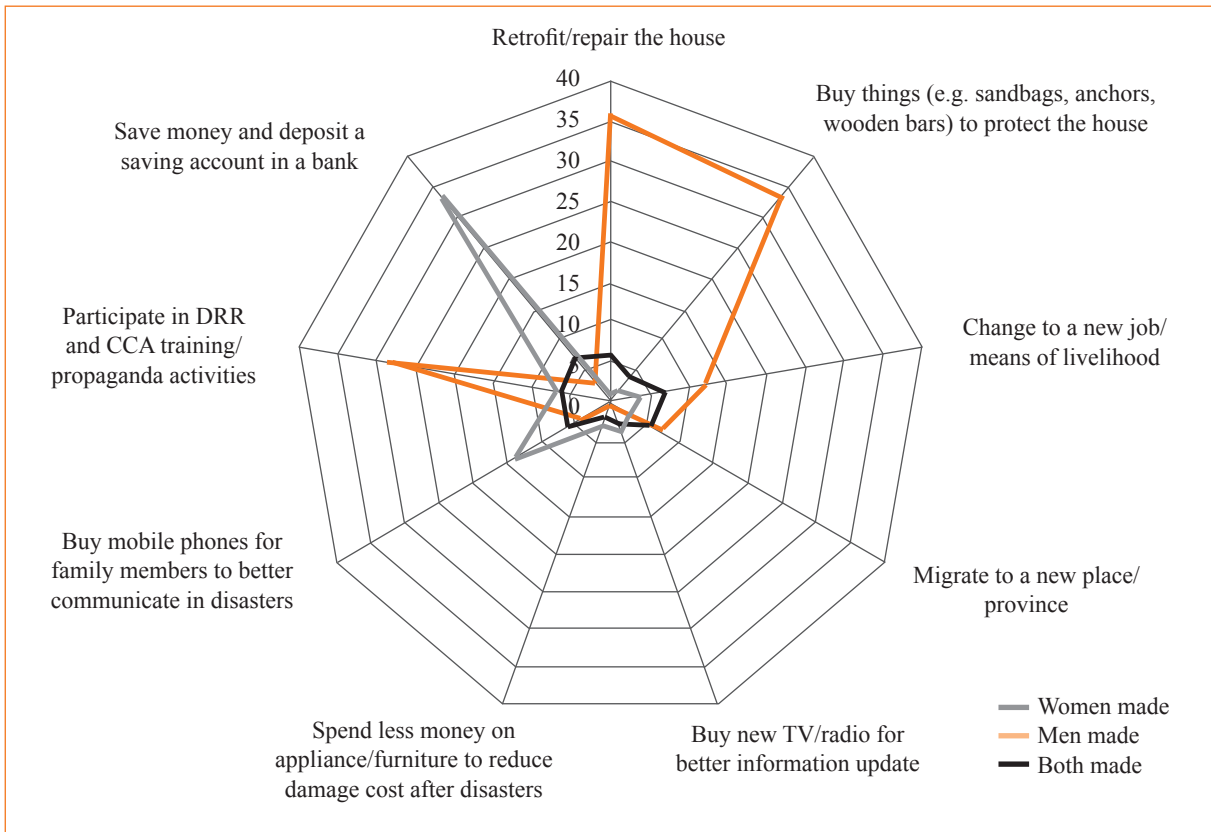
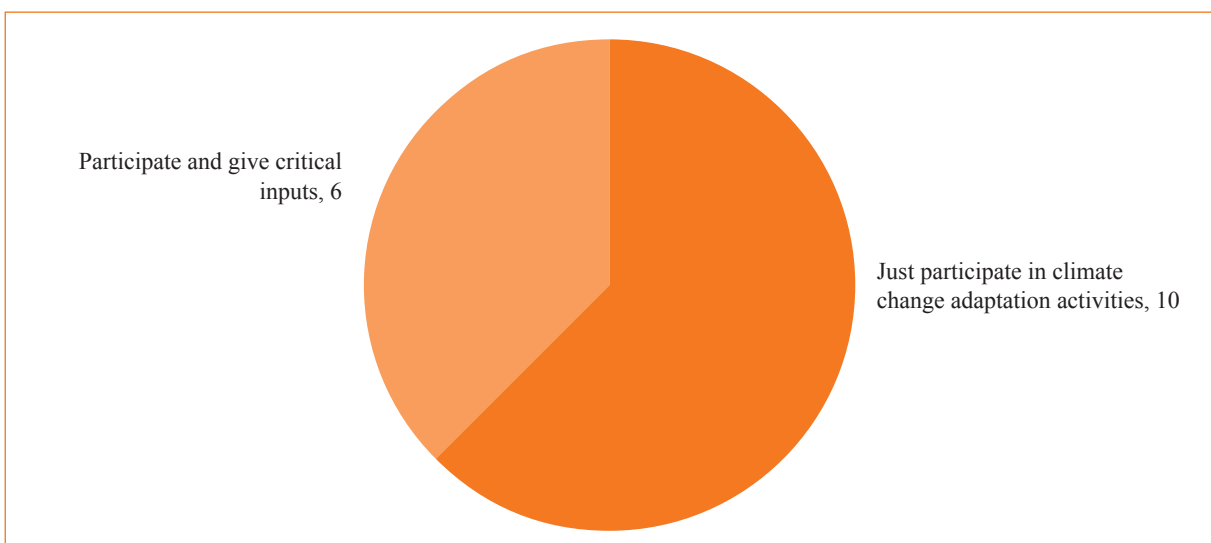


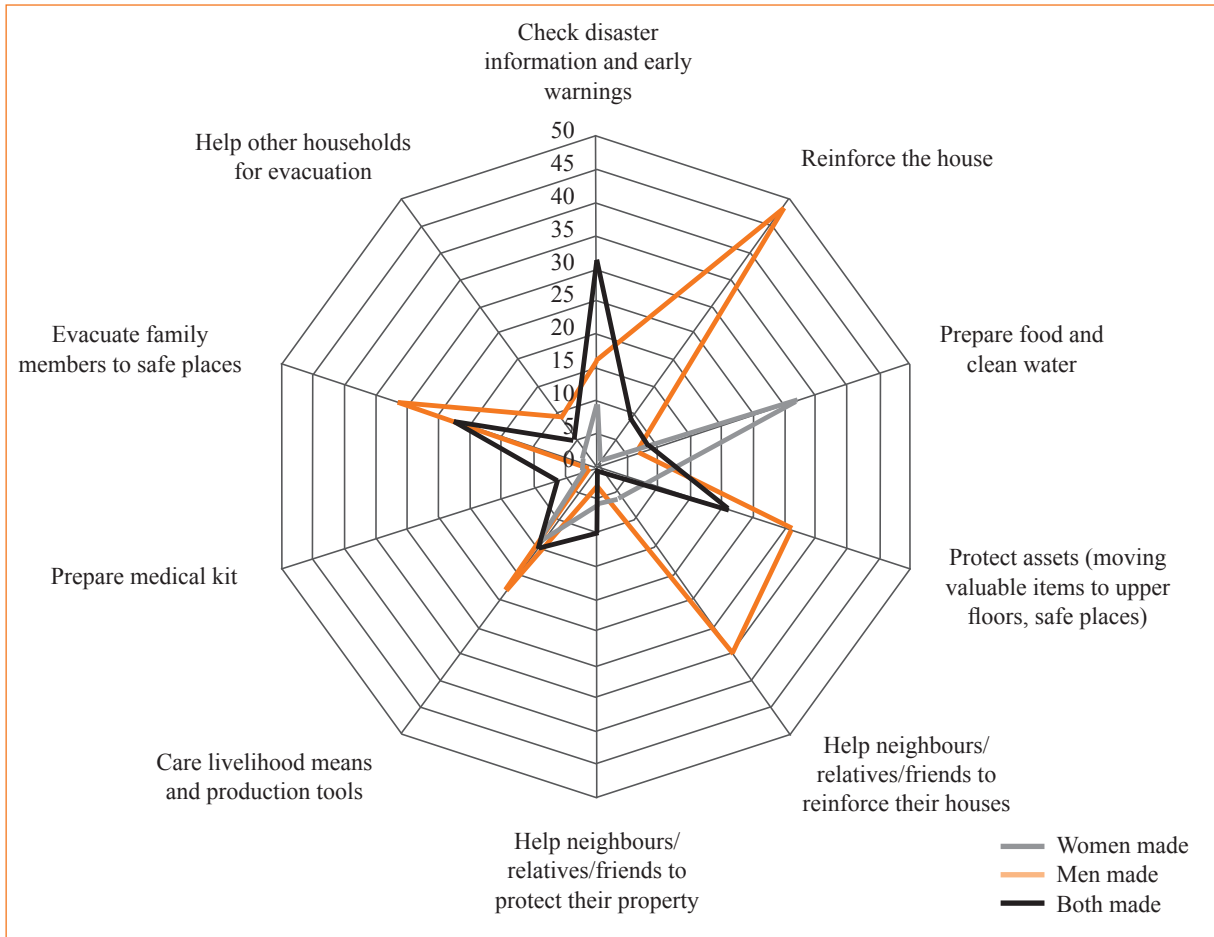
Figure 22: Degree of women's engagement in climate change response/adaptation activities at the city level



Inputs of women were clearer at the household level, since they are responsible for some of the family tasks in response to a coming disaster (Figure 23). Women are often involved in preparing logistics in the face of disaster to ensure the wellbeing of other family members, although men (husbands) tended to have a slightly stronger power and authority in deciding most family matters, as inferred from the household interviews.



Figure 23: Household responses to climate change and natural disasters



## 7 Conclusion

This study has developed a clearer picture and new evidence of gender issues in the context of climate change resilience building in Da Nang. Three core components of the resilience lens – agent, system, and institution – were examined and analysed through a gender lens to better understand how climate change has different impacts on men and women, how social norms/biases affect men and women, and to what extent men and women could show their capacity and contribute to climate change adaptation plans and actions. There are six key conclusions from this study, as follows:

- Da Nang has paid increasing attention to gender equality and the empowerment of women in general administration, policy making and implementation. Notably, several women-based unions and associations, besides the Women’s Union, have been established in recent times. These organisations enable women’s engagement in socio-economic development, climate change response and adaptation, and help to eliminate social preconceptions/biases towards women.
  - Climate change impacts are different between men and women, but this does not seem to be fully realised by local stakeholders. The greater vulnerability of women is not merely due to social preconceptions/biases, but also because of their own physical weaknesses or structural disadvantages compared with men. However, the study shows that women are also perceived to possess several particular strengths that are normally not associated with men (eg ability to raise awareness and mobilise the masses) and, to some extent, such strengths are integral to effective planning and action for climate change response and adaptation.
  - Social norms and biases on gender still exist but they are not perceived to be especially serious in the context of Da Nang compared with other parts of Vietnam. In climate change response and adaptation, gender biases tend to exist in the composition of leadership boards or steering committees, where men often occupy a higher number of positions; in planning and approving plans and actions, where men frequently show their slightly stronger power and authority; and in household-level responses, where husbands normally decide important things for their family. The fact that these ongoing prejudices and norms are not fully appreciated indicates a systemic problem. But such gender biases are believed to be significantly reduced compared with recent history. There are hopes that they may be eliminated all together in the future thanks to increasingly active involvement of women, through legalised women-based unions/associations, in almost all activities of climate change response and adaptation at multiple levels and within multi-sectoral agendas/interventions.
  - The process of planning and approving policies, plans and strategies on climate change in Da Nang always engages both male and female groups. While many stakeholders consider that gender equality is thereby addressed and incorporated in the proposed solutions, others observe that women participants may be less confident or influential in these settings. Similarly, there are perceptions that climate policies, plans and strategies must meet the need of all gender groups rather than focusing on one particular gender group to ensure a social justice and a balanced share of benefit, role and responsibility between gender groups. This perspective neglects the fact that marginalised groups may have different needs and priorities, and that plans and strategies developed without meaningful participation may not address their specific concerns. There is, therefore, an ongoing need to enhance gender awareness and understanding among decision makers.
  - At the city scale, policies, plans and actions on climate change mostly have limited or no mention of the term ‘gender’ or ‘gender equality’ in their texts. Some participants argued that this is because such documents are usually for the
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wider public where all gender groups are already included. However, the lack of specific instructions on gendered relation and gender equality is likely to cause planners/implementers to underestimate the significance of addressing women's particular vulnerabilities, and to lack the frameworks to effectively include and empower female groups. Gender is a prominent issue at the national level, but there is a need to translate this commitment into action at the local level.

- In Da Nang, gender relations have recently been given a positive signal in the form of support from a robust legal system. Remaining challenges include insufficient engagement of women in tackling major roles/tasks; a persistently larger work burden for women that hinders them in participating in community and social activities; the ongoing influence of feudalist ideas where women were not considered as powerful or as capable as men; the smaller number of female than males on decision-making boards or steering committees; and the way that key players/actors continue to underestimate the significance of gender equality as a development goal.

In brief, the qualitative survey of 26 local experts and 60 households in Da Nang City are not sufficient to represent and generalise into the findings for the whole city. The difference between men and women in relation to the impacts of climate change and responsibilities in climate resilience building within the city need to be further investigated. We recommend the use of quantitative survey methods to have a larger and more reliable evidence base for qualitative conclusions or recommendations.

However, our findings have some substantial implications regarding gender and climate resilience building, which future planning and action for resilience building can take into account for better outcomes. The gendered analysis provided in this study has identified the necessity of gendered considerations and interventions in a wide range of climate change response and adaptation, from policy making to planning to implementing practical actions. Four important policy implications for gender equality and gender mainstreaming in building climate resilience generated from this study are:

- It is important to say that men also have some responsibility here. There is a need to change their mindset so that they recognise the strengths and potential of women as climate change actors. There is also a need to change mindsets so that, where women are vulnerable, the importance of including and amplifying their voices is fully appreciated so that climate actions respond to their needs. Decision makers need to trust women to make the right decisions, and empower them to make those decisions by increasing their access to information, resources and capacities.
- It is essential to improve the capacity of women to address their vulnerabilities. Improving women's capacity may include raising their awareness on climate change, climate risk reduction and management through formal education or the conduct of information and training sessions. It also includes offering more professional or vocational training for women to allow them to better engage in the urban labour market and secure stable and well-paid jobs. This helps indirectly reduce women's vulnerability to future climate hazards, increases their self-confidence and heightens their position and role in community and society. Such improved self-confidence would also allow women to better participate in social and community activities, including the climate vulnerability reduction and resilience-building ones.
- It is crucial to have supportive schemes or mechanisms to enable full participation of women in planning and decision making associated with climate change. In addition, there should be programs and projects to mobilise and empower women to join community and social activities, thereby acknowledging and enhancing the social roles and responsibilities of women in tackling climate change-related problems.
- It is necessary to integrate gender-sensitive indexes/indicators into plans, programs, and projects to guide gendered interventions or actions in practice to reduce gender gaps/biases and balance the benefit, role and responsibility between different gender groups. This includes gender-sensitive design standards/regulations for hard infrastructure such as public spaces, green parks and public buildings (for evacuation purposes), especially in climate-exposed areas. Such an approach ensures gender sensitivity in the use and operation of such public spaces/buildings when climate shocks and stresses happen (eg storms, floods, fires). However, it also includes incorporating gender considerations into soft infrastructure, such as information and communication systems for climate risk reduction and resilience enhancement (eg early warning systems, climate-related policy dialogues). Specific instruction or guidance on how to translate gendered requirements/conditions in policies, plans and strategies into practical actions are vital to shorten the gap between policy/theory and implementation/practice.

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# Gender analysis in building climate resilience in Da Nang: Challenges and solutions

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