Universidade do Minho
Instituto de Ciências Sociais

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Rural Water Supply and Sanitation as Means for Development - A Case Study on Community Participation and Gender Inequality in Timor-Leste (Maubara, Liquiçá)

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PhD Thesis in Sociology

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[Abastecimento de Água e Saneamento como Meios para o Desenvolvimento – Estudo de caso sobre participação e desigualdade de género em Timor-Leste (Maubara, Liquiçá)]

Orientadores: Prof.ª Dr.ª Emília Rodrigues Araújo, Prof. Dr. Joel Augusto Felizes

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Resumo

Abastecimento de Água e Saneamento como Meios para o Desenvolvimento – Estudo de caso sobre participação e desigualdade de género em Timor-Leste (Maubara, Liquiçá)

Os temas da sustentabilidade e do desenvolvimento, bem como da possibilidade de manter este desenvolvimento para as gerações futuras, têm suscitado bastante preocupação a nível internacional. Alem disso, nas últimas décadas o objetivo da "participação das comunidades" nos processos de desenvolvimento tem sido muito valorizado e promovido como uma abordagem sustentável e alternativa à visão de "cima para baixo" desses processos.

Esta pesquisa tem assim como objetivo focar as questões da participação das comunidades e da desigualdade de género que se levantam em torno dos projetos de abastecimento de água e de saneamento básico em meios rurais, em si importantes no quadro de uma estratégia de redução da pobreza no sub-distrito de Maubara e em Timor-Leste no seu todo. A pesquisa é feita através de uma abordagem metodológica qualitativa, recorrendo sobretudo a dois estudos de caso realizados em duas pequenas localidades. São focados alguns dos principais paradigmas teóricos do desenvolvimento, da participação dos cidadãos e dos estudos de género, para depois, ao nível da pesquisa empírica, se explorarem quatro ideias principais:

i) A participação das comunidades, especialmente quando dirigida às necessidades básicas e às infra-estruturas, pode ter mais potencial para mobilizar a acção coletiva e satisfazer essas necessidades.

ii) A participação da comunidade não é estática ou garantida. Vai-se regenerando e mudando ao longo do tempo. Ainda que ela esteja enquadrada numa abordagem de 'cima para baixo' (de tipo paternalista), os membros da comunidade têm alguma autonomia para, por exemplo, definirem regras de cobrança de contribuições para a manutenção dos equipamentos que variam de acordo com a condição económica de cada família. No mesmo sentido também podem aplicar o seu conhecimento local para melhorar os sistemas de fornecimento de água.

iii) Os fatores socioeconómicos, culturais, institucionais, naturais, bem como os tipos de liderança, até certo ponto, têm um impacto significativo sobre a participação da comunidade e, portanto, sobre a sustentabilidade da distribuição de água. No entanto, uma pequena diferença nos resultados revela que um alto nível de escolaridade não é fator determinante que influencia diretamente a participação da comunidade, mas sim a experiência de filiação numa organização e num grupo social.

iv) A desigualdade de género, especialmente quando enraizada em práticas culturais e sociais que pouco mudaram e estão profundamente firmados nas instituições sociais, pode ser reduzida pela introdução de práticas mais igualitárias, quando e se os princípios de desenvolvimento comunitário estiverem totalmente implicados nos programas e nos projetos concretos.

Abstract

Rural Water Supply and Sanitation as Means for Development - A case study on community participation and gender inequality in Timor-Leste (Maubara, Liquiçá)

Many concerns at the international level have circled around the topic of sustainability in development, and the likelihood of maintaining this development for the coming generations. On the other hand, on recent decades the concept of 'community participation' in development is highly valued and promoted as an alternative and sustainable approach to the top-down one.

Hence, this research aims at describing the community participation and gender issues at play in rural water supply and sanitation projects as an important strategy of poverty alleviation in the sub-district of Maubara and in Timor-Leste as a whole. The research is done using a qualitative methodological approach with two case studies in two hamlets as the main focus. By drawing on some of the main theoretical paradigms of development and community participation, as well as those of gender studies, the research puts forward four main ideas that have been empirically explored:

i) Community participation, especially when directed to basic needs and infrastructures, can have greater potential to mobilize the collective action to address immediate needs.

ii) Community participation is not static or given, it has been regenerated and changed over time even though it is framed in a top-down approach, a free space is given to the community members to exercise their autonomy, such as, they can set their own rules for collecting payment for maintenance funds according to the economic condition of each household. They can also exercise their local knowledge to improve the water system for their own well-being.

iii) The socio-economic, cultural, institutional, natural, and leadership figures, to a certain extent, have a significant impact on community participation and therefore on the sustainability of water distribution. However, a minor difference in the findings reveals that a high level of education is not a determinant factor that directly influences the participation of the community, but rather it is the experience of affiliation in an organization and on a social group that has a great impact

iv) Gender inequality, especially when rooted in cultural and social practices that have hardly changed and are deeply embedded in social institutions, may be reduced by the introduction of more egalitarian practices, when and if the community development principles are fully implicated in actual programs and concrete projects.

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Abbreviations and Acronyms

ASDT:	Associação Social-Democrata Timorense (Timorese Social Democratic Association)
ASEAN:	Association of Southeast Asian Nations
RWSSP:	Rural Water Supply and Sanitation Program
CNRT:	Conselho Nacional de Reconstrução de Timor (National Congress for Timorese Reconstruction)
CF:	Community Facilitator
DNSAS:	Direcçao Nacional do Serviço de Água e Saneamento
FRETILIN:	Frente Timorense de Libertaçao Nacional
GDP:	Gross Domestic Product
GLAAS:	Global Analysis and Assessment of Sanitation and Drinking- Water
GMF:	Grupo Maneja Fasilidade in tetum or Grupos de gestão da água in Portuguese (Community Water and Sanitation Management group)
GNR:	National Republican Guard
GoRDTL:	Government of the Democratic Republic of Timor‐Leste
IDP:	Internally Displaced Person
ILO:	International Labor Organization
LDF:	Local Development Fund
LGSP:	Local Government Support Program
MDG:	Millennium Development Goal
MSATM:	Ministry of State Administration and Territorial Management
NGO:	Non-Government Organization
PD:	Partido dos Democratas (Democratic Party)
PDD:	Decentralized Development Projects
PDL:	Local Development Projects
RWSSP:	Rural Water Supply and Sanitation Program
RWSS:	Rural Water Supply and Sanitation
SAS:	Serviço de Água e Saneamento (Water and Sanitation Services)
TL:	Timor-Leste
UNCDF:	United Nations Capital Development Fund
UNDP:	United Nations Development Program
UNICEF:	United Nations Children's Fund
USAID:	United States Agency for International Development
WAD:	Women and Development
WID:	Women in Development
WSS:	Water and Sanitation Services

Introduction

Unsafe water and poor sanitation has become a critical global problem that we are facing today. UNICEF (2013) has estimated that about 783 million people in the world have no access to clean drinking water and 2.5 billion people live in poor sanitation conditions. Each day across the globe there are around 4000 children deaths that are linked to unsafe water, poor sanitation and hygiene. Rural Water Supply and Sanitation (RWSS) in Timor-Leste is one of the most determining components in poverty reduction strategies and in the achievement of the UN Millennium Development Goals of this country. 37 per cent of the rural population of Timor-Leste still lives on unimproved water sources, and 52 per cent of the population still practices open defecation (WHO & UNICEF, 2010: 56). Thus, rural water supply and sanitation (RWSS) soon became the first priority for human development strategies in Timor-Leste (TL). TL is just a small fragment in a problematic chain of 'underdevelopment', which is perpetuated in a circle of environmental degradation, poverty and a social and economic injustice structure, which is currently the dominant model of development. Once again water has become an important indicator to measure sustainability, as Bettini (2007) describes, water is a "mirror of sustainable development".

Many concerns at the international level are associated with sustainability in development, with a focus on sustaining development for the coming generations. In recent decades, the concept of 'community participation' in development has become highly valued and promoted as an alternative and sustainable approach to the top-down one. The United Nations, The World Bank and other developmental agencies have promoted this concept in all spheres of human development, and it is being applied in health, education, public services, social work and urban and rural development programs. However the definitions of the concept of participation in the various literatures are loose, rhetorical and ideological. It is difficult to develop an idea on how effective community participation can be achieved in development projects.

In TL the concept of participation[1] in RWSS programs in the local context has not been well conceptualized and remains controversial, not only among the policy makers, but also the development practitioners and the community members.

[1] Today, participation, which before was known as the western concept, has been used widely in post-war and developing countries. It was increasingly used in politics, governance, and especially in the area of community development as well as having been reported in post-development literature.

For these reasons a micro empirical study will be necessary to look into, analyze, compare the dynamics, the operation, and the restructuring of community participation in a concrete project in a given local setting.

This study aims at describing and exploring some prominent characteristics on community participation and gender issues in RWSS projects in the two hamlets of sub-district Maubara, district Liquiça, TL, while understanding that participation is not fixed or given, but rather continually regenerated. Hence, this research is best suited for the time it was conducted, however, the major cultural characteristics of participation remain unchanged.

Gender inequality was examined carefully in the process of community participation in RWSS. Insights were gained from interviews about the planning to the maintenance phase. The level of women's participation varied significantly in accordance with the phases of the projects.

Turning to government institutions, various literatures have emphasized a strong relationship between the participation of the local community and the centralized bureaucratic state, however this relationship does not always successfully go hand in hand. Therefore this study places special attention on the institutional factors, which include the policy framework, the institutional arrangement and human resources development.

On the other hand, this study also reached out to the rural communities and the emergent and fresh discoveries found are unique findings from what has been discussed in the literature thus far. This study aspires to innovate the area of community participation, however it consolidates its position based on the beneficial factors of the participation concept brought to the development discourse. On the other hand, it also bridges the activist argument of the participation concept with a pragmatic point of view.

After going through the restructuring process of the whole thesis, I decided to divide it into five main chapters. The first one describes the general research background in which a brief summary of the history is given of TL since Portugal first discovered Timor Island in 1512 until TL won its independence in 2002. In this chapter some geographic and demographic characteristics are briefly described in terms of the size of the land, the number of people in TL compared to other countries in world, the weather, and the natural environment surrounding the country. Following this is a general description of the social, economical, and political profiles of TL after gaining independence from Indonesia in 1999 until now. The poverty line, Human Development Index (HDI), mortality rate, the stratification of the demographic profile, and the pattern of agriculture production are also briefly presented.

Further, a quick snapshot on internal political dynamics and the international relationship between TL with the international community is discussed in respect to some authors.

Chapter 1 also describes the administrative structure of TL and the water supply situation and a short description of the sanitation situation of TL and in Liquiçá, where the research was conducted. This section served as a foundation to the rationale of the research.

Chapter 2 focused on the literature review and the process of formulating the conceptual framework. At the start of this chapter, I want to frame the theoretical concern within an alternative development theory that has taken shape and now is still in the process of debate and consolidation. Before the shift to an alternative development theory, a brief section mainstreaming theories of economic development is given and their failure in relation to the basic needs of all the citizens in a country, as well as in the world, is outlined.

In the following sections, various multi-disciplined literature was gathered, which discuss the concept of participation, gender, and community development, to develop an understanding of the history as well as the development of these concepts. The two concepts of participation and gender were mostly found at the center of these discussions. The concept of participation was examined within other disciplines, such as political science and education. It was regarded under the post-development perspective, community development disciplines and the UN literatures. Besides presenting the positive side of the concept of participation, the unrealistic and downside of the concept by different authors is also reviewed.

In the gender literature review, different sources are explored. In the section discussing gender inequality, a historic review of human history, from pre-history to modern times, the influences of the major cultures in the world and the expansion of European colonization throughout the world on the politics of gender were briefly explored in relation to their influence on the Polynesia islands, Micronesia, Melanesia, and Southeast Asia.

On the other hand, a review of feminist theories in relation to developmental progress is necessary to understand the evolution of the feminist theories in dealing with developmental issues. It includes liberal feminism and modernization, feminism and the Marxist framework, dependency theory, and the radical feminist framework. Other trends of contemporary feminism provide the main theoretical frame to analyze the gender policy in the development programs, such as, the socialist feminists and GAD approach, gender and development initiatives in the third world, practical and strategic gender needs approach, and women's equality and empowerment framework.

Each approach is presented with proper rationales, disadvantages, as well as advantages.

The two major frameworks used for analyzing the findings of the research were the structural barriers framework and the gender practical and strategic gender needs framework. Then the guiding conceptual framework was formed and the specific objectives of the research were lineated.

In chapter 3 the methodological choice is presented as multiple case studies, and the ethnographic approach is employed on the research field. This chapter also demonstrates the whole research path, detailing how all the processes are interactively formed with routes connecting each phase of the research. This approach is in contradiction with the lineal approach. In the following part of this chapter, the location option and the two case studies of the two hamlets is justified. The technique of choosing respondents is similar to the purposive and the snowball techniques. The two main techniques of collecting data involved face-to-face interviews and direct observation, which enabled direct interaction between the researcher and the community. Further desk research was done by going through the written documents. The process of data collection is presented narratively.

In the data analysis process, several techniques are presented, such as typological analyzes, comparisons, and enumerations and all these techniques are intertwined with notes made during observation.

Data triangulation was employed as the main method of data validation. Data triangulation was crossed in three settings: institutional, documentary, and field research.

Finally the last part of this chapter recounts all the challenges, as well as the limitations of the research. All the issues raised in approaching the communities, difficulties in finding a way to interview the women alone and the paternalistic and patriarchal attitude of the village men towards women are narrated in my own observation. The research concept itself causes a degree of confusion and a sense of ambiguity in the villagers. They needed further explanation to have a greater understanding of the purpose of the study.

Furthermore, I also present the difficulties I experienced, as a stranger (even as a foreigner, although I know how to speak Tetum, I know they considered me as a daughter-in-law) amongst the local community, and the perceived reluctances and shyness on the part of the community people.

In Chapter 4, the main findings of the research and its discussion with the theoretical framework are orderly presented according to the main objectives of the research and the

guiding conceptual framework. Chapter 4 is divided into various sections, and the initial part of this chapter provides an overview of sub-district Maubara in terms of the general geographic, social, and economic landscape and an overview of WSS projects in Maubara. Subsequently, a short historical background of the research site in the two hamlets is given, which is presented in the manner of an oral narration of the traditional leaders and also from data from secondary resources. Then this chapter tries to give a detailed view of different definitions on participation by the villagers, community facilitator and the directors of DNSAS.

The pattern and level of community participation was closely examined on the basis of socio-economic factors that were compared in a sex-segregated way. This is also presented based on gender, the participation of the two sexes in an action plan, implementation and maintenance and then a separate section focuses on women's participation in RWSS.

In relation to natural disasters, a small section is briefly presented describing the types and the characteristics of natural disasters and their impact on the development process and human society, and the relationship between these natural factors and community participation.

The following part of this chapter analyzes the very important role of the institution that shares a major part in sustaining the RWSS, together with the community-based factors. This section is divided into sub components: (1) The policy framework of the TL government for rural water provision presents the legal base for water supply and sanitation in the rural areas and also regulates the gender mainstreaming policy, (2) this section relates the institutional working arrangement of the State Secretary of Electricity, Water and Sanitation, the internal working coordination and the transformation of the organizational structure in DNSAS (National Direction of Water Services). In this section, a short description is provided on the role of the construction contractors, the major international donors and a separate part discusses the cooperation between AusAIDS and DNSAS, which postulates the adjustment, disagreement, and some potential cooperation in the future, (3) Human resources conditions and the impact of the work of the community facilitator (CF) of the sub-district of Maubara is discussed and the reality of the educational level is analyzed, as is the temporal working contract of the community facilitators, the difficulties confronted by the CF during their works with the community with a minimum of support from the DNSAS.

The last part of this chapter presents an open conceptual framework in which it synthesizes the findings of the empirical research with the previous guiding conceptual framework before the empirical research was conducted. It indicates some changes in the open conceptual

framework. This framework is considered open because it can be added and modified in the future by other researchers and is not considered absolute .

Chapter 5 presents a short evaluation of the whole thesis. The difficulties faced while conducting the study, the achievement of the objective set at the beginning, the satisfaction of the methodology used, and the key main findings are all presented. And, finally, the recommendation part, which gives recommendations on gender negotiation at the household level, community level (in order to improve living conditions), and on the participation of women and men in all spheres of life. The recommendation also refers to institutions that can potentially improve their human resource management, accelerate the decentralization, and offer further researches on applying local knowledge in development projects and its impact on RWSS. Furthermore, an outline of other researches on the participation in the development programs in TL are given that may prove beneficial.

1. Research background and rationale of the research

1.1. Brief overview of the history of Timor-Leste

Throughout the 1220s, Timor was identified as an island rich with sandalwood by the foreign trade of imperial China. During 1511, the Portuguese started to open the trade route into the Malay Peninsula. In 1512, the first Portuguese footprint was imprinted on the island now known as Timor-Leste, which at that time was known as the "island born of sandalwood" (Durand, 2010: 180). Since then Timor-Leste has become a Portuguese colony. During World War II the Japanese occupied Dili. The guerrilla campaign started to operate in mountainous areas; a group of Timorese voluntarily joined the allied force to fight against the Japanese under the name "battle of Timor", this battle cost between 40,000 to 70,000 Timorese lives (Department of Defense, 2002).

Right after the end of World War II the Portuguese were back on the colonization track in Timor-Leste. Until 27 July 1974 when Spínola the President of Portugal, as a consequence of the revolution of "Carnation", which happened on 25 April the same year, recognized the right to independence of the Portuguese colonies. Between 1974 and 1975, civil war in Timor was led by the two political parties; FRETILIN (A Frente Revolucionária de Timor-Leste Independente) and UDT (União Democrática Timorense). Finally the FRETILIN managed to declare independence on 28th November 1975.

In December 1975, the Indonesia military invaded Timor-Leste, and turned this young country into the 27th province of Indonesia. The amassed conflict-related deaths during the period 1975-1999 were 102,800 (HRDAG, 2006). On 11th March 1999, the Secretary-General of the United Nations announced that Portugal and Indonesia have reached an agreement in the organization of a direct consultation of the population of Timor-Leste. Finally a popular referendum was realized on 30th August 1999. More than 97% of the Timorese population voted for independence. Brutal violence ensued, which was provoked by the pro-integration militia with the support of elements of the Indonesian military. Hundreds of thousands of the population dislocated to the mountains and to other countries, but most evacuated to West Timor. INTERFET, an international peacekeeping force formed by the UN, came to settle the conflict. In October 1999 the United Nations Transitional Administration in Timor-Leste (UNTAET) started a transitional government. On 20th May 2002, Timor-Leste celebrated its

independence and Mr. Xanana Gusmão as the first President of the country, and Timor-Leste became a member of the UN on 27th September 2002.

1.2. Social, economic, political and geo-demographic profile of Timor-Leste

TL is commonly referred to by its leaders "as a small country", but in reality it ranks at the 42nd position among all the countries in the world in terms of geographic size. TL is bigger than Luxembourg, Brunei, Gambia, Lebanon, Qatar, Jamaica, Vanuatu and more. The country consists of the eastern portion of the island of Timor and includes the enclave of Oecussi (also known as Ambeno; 2,500 square kilometers), the islands of Atauro (144 km^2) and Jaco (8 km^2). Timor is part of the Malay Archipelago, representing the largest and easternmost of the Lesser Sunda Islands. The area of TL is approximately 14,874 square kilometers, or 1,487,000 hectares (Durand, 2010: 16). On the other hand, the characteristics of the topology of TL are different with other parts of Sunda and TL was considered as a landmass fragmented from the mainland of Australia (Durand, 2009). The foundation of the island is largely made up of limestone and other sedimentary deposits.

TL is located at approximately the eastern half of the Timor island, between longitudes 127 22 and 132 25, with latitude – 8 17 and – 10 22 with a southwest to northeast orientation (Pedersen & Arneberge, 1999). The rainfall volume averages between 1,200 and 1,500 mm per year. On the northern coast the volume is reduced to (500 – 1,000 mm), however the southern coast has more with a volume of (1,500 – 2, 000 mm). The rainfall has more in mountainous areas of Soibada, Lolotoi, Ainaro, and Same with a volume of up to 3,000 mm (ibid.)

TL has more than 100 rivers, but most of them are dry in the dry season and have more water in the rainfall season. Big rivers in TL are The Tono, Maribo, Laclo, Belulik, Boronuho, which provide permanent drinking water and domestic use, but they are not appropriate for navigation.

The forest in TL depends on the altitude and the rainfall patterns. In the northern half region, the weather is extremely dry and lacks tree coverage (Pedersen & Arneberge, 1999). This is one of the major reasons that makes TL a country vulnerable to water scarcity.

A significant amount of rivers were used by the Dutch and Portuguese to determine the border between West Timor and East Timor. Those rivers are Sorum and Thuah Naruc until riverside Telau, and by continuing this to Malibaca, and Mautilu Pepies, up the hill.

The climatic influences give Timor antithetical aspects: since it is not heavily wooded, the system of droughts and floods transform its surface, sometimes showing a placid opulent, then a dehydrated vegetation surrounded by bald teas. In July and August, life almost stops, drought is visible, and the numbers of swamps reduce significantly. At this time, the birds migrate and the intensity of the sun overwhelms people and animals. The alleviation brought about by eastern breezes animates and encourages the nature (Oliveira, 2004).

TL's population is ranked 44th position in the world (Durand, 2010: 15), and in the 2010 census it was estimated at 1.066 million people (DNS, 2010) (this does not include around 30,000 people displaced in Indonesia).

Administratively, TL is composed of 13 districts, 65 sub-districts, 443 sucos (towns or villages), and 2,336 *aldeias* (hamlets). Much of the decentralization agenda has been led by the Ministry of State Administration and Territorial Management (MSATM) with the support of a continuing Local Government Support Program (LGSP) funded by Irish Aid, Norway, UNCDF and UNDP (RDTL, 2010).

In March 2008, MSATM produced policy guidelines designed to establish a municipal government by combining sub-district and district administrations into municipalities that will deliver services, specifically "civil registration, primary health, primary education, water and sanitation, and local roads". It is intended that most sub-district offices will be kept as "service-providing extension units". Municipal elections have been postponed until 2013.

Nearly 50 percent of the GDP was provided by the government of Indonesia in subsidies in the public sector and in infrastructure development during the period 1976 to 1998. Non-Timorese (Indonesians and Chinese) mostly operated in trade and services. During the financial crisis of ASEAN in 1998, Indonesia was severely affected and this had an immense impact on the economy of TL. The violence after the referendum in1999 adversely impacted agriculture production, which in turn impoverished households' economic resources and increased the poverty rate.

After 2002, when TL gained her independence, economic and social conditions in TL remained deprived. In terms of human development, during 2006 it ranked 158th in HDI with an index of 0,483, and the Human Poverty Index ranked 122nd. In relation to income poverty, 52.9% of the population lived under 1.25 USD/day, 77.5% of the population lived under 2 USD/day (UNDP, 2008: 35). About 50% of the population lived under the National Poverty

Line[2] (UNdata, 2007). The demographic characteristics of TL have very important implications for its future development. Currently, the population is increasing at 2.4% per year and about 45% of the population is aged 0 – 14 years, with 62% under the age of 24. Around 77% live in rural areas and 21.97% live in Dili. The population density is about 70 people per square kilometer (UNDP 2011).

In 2010 TL ranked 120th among 169 countries in HDI with an index of 0.502, having made clear progress after the crisis of 2006. It marks the success of the present government led by Prime Minister Xanana Gusmão, which was achieved through many cash transfer programs to the aged, veterans, and vulnerable families.

The improvement in the HDI in 2010 could be the result of economic growth; TL's economy grew based on the huge state expenses that used nonrenewable natural resources, namely oil and gas. By the end of June 2009, the Petroleum Fund's assets were estimated at more than $4.9 billion. 9.9% of economic growth between 2007 and 2010 marked a significant step (Snodgrass, 2009). In 2012 the petroleum fund reached 9,310.32 billion (Business Timor, 2012). However, the big challenge for this country is how to use petroleum funds to sustain a non-oil economy and reduce poverty in a social context, in which the corruption is perceived as rampant and the overall process in fighting it has been significantly challenging (Blunt, 2009; Index of Economic Freedom, 2013; MSI, 2009; Transparency International, 2008).

Even though advancement has been made, TL is still seen as a "fragile state" (Manuel, King, & McKechnic, 2011). The economic growth alone is not a sustainable guarantee to attain millennium development goals (MDGs). Infrastructure and public services are poor and insufficient. The poverty gap between the urban and rural areas is widening. In rural areas, 76.2% of the rural population is poor compared with 23.8% of the urban population. The incidence of poverty is stratified according to the regions, for example the districts located in the central areas of TL consist of 64.3% recognized poor. The majority of the poorest population is concentrated in Manufahi and Ainaro. In the eastern part the incidence of poverty is smaller compared to other regions with only 12.5% of the population considered poor.

TL also has a very young population with half under 18 years old. Many children are living in poor health conditions with malnutrition. The infant mortality rate is 60 deaths per 1,000 live births (Ministério da Saúde, 2008). Maternal mortality is quite high with 660 deaths per 100,000 live births (UNCEF, 2009: 1).

[2] Between 2001 and 2007 the absolute poverty line increased from US$ 0.52 to US $ 0.88 per person, per day.

MDGs have set 13 targets to be achieved by 2015 and TL has already achieved two targets that are assisting to bridge the gender disparity in education and reduce infant mortality under-five years and under one year olds. There are two targets that are anticipated to be on track; proportion of population accessing an improved drinking water source, proportion of births attended by skilled health personnel, in order to also reduce the maternal mortality ratio.

The other targets, which are predicted off-track, are; proportion of population below the national poverty line (it is expected that 15% of the population will live under the national poverty line by 2015), prevalence of underweight children under five years of age (it is expected to decrease to 31% by 2015), net enrolment ratio in primary education (it is expected to increase to 100% by 2015), proportion of children who reach 5^{th} grade (it is expected to increase to 100% by 2015), increase in literacy rate of youth (15 – 24 years) (it is expected to increase to 100% by 2015), increase in adult literacy, incidence associated with malaria (it is expected to decrease to 45% by 2015), proportion of population using an improved sanitation facility (it is expected to increase to 60% by 2015) (UNDP, 2011). Besides facing many challenges to achieve these MDGs, the Timorese government is facing many difficulties in controlling the price of rice and other basic groceries, which are largely imported from Indonesia. Food prices increased by 13% in 2007 and the trend continued in 2011. In 2011 the inflation rate in TL was very high, reaching 12.3% compared to 7.8% in 2010 (CIA, 2011). The lack of a clear government policy controlling the market price and the manipulation of the private business sector are the main reasons inciting these problems.

A non-oil sector considered as an alternative economic option for TL is agriculture. However, the topography formation of this island is mainly limestone and the coral layering in the soil is very high, which can easily lead to erosion of the rocks (Monk & Yance de Fretes, 1997).

The agriculture of TL is deeply affected by its historical colonial past and also by its weather in each region. Matsuno observed a significant characteristic of the four western districts of Liquiça, Ermera, Aileu and Ainaro, namely that they are major coffee producing districts. Together with Manatuto and Dili, these western districts have more contact with outside forces and consequently are more susceptible to the impacts of the globalized market. The weather factor also determines the type of crops cultivated in every district. The central southern highlands are characterized by much rainfall and cool temperatures and are therefore suitable for coffee growing. 92% of TL's soybean crop are produced in Maliana, and is usually used to make tofu and 'tempe', while Baucau produces only 1% of the soybean crop

(Matsuno, 2009) and 60% of TL's peanut crop. In general, the agriculture in the southwestern part is more accessible to the market. The northeastern parts, like Baucau, Viqueque, and Lospalos, are prone to basic subsistence to respond to local consumption. Politically, these districts in the east compose the majority of FRETILIN's supporters, especially in Baucau and Viqueque. Matsuno noticed that the FRETILIN intended to make Baucau District a people's commune model of "politico-productive unit" with the purpose of enabling cooperative production and equity without increasing productivity. It was to consolidate production and to realize equity. This model is similar with socialist cooperatives in some countries during the 1950s until the 1980s.

Politically TL is a democratic country. In 2012 five political parties won the majority of votes and have seats in the parliament. TL's internal political affairs will continue to be heavily influenced not just by the dynamics between the political elite, deep regional divides, poverty, a weak judicial system and a lack of respect for the rule of law, but also by the politics of oil in the Asia-pacific region (Molnar, 2010).

TL still depends heavily on its oil and gas resources. This "mini petro-state" has a very weak private sector and a less advanced industry. The state itself became a major power grabbing competition among the political parties to occupy the high positions and to extend the employment opportunities to political party members and their families. Local entrepreneurs mostly depend on the State's expenditure that has taken the form of purchases and projects, for example: "Pacote referendum", rehabilitation of schools, roads, PDD (decentralized development projects), PDL (Local Development Projects), etc.

The crisis in 2006 resulted from multiple factors, including the huge amount of youth unemployment in Dili and the conflict between two military forces. The conflict led to thousands of people being displaced in 2006/2007 and thousands of houses were burned down. The rooted causes of these problems could be based on dealings with a number of observers that proved to be institutional failures, as well as different ideas among political leaders, and personal ambitions. However some problems were resolved by policies such as enforcing security, and integrating the internal refugees back into their community,

The parliamentary election was held in 2007 in the turbulence of the unsolved crisis of 2006. There were 14 political parties that participated in the elections, but only 7 parties met the election law criteria and have seats in parliament. The formation of the new government was a coalition of the CNRT, PD and ASDT/PSD parties. Xanana Gusmao was chosen as Prime Minister facing many pressures and challenges from international communities and also from

the opposing party, namely the FRETILIN. The political leaders of this party and their supporters considered Xanana's government unconstitutional (Guterres, 2008). On the other hand, there have been some positive changes after the crisis of 2006, the problem of IDPs camps were put to an end even though many disputes on this policy have taken place. The internal security was enhanced and strengthened. The government also gained much sympathy from different religious groups and civil societies.

The parliamentary election in July 2012 has changed the landscape of politics in TL significantly. Four political parties now had seats in the parliament; the FRETILIN, the Democratic Party, the FRETILIN Mudança, and CNRT. A coalition government was once again formed to rule the country consisting of the Democratic Party, the FRETILIN Mudança, and the CNRT in September, 2012. The strongest opposition party is the FRETILIN with 25 seats in parliament. By the end of 2012 the UN will have withdrawn their mission together with other peace-keeping forces from Portugal and New Zealand. All of these dynamics marked significant political, social and security changes in the years to come.

In terms of international relations, TL has an unequal power relation with its international donor countries. During the first five years of independence the government had to depend on donors for their domestic expenses, however TL had to follow some certain blue-prints from these "benefactors" that seemed to benefit these foreign powers more than its own interests. International development agents gave their concerns and inputs on the capacity of TL to manage oil revenues effectively and not fall into the 'resource curse', which has historically been experienced by many other oil producing developing countries. The petroleum fund was set up and the government was not allowed to annually exceed 3% from this fund. According to Hughes analysis, this policy did not help TL move towards economic independence (Hughes 2009: 149). Continued dependence on international donors is also assured by disallowing foreign aid to be used for the development of national programs focusing on rice production and fisheries.

1.3. Water use and sanitation situation in Timor-Leste

As indicated in Table 1, in rural areas of TL, 37% of the population use drinking-water sources that have yet to be improved, compared to only 19% of ASEAN countries and 22% of the world. This means that TL is trailing behind compared with the region and the world.

Table 1 - Proportion of population with access to clean drinking water

	Population (x 1000)	Urban (%)				Rural (%)				Total (%)			
		Improved	Piped on premise	Other improved	Unimproved	Improved	Piped on premise	Other improved	Unimproved	Improved	Piped on premise	Other improved	Unimproved
Timor-Leste	1,098	86	28	58	14	63	11	52	37	69	16	53	31
ASEAN	575,626	92	52	40	8	81	16	65	19	86	33	53	14
World	6,749,872	96	79	17	4	78	34	44	22	87	57	30	13

Source: WHO & UNICEF, *Progress on Sanitation and Drinking-water: 2010 Update*, (2010: 56)

Therefore, it can be understood that, after the Referendum for Independence in TL, the water facilities built during Indonesian time have since been destroyed. Water sources are still in good condition but there is the possibility of damage when hit by floods; filtration equipment was rehabilitated 4 years since the time of writing and is now in good condition; drilled wells in the city of Dili have also since been rehabilitated and are functional; many pipeline transmissions are destroyed or old; reservoirs have been rehabilitated; the condition of distribution pipes is not known because most are underground; many houses' connections are dysfunctional or damaged; the water loss rate is high (RDTL, 2010).

Since 2002, non-government organizations (NGO) and foreign donors like: USAID, ICRC, World Vision, CARE, GOAL have contributed greatly to rural water supplies, but despite this many rural villages still do not have any access to water service.

Even though many efforts have been made by NGOs and governments to improve the water supply, Timor still faces many problems relating to maintenance and responsible community behavior. There are many issues that have to be addressed, such as frequently broken pipes, leakages in water tanks without immediate response from the community or from the service providers. Furthermore, an adequate method to prevent contamination at the catchment area is still yet to be implemented. Wasteful behaviors by water consumers also leads to an inefficient water delivery system (WHO, 2010: 14).

Table 2 - Sanitation coverage in urban and rural areas

	Population (x 1000)	Urban (%)				Rural (%)				Total (%)			
		Improved sanitation	Shared facilities	Unimproved sanitation	Open defecation	Improved sanitation	Shared facilities	Unimproved sanitation	Open defecation	Improved sanitation	Shared Facilities	Unimproved sanitation	Open defecation
Timor-Leste	1,098	76	5	0	19	40	2	6	52	50	3	4	43
ASEAN	575,626	79	10	3	8	60	8	12	20	69	9	8	14
World	6, 749, 872	76	15	4	5	45	8	18	29	61	11	11	17

Source: WHO & UNICEF, *Progress on Sanitation and Drinking-water: 2010 Update*, (2010: 56)

In terms of sanitation coverage, 52% of the population in rural areas still practice open defecation and 6% still use unimproved sanitation facilities.

Like most sectors in TL, the water and sanitation service provision is constrained by a lack of qualified civil servants, a recurrent budget and insufficient administrative systems. Private provision is inhibited by extreme poverty in many areas and an extremely weak private sector. Some progress has been made in the sector since independence, mainly due to donor and NGO efforts. New schools and health centers have been built without sufficient access to water. Out of the 600 schools surveyed in 2007, only 300 have adequate water and sanitation facilities. A Ministry of Education study in four districts has revealed that only 25% of the schools had functioning water supply and sanitation (Buhl-Nielson, E., Gitner, S., Dutton, P., Donohoe, J. 2009).

1.3.1. Problems and constraints in water services and sanitation

The most concerning issue is the lack of legal framework supporting the water supply and sanitation sector. There are many constraints relating to the lack of raw water sources in the dry season. In the rainy season the river water is vulnerable to contamination. In certain parts of rural areas, it is quite difficult to repair and install water pipes. Compounding this problem, the poverty of the local people in these rural areas inhibits paying for water service repairs. In addition, material costs for water and sanitation infrastructure construction are very high, especially in rural areas. There is also a lack of human resources to meet the needs of clean water and sanitation infrastructure like planners, engineers, and technicians. Society awareness in regard to the importance of clean water and sanitation for health is still low. The general community lacks awareness to conserve, preserve and maintain the continuity of their water supply.

In 2007, nearly USD 79.1 million had been spent on the water and sanitation sectors since 1999, including USD 30 million for WSS sector projects in Dili. The estimated funding from donors is USD 81.9 million (RDTL, 2010: 171). In the strategic development plan, the government is aiming to achieve servicing 80% of its population with a suitable water access supply and sanitation by 2015.

The government is aware of its financial limitation and personnel management of the water and sanitation sector. To achieve the above-mentioned goal, the community, civil society, and international aid have to become involved, primarily for rural areas.

1.3.2. National priorities of the fourth Constitutional Government

In one national workshop on water safety planning, Agapito da Silva S., the Director-General of the Department of Health said that: *"water and sanitation play a very important role in maintaining a sustainable public health. Drinking water has a direct impact on people's health"* (WHO, 2010: 5).

The leaders of TL government are well aware of the importance of water. In 2008 the government established a 'National Priorities' process as the main planning mechanism for the government and development partners. The National Priorities for 2010 are listed as infrastructure, food security, human resources development, access to justice, social services and localized service delivery, good governance, and public security and safety. A summary of the Strategic Development Plan for 2011 to 2030 was published in April 2010 by the Office of the Prime Minister. The plan offers a Vision until 2030, a Framework of Action until 2020, and a Public Investment Plan until 2015 (RDTL, 2010).

Infrastructure (roads and water/sanitation) was established as priority number one in 2010 and this was subsequently reflected in the national capital expenditure budget. Budget submissions for 2011 include USD 9 million for rural water (double the 2010 budget) and USD 760,000 for rural sanitation (triple the 2010 budget) (RDTL, 2010).

Preparing for decentralization

To prepare for the process of decentralization, TL established the so-called Local Development Funds (LDF), which are allocated according to population, with priorities chosen by the local assemblies who are also responsible for procurement and monitoring. They establish one team to evaluate projects, which has a maximum amount of USD 10,000.

This process must be transparent, effective and under observation of the government or multi-donor Local Government Support Program (LGSP).

In 2008, the government of TL granted about USD 2.1 million in which USD 1.9 million was spent for capital expenditures and the rest was put towards planning processes, supervision, and technical staff.

In 2009 the grant for LDF was smaller than that administered in 2008, namely about USD 1.8 million. 29% out of the 119 projects approved for 2009 were for water and sanitation, 28% for roads and transport, and 20% for education. This further stresses the community's need for water and sanitation (mostly water supply). The capital funds for 2009 were all delivered to Local Assembly[3] bank accounts. The LDF for 2010 was around USD 2.4 million and it covered all 13 districts (RDTL, 2010).

Since this research was conducted in Liquiçá, an overview on the geographical, administrative characteristics, and water and sanitation conditions of this district is necessary.

1.4. An overview on Liquiçá District

Liquiçá (Tetum Likisá) covers an area that is 467 km long and more than 90 km wide, on one northern coast district of TL it meets the boundary line with districts of Bobonaro and Ermera in the southern part, its north-west coastal margin borders with the Savu Sea (OLGD, 2002). Liquiça's population consists of about 63,329 inhabitants (NSD, 2010). Since Portuguese inhabitation, its name remains the same as the Liquiçá municipality, and includes the three sub-districts of Bazatete, Liquiça, and Maubara.

The local people of Liquiça speak the official languages Tetum and, to a lesser extent, Portuguese, but they mostly speak the dialect Tocodede in their daily life.

The average household size in Liquiça is 6.1, compared to the national growth rate of 5.8.

Liquiça has 3 health centers, 18 health stands (postos de saude), 26 community integrated health services and 2 private clinics (Direcção Nacional de Estatistica, 2011).

1.4.1. Administrative structure

District of Liquiça comprises 3 sub-districts; Liquiça, Maubara, and Bazatete. Table 3 presents the population distribution in each sub-district.

[3] In the first quarter of 2010 the TL government decided to restructure the District assembly and Sub-District Development Committees in all 13 Districts. The Local Assembly was established by the Ministerial Decree No. 01/2008 –DNAL/MAEOT on the Local Assemblies.

Table 3 - Population of sub-districts of Liquiça

	Female	***Male***	***Total***
Bazartete	11,453	11,718	23,171
Liquica	10,623	10,875	21,498
Maubara	9,232	9,428	18,660

Source: Direcção Nacional de Estatística (National Statistics Directorate), 2011

In local authority structure, the Suco Council is the collegial and advisory body of the Suco, it was planned to assist and advise the Suco Leader in exercising its duties, and shall operate for the benefit of the local community interests and without prejudice to the national interests (UNMIT, 2010). The Suco Council is composed of one Suco Chief, two women representatives, one male youth, one female youth, one elder, an "aldeia" chief (one from each aldeia), and one *lian nain*.[4]

1.4.2. Water Supply in Liquiça

During the violence after the referendum of 1999, four of the biggest boreholes were ruined, which caused a serious shortage of water resulting in only 40% of the population's demands being met.

In 2001 JICA helped the community to rehabilitate their water supply system in the city with two deep bore holes. Many water lines and storage tanks had been rehabilitated during the implementation of the three sub-districts Community Empowerment and Governance Program (CEP), which were initiated to handle water management, and was done so quite successfully. Each sub-district received around USD 75,000 for rehabilitation of their water system (Ministry of State Administration, 2002). The local authority showed their capacity to manage the project effectively. Recently WaterAid helped the GMF (community water and sanitation management group) with practical training and regular mentoring to ensure that they had the confidence and capacity to maintain the water system and the latrines.

[4] Traditional leader, he (she) was not elected, but rather appointed by the Suco Council in its first meeting.

1.5. The rationale and objectives of the research

"A água potável é um recurso finite e vulnerável, essencial à manutenção da vida e ao desenvolvimento do meio ambiente tendo um valor economico em todas as suas utilizações concerrencias que cabe constitucionalmente ao Estado preservar e valorizar.

A constituição reconhece também a propriedade do Estado sobre os recursos naturais e o valor social destes, establecendo que devem ser utilizados de forma justa e igualitária, de acordo com o interesse nacional.

Reconhecendo que o processo de gestão e poupança da água, no qual as mulheres desempenham um papel fulcral, deve basear-se na participação de todos os intervenientes: utilizadores, agentes económicos e serviços responsáveis pelo abastecimento de água." (G-RDTL, 2004: 1)

This is the opening statement of the Degree-Law No.4/2004 on water supply for public consumption, which expresses concern about the vital value of clean water and the important role of community participation to implement and sustain the water system, as well as the recognition of equality of gender in regards to participation throughout the entire water system process, as clients of the public service as well as actors in the whole process.

Furthermore, Agapito da Silva S, Director-General of the Department of Health, said in one national workshop on water safety planning that water and sanitation play a very important role in maintaining sustainable public health. Drinking water has a direct impact on people's health (WHO, 2010: 5). In fact, clean water and basic sanitation are important components in measuring Human Poverty Index and Human Development Index.

The WSS in TL is facing major challenges of low operation and poor maintenance of these projects. A growing number of practitioners and academics from different countries claim that effective community participation would increase the sense of ownership and, therefore, the sustainability of water and sanitation projects would be secured (Chambers, 1994; Oakley, 1991; Isham & Kähkönen, 2002; Memon, 2004).

In most instances, varieties of doubts are set on the concepts of "community participation". Does it really happen in local communities? To what extent does participation happens? And how does it happen in the rural context of TL? So far, very few researches have specifically focused on community participation in the water and sanitation sector. The present literatures on this sector, which are only a few, mention it in some parts of their evaluation reports of government offices and NGOs.

Picture 1 - A girl is carrying water with her baby brother on her shoulder

Picture taken by Lucio do Santos, CF Maubara

The importance of community participation in the public services is obviously undeniable. It is time now for development projects to treat the community as subjects of the development process, not just as "objects" of development. This research can contribute a deeper understanding and, at the same time, advance a conceptual framework of community participation in RWSS programs in Timor. It will help the policy makers figure out an appropriate approach to mobilize more participation of local citizens. This research will also raise more awareness of local communities (men as well as women) of their importance, their rights, their power of participation, and make the project more sustainable for their following generations.

Briefly, the specific objectives of this study are:

- To know how the community members, policy makers and organization officers define the concept of participation and what the perceived benefits of participation have brought to the RWSS project.
- To describe the quality and the dynamics of community participation in RWSS: What type of participation is occurring in the community? Who participated? What initiated community participation? What are the differences in participation between women and men in the different phases of the project (planning, implementing, and maintenance)?

- To identify the underlying social, economic and cultural factors that facilitate and restrain men and women from participating actively in RWSS projects.
- To identify the efforts made by the service providers to encourage more participation of women.
- To build a conceptual framework that could be used in the future to enhance the participation of men and women in RWSS (or similar) projects for sustainable development.

2. Literature review and formulation of conceptual framework

The discussion on the politics of participation, gender, and development projects within the structure of this thesis is largely framed around development and feminism literatures, specifically alternative development or post development will be placed at the center of this research. Arguing that the world today is facing rapid social, economic, and political changes brought by globalization and economic growth: in developing countries, despite the fact that some of them are making fortunes in economic growth (for instance, China, India, and Brazil are the emergent economic giants in the developing world), within their own countries, the majority of the population still suffer from poverty. The gap between the rich and the poor inside a country is rapidly widening and the HDI in these three countries is even lower than Cuba's (UNDP, 2013). This situation reflects a real condition of social inequality and exclusion (Silva, 2005) in which a majority of the southern countries are currently experiencing. These countries continue to face several chronic problems such as: economic disparity, political instability, extreme poverty, marginalization, climate change, natural resources deterioration, growing water scarcity (Clayton & Bass, 2002), ethnic conflicts, mass emigration, the proliferation of civil war, globally organized crime, etc. (Santos, 2002).

Under the alarming condition of climate change and global warming, water scarcity is becoming the most critical worldwide concern and it is presently the most important factor for development policy in the less developed world. Water distribution and water management are two of the main objectives targeted under the theme environmental sustainability and sustainable development. They are vital components of the seventh goal of the Millennium Goals "Ensuring environmental sustainability", whose principal indicator is the proportion of the population with sustainable access to an improved water source and to improved sanitation (RDTL, 2009). However, it was predicted by the President of the Committee for the Abolition of Third World Debt that the MDGs will not be achieved by 2015 (Toussaint, 2010). This problem has much to say about the mainstreaming economic approach, which is now almost dominant in the whole world. However, a historical review of the process that established this powerful neo-liberalism influence would be necessary in order to ascertain this.

2.1. Major divisions among theories of economic development

There are two leading schools of thought that prevailed in the development literatures: 'Modernization' and 'Dependency' or 'Underdevelopment' in the decades of the 1950s, 1960s, and 1970s. Modernization approach to economic development was based on the characteristics of dualism: traditional economy versus modern economy (the prominent authors for this approach are W. Rostow, R. Harrod, R. Nurkse, A. Lewis, and more). They believed that the western modernization model can be multiplied or propagated in underdeveloped countries, and these countries need the assistances, ideas, and technologies from the developed ones (Webster, 1984).

For instance, W. W. Rostow is well known for his five-step model of 'take-off' for under-developed countries. Rostow believes that the first important step these countries have to do is to significantly change their effective attitudes of traditional society; second, as a precondition for 'take off', a rise in the rate of investment towards the 10-12% mark that is estimated as the required percentage for take off; third, an improvement in agricultural productivity as the precondition for 'take off'; fourth, the drive to maturity; fifth, the emergence of a new elite preparation for high mass-consumption (Little, 1982; Webster, 1984).

Dependency theory has become the center of development debates and has even had its influence on the Lefts and the nationalist Rights in the 1970s. Drawing its ideas from the analyzes of the economic system of capitalism, which was developed by Marx, Dependency theory was developed in the 1960s through the work of development economists such as Raul Prebisch, Hans Singer, and others who were particularly concerned over the continuing economic failure of Latin American countries. Andre Gunder Frank argued that the chronic poverty of the underdeveloped world is caused by its 'dependency' on the developed countries.

Frank (1967) argues that there is a 'chain of dependency' connecting the high 'metropolises' centers of the world with the subordinate 'satellites'. The economic surplus is passed inward from the farther satellites to the center 'metropolises' within a national and then international level.

While countries of the advanced center can develop with the inner strength of technology and the accumulative capital that they had, other poor 'satellites' are dependent on the center. Its expansion therefore also depends on the expansion of the center. This means that their economic development is under the control of the dominant center. This approach has led to many radical revolutions against the capitalist system, and the state has had the important role

of rerouting the development path in a way that reduces and minimizes dependency on the developed countries.

The neo-liberal perspective was forced forward after certain failures and a recess of the dependence or structuralist approach (which emphasized the role of the government in intervening in the market and the national economic planning). This movement was essentially led by the critics of Deepak Lal and his book *The poverty of 'Development Economics',* where he strongly criticizes the theory of economic development, considering it necessary instead to uphold the principle of non-state intervention and consequently generating distortions. Even in the case of redistributing income, it is seen as contrary to the principle of freedom that must be held in a greater fraternity or equity. Where intervention is essential, it should occur on the basis of cost-benefit analysis (Lal, 1997).

Despite all this, the development path has, until today, proved its failure to respond to the developmental needs of poor countries. The mechanisms systematically designed induce the natural resources and wealth flow from less developed countries to more developed countries (Monbiot, 2010). For many years of development in industrialized northern countries, their economic growth could not help the deprivation and poverty of the poorer southern countries (Nkunika, 1987). As Korten put it: "Development models based on economic growth were making a few people fabulously wealthy at an enormous social and environmental cost to the substantial majority" (2009: xi). Then it is time to talk about 'human economy' (Hart, Laville & Cattani, 2010), which incorporates, both, economic and social dimensions. Many evidences have showed us that money could not solve these social problems. The unequal trading system has only made the extremely poor countries further impoverished. The "Aid industry" only benefits the giver, not the receiver (Svensson, 1997).

Development experts from northern countries have shared a number of strategies and blue-prints on furthering economical development, but this has had minimal impact on advancing these southern countries. Fundamental and essential factors, such as poverty, environmental degradation, the derivation of basic needs of developing countries (like the issue of lacking water), requires looking beyond the economic, social and political systems that currently dominate, namely, the neo-liberals and the global capitalism, which are unresponsive to environments and social production (Harvey, 2011).

Therefore, the alternative development approach, which suggests a more participatory, human-centered, community-driven, pro-poor and environmentally friendly approach, was born as a result of the failure of the modernization of the neo-liberal approach (Hicks &

Streeten, 1979; Korten, 2009; Hart, Laville, & Cattani, 2010; Rist, 2006 & Tran, 2012). The slogan of sustainable development has been repeatedly written and mentioned in the UN's agenda covering development in developing countries since the start of the twentieth century; furthermore, this development approach has taken root from the alternative development literatures.

Around the 1980s, the United Nations Development Program (UNDP) redefined the concept of development. Figuratively, economic growth at the national level could be imagined as a big cake, and reality has shown that the division of that cake has not been equally distributed among the citizens. The concept of human development appeared to dictate the wealth distribution at the national and global levels. A country might have a high rate of economic growth but the population may still live in poverty, with poor health and low education, rendering statistics on economic growth as meaningless to the poor.

Therefore, ideas of alternative development suggest that development will be more meaningful and more successful if its approach is more human-centered, more participatory and structured on bottom-up decision making.

When we come to the strategies developed in order to implement those goals, it is undeniable that much importance has been given to community participation. The 1990 Earth Summit in New Delhi gave importance to community management and participation, as well as to the strategy for sustainable development in the 21st century. The "community management of services, backed by measures to strengthen local institutions in implementing and sustaining water and sanitation programs" (Bolt & Khadka, 2000: 2) becomes a compulsory agenda for most international donors and governments. This appeals to states' and donors' agencies to find ways to efficiently support local communities.

Before reaching a broader discussion on the concept of community participation and gender inequality, the relating epistemological background of the theme of this study has to be discussed. In this line, the basic human needs approach could be seen as the utmost motivation for all the development planners or specialists at the national level as well as at the community ground.

2.2. Basic Development Needs (BDN)

Touching on the idea of basic development needs (BDN), first of all it is important to make clear the idea of basic material needs even though it is not the only one to determine the whole BDN approach, but it is important to consider it under the light of the sociological

perspective in order to profoundly understand it. "Materialism" could be understood in Marx's perspective on the vital role of it in creating economic structure and the fundamental base of a society (Llobera, 1979; Huges, Martins & Sharrock, 1995). Even though many critics argued against Marx's assumption, in some certain context, especially in the process of building a post war country rising from rubble like TL, we need to adopt multi-perspective paradigms to fit its complex situation. The main issue to be explored in this study, on the one hand, rests more on "social superstructure" or community participation and the collective action. On the other hand, I assumed that it is the poverty and the poor material base that triggers the motivation for change of the "social superstructure". It urges people in the local community to get together to organize, plan and make changes in order to respond to their basic needs.

Maslow is recognized as the creator of hierarchy of needs in the field of social psychology (Maslow, 1987): a relevant theory to consider when it comes to BDN. He stresses the basic needs as physiological drives that need to be gratified before moving on to further steps towards human development. Despite several critics and researches having proved this incorrect (Wahba & Bridwell, 1976), the concept of basic needs still has its importance in academic literature, especially since there are still currently many young children dying due to hunger and extreme poverty throughout the world. In 1976 the ILO proposed a basic needs approach at the world Employment Conference and it had a leading international role in working on the issue of human basic needs, which has paved the road for the human development approach for the following years (Asadi-lari, Farshad & Gray, 2005; Streeten *et al.*, 1981). The basic needs approach is easily accepted in any development strategy of developing countries and endeavors to supply the most vulnerable and poorest group of each country with access to a suitable minimum standard by the end of the twentieth century. Mahbub Ul Hag states in his forward in the book "First things first", when considering the access of an entire population, as a whole, to the food, nutrition and water at the center of social development: *"The emphasis on basic needs heighten concerns with meeting the consumption needs of the entire population, not only in the customary areas of education and health, but also in nutrition, housing, water supply, and sanitation."* (Cited in Streeten *et al.*, 1981).

According to Webster (1984), basic needs aim at two things: Eradicating extreme poverty by direct assistance to the most vulnerable deprived groups and meeting the basic needs of all the population as a whole. Basic needs is not only material needs, which corresponds to the

minimum private consumption of a family such as: adequate food, shelter, and clothing; fundamental services for a whole community at large such as safe drinking water, sanitation, public transport, health, etc. (Jolly, Emmerji & Weiss, 2007), but also "social needs such as education, human rights and what is called 'participation' in social life through employment and political involvement" (Webster, 1984: 34). It is important to note that at the center of BDN is a belief and aspiration for social justice. The wealth of society is supposed to be distributed evenly among its members and, therefore the richer have a social responsibility to guarantee the basic welfare to the more vulnerable groups.

Meeting basic needs is not simply delivering a welfare services package to the poor for a temporary time, but it is also a long-term political commitment, which is manifested in its public policy in each country (Streeten, et al., 1981). Basic needs in less-developed regions of the world require a legislative commitment from all countries and the UN, to advocate and articulate the necessities at a global level. Awareness of this situation has been made apparent by many international activist groups who have questioned the seepage of wealth from developing countries back to the developed countries via a variety of mechanisms of international trade, development assistance or aid, which do not really benefit the low-income countries (Webster, 1984; Jolly, Emmerji, Weiss, 2007; Easterly, 2003). This needs to be addressed seriously in the development discourse to make sure that international assistance can efficiently respond to basic needs.

It is necessary to keep in mind that the basic needs approach is important and inevitable for short-term relief strategies to respond to emergency situations involving the more vulnerable groups in society. However, it needs to be backed up with a more empowered and participatory strategy, which has been proposed by many development theorists and practitioners. Community participation and community development gradually become indispensable in development discourse. Furthermore, it is the basic needs strategy that forms the original arguments for increasing community participation in rural water supply projects (Kleemeier, 2000).

To thoroughly understand the concepts adherent to this research, it is necessary to conduct a more detailed investigation of every concept of the study. First of all, exploring the participation concept in other disciplines, then centering it on the development discourses, will assist synthesizing different approaches of community participation and gender perspectives in water supply and sanitation projects and relate it to different studies and

researches. This will support and assist formulating the conceptual framework for this research.

2.3. Participation as a multidisciplinary concept

The concept of participation has appeared in political literature as early as the time of Aristotle, who had seen the importance of people's involvement in politics with his famous saying: *"Man is by nature a political animal"* (cited in Heywood, 2007: 3). After his own experience of the failure of the tragic Greek and Athenian regime, he stressed the importance of a mixed government. He also identified the requisite elements that fostered a mixed polity, which is 'moderation, interpersonal trust, and even a certain diffidence regarding political participation' (Almond, 1989: 17). A concrete example that he accounts of such a mixed polity is the Spartan and Carthaginian constitution and the contemporary pre-Gracchan Roman republic (ibid).

Although Aristotle did not mention the concept of participation in his politics, the implication of a need for the involvement of different fractions in society and in politics was quite clear and implicit.

In 1762 the term of participation appeared quite early in political theories after the publication of the pioneer work of Rousseau *the social contract* (Rousseau, 1762). Rousseau believed that, by the joining together of all individuals through a social contract, they can save themselves and remain free. Although Rousseau insists that people should become involved in law making without the exclusion of any class, race, religion, and so on: "No citizen shall ever be wealthy enough to buy another, and none poor enough to be forced to sell himself." (cited in Mansbridge, 1995).

Tocqueville is also interested in developing a commitment for the common good and, unlike Rousseau, he says explicitly that the practice of democracy - or at least the practice of face-to-face democracy - helps develop this commitment (Mansbridge, 1995). He examined the political culture in France since the eve of its revolution; he tried to explain the collapse of the ancient regime, the destructiveness of the revolution, and the instability of the post-revolutionary regimes. Tocqueville believes all of these happened because of the disconnection in dialogue among the bourgeoisie and the expanded gap between the aristocracy and the peasantry. He also put much expectation on and belief in the prospects of democracy in America.

The dictatorship, fascist rule in Italy during the 1920s and the 1930s (Bosworth, 2006), particularly disrupted the German democracy and the cruelty of Hitler's fascist regime, and the instability of the French Third Republic (Lehning, 2001) became painful and precious historical experiences to develop more complex theories on the relationship between political culture and democratic stability. As a continuous process of democratizing in the aftermath of World War II, the *civic culture* study took shape and the flourishing time of democracy in Europe had begun.

In the 1960s and 1970s the concept of political participation became very popular with the significant contribution of political theorists like Arnold Kaufman, Carole Pateman and other political theorists. Arnold Kaufman believed that democratic participation in the way a citizen exercises real power over decisions would improve one's "powers of thought, feeling and action" (Mansbridge, 1995: 4).

In the 1980s and 1990s the world witnessed the powerful waves of realization of democracy in politics and in organizations, with the accompaniment of neo-liberal economics, which was initiated by Regan, the President of the USA, and Thatcher, Prime Minister of England.

Around 1916, within the sphere of education, the concept of participation was first mentioned in works by John Dewy, titled 'Democracy and Education'. Here he emphasized the important role of education to maintain a democratic government. He also debates the benefits of the participation process within the school environment or in any educative organization.

Later Freire (1993), in his Pedagogy of the oppressed, provoked a radical revolution in the field of adult education; he criticized the banking approach, which places learners in the position of passive receivers. Freire not only holds learners at the center of the learning process but also encourages them to become actively involved in the conscientization by profoundly analyzing their problems and seeking the solution together with the trainers.

In general, the participation concept was most prominently ingrained in political literatures. It has certain influences on the area of education and lately in other areas. To go back to the main concern of this research, it is important to trace these links between approaches to participation and broader trends within the development discourse.

2.4. Participation in development literatures

A wide range of development literature holds a strong belief that participation is at the heart of development (Pieterse, 2010; Hickey & Mohan, 2004; Chamber, 1994).

Hickey and Mohan sketch out the different approaches to participation in development history. Each approach has its own trajectory and contextual specificities, and is characterized by particular debates and empirical experiences. They demonstrate how there are always some relationships among given political, social and economic factors, and concept of citizenship of a certain historical period with each approach in development theory.

Participation was known and took root in development discourse in the 1920s (Holdcroft, cited in Korten, 1980). In the 1940s to 1960s, the colonized countries were set on the revolution path for liberation and independence. In this context, the approach of 'colonial community development' and 'post-colonial community development' appeared and were under the influence of the United Kingdom Colonial Office after its report on Mass Education in Africa, and the pilot project was introduced in the Etawah District in India by Ford Foundation in 1948 to experiment with community-based development programs (Hickey & Mohan, 2004). In the same period, the success of Indian community development programs became a good model for other countries to follow. Similar programs were initiated in more than 60 countries of Asia, Africa, and Latin America (Korten, 1980), this time was considered the golden age of community participation. During this period, the participation of the citizens was considered as a duty or obligation to contribute to the stability of rural communities to create a counterbalance with the process of urbanization and sociopolitical changes. The dominant programs, which served as a means to achieve these objectives, were 'adult literacy and extension education', 'institution building', 'leaderships training', and 'development projects' and these means were coupled with mixed principles and values of 'participation', 'self-reliance', and 'cost-sharing' that were definitely upheld in those years (Hickey & Mohan, 2004).

Exploring the concept of participation as a citizen's obligation, the related concept of 'emancipatory participation' was introduced in the 1970s (Hickey & Mohan, 2004: 18) by radical southern researchers and educationalists like Paulo Freire (1993). Freire criticized the banking approach of education systems, which does not liberate the people from oppression in modern societies. He suggests a problem-posing approach model, which is considered as an alternative pedagogy. This inter connections the process of 'knowing' and the process of 'education', which needs to be achieved through the process of 'concientização' (conscientization) of the 'oppressed' or the marginalized, through a process of learning, knowing and reflecting. This can only occur with the participation of all the stakeholders. Ivan Illich (1970) who criticized the schooling system, which is dominated by the ruling class

and elites, and Fals Borda and Rahman (1991) who made a significant contribution to this concept, also suggested the 'participatory Action Research' method which is now applied widely in Latin America. In this political vision, emancipatory participation is considered as a right of citizenship to confront the structures of oppression within existing forms of economic development, state formation, and political rule. The work of Paulo Freire has inspired activist participatory research, which has been known as participatory research and participatory action research.[5]

During the late 1970s until the 1990s, in the midst of experiencing the failures of 'mainstream development', which juxtaposed the neo-liberal economy, the debate on development became tense and contested. Consequently the suggestion of an alternative means of development was born and once again the promotion of participation became a central concept in alternative development. During this period the participation approach continued to uphold "participation as a right of citizenship and citizenship as a key objective of alternative development" (Hickey & Mohan, 2004: 7). Alternative development participation gives more voices and spaces to marginalized groups. It aims at replacing the top-down, expert-designed development projects and programs. This type of participation aims at making use of knowledge and skills of those who are critical participants and central actors in the development process (Chambers, 1990, 1995). Some of its strategies of intervention have been expressed as people's participation, women's participation, youth participation, popular education, etc. It first starts with communitarian forms of participation and then interacts with the state through multi-level political communities (Hickey & Mohan, 2004: 8).

Until today, various approaches of participation continue to flourish and take the form of 'populist' participation in development projects, rather than in broader political communities. This takes root from the works of Robert Chambers, and World Banks, UN agencies, USAID, and international NGOs (Kleemeier, 2000), all of which continue to promote, modify and innovate different approaches of participation while maintaining its core philosophy to citizenship loyalty and remaining close to the previously mentioned strategic themes. In contemporary times, the approach of 'populist participation in development' and 'social capital' has pervaded development agencies, local communities and civic associations. These approaches view participation as a right and obligation of the citizen. Recently, the Institute for Development Studies in Brighton and Participatory Research and Action in Delhi had its

[5] This methodology appreciates the participation of local people in rural assessment or research, it believes that these poor people are creative and capable, and can do much of their own investigation, analysis and planning. Whereas the outsiders have roles as conveyors, catalysts and facilitators, but the weak and marginalized should be empowered.

influence on the wave of 'participatory governance and citizenship participation', which promote civil society and a responsive state. This approach emphasizes that participation is primarily a right of citizenship. The intervention strategies took the forms of decentralization, state-civic partnerships, public hearings and other combinations of social and political participations. These forms of participation can be found in several democratic developing countries, including TL, where the public hearings or public consultant on important law modifications and pilot projects are prepared for decentralization and so on.

2.5. The downside of community participation

The above literature tends to stress the strengths, as well as the positive aspects, of participation. However, we have to also accept the fact that community participation is a loose concept with different conflicting philosophical disputes (Windle & Cibulka, 1981) and could be interpreted and used for different purposes. Ife & Tesoriero (2006: 151) paid attention to the other side of participation, suggesting that it would be naïve and dangerous if we solely consider the positive aspects of participation. Participation is interpreted in different ways; it is connected to different interests and political agendas. It can be interpreted under different meanings and may therefore be contradictory.

On the other hand, participation becomes one condition for development projects to obtain funding, in this case participation is used as a curtain or just a name, but true participation does not really occur. Mohan (2001) also sees the challenges of the realization of deep participation because of the time-bound programs and agendas of the funders. Jimu (2008) observed that it is hard to find acts of genuine voluntary participation in the community.

There are problems around the implementation of community participation, according to Susan Rifkin (1986 in Taylor, 2004), a famous author in the rural health promotion field who has studied community participation for more than 25 years. Rifkin noticed that different forms of interpretation of the concept lead to different forms of practice and, therefore, there is no truly right form of community participation implementation method.

There is another interpretation by Kaminer (1984) in relation to women's community participation as unpaid, cheap labor. Kaminer believes that, by promoting the virtues of volunteerism and the virtues of participation, the state will consequently disregard its responsibility to look after the welfare of its people. However Naomi Abrahams (1996) sees women's community participation as the only avenues for them to become involved in

political and social work, which contributes to improving their lives and the betterment of themselves, their families and their community.

Many authors have called attention to development projects that encourage the involvement of women in their project, but ignore the fact that community work might further increase their already heavy workload.

The concept of community participation has been well promoted in democratic countries in Europe for a long time, however its implementation is still problematic; democratic civic engagements are well mobilized, however many practices still carry a characteristic of consultative participation, listening to public opinion on public policy, but without a mechanism for citizens to become involved in the decision-making process. Political participation usually takes form as a consultation or advisory role and elected politicians are the ones who make the final decisions (Steyvers et al., 2007). Many have accepted that citizen participation is essential to democracy, but no one can deny that "in a complex, large-scale society democracy cannot survive without the concept of representation and a political division of labor. However, this entails an inherent risk of citizen participation being neglected and minimized" (ibid.).

We have to agree with this on the grounds that any approach always carries with it some advantages and disadvantages. Many researches showed that the long-term benefit of community participation is apparent. The participation in RWSS is well understood for the sake of sustainability of natural resources and for the betterment and wellbeing of all community members. The disadvantages of community participation experienced in other projects from other countries needs to also be considered to avoid repeating errors learned.

2.5.1. Different approaches to community participation

There are different definitions of community participation. Participation can be considered as a voluntary contribution by the people in one or another of the public programs that are supposed to contribute towards the national development, but people are not expected to take part in shaping the programs or criticizing its contents (Economic Commission for Latin America, 1973). Therefore it becomes evident that this level of participation does not make local people feel like they are part of the development projects. On the other hand, in the rural development context, some authors defined participation as a process in which local people are involved in decision-making, in implementing development programs, in distribution of

the benefits, and in the follow-up of the development program (Cohen and Uphoff, 1977). For instance, Santos (1998) presented the case of participatory budgeting in Porto Alegre, where the representation of different people in grassroots organizations has been well depicted in the municipal budgeting decision making process. A comparative study on rural water supply and sanitation projects in the state of Kerala, India by Manikutty (1997) evidenced that strong community participation could induce better outcomes for the project.

Further, Oakley defined community participation as "an active process by which beneficiary or client groups influence the direction and execution of a development project with a view to enhancing their well-being in terms of income, personal growth, self-reliance or other values they cherish" (1991: 15).

Kasiaka defined participation in more detail while carefully considering the local knowledge: "Participation is an approach through which beneficiaries and other stakeholders are able to influence project planning, decision-making, implementation and monitoring phases. On the other hand, participation is considered to be a prerequisite for project ownership, successful implementation and sustainability of the projects in question. Participation does not mean acceptance of all ideas from diverse groups. In participation, there is a need to combine indigenous and intellectual knowledge. However, care must be taken so that intellectual knowledge does not influence that of the indigenous" (Kasiaka, 2004: 9).

Community participation assists to amass all the information, local knowledge, and skills from different backgrounds in a manner that enhances the process and the outcomes of a development project (Mahjabeen, Shrestha, Krishna & Dee, 2009), while gaining the shared experiences and personal growth of participants, particularly considering the gender relationships and positioning (Oakley, 1991).

Several authors had a tendency to categorize or typologies concepts of participation. Taylor (2004) synthesized four conceptual approaches to community participation; 'contribution', 'instrumental', 'empowerment', and 'development'. His concern with community participation in the health sector does not particularly lie with water and sanitation issues in rural areas. The typology 'contribution' considers the idea that people are expected to voluntarily give their labor, money, and their ideas to development projects that are usually led by experts and technical assistants. The 'instrumental' approach is not so different to contribution. Here the participation is considered as a means to achieve the objectives and outcomes of a project, in this case the professionals make the decisions on important project matters. The 'empowerment' approach aims to enhance the capacity of individuals or the

community's influence on the development process and increase participants' sense of control over natural resources. It is a process of raising awareness and taking action on the issues that affect their lives.

The 'development' approach can be considered as a value oriented approach that is a continuation of the empowerment approach. This approach focuses on the self-determination of individuals and the community as a whole. Participants know what they need and assert their will to achieve it. It is an interactive process in community decision-making.

Samuel Paul (1987) suggested four levels of participation in the context of a service provider – beneficiary relationship. The first level is information sharing: At this level the donor organization or service provider informs the local people about the project, planning, implementation and control of the project, which will be the responsibility of the organization. The second level will be the consultation level: Here the agency considers the ideas and local knowledge, but the agency is the one that makes the final decision. The third level of participation is decision-making: At this level the local people are involved in decision-making processes, but it is controlled by the development agency to a certain extent. The final level is initiating participation: Here the local people initiate all actions and therefore information and flow of control from the local people to the development organization.

Figure 1 - UK Health for all Network continuum of community participation

High ↑	*Has control*	Organization asks community to identify the problems and make all key decisions on goals and means. Accompanying community at each step to accomplish goals.
	Has delegated	Organization identifies and presents a problem to the community, ask community to make a series of decisions, which can be embodied in a plan.
	Plans jointly	Organization presents a tentative plan subject to change and is open to advice from community, expecting to change plan.
	Advises	Organization presents a plan and invites questions, prepared to modify plan only if absolutely necessary.
	Is consulted	Organization promotes a plan, seeks support, acceptance from community so that administrative compliance can be expected.
	Receive information	Plan was made, community just receives information. Compliance is expected.
↓ Low	*None*	Community is told nothing.

Source: Ife & Tesoriero (2006)

In 1991 the UK "Health for All Network" developed an interesting community participation measurement system (figure 1). Its levels focus on the organization and its relationship with the community.

The framework in figure 1 is more detailed than the measurement model of Paul (1997). It will be very useful for measuring community participation in the context of donors/service provider-beneficiary relationship. However, these measurements from Paul and the UK "Health for All Network" do not reflect the equality of participation from the marginalized groups, such as women, the aged, handicapped, ethnic minority groups, and so on.

2.5.2. Software and hardware in water and sanitation

Paula Roak suggested a framework to analyze local learning systems by using the concepts of software and hardware. Software refers to community participation and health education and hardware refers to technology aspects of the project. The challenges for most of the development projects are how to integrate these two elements of the projects and to ensure community men and women can voice their opinions and make decisions during the project process (Roark, 1980). In RWSS projects, much attention is usually assigned to the technical or technological aspects, and the software aspect is often forgotten or overlooked. There is a tendency for stereotypic labor division between men and women; men are often more interested in the hardware aspects, meaning men usually deal with technical and heavy works relating to construction and fixing of the water equipment. The women are expected to participate more in health promotion, education and bookkeeping.

Keeping a balance between software and hardware is essential to create suitable conditions for community involvement. If the water and sanitation services assign more importance to technical issues (hardware), then the participation of women or other disadvantaged groups will be discouraged.

2.5.3. A synthesis of the participation concept

Participation is considered as a foundation concept in community development because it is closely linked with the notion of human rights (Ife & Tesoriero, 2006). Participation underlines the people's important role in decision-making (Uphoff & Cohen, 1979). In a more value oriented way, participation could be understood as an end in itself; it activates the notion of human rights, the right to participate in democracy and to strengthen deliberative democracy (Hickey & Mohan, 2004; Nelson & Wright, 1995).

Participation concepts have changed historically, socially, politically, and economically from the third decade of the 20th century until presently. After having revised a series of literature I will rely on the synthesis of Taylor (2004), Samuel Paul (1997), and the "UK Health for All Networks" (1991) and divide the approaches to participation into two major approaches: 'participation as a means' and 'participation as an end'. *'Participation as a means'* can be understood as a 'contributions' or 'instrumental' approach (Taylor, 2004: 29), or 'pragmatic' versus 'activist' (Morgan, 2001: 228), or the 'information sharing' and 'consultation' of Samuel Paul, or it can be similar to the first four levels of the 'UK Health for All Network' scale, which is; 'none', 'receiving information', 'consultation', and 'advises'. In these approaches, participation becomes a technical approach; mobilizing the voluntary contribution and involvement of the community in order to reduce the project costs, which is usually led by a professional. The engagement of the community in decision-making processes, however, is not given much attention.

'Participation as an end' is more value oriented; it can be understood in a different name suggested by Morgan (2001) as the *activist* approach. It can be understood as 'empowerment' or 'developmental' approach. It has similar implications with the 'decision-making participation', and 'initiating participation' of Samuel Paul (1987) or the 5th, 6th and 7th level of the scale of 'UK Health for All Network' which is; 'planning jointly', 'has delegated', and 'has control'. All of these levels aim at increasing the people's role in development initiatives, and improving the ability of the people to participate. Participation here is viewed as a long-term process, and the people are more active and dynamic (Oakley, 1991 in Ife & Tesoriero, 2006).

Nonetheless, talking about participation as a whole package may not be enough. Kannan focuses on the people that are usually excluded from having control over resources and institutions (Kannan, 2002 in Ife & Tesoriero, 2006). Bearing the same idea as Kannan, Pears and Stiefel (1979) emphasize the organized efforts of a local community to increase control over resources and regulative institutions of groups that are usually excluded from such processes. Meaning that the participation must allow people to influence activities in such a way as to enhance their wellbeing. He sees participation as an empowerment process that must be undertaken by the excluded, recognizing the power differentials among groups in society.

Considering again the concept of participation in the context of water and sanitation services; we have to place gender perspective at the center of the study. Bettini (2007: 5) describes the

common picture of women's limited access to water resources as "gender-selective structure of exclusion that is found even in access to water". This problem raised a need for more research with a focus on gender perspective in community participation. A following section about gender inequality analysis from different literatures is presented. It will briefly go through historical reviews on gender relations in prehistory to classical civilization times. It summarizes the influence of major religions on the gender structure in Asia. And, lastly, it provides an overall review of the feminist theory and development and more contemporary theoretical trends on gender and development.

2.6. Gender inequality: Historical reviews on major cultures in Asia and their influence on South East Asia

2.6.1. Understanding the roots of gender inequality

Scholars from social anthropology and archaeology discovered that men and women enjoyed an equal status amongst the earliest human race, when their survival relied greatly on vegetation, which was gathered by men and women. They consumed small animals that were easily caught by women as well as men. About 7,000 years ago women had important roles in planting and farming in African and central European communities. Some anthropologists have argued that in agricultural and foraging societies, where women controlled production and distribution of food, women and men enjoyed relatively equal status (Frader, 2004).

However gender division started to form through a long process of more than two million years ago. When the hunting tools and weapons improved, the hunting tasks required more skills and technique, which required experienced and mature hunters, suggesting that the first division of labor was induced by age rather than by sex. The transformation in hunting techniques varied around the globe. The increased quantity of meat surplus also improved the nutrition status for humans, which led to a higher fertility and survival rate. Pregnant women tended to stay home more often and took care of children and the aged and they therefore participated in hunting less and less. At the same time women started to raise domestic animals and make gardens near their residences, men continued to look for large wild animals in further fields. These practices, over time, were enforced and patterned and became more rooted when the hunting products and agricultural products were used for exchange (Calaanssen & Joyce, 1997).

The earliest evidence of inequality between men and women can be traced back to human history of civilization during the fourth millennium BCE. During this time most agricultural

societies dominated with a patriarchal system that upheld husbands and fathers as the dominant figurehead.

In the northern Middle East, 10,000 BCE, agriculture spread very fast in these areas. Since the residents could develop a more stable agriculture system they tended to stay longer, at the same time the agriculture production also reaped more surpluses.

It is during this time that, according to Leacock (1987), labor division between men and women first appeared, since human society started to develop hunting tools, gain private property, political institutions, and standing armies.

In the period of classical civilizations, from around 1000 BCE to 500 CE, China, India, the Middle East and the Mediterranean regions had established their political and cultural systems, with the expansion of trade. During this period the major empires, like the Persian Empire in the Middle East and the Confucius and Dao cultures in China, started to spread from the north to the south. The Hindu religion and its social institutions were consolidated in India. This period was marked by the expansion of Greek and Roman societies in the Mediterranean and several parts of the Middle East.

Classical civilization started to foster the gender standard. China established written rules for men and women's behaviors, defining gender roles in society and in the market. The literate upper classes particularly had the tendency to strictly obey these rules more so than the lower class. Greek philosopher Aristotle put gender in political and social theory discussions. Greek patriarchy had a standard belief in women's inferiority and their principal domestic domain. However, the Hellenistic society was a little bit different than the classical Greeks. It gave more space to elite women in politics, land ownership, and business, as well as in culture life. The artist started to employ the female nude as their inspiration to compose or invent.

Hindu and Roman jurists considered setting up gender standards as a part of defining society itself (Stearn, 2006).

Mostly gender standards were all set in the patriarchal system, although there are some minor exceptions in some areas. The contacts among the major civilizations happened mostly through trading and commercial exchanges. This caused no significant impact on the gender standards and it remained a separate cultural identity for every region.

Following the classical period was the postclassical period from 500 to 1450 CE. This period is marked a little different from the last period due to the spread of missionary religions: the appearance of Buddhism in China, the spread of Christianity throughout Europe beyond

Roman borders, and the rise of Islam, which expressed another force in the Arab region. Religious interaction spread wider among the civilizations of Asia, Africa and Europe. It was particularly manifested in artistic styles, in writing and, most importantly, religion. For example, Japan established contact with China, Europe with the Mediterranean world, Russia with the Byzantine Empire and sub-Saharan West Africa with the Muslim regions.

In general, gender inequality in agricultural societies is accentuated more strongly and clearly in this postclassical period: The practice of foot binding in China; arranged marriages in India; Indian widows being forced to throw themselves into the tomb of their husbands, the practice of giving a dowry to the husband's family, and even the *sati* practice where widows immolated themselves on the funeral fires of their husbands. The *sati* practice was not widely practiced but symbolically it demonstrated an extreme dependency of women on men. In Arab society, the women veiled their faces and covered their whole bodies, this practice accents the gender differences.

Cultural interaction increased significantly in postclassical civilizations, this interaction process intrigued ongoing "currents and countercurrents" relating with women issues. Cultural contact also facilitated the reconsideration of culturally assumed taboos in some societies like homosexuality, religious conversion, and so on. On the other hand, cultural contact most likely evoked resistance to new concepts and therefore potentially increased gender inequality (Stern, 2006).

2.6.2. Gender and some major religions

Islam was considered as one of the major religions in the world during the postclassical period. Around 610 CE, the expansion of Islam was very fast and significant through their successful military conquest and the expansion of trade. Within some centuries, Islam had invaded the Middle East, North Africa, southern Europe, India, sub-Sahara, central Asia, and Southeast Asia. Islam's influence was not ubiquitous, however, as some regions, like India and sub-Saharan Africa, continued to maintain their religions, but it still influenced their own earlier cultures to a smaller extent. In Islam's teachings, the Qur'an and other central Islamic writings emphasize two important principles regarding women. First, principally women had souls, and therefore they were spiritually equal to men and they could go to heaven. Second, they could own property, they had right to land, and they could divorce. It seems that Islam gave more voice and protection to women compared to other major religions. Islam allowed

women to independently pilgrimage to Mecca. These practices made Islam different with Hindu in terms of treating women in society.

Even though Islam provided women some advantages, it still maintained a strong patriarchal structure, the Koran states: *"Men have authority over women because of what God has conferred on the one in preference to the other"* (cited by Stern, 2006: 44). If men committed sexual violation, then it was punished lighter than women and men could marry up to three wives. Men were authorized to use violence on women when needed to keep women disciplined or in line. Even though, in principle, men and women in Islamic teachings are spiritually equal, there exists, however, a deep belief that "women were by nature more sinful than men" (Stern, 2006).

Islam did not encourage women to take up high decision-making positions. It encourages wives to bow to the "service of the husband, care of the children, and the management of the household".

Buddhism was set up as a symbolic rebel against the cast system of Hinduism. It was established around the sixth century BCE. Buddhism took a stand point against the emphasis on inequality of Hinduism by accenting on ultimate spiritual equality discounting one's sex and social status. All can participate in the divine essence.

In regard to women, Buddhism gave an uncertain view on women in a patriarchal framework, which is quite contradictory to its equality principle. Women might be the source of lust and evil that could tempt holy men. A Buddhist story mentions an evil god who sent three women (Lust, Aversion and Craving) to seduce the Buddha. In Mabayana, the Buddhist said:

> *Women can ruin*
> *The precepts of purity*
> *They can also ignore Honor and Virtue*
> *Causing one to go to hell*
> *They prevent rebirth in heaven.*
> *Why should the wise*
> *Delight in them?* (Paul, 1985: 31)

And more:

> *Women can compound one's suffering.*
> *By their perfume.*
> *One falls in love.*
> *The fools,*
> *Confused, yearns for her,*
> *Being close and admiring*

Insignificant things,
He turns away from wisdom (Paul, 1985: 32).

Here, there exists a distinctive imbalance between men and women, especially in Theravada Buddhism where men had greater incentives to achieve the 'merits, 'meditation', or 'conquer suffering' than women. And men were supposed to have an extraordinary capacity for reflection on spiritual texts and less exposure to suffering. While women's natural biological bodies were associated with menstruation, pregnancy, childbirth, separation from parents when she got married, and the obligation to serve her husband. It did not mean, however, that women could reach the holy state of nirvana (Schouten, 2011).

Historically, several Buddhist stories depicted a holy woman like Ananda, who could reach 'perfect enlightenment'. She is the 'goddess of the Ganges': "Ananda after her death will change her sex from female to male and be born in the Buddha land called Delight" (Paul, 1985: 185).

A Chinese Buddhist told a story of an Indian princess who, together with other women, meditated and learnt the teachings of Buddha and this resulted in direct enlightenment (Stern, 2006). This implies that the enlightenment is 'neither male or female', since, here, the human body is inconsequential. Many women bodhisattva were worshipped as a source of sanctification or as a spiritual protector. Some of the women statues of the fifth century were found in India (ibid.).

In Taoism and Confucianism, the Chinese defined gender under the light of religion, therefore to understand gender we need to understand how it was recognized in view of some major religions in China.

In China, the yin and yang are very important symbols of harmony and complementary. The concept of 'yin and yang' in China can be traced back to the Yin Dynasty (1400 -1100 BCE) and the Western Zhou Dynasty (1100 – 771 BCE). Yin and yang were used widely in the Spring and Autumn Periods (770 – 476 BCE)[6] and the Warring States (475 – 221 BCE) (ibid.). Laozi developed Taoism is basically based on the Ying Yang and the five elements (Encyclopædia Britannica, 2005). The nature of yin and yang is always in duality, such as the moon and the sun, female and male, dark and bright, cold and hot, passive and active, etc. But yin and yang are not static or just two separated entities. The nature of yin and yang is to

[6] During this period the Zhou dynasty became weak and moved east, however it was during this period, named Spring & Autumn, that marked a significant proliferation of new ideas and philosophies. The three most important ones were Taoism, Confucianism, and Legalism.

change places with each other and have reciprocal interaction.[7] The *yin* represents the feminine, which is understood as an attribute of darkness, weakness, and passive, whereas the *yang* implicates the valuable principle of light, strength, and activity (Encyclopedia Britanica, 2005). This symbol was interpreted differently by Taoists and Confucians of their time.

In Taoism, the role of women varied greatly depending on how one understood and interpreted it. Livia Kohn observed that, "Medieval Taoist sources make no distinction between male and female ranks, accomplishments, status or even clothing" (cited by Wiesner-Hanks, 2011: 45).

In Taoist tradition, the early Tíen-shih tradition constructed a model of 'priest hood' on a basis that was undoubtedly open to men and women on equal terms. Its primary office was also open equally to men and women (Kirland, 2004).

In Taoism, "traditional sex roles and biological differences were recognized but denied determinative status" (cited by Reed, 1987: 29). Furthermore, there was no 'sex restriction for immortal beings' and overall sacredness was the complementary dualism of yin and yang. Feminine symbolism is expressed as the Mother Earth, river gorge, valley, and water. All of these are the wombs of living things.

Confucianism was born later after Taoism and it became the most dominant of the three religion pillars in China. Confucianism has a very strong influence not only in China but also in Vietnam, Japan, Korea, Taiwan, Singapore, and several parts of ASEAN countries where the majority of Chinese communities reside. Chinese Confucian cultural norms state that girls must obey their fathers, wives must obey their husbands and widows must obey their eldest son (Hsu, 1967, as cited in Morrison, 2004). In Chinese, the word for husband literally means "supporter", whereas the word for wife means "subordinate".

Confucian values discouraged the expression of emotions because Confucius viewed such display as individualistic intrusion on the amity of others. This is exactly what Wiesner-Hanks (2011: 119) affirmed, namely that, "in Confucianism, the gender order is hierarchical with men on top. Women are bound to three obediences: to her husband, to his parents, and to her own parents (...) the subordinate owes obedience to the superior, who is honor-bound to exercise care toward the subordinate."

[7] Laozi and Daode Jing: http://chineseculture.about.com/library/weekly/aa030402a.htm

Furthermore, the Chinese character for 'wife' shows a woman with a broom and the ultimate goal for women was to be regarded as a 'treasure of the house'; the ultimate goal for men was to become a sage (Wiesner-Hanks & Wiesner, 2011).

Confucians greatly emphasize social order and believe that society can achieve peace and order only when the women remain in their house or within the domestic domain. This is symbolized through the character 安[8], illustrating women under the house roof where it is safe and peaceful. It is a means to keep society functioning well and orderly.

In general, Taoism and Confucianism could not be separated; they are complementary to each other. Taoism and also Buddhism can serve as a counterbalance with the restrictive hierarchical order of Confucianism. Many women escape their suffering under a Confucian dominant society by escaping to the solitary and peaceful life in a Buddhist convent or Taoists training groups (Paul, 1985).

2.6.3. Gender and the European expansion

The 15th to 19th centuries covered the time the Europeans extended their territorial and economic interests in colonies around the rest of the world and Christian missionaries were also imbedded in all corners of the world.

The interaction among the colonies with European cultures bore different implications to gender relations. Obviously, the Christian ideas about sexuality and marriage are based on strong foundations of a patriarchal system, nevertheless, the Europeans usually claimed that they were helping to improve the condition of women in colonies; this could be true in the 18th and 19th centuries, where the feminist movements in Europe contributed greatly to the transformation of gender relationships. On the other hand, the Europeans did not thoroughly understand the gender arrangements of the societies in which they colonized. To add to these misconceptions, the changes in gender relations in their own countries were also occurring so rapidly, together with changes in economic and political life.

Europeans had more difficulties penetrating their western values in Islamic countries, some scholars project Islam as *"static, timeless, and uniform, and by implication, impervious to the dynamics of change or historical process"* (Adas, 1993: 3).

In India, the British approach was divided into four phases; the first phase involved mainly establishing commercial businesses and seeking markets. During this phase, Indian women

[8] The upper calligraphy symbolized for the group of the house, the under calligraphy symbolized for women.

started to become involved in economic activity. During the second phase, around 1820, the British government decided to interfere in the Indian social and economic spheres. They particularly attacked some traditional laws, which seriously affected the life of ordinary Indian women. In addition, the number of British women in India also increased, which came with its own 'pros or cons' attitudes toward it. However it gave new references of women's lifestyles outside India.

By the end of the 19th century, British colonizers faced many nationalist movements and resistances from India.

The importation of Christianity in India did not make any difference and the majority of Indians remained faithful to Hinduism rituals and beliefs, even though some new ideas were sometimes received with tolerance.

In the 1870s there were various visible changes in Britain. The birth rate was reduced (women no longer cared to bear so many children), many women's movements were instigated and they fought for employment opportunities. All of these movements and changes were not particularly noticed by Indian women. However Indian men were greatly impacted and they were repeatedly confronted with economic changes. Now they were in a subordinate status presided over by the government and the military. This situation led the men to assert their traditional status over women to replace the stressful condition that they were facing. This also explains why Indian women were not the beneficiaries of opportunities that would have allowed them to reform their inferiority status. Consequently, the British's general impression of the social issues in India was the maltreatment of women.

2.6.3.1. Effects on Polynesia

In areas of Polynesia, the missionaries were more concerned with the reality of Polynesian sexual practices and Polynesian women's way of clothing, which they regarded as quite sordid. European missionaries stressed the importance of women's decency and they tried to enforce Polynesian women to follow a certain standard of behavior and conduct. They restricted bare body dressing and banned traditional *hula* dances, which they found so provocative.

The missionaries also urged the discontinuation of abortion and infanticide. Even though there was resistance to these changes. Until the 1840s there were clear cut 'improvements'. Formal education was introduced to young women and other adults quite successfully. The

missionaries noticed that women were more enthusiastic to learn religious lessons more than men. The men were expected to become more involved in learning due to their position as the head of the family; however, women were more active.

Basically, some Polynesian societies kept a strong hold on polytheistic religions, with some females as their leaders. The missionaries pressed on with their agenda to change gender roles. They insisted that men should become more involved in productive tasks in the agriculture fields rather than remain idle at home. This caused inadequate care of domestic work, which affected the welfare of the children. In the eyes of the missionaries, agricultural work was undesirable to women. They tried to promote the ideology of women doing domestic work by improving their sewing skills to make more decent clothes. Stern (2006: 97) found that "an obvious result was a growing inequality in economic power between men and women, compared to traditional Polynesian standards, which missionaries amplified by insisting that women be deferential to their husbands' authority – as was the current standard in Europe and the United States".

The missionaries also pushed for a change in extended family traditions. They imposed western values of the nuclear family, which they thought was good. According to their beliefs, many different adults participating in taking care of children was inappropriate.

Since this imposition, Polynesian women have been attached to childcare and domestic work and opportunities for paid work consequently diminished. In Tahiti and the Hawaiian Islands, a majority of males worked in horticulture, while in Southeast Asia, this was carried out by women.

The implementation of western standards resulted in some significant changes, yet there seemed to be no remarkable resistance to the newly imposed values. However, despite the new values being embraced, traditional practices persisted. Polynesian societies were dominated by men but they maintained respect for their eldest sisters, who were considered as protectors of the genealogies. If a man did not respect or obey his sisters, he and his children could be cursed (Stern, 2006).

2.6.3.2. Effects on Micronesia

Western regions of Micronesia speak similar languages with the Philippines, and this region appeared 'less female-centered' than eastern islands. The absorption and interaction with European culture had changed the cultural practices, although not completely, of the

Micronesia islands. Mostly they lost their contact with their Pacific Oceania communities in the eastern parts. For example, in Guam, the structure now resembled lowland societies in the Philippines, whereas previously it resembled Oceanic societies (Andaya, 2006).

2.6.3.3. Effects on Melanesia

Some Melanesian societies attributed important positions to men in ritual life. In spite of mythological oral stories portraying female characters, men were still dominant in all sacred ritual positions. In New Guinea, men's houses were a place to keep sacred objects, and a place to exercise ritual ceremonies, women were prohibited to enter and could be killed if they transgressed beyond the boundary (Conklin, 1970).

Paralleling with the patrilineal system, exists also matrilineal communities in Melanesian islands and the women in these societies, for example, in Vanuatu, have higher social status than other Melanesian women. TL is located on the boundary of the Melanesian islands and is far east of southeast Asia. The cultural contact and the acculturation process, in some manner, influences the culture of TL. The discussion on cultural character regarding gender relations will be mentioned separately in the following section.

Christianity in Melanesia has been described as a foreign influence, which has replaced Melanesian indigenous religions (Barker, 1992).

2.6.3.4. Effects on Southeast Asia

There are very few early human history references to women in Southeast Asia. Most can be found in the 18^{th} and 19^{th} centuries. Recently research on women has been within the sphere of the economic and cultural effects of globalization, however their historical dimension is rarely emphasized. To suitably understand contemporary gender relationships, we have to have an adequate knowledge of the past.

Very few comparative data exists on the Oceania region, but anthropologists have made a great effort to collect information over the last two hundred years (Andaya, 2006).

According to Jane and Shelly (cited in Atkinson & Errington, 1990), southeast Asia is identified as an area where women enjoy high status compared to the mainland countries; China and India. From Burma to the island of Indonesia and the Philippines, it is quite a general conclusion, but if we looked into the diversity of cultural settings, various versions of the relationship between men and women are revealed.

Mainland southeast Asia, such as Vietnam, Cambodia, Laos, Thailand, and Burma, are slightly different than the other island countries. In the case of Cambodia, many historians found that women held superior religious and social status and some findings show evidence of Cambodia's historic matrilineal society, which was however gradually eliminated by the Hinduizing process (Andaya, 2006).

There are cultural similarities between China's highland people with the highland people of eastern India, and highland people of Vietnam, Laos, Burma, and Thailand.

There are also cultural similarities between eastern Indonesia and the westerner of the New Guineas, and communities in the pacific Oceania areas who live near the seashore.

Traditional matrilineal practices of land heritage of some areas in Micronesia and Melanesia could be found in some eastern parts of Indonesia. Andaya (2006) also noticed the similarity of sexual taboos against women, and native marriage practices such as wife-giving and wife taking of eastern Indonesian islands and the Melanesian.

The concept of gender in the eastern parts of Indonesia is quite different; every one, men and women, has dualistic elements of sex, for example, in the Kodi ethnic group on the Island of Samba, Robison observed that: "Gender differences are understood as a continuum, not a dichotomy" (Robinson, 2009: 12). At the same time, Hoskins profoundly analyzed the gender identity of Kodi society in Samba as "each person has elements of both sexes in a residual pattern, but that with adequate social conditioning he or she can make a successful adjustment to the appropriate gender identity" (Hoskins 1990: 303, cited by Robinson 2009). The given implication is that the local definition of gender does not differentiate from the modern contemporary definition of gender.

The major countries on the mainland, like India and China, expanded their influence more in the southeast Asian areas, however this influence was weaker in the eastern parts. Some influential religions in eastern Indonesia were not concerned with extending their influences beyond the boundary of Melanesia. For example, in the 17th century when the Dutch took their first steps on the regions along the seashore of New Guinea's Bird's Head and the neighboring islands, several chiefs of the village were nominal Muslims. However, farther east, the influences of Islam were weaker, therefore Oceania regions seemed to have weaker contact with more powerful religious, social and political forces, which had already penetrated across Asia and southeast Asia in the early modern period.

Southeast Asia embraced a vast diversity of social and cultural patterns in organizing their society and gender relations differed in various countries and islands. Prior to this, some southeast Asian societies were mainly matricentric, however, after contact with the major cultures and western colonization, the androcentric values were imported and enforced over time until today.

2.7. Feminist theory and development: historical approach

In this section, we will have a look at the key development frameworks and some major feminist theories, which are prominent in the contemporary world. On comparison of the working experiences of feminist activists and western feminists, with development policy intervention in the developing worlds, it is apparent that particular concepts and ideologies are interwoven and appear parallel.

Below is a review of historical development processes of development thoughts and policies, as well as on the development of feminist theories related to development issues in third world countries.

2.7.1. Liberal feminism and modernization

During the 1930s, modernization theory was dominant. It was expected that the poor countries would completely adopt the technology and social values of the West. It became a model for the colonies and the development specialists used modernization approaches concurrently with westernization strategies. They supposed that the non-western countries should adopt the 'modern institutions, technology, and values' of westerners. During these years, women were not included in the development framework.

In the 1940s and 1950s, the movement of decolonization was stronger than ever. It first began with India and then expanded to other continents all over the globe. Though many development projects failed, the westerners kept faith in their modernization model. At the emergence of the United States as a world power, many developing countries looked up to this country as a model for economic development. The US dominated all fields of development plans, intellectual providers, and researches in developing countries.

In the 1970s, development in the third world was still very slow, due to their focus on exporting raw materials and agriculture products. This caused degradation of the natural environment and impoverished the fertile soil surface. The western specialists believed that

the third world countries needed to prepare for an economic 'take off', meaning that they believed that they had to industrialize the production process and sell their industrial products.

Ester Boserup (1970) researched *women's role in economic development* and found that women were excluded in this development process. Women did not have equal opportunities to their male counterparts to participate in technical training. She disagreed with the idea that the development will automatically trickle down to women eventually. After her study, a series of women's movements, which were concerned with the development issues, worked to influence the policy makers. The United States Agency for International Development (USAID) became a pioneer to advocate this idea. A new theoretical framework emerged named women in development (WID), which was pioneered by the liberal feminists. This is the first intersection between Modernization theory and liberal feminist theory. WID's approach emphasized 'equal opportunity' as the main theme for inclusion of women in the development plan of every country. WID experts were sent to different developing countries to make sure women's sensitive plans were put into practice. WID contributed towards developing a statistical database to measure the women's participation. It helped to increase the number of women to participate in labor markets and education.

However, the WID approach failed to transform gender relations and gender roles and women still continued to monopolize the domestic sphere. Liberal feminists of the time strongly believed in the modernization framework and they trusted in their western values and technology, which they believed could answer all the questions of the developing countries. They disregard generations of indigenous wisdom and knowledge. The WID pressed the important role of the government to take a lead in resolving the problem of gender inequality. The WID did not pay attention to the impact of global economy in the third world countries in which women's lives were miserable. In addition, race and class factors also had a great impact on women's lives (Connelly, Li, MacDonald, & Parpart, 2000).

2.7.2. Feminism and the Marxist framework

Marxist feminists assumed that women's subordination is 'a consequence of the development of private property and capitalism' (Connelly, Li, MacDonald, & Parpart, 2000: 59). They also argue that the end of the capitalist system can bring about gender equality. That is the limitation of Marxist thinkers who press on the struggle against capitalism rather than resistance against the patriarchal system, which they argue is merely an outgrowth of the capitalist system. For them, patriarchy is just a byproduct of capitalism. The capitalism

system takes for granted the ‘domestic mode of production’, which means women subsidize free care and welfare to their husbands and sons who are assumed responsibility of the capitalist system (Kirton & Greene, 2010).

2.7.2.1. Dependency theory and the radical feminist framework

Liberal modernization could not counteract the vicious poverty of the third world and liberal feminists failed to resolve the problem of attaining sufficient capacity to overthrow the patriarchal system. Therefore, the radical feminists believe that patriarchy subsists everywhere in this world and it is the main source of inequality. Therefore, substitute women-only social institutions must be established that are independent from men and that can fulfill women’s needs. Radical feminists’ stance appeared parallel with dependency theorists’; both of them supported the idea of separation from the sources of oppression. Dependency theorists argued that the capitalist “metrople” exploited the natural resources from the third world countries to enrich themselves, therefore third world countries should maintain their distance from this abusive structure to refrain from western technology and products (Connelly, Li, MacDonald, & Parpart, 2000).

The formation of Women and Development (WAD) was the product of radical feminists. The WAD outlook was implemented into the social policies and practices of many NGOs, consequently the so-called women-only projects became dominant and still remain so until today. Many NGOs set up micro-finance projects for poor women groups in the community. WAD realized that women are vulnerable in the patriarchal power structure at the household level and community. This is what spurred the establishment of this approach, namely to permit women to be independent and confident, as Buchy and Rai (2009: 142) argue:

> Creating space for women away from the intimidating glance of men, women might slowly be able to build up their confidence. Their leadership skills and more generally their capacity to engage in public affairs. Creating women-only spaces would help to develop a critical mass and allow women to ascertain their power to act, mobilizing the power from within.

However, there are some limitations to Jackson’s (1999) approach. He discovered that women are demoted in the community at the local level, that they lack access to more quality resources and services, and their voices are not heard at more strategic levels because they have less opportunities to engage in national debates (as cited in Buchy & Rai, 2009).

Connelly, Li, MacDonald, and Parpart (2000) cite further advantages and disadvantages of WAD:

> Although the WAD perspective has offered an important corrective to WID's too-ready assumption that male-dominated states can be used to alter gender inequities, it also has its weaknesses. (…) marginalization and smallness of scale have limited the transformative potential of women-only organizations, although gains have been made in raising consciousness, publicizing women's concerns, and bringing them into the policy arena (p.61).

2.7.3. Other contemporary feminisms

2.7.3.1. The rise of Black feminists

Some Black feminist scholars detailed accounts of black women in the United States who were discriminated against in society, suffering oppression in their homes by their men and, when they moved to the public spheres, oppression by the racist attitudes.

Black feminists valued these concrete and personal experiences, which were revealed only through dialogue and accountable researches. Black women found it difficult to fight side by side with the White feminists. In 1982 they instigated their first step by declaring a Black feminist manifesto to facilitate them joining hands with the white women to fight against racism and sexism. Black women were strongly against sexist acts committed by either white or black men. However, they also needed the cooperation of black men to fight against racism.

Black feminism gained an enthusiastic response from developing countries, because they had struggled for independence from colonialism and, even presently, they continue to strive against global inequalities and patriarchal systems in their societies.

2.7.3.2. Third world feminists

The focus targets of the western feminists and third world feminists are not the same. While the prior tried to center on the equality between men and women, the later emphasized *"the basic material needs as a pressing issue in the context of disadvantageous international economic order*" (Saunder as cited by Bruno, 2006: 8).

Together with the writings of third world feminists and the experiences of grass-roots communities in the third world, a new agenda appeared under the name DAWN (Development Alternatives with Women for a New Era). This new paradigm started around the 1980s. DAWN called for an approach to women's development that recognizes the importance of global and gender inequities.

2.7.3.3. The socialist feminists and GAD approach

Socialist feminists emerged as the result of unsolved problems by the Marxist, black and the liberal feminists. GAD rose from an amalgamation of the DAWN approach and socialist western feminism, and is concerned with development issues. They do not concur with the solutions of WID or WAD. Connelly, Li, MacDonald & Parpart (2000: 62) argue that "women's status in society is deeply affected by their material conditions of life and by their position in the national, regional, and global economies". GAD also sees the great impact of the patriarchal structure from the domestic to national levels. GAD's approach consisted of two main domains; study of material condition of women, their class position and the patriarchal system and values that perpetuate the subaltern position of women. The focus of gender relations are the relationships between women and men, not women alone. "Gender relations are seen as the determinant of women's position in society, not as an immutable reflection of the natural order but as socially constructed patterns of behavior – the social construction of gender – which can be changed if this is desired." (Connelly, Li, MacDonald, & Parpart, 2000: 63).

The GAD approach, besides examining gender relations, also sets light on other important issues like race and class and other characteristics of social construction from colonial history, culture and global inequality. The most important point of GAD is women are seen as transformative agents not as recipients of the development results.

2.7.4. Post-modernism and postmodernist feminism

Post-modernism appeared as a strong blow on the conventional, established knowledge or 'meta theories' that explain anything in this world, especially the rationality and the technological innovations that can help societies around the world achieve enlightenment and civilization. Post-modernism neither believes in liberalism nor Marxism, which was considered the longstanding representation of 'truth'', it used to dominate and denied the other disadvantaged, voiceless discourses. This approach called for the recognition of the other hidden discourses and other knowledge, languages and wisdom that can only be produced and reproduced according to specific locality and context (Connelly, Li, MacDonald, & Parpart, 2000).

Some scholars argued that the congenial relationship between post-modernism and the feminist allows for some 'middle ground' to develop a more universal paradigm that will not depend on traditional mainstreamed knowledge. And they also believed that:

> Feminist theorizing and action can be strengthened by postmodernism's sophisticated and persuasive criticisms of foundationalism and essentialism, its focus on difference, and its analysis of the relationship between language, power, and knowledge. At the same time, they believe postmodernism has much to learn from the socio-critical power of feminism, particularly its attention to gender. (Butler and Scott as cited in Connelly, Li, MacDonald, & Parpart, 2000: 137).

The postmodernist-feminists continue to criticize the white 'male-establishment' knowledge, male-language, male-politics, male-culture, and male-technology. Actually, the postmodernist-feminists have won the sympathy and support from the third world and minority feminists, who usually criticize western feminists who have homogenized the problems of all women around the world with theirs and ignored the global diversity of social, political, and cultural situations of non-western women.

There are various implications for policies and actions drawn from postmodernist-feminists. First, policymakers of the developing countries need to consider that knowledge from less privileged and less powerful people can often offer good solutions that are not always offered from western advisers. Second, the language used in law and policy documents can have a great impact on implementing these policies, because it reflects how they are perceived. Third, this approach reminds the policy maker to try to know the different needs of different groups based on their own racial and cultural identity in order to have policies that can be responsive to these needs.

2.7.5. Antifeminism: a new theory for the 21st century?

Hakim (2000) analyzed the strong foundation of the feminist tradition, which has taken over a century to construct. Through empirical research she found many contradictions and challenged the presumptions of different feminist frameworks. For example, Hakim found that employment and family-friendly policies might reduce gender equality in the workforce. By using preference theory we can predict women's choices between market work and family work. This theory is empirically-based, multidisciplinary and it is more applicable in rich and modern societies. It argues that in such societies, women's preferences is are a key

determinant of life options relating to children and family life, or an emphasis on employment and pursuing a career in the public sphere.

This theory could answer problems of careers and employment in modern societies, but may not be applicable to the issues of sexual harassment, domestic violence, and others. Moreover, preference theory might not be relevant to the poor societies in which women have lesser options to live a decent life as a human being. For them, to choose their own life path seems impossible. These are reasons inciting further examination in the next sections of gender practical needs and gender strategy needs.

2.8. Gender and development initiatives in the Third World

This research also holds gender issues at the center of the process; therefore a conceptual framework that fits within this context is needed. In reviewing various ranges of theories on gender, I decided to choose the sociological explanation on differences of gender. Sociological theorists see gender as a socio-cultural construction, not a biological given (Bussey & Bandura, 1999). Social and institutional arrangements and practices perpetuate stereotypic gender differentiation. Labor division between the two sexes continues to perpetuate and deepen the gender status and power gap (Eagly, 1987a, in Bussey & Bandura, 1999). The UNDP (2003) also looks at gender through socially determined roles and responsibilities of men and women. Historical, religious, economic, cultural and ethnic factors greatly influence their gender roles. This point of view allows us to expect changes and transformation in gender roles and relations because it is not a fixed monolith, it can be changed through institutional practices in families, communities, and organizations.

Since the start of the International Drinking Water and Supply Decade, gender issues have been placed at the center of community participation in an overall context. A lot of experiences from different development projects have been accumulated and there is still a lot more to discover. Before the term gender was used as widely as it is today, a significant historical evolution of this concept took place. During the 1950s and 1960s, the field of development was characterized with the welfare system, anti-poverty goals, and WID paradigms that also inclined toward this tendency of viewing women as passive recipients. In sectors of the WSS, women inevitably are seen as grateful beneficiaries, but have no control of it (Wakemen, 1995).

During the 1970s and 1980s, with the success of socialist movements in third world countries, the focus turned to efficiency and equity. Socialist feminists started to challenge the subordinate position of women and attempted to increase women's participation along the development path. They suggested a structural reform, therefore the GAD paradigm appeared to overcome the limits of WID and they complemented each other. In actual development projects the two approaches were used depending on the local contexts where the projects were operated. According to Young (1993), the introduction of the GAD approach gave a new transformation in development projects, as well as in WSSP. Women were given better opportunities and greater involvement in planning, construction and management. This approach had potential, leading to greater benefits for development projects, households, communities, and for the women themselves.

Forums, such as the International Drinking Water Supplies and Sanitation Decade Review (1990), the Dublin Conference (1992), the World Summit on Sustainable Development (1992), the Beijing Conference (1995), the World Water Conference (2000), and Integrated Water Resources Management (UNDP, 2003), had agreed upon a consensus that the equal participation of men and women are very important in development projects, particularly in the WSS sector, they should remain equal partners of development and not objects of development. Therefore gender-sensitive approaches are necessary (UN-Habitat, 2006; Momsen, 2004).

In developing countries, mostly women and young girls are responsible for fetching, carrying, and storing water for domestic uses. Women principally are responsible for the well-being of a family as a whole. As Van Wijk-Sijbesma states:

> As domestic managers, women decide where to collect water for various purposes and in various seasons, how much water to collect and how to use it. In their choice of water sources, they make reasoned decisions based on their own criteria of access, time effort, water quantity, quality and reliability. In addition, much of the informal learning about water and sanitation takes place through interpersonal contacts between women. (Van Wijk-Sijbesma, 1985: 1 in Baden, 1999: 2).

However, most of the time, they are not given an opportunity to become involved in the designing, making or choice of technology they should use or even in deciding the location of the water services (Musa, 2008). Women and girls spend up to 6-8 hours a day collecting an average of 15 to 20 liters, which requires 600-800 calories to carry this heavy load. Many infectious diseases are associated with poor water quality (Musa, 2008). Sometimes children are forced to forgo their schooling just to fetch water.

Women and girls are very vulnerable to the bad conditions of sanitation. Many girls are absent from school when they menstruate. On average, a girl will have 55 days of menstruation per year, if the school does not provide privacy, a separate latrine and water, then there is a tendency that the girls will not go to school during those days (ibid). In most public schools in developing countries, the girls usually share the toilet together with boys. In Asian culture, it is considered taboo to talk about human waste disposal. Rural girls would wait until dark to defecate, exposing them to sexual harassment and rape. In terms of health, they are vulnerable to infection, which affects their fertility in the future.

2.9. Structural barriers inhibiting rural women's participation

Turning to structural barriers and their history, which derived from sociological conflict, we have to delve briefly into the functional history of gender inequality. Functionalists view gender roles in relation to the origin of the sexual division of labor (Parsons and Bales, 1960; Zeldithch, 1955 cited in Lupri, 1983). Parsons particularly defended the status quo of this division of labor in which women do their *expressive* work (taking care of children, doing domestic tasks, confining themselves in private spheres) and men do *instrumental* work, which is usually allocated outside the home setting or in public spheres (Silva, 2008). Parsons believes this is necessary in order to maintain an equilibrium and harmony in society. Parsons even said that if a woman was employed then she had to continue to tackle her assigned traditional role: "…even if, as seems possible, it should come about the average married women had some kind of a job, it seems most unlikely that this relative balance would be upset; that either the roles would be reversed, or their qualitative differentiation in these respects completely erased" (1960: 15, cited in Lupri, 1983). From this stand the functionalists failed to challenge sexual inequality and gender inequality and have a tendency to maintain the status quo of the patriarchal system.

Collins (1971 cited in Lupri, 1983) gave a sociological point of view of the conflict compared to structural inequality with sexual inequality as follows: "sexual inequalities are structured like any other structural inequality, are based on a conflict of interests between dominant and subordinate groups" (Lupri, 1983: 8). Men continue enjoying the privileged status in political, social, psychological and economic life and they are in power to maintain that status quo. Other authors stress the idea that gender inequality is persistently reinforced by social and cultural norms (Bourdieu, 1998) and that it is also institutionalized and incorporated into political practices, creating the context for its naturalization. This structural barrier framework

was studied and profoundly developed to suit the socio-economic context of developing countries. The approach of the triple roles of women; reproductive roles, productive roles, and community management roles (Moser, 1989; Moser, Tornqvist & Bronkhorst, 1999) is very relevant in understanding what are the main factors impeding women's participation in the public sphere and in making them appear invisible. One of the manifestations of such structural barriers is women's workload. Authors claim that many policy makers in the areas of development policy, especially in the water sector, enthusiastically promote the involvement of women in this area, but then fail to pay sufficient attention to the triple roles that women have traditionally been committed to and on how these roles interact in building a complex set of role expectations that diminish possibilities of women's emancipation. In fact, rural women's reproductive roles not only refer to child bearing and child caring, but also include the whole domestic drudgery such as: cleaning, sweeping, arranging inside and outside the house, cooking, buying food, collecting vegetables and other grains from the gardens, and collecting firewood and water. The reproductive roles of women do not stop at taking care of their own household or children, as many women in developing countries look after their in-laws as well. They also take care of the sick and the aged in an extended family.

This is a major point and should be highlighted, as Tam (2012) mentioned that women's reproductive duties are huge but they are kept as hidden or invisible, as far as they become naturalized and normalized as feminine attributions. That is why, according to Wanjiku Kabira, women's reproductive tasks are the key factors to "economic functions, which ensure the development and preservation of the human capital for the family and the nation" (1997: 38). On the other hand we can definitely argue that women's reproductive duties have economic value by supposing that if women got involved in the paid labor market and delegated her domestic work to a domestic helper, then these reproductive tasks will be considered marketable and exchangeable. However many reproductive tasks produced by women are not considered in the national income and are just taken for granted by the family, community and the state.

As stated, the reproductive roles are very interwoven with the productive roles, which is contrary to what happens to men who normally work in marketable activities, however women's productive tasks are usually non-marketable. They do effectively produce agricultural products for market and also for family subsistence (In TL, 90% of women play a key role in agriculture production). However, this work is also hidden, no account of their

work is done in correlation with reproductive roles and they are therefore considered less socially valuable.

Community managing roles of rural women are huge, but they are also part of the same configuration. These roles are usually considered as an 'extension' of their reproductive roles: they are also part of the same hidden block of activities in which women spend their time and effort but lack social recognition. Community tasks can be considered as service works involving taking care of the sick or aged by doing households chores. They can be seen under other forms like assisting in service work for the community such as water management, road construction, or other kinds of involvement in religion, political and social organizations.

Community tasks, most of the time, are voluntary unpaid works which occupy the "free time" of women. But if women's natural attribution is as caregivers, then the situation is radically different for men who are actually rewarded with high privileges and social status, which becomes a stepping stone for them to jump to higher political authority positions (Teshom, 2007).

This approach is really fundamental for us to assume the great relevance of those historical traits and cultural patterns that have defining gender roles and gender relationships within a society such as TL. It is also very relevant because it shows the structural nature of most of the inequality relations existing in social and political life. Accordingly, it presents great challenges for policy intervention and apparently the barriers are deeply ingrained because of biological beliefs that are based on the sexual distinction of male and female. Therefore political actors have to introduce changes and rupture old beliefs. For that reason, sanitation and water supply projects do inevitably have to deal with and challenge these beliefs.

2.10. Practical and strategic gender needs approach

The Beijing declaration underlined the importance of equality. "Women's empowerment and their full participation on the basis of equality in all spheres of society, including participation in the decision-making process and access to power are fundamental for the achievement of equality, development and peace." (OECD, 1998: 9).

The realization of gender equality always requires a framework to work on; there are several frameworks that help to analyze gender, many of which are quite relevant to the theme of this research.

Caroline Moser (1999) from the London School of Economic and Political Science developed a framework that recognizes the differences between women and men in terms of roles and needs in third world society. She based this framework on the triple roles of women and on practical and strategic gender needs.

Practical gender needs are basic needs required for human survival and these needs start from immediate, concrete situations that women experience. Practical needs could be manifested through the form of materials like food, water, shelter, health care, or even child care. Practical needs can refer to basic needs such as food, water, and shelter, which are required by all members in the community. However practical gender needs do not challenge existing forms of women subordination (Kabira, 1997).

Strategic gender needs are the needs women are aware of that contribute to the inequality in their gender relation and their subordinate position to men in their society. Strategic gender needs change according to particular contexts. They relate to gender divisions of labor, power and control. Meeting strategic gender needs helps women to achieve greater equality. It also changes existing roles and therefore challenges women's subordinate position.

2.10.1. Women's Equality and Empowerment Framework

This framework was developed by Sara Longwe from Zambia (CCGD, 1997; Sahay, 1998). The author ranged levels of equality from the lowest to the highest as follows; i) level one is understood as 'welfare'. At this level women are considered to be passive recipients of material welfare such as food supply, water, income, and health care rather than individuals capable of changing their own lives. Ii) Level two is understood as 'access'. This level emphasizes the inequality of access to resources by men and women in terms of land, credit, labor forces, etc.. Relative to men, women have less access to vocational formation, wage employment, and services that make productive employment possible. Overcoming the gender gaps requires that women have equality of access. Equality of access to resources is seen as a step towards women's advancement. Iii) Level three is conscientization, which addresses the belief gap that women's lower socio-economic position, and the traditional gender division of labor, is part of the 'natural order', or is God-given. Empowerment at this level means sensitization to such beliefs and practices. This requires the individual woman to be aware of injustice or inequality that they experience in relation to men. Iv) Level four is the level of participation; this level addresses equality in terms of women's equal participation in the decision-making process; in development projects women are supposed to represent the

process of needs assessment, problem identification, project planning, management, implementation and evaluation. Increased representation is both a result of empowerment and a potential contribution towards increased empowerment. V) Level five is level of control; women have more control over their bodies, labor and their income. Women's increased participation at the decision-making level will lead to empowerment of women. Increased level of control enables women to obtain improved access to resources and therefore improved welfare for women and children.

Thus, women's development can be viewed in terms of five levels of equality: welfare, access, 'conscientization', participation, and control. Empowerment is essential at each of these levels. However 'conscientization' is the most critical component of the framework because in lacking 'conscientization' women might take part in reproducing gender-related problems.

It is important to note that 'conscientization' in level iii) in Longwe's frame can be traced back to the 'conscientization' of Paulo Freire in Cabral (2003), which focuses on intensive reflection and action of the oppressed by raising awareness in order to move from a naïve or mythic consciousness to critical consciousness. This framework believes that when women have a critical awareness of their subordinate position, then they will take action, participate in whatever social, economic, or cultural projects necessary to transform their actual situation. This will lead to the empowerment stage with their transformative capacity.

On further analyzes, it may be viewed that these three theoretical frameworks are temporally relevant for analyzing the gender inequality in TL, as well as in the developing world where basic needs have not yet been met, especially when women are the majority poor in the world (Sen & Grown, 1987), serving as a foundation to reach higher levels of gender strategic needs. Practical gender needs or basic needs have the same voice with levels i) and ii) of the Longwe frame, which are 'welfare' and 'access' (CCGD, 1997; Sahay, 1998) and which mostly come from the external intervention of the state or other international institutions. The triple roles framework gives an extension of the ideas of cultural and structural barriers for the women themselves, as well as for policy makers and other development planners to have a better inclusive and gender sensitive developmental policy. In addition, the triple roles framework gives women themselves a better reflection on their oppressed situation. Longwe's empowerment framework gives us a guideline for understanding the process and determining a possible intervention strategy. It could be the five levels, in some concrete context, which can run overlapping upon each other. The first two levels are the means to people's well-

being but it is not the end (Sen, 1992). Sen argued that giving the people freedom to reason and value their choice is the most important factor addressing human capability. Furthermore he emphasized what people are able to be and to do, not what is given to them for consuming. Nevertheless, Robeyns, who analyzed the capability approach of Sen. Said that, "Indeed, inequalities in resources can be significant causes of inequalities in capabilities and therefore also need to be studied" (2003: 64).

Another important concern is the intersection of the two concepts: gender and community participation, which have been contested issues in the literature. Some studies explain that good participation does not always implicate gender equality in real practices, especially in the context of a rural and traditional community.

2.11. A guiding conceptual framework

The scope of research aspects, namely the given assumptions from diversified sources of the literatures on similar areas, is helpful to map out the necessary steps to be explored and guided in this research.

Before the field research took place, I had a series of assumptions or hypothesis, which were based on desk research and my earlier knowledge about the water and sanitation services in TL. I came up with a detailed description of the conceptual framework. First of all, a modified version of the participation scale proposed by the 'Health for all Network' (figure 1) was adopted because it is quite relevant to the context of water and sanitation projects that have been operated in small communities. I believed that participation may happen at different levels in each phase of the project (planning, implementation, and post implementation). For example, in the post implementation phase, people may have full control over the infrastructure, or in the planning phase, the community is actively involved in deciding the location of the public tap and in giving information on water sources and on other issues. After reviewing secondary data on the process of involving community members, it is supposed that the level of participation of the community in the planning phase would be a joint level of consultation and planning. In the implementation phase, the level of community participation would be an equally joint level of planning and delegation.

The level of participation could be seen through the involvement of community members in different phases of the projects by the attendance in the community meetings, their concerns, movements, contributions in terms of labor, materials, money, ideas, or information exchange

and responsibilities throughout the entire phases of the RWSS projects. As Oakley puts it, "there is also the notion that participation means good consultation. The technical aspect of the water supply is left to the external technician; the people are consulted on site location, resource availability and maintenance." (1990: 56).

In our figure 2, the "planning phase" starts with the initiation of DNSAS (Direcção Nacional de Service de Água e Saneamento) or NGOs. The planning phase is usually divided into sub phases such as: rapport building and community mobilization, social analysis, WASH (water, sanitation, Hygiene) situation analysis, preparation of action plan, technical survey and design, and finally attaining community agreement and finalization of community plan (DNSAS & Ministerio da Saude, 2011). In this phase the community will elect the GMF (Group Management Facility).[9]

In the "implementation phase" the construction work is undertaken mainly by contractors and engineer technicians from DNSAS, but with collaboration in terms of managing the construction work and doing public audit reports. This phase includes the following activities; *Adat* (traditional) ceremony, GMF training, GMF and community meetings, meetings with contractor, mobilization of materials, implementation of activities, and finally the social or public audit.

In post implementation, the GMF receives more training and more management and organization skills. In this period the community fully decides and controls the operation and maintenance of the water system. The promotion of hygiene and sanitation is particularly actively led by the GMFs.

The gender aspect in community participation is the main concern of this research. It is very clear that women are the beneficiaries of WASH, but it just responds to the practical needs of women. The main concern of this research is in regard to the equality of the two sexes, considering that women are facing various social, cultural, and structural barriers to being actively involved in community work that is meaningful and important to their wellbeing and personal development. The triple roles of women have to be given special attention in this research. Only through the renegotiation of the two sexes in dealing with domestic work, and not solely delegating it to other women, will women have more time to participate in community work. If this can be implemented, then strategic gender needs can be met. This process cannot be achieved by women alone, but with the support from institutions promoting gender sensitivity training to the community and gender mainstreaming policy.

[9] *Documentation Guideline Revision*, Secretaria do Estado para a Electricidade e Águas Serviço de Águas e Saneamento, 2010.

On the other hand, maintaining gender concerns in RWSS is necessary for a variety of reasons: among them, women's participation may ensure the effectiveness of the projects and meeting the project goals, besides contributing to environmental sustainability (UNDP, 2003).

Islas (2010), in her thesis conducted in Nicaragua on women's participation in a community-driven development project, showed that the women who become involved in this project are much more confident. They can renegotiate with male family members to look after domestic work. The men started to change their perception about women who are usually economically dependent on men.

A recent study of over 100 rural water supply projects indicated that women's participation, along with other variables, is highly associated with project effectiveness. It also revealed that in spite of the rhetoric about women's involvement prevalent in many project documents, only 17% of the projects surveyed scored high on women's participation. Thus, although much has been written and many models have been formulated, the 'burning issue' now is how to operationalize and institutionalize what has been learned. As Christine van Wijk-Sijbesma states, "There is a need to integrate the involvement of women in a systems approach to water supply and sanitation, including regular monitoring and feedback on both the process and the effect of their involvement in relation to the type of technology and the socio-economic and cultural circumstances." (Narayan, 1993 in Wakemen, 1995).

Experience shows that a failure to consult women at the project planning and preparation stage can lead to inconvenient design and location of facilities and thus to their non-use. If women are not involved early on, then they will also tend to be passed by at later stages of implementation, management, maintenance, and evaluation (IRC, 1991: 3).

The presence of institutional factors, which are largely related to the features of bureaucracy and professionalism, is mentioned in figure 2. They include the rules and regulations of an organization, the complexity of its structure, and the tensions between bureaucratic goals and those of the community (Bauman, 1974). They can be related to the established relationship between the staff and community members and with the levels of transparency and impartiality of the decision-making procedures (Tyler, 2002).

Zelalem Getachew (2005) in his master thesis paper entitled *"Determinants of Sustainable Rural Water Supply System in Ethiopia"* has indicated that the sustainability of rural drinking water supply systems is determined by community participation, women's participation and involvement, cost sharing and cost recovery, community awareness raising and education, water resources and base-line survey, repair and maintenance services, water users

management body and structure, technology, and institutional support. Assessments in Cameroon shared the same results as Zelalem. The water schemes were mostly managed by the community and, among 438 schemes, only 9% of these schemes were disrupted (Bolt. & Khadka, 2000). Many researches also showed that some water schemes without community participation are no longer in use. According to Bolt and Khadka's observations in many other countries, beside the technical defaults and natural disasters, a lot of community managed systems do not operate well due to lack of management training and poor administration of the water committee (ibid.).

The field research of Harvey and Reed (2004) in Ghana, Kenya, South Africa, Uganda and Zambia indicated the seven key following elements; policy, institutional arrangements, community and social factors, technology and the natural environment, spare-part supply, maintenance system, and monitoring determined the sustainability of the RWSS (in Tesshome, 2007).

The socio-economic and cultural factors are supposed to be very influential to participation in WASH projects: they may severely hamper or facilitate the extent and the effectiveness of participation (Ife & Tesoriero, 2006; Berends, 2009; IVO, ICTA, ITN-BUET, & CEDECON, 2008). There are many diversified demographic profiles of community members: gender, age, family size, education level, political affiliation, and socio-economic status, to name a few. There may be 'cultural drawbacks', meaning influences of some of the traditional characteristics found in many developing countries: a culture of silence (fear of open participation), belief in meta-social factors like destiny, gender stereotypes in the public sphere and more (Alambeigi, Zarifian, & Rezaei, 2008).

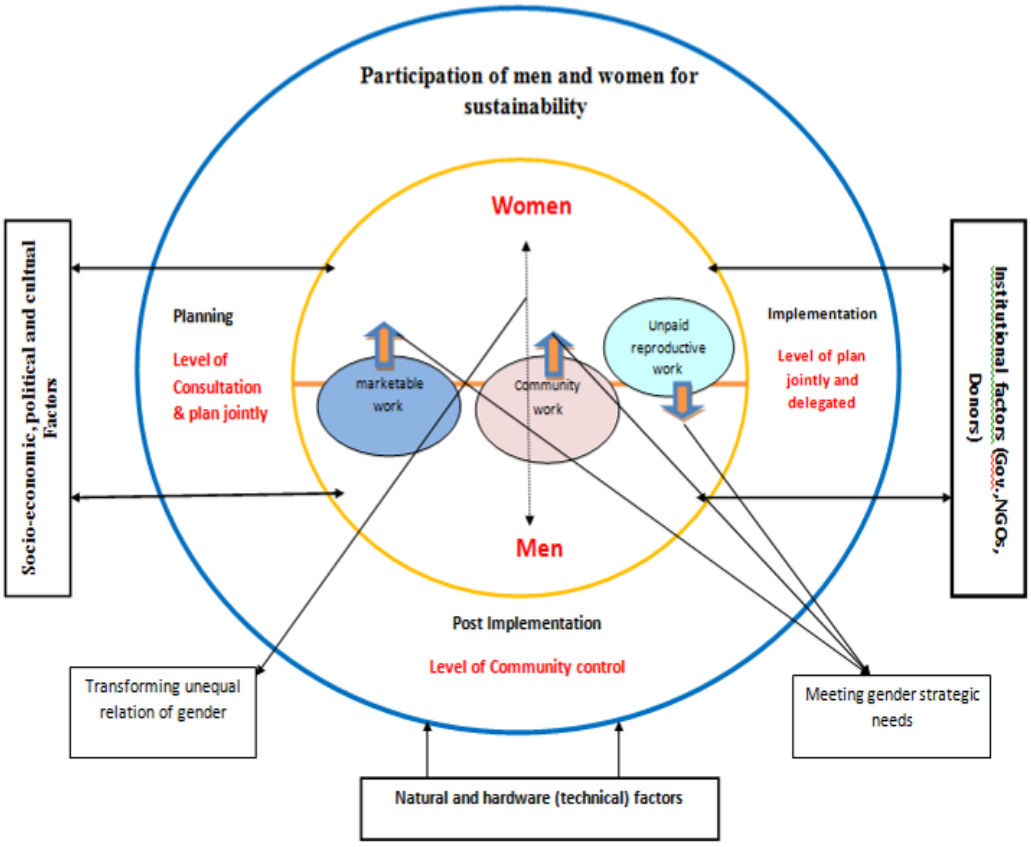
In one research done by Shila (2006), household characteristics were found to be factors affecting the rate of participation and in decision-making. The family size also strongly affected the frequency of attendance of meeting and decision-making, showing that the larger the family, the greater the participation. The research also found that male heads of households participated more in community meetings and decision-making. More men than women were actively participating in group meetings. On the other hand, the research also found that the level of education and participation in other local organizations and groups are influential factors to participation (ibid).

The 'Technical and natural factors' mean the possible technical problems that may occur (e.g. the poor quality of constructions also affect the collective action of the community (Nisha, 2006: 5). Natural factors refer to the geographical characteristics of the location. Mountainous

areas or remote community locations are undeniable obstacles to sustaining RWSS projects. Natural disasters like typhoons, erosion or floods are among the main causes for the breakdown of the water pipe systems.

Synthesizing all the key concepts and interacting factors that demonstrate the dynamics of the concepts of community participation and gender issues in water supply and sanitation services, I came up with a conceptual framework demonstrated in figure 2, which serves as a guide to further steps for the research.

Figure 2 – Conceptualizing community participation in rural water supply and sanitation (RWSS) in Timor-Leste



To sum up the key interplaying factors to achieve the sustainability of community participation, an adequate policy frame and an integrated institutional arrangement needs to exist to guarantee the equal participation of men and women. This should consider; socio-demographic profile of the community members, other social and cultural factors in the context of where the projects are implemented, continuous capacity building for the community management team, available technology, and the natural environment.

3. Methodology

None of us are to be found in sets of tasks or lists of attributes; we can be known only in the unfolding of our unique stories within the context of everyday events

Vivian Gussin Paley (1990, p. xii)

The methodological approach to this study is based on case studies. Before explaining the choice of this methodology and elaborating more extensively on the case study research, let us have a look at the historical background and philosophical implication behind it. In 1829 Frederic Le Play was a pioneer in bringing case studies into social science (Baxter & Jack, 2008). In the 1920s and 1930s the University of Chicago's Department of Sociology adopted the case studies and developed various important theories in the sociological field. Later, on the basis of this method, the case study approach was further developed by Barney Glaser and Anselm Strauss who elaborated a research method that was well known as Grounded Theory in 1967. Furthermore, Eckstein believed that the case study commonly used in social sciences took root from clinical studies in medicine and psychology (2009: 120). In recent decades, analysis and research using case studies has been widely used in science of Education, Social work, Nursing, Psychology, Anthropology, Economics, Politics and the like.

The philosophical implication of the case study is grounded mainly on constructivists' framework (Stake, 1995; Yin, 2003; Baxter & Jack, 2008). As these authors believe that:

> Truth is relative and that it is dependent on one's perspective. This paradigm recognizes the importance of the subjective human creation of meaning, but doesn't reject outright some notion of objectivity. Pluralism, not relativism, is stressed with focus on the circular dynamic tension of subject and object (Baxter & Jack, 2008: 18).

Indeed, the meaning making process depends very much on one's personal view and experiences. From this philosophical perspective it is important to go through different definitions of case study methods. The Merriam-Webster dictionary defines case study as: "An intensive analysis of an individual unit (as a person or community) stressing developmental factors in relation to environment" (Merriam-Webster's Dictionary, 2009). Thomas (2011) defined case study as follows:

> Case studies are analyzes of persons, events, decisions, periods, projects, policies, institutions, or other systems that are studied holistically by one or more methods. The case that is the *subject* of the inquiry will be an instance of a class of phenomena that provides an analytical frame — an *object* — within which the study is conducted and which the case illuminates and explicates (Thomas, 2011: 23).

Some authors presented case study as: "strategy of inquiry, a methodology or a comprehensive research strategy" (Creswswell, 2007: 73) and explain it as an intensive study.

Creswell categorizes the case study as one of five approaches to qualitative research: phenomenology, grounded theory, ethnography, case study and narrative. He defines the case study as:

> A methodology, a type of design in qualitative research, or an object study, as well as a product of the inquiry. Case study research is a qualitative approach in which the investigator explores a bounded system (a case) or multiple bounded system (cases) overtime, through detailed, in-depth data collection including multiple sources of information (e.g. observation, interview, audiovisual material, documents and reports) and reports a case description and case-based themes (Creswell, 2007: 73).

For Creswell, a specific characteristic attached to the case study is the 'qualitative approach'. This provokes a series of questions: Can a case study embrace quantitative characteristics? Can a qualitative researcher present her research in a quantitative manner? Hence, Stake (1995) and Yin (2003) helped to resolve these methodological queries, and have erased the polarization of the two approaches: quantitative and qualitative. Yin (2003) affirms that the case study can embrace both approaches: qualitative and quantitative. Further, Stake argues that the object of the research will determine the researcher's choice to choose the suitable approach. The different arguments above in the definitions of the case study, in a certain way, contributed immensely to formulating the units of this research and deciding what types of data are necessary to obtain.

In summation, the case study approach adopted in this research was a complex mixture of different types of units that include individuals from different institutional settings (two villages, DNSAS, and NGOs), policy of WASH projects on community participation, the performance of DNSAS in responding to the needs of rural communities and the policy of gender mainstreaming. Therefore most of the characteristics needed for a case study mentioned in Merriam-Webster's dictionary (2009), Thomas (2011), Yin (2003) and Stake (1995) could be found in my study. I preferred the idea of Yin and Stake, namely that a case

study can be composed of both qualitative and quantitative approach. It means that inside one objective unit of the research exists sub-units or different variables that could be counted and ranked. For example: In a community I can count the similar qualification of the respondents relating to their income, age or level of education. Furthermore, techniques mentioned in Creswell's definition in relation to in-depth data collection from multiples sources of information (eg. Observation, interview, audio visual material, documents, and reports (Creswell, 2007: 73)) were found useful in orienting me where to go in my study.

Case study, like any other research methodology, also has its own limitations and certain shortcomings. Indeed, there exists many attacks and critics on qualitative research conducted using the case study method. It has been labeled as 'soft science', 'unscientific',' personal', and full of bias (Denzin & Lincohn, 1994). The positivist sciences are often seen as the crowning achievements of western civilization and their practices assume that 'truth' can transcend opinion and personal bias. Qualitative research is seen as an assault on this tradition (positivist science). In relation to the validation and reliable test of variables, the case study revealed a certain weakness in this aspect (Denzin & Lincohn, 1994).

However, I also totally agree with authors who claim that the advantages of a case study are undeniable. Indeed, this approach opens and extends to field space and chances for interacting face-to-face with research subjects (Matveev, 2002; Lecompte & Preissle, 1993). It unveils hidden data and deepens knowledge on the social and cultural setting of a small community. Flyvbjerg gave high recognition to case research and undermined the generalized tendency of interpreting the quantitative approach: "Predictive theories and universals cannot be found in the study of human affairs. Concrete case knowledge is therefore more valuable than the vain search for predictive theories and universals" (Flyvbjerg, 2011).

In spite of the disadvantages involved in the case study approach, as revealed by various researchers as mentioned above, I resolved to go with the case study approach because it helped me to obtain refined personal experiences of women and men, their life settings, and to search the 'natural history of the social unit' and its relationship with the social factors as well as the induced impacts from its surrounding environment. This method is helpful in analyzing and comprehending the former experience of people in the community (Kothari, 2004). On the other hand, case study research "can play an important role in planning and carrying out a development project, particularly in designing interventions that are tailored to suit the local context" (Kothari 2004: 114). Furthermore, a case study facilitates better understanding of a

particular case, illustrates a particular problem, provides insight into an issue and can further refine a theory.

All of these advantages encouraged me to choose in-depth interviews as a principal technique with different actors in RWSS, while concurrently conducting observations of field settings where the interviews took place to understand the dynamics of participation in rural areas, as well as the possible emerging factors that both hinder or facilitate the participation of community members. The case study approach also had the advantage of allowing me to delve deeper into the stories of some women in the village and to discover the gender relationship. I want to let the case "tell its own story" (Carter, 1993). Another reason for my interest in this methodological choice could be the human-centered principle in doing research (spending more time with people, listening to them) as well as conducting development work that was inspired by my social work experiences with vulnerable individuals, groups as well as communities.

Before making the decision to choose the case study as the principal methodology for this research, I also went through a series of researches on RWSS, it appeared that these research projects predominantly adopted quantitative approaches when dealing with many cases, surveys and studies about water supply and sanitation. They discuss various issues related with finance, techniques, sanitation coverage, water treatment, water quality or human resource trainings (Hubbard, Sarisky, Gelting, Baffigo, Seminario & Centurion, 2011; Cohen & Uphoff, 1977; CERG, 2007; Rodrigue & O'Neal, 2004; Nielson, Giltner, Dutton & Donohoe, 2009; VO, ICTA, ITN-BUET & CEDECON, 2008). Quantitative researches (Nisha, 2006; Padangwangi, 2009; Tesshome, 2007; Osumanu, 2010; Marks & Davis, 2012) and qualitative analysis (Taylor, 2004; Shepherd, 2009; Mwakila, 2008; Akbar, Minnery, Horen, & Smith, 2007) on community participation have been done recently in the field of water and sanitation and other types of development projects. Among these mentioned researches, very few studies have addressed the gender aspect in community participation (Yuerlita, Febriamansyah, Saptomo, 2008; WHO & UNICEF, 2009; Gatachew, 2005). One ethnographic research done in Timorese agriculture development has encapsulated several aspects of participation in regard to authority and resource distribution, however the gender aspect was sidelined or even absent in this study (Shepherd, 2009).

It is important to highlight that research in the development field normally uses large-scale surveys, which are traditionally supposed to be more trustworthy and more objective than studies that are more qualitatively driven. Nevertheless, despite the visible advantages of

quantitative approaches, it is relevant to say that they often fail to consider the nature of the local knowledge, as well as people's experiences and subjectivities. This consideration is even more pertinent if we consider that, for some authors, these aspects of the social fabric are considered less important or even irrelevant (Laws, Harper, & Marcus, 2003).

Here are some particular studies and the methodological option made by different authors. For example, Nisha (2006) studied how household characteristics affect participation by employing a quantitative approach based on a survey. Besides not having considered the questions concerned with gender relationships, the study was also somewhat less complete regarding the analysis of different levels of participation. This research paid minor attention to the social, cultural and political settings of the research field. A larger scale and more comprehensive research on water management for sustainability, conducted by Oxfam Australia, used multi-research techniques in their methodology (Kamtukule, 2008); however without reaching an in-depth inquiry into factors that could actually facilitate or restrict women's participation.

Mwakila conducted a case study on community participation in development projects, however the technique of collecting data was interviews with respondents by phone rather than face-to-face contact. This diminishes the chance to observe the real actuality on the field and the facial expressions of respondents (Mwakila, 2008).

Kleemeier (2000) did a qualitative research using direct observation techniques and desk research on the impact of participation on the sustainability of rural piped scheme programs in Malawi. The report went through a very detailed observation on the water system and an intensive study on secondary data. However the primer and in-depth data about the community members appeared vague in the research. Furthermore, gender issues were completely absent.

In collation, the given methodological characteristics of these above-mentioned studies, which followed mainly a quantitative approach, and some qualitative studies did not cover the gender issue. I realized that there had not been research on community participation in water and sanitation services in TL, and that it was time that a more in-depth, beneficiary-centered, community-based approach research was conducted to pave the foundation for future researches. This research could explore the conception of the social world of community people through their daily experiences as a complex matter, which are undoubtedly conditioned by political and structural factors, as well as by cultural contexts.

In order to complement and enrich previous researches on gender and community participation conducted in developing countries, including TL, this study aspires to capture the interrelated dimensions of basic needs, development, community development, community participation, and gender. It was thought that the initial research on the Timorese community's participation in the area of water supply and sanitation could pave a conceptual path for future researches on water, sanitation, gender, and community participation.

There are some case study researches done in TL on community participation, however they are single case studies on different types of projects (Shepherd, 2008). In this research, a multi-case studies design was adopted. It means that the two hamlets in Maubara were chosen and the research was done on the same project of water supply and sanitation in these two hamlets. The intention of this type of design was to use 'theory building case studies' by selecting cases to "develop and refine the propositions and develop a theory that fits the cases we study" (Vaus, 2001: 220). Furthermore, a multi-sited ethnographic method (Marcus, 1995) was employed by selecting various research sites for exploring different types of information from distinct settings.

A multiple case study enables the researcher to explore differences within and between cases. The goal is to replicate findings across cases. Since comparisons will be drawn, it is imperative that the cases are chosen carefully so that the researcher can draw similar results across cases, or contrast results based on a theory (Yin, 2003).

It needs to be clear that one case in this research is equal to one hamlet; two case studies are equal to two hamlets. Respondents chosen in the two hamlets must meet some criteria set out to satisfy the research objectives, which will be described in more detail in the case selection account.

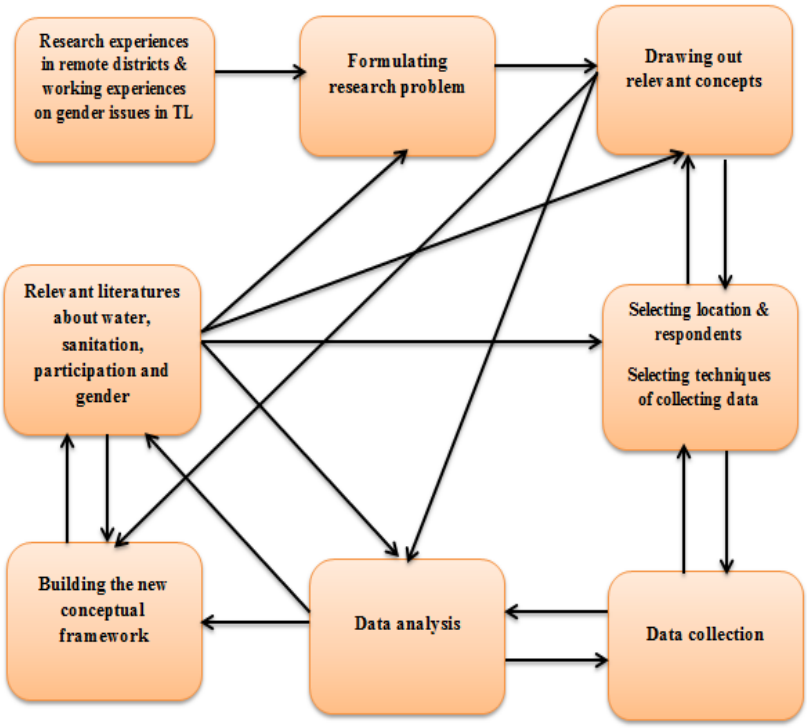
This study was implemented in three settings, therefore the characteristics of each setting produce the nature of the data: for example, in the community-based field setting, the data characteristics of this research were dominantly qualitative from in-depth interviews. In desk research on secondary data from the office of DNSAS or village office, the quantitative data from the statistic reports or from documentary sources were obtained. However the information from the in-depth interview with the directors from the DNSAS office naturally took the form of narrative texts.

3.1. Research Path

This part presents the sequence of events undergone to conduct this research, which was taken in an interactive form which involved a process of building the new conceptual framework by going back and forth between literature reviews, guiding conceptual frameworks, data collections, and data analyzes.

The diagram below summarizes the process of doing this research. The research problem started from my own experiences working with Timorese women in rural and urban settings. The ideas of community participation started with my experience teaching in a community development department. The research problems were formulated by my own personal contact with a gender adviser in the BESIK program. Here, an idea emerged on how to determine women's involvement in RWSS in TL and also to ascertain the main factors influencing community participation. Government institutions, community organizations, and NGO institutions have recognized and started to give importance to community cooperation and participation in all the developmental programs, and in programs to restore and maintain peace and rebuild the country. By reviewing other research and literature reviews on gender inequality, as well as RWSS issues, I came up with a pre-conceptual framework and research hypothesis. In addition, this initial background research also helped me to develop research instruments. The literature review process continued throughout the research period until the end of the report writing. This process was extremely important during the data analysis phase. I had to put my findings under the light of some theories and compare them to other researches. When the new conceptual framework was constructed, it was vital to go back to the pre-conceptual frame that was built from literature reviews and personal experiences to see if it is still applicable to the actuality of the research field. Following the research instrument development phase is the process of data collection. The data collection was divided into many sub-phases. Data transcribing and screening was an important sub-phase that involved a process requiring the whole range of records from note book, information from tape recorders, and memories. This process required the recalling of memories and observational notes, which could add more substance and meaning to the data analysis.

Figure 3 – Research Path



Source: Based on the interaction research design idea of (Taylor, 2004: 81) and modified by author

The data analysis phase was followed by the categorized phase, which drew on common themes and sub-themes of the research. It was very important to continue to relate and interact the pre-conceptual framework with the theories and concepts from literature reviews in order to support the process and analysis of the data. Data analysis was one of the most vital phases, which formed the construction of a new conceptual framework. This phase, nevertheless, continued to interact and relate with the preceding processes like collation of personal experiences, literature reviews and the phase of data collection.

During the building of a new conceptual framework, I drew concepts from analysis of the results data, from the initial conceptual framework and the literature review phase. Different new factors emerged in the research findings that were unique and not yet mentioned in previous researches. While continuing the literature review, I constructed a new conceptual framework that considered the new concepts derived from the study process. This required a comprehensive examination of the context-based nuances of the whole picture of the two cases. The conceptual frame was built on the contextual base, local knowledge and cultural background and the reality of community participation. It accounts for real life circumstances

and considers factors with the potential to transform. Therefore this phase could be regarded as a process of knowledge production.

This research path was naturally an interactive process. It was not a lineal process. These different phases were interrelated and interactive. The process of analyzing data was intertwined and crossed with other processes like literature reviewing, personal experiences, observations in the field, and data acquired from interviews. Figure 3 is a general summary of the whole research path, which is described in more detail in the methodology chapter.

3.2. Selecting two cases in Sub-district Maubara

This research mainly concentrated on the community participation. Before making contact with the community, I planned to choose a hamlet with a good reputation for participation[10] and one with a poorer participation history. The objective of creating these criteria was to examine the influential factors that prompted unsuccessful participation and to determine what were the hindrances to good participation. Before the data collection, I had a brief consultation with the DNSAS officer of district Liquiça and the technical assistant from AusAid. Sub-district Maubara was suggested as a good example of community participation. Sub-district Maubara recently proceeded to establish federation of all the GMFs from eight villages. It was necessary to choose a suitable locality for the research where it was also appropriate to conduct purposive sampling, in which special characteristics of the object decided the technique of sampling.

On the other hand, Liquiça is geographically closer to my home town compared to other districts.

Actually 13 districts in TL received the same operating policy framework on management of the RWSS projects. However there are some projects that are quite successful and some that are not. This is a crucial point to discover and unveil by comparing and examining the actual situations in the field.

In Maubara, I chose two hamlets that had commenced WSS projects in 2009 to limit the scope of the research. Since 2009 DNSAS has recruited sub-district facilitators to help the community carry out their action plan and coordinate the work at different levels; from hamlet to national level.

[10] The indicator of good participation was seen by the community facilitators and many staff as the capacity to maintain the water facility in good condition, the regularity of attending meetings and their creativities and the maintenance fund was continued.

Table 4 – Conditions of water systems in Sub-district Maubara

Name of villages	Water systems are not functioning well
Vaviquinia	4
Gugleur	5
Vatuvou	14
Guiço	4
Lisadila	5

Source: (SAS, 2011: annex 3)

Table 4 presents a list of villages experiencing problems with their water systems. Among them, I chose a village with more damage to its water system named Vatuvou. According to the annual report, this village has 13 groups of GMFs and they were no longer active. The hamlet named Vatunau has 10 damaged water systems. If a community can not maintain their water system, it is a strong indicator that the community participation of this village is ineffective or very weak. The least damaged water systems in the two villages (as seen in table 3) are Vaviquinia and Guiço. However the CF of Maubara suggested that the hamlet Dair of village Gugleur is considered as the best one in terms of community participation and it was chosen as the pilot sample for the water supply project in 2010.

When I stepped into the two communities, the differences were blatantly apparent. Factors that I had thought caused Vatunau to be the community with the least participation were not the cause, and there were other factors that disrupted the participation of this community causing it to be ineffectual and unsustainable.

The different realities of the villages made me review the objectives of the research. I changed my view of focusing on less participation by looking at the different kinds of participation in Vatunau village, which was a spontaneous, need-driven community participation in which the participants were not well organized or trained. They were not under any monitoring of NGOs or government agency. When I looked at the gender issues in this village I noticed that a gap existed between the community under the influence of gender mainstreaming policy and the one that is not. This analysis will be described in more detail in chapter 4. The following part of this section discusses the process of collecting data.

This research was conducted in two phases: The first phase was from January to March of 2012[11] and the second phase necessitated going back in the field on January 21, 2013 to follow up the situation of village Vatunau and conduct the interview with the village chief of Vatuvou. There was also promising news about the prospect of Vatunau attaining two new water systems in 4 more months.

3.3. The selection of respondents

The selection method of respondents adopted the 'purposive' type, which is to choose possible cases that fit particular criteria (Neuman, 2007), or more specifically as Richie & Lewis defined:

> [P]articular features or characteristics which will enable detailed exploration and understanding of the central themes and puzzles which the researcher wishes to study. These may be socio-demographic characteristics, or may relate to specific experiences, behaviors or roles (Richie & Lewis, 2003: 180).

Bryman mentioned that in qualitative research sampling is done in terms of what is relevant to and meaningful for our theory (Bryman, 2004). In this research the GMF members, traditional leaders, village chiefs, and hamlet chiefs of the two hamlets were purposively chosen at the beginning of the research plan**.** However the snowball sampling technique was applied in the process of looking for community members in two hamlets of sub-district Maubara. With the help of GMF members I could extend my interview with other community members who were available at that time.

Besides choosing the respondents in the two hamlets, I also chose some key informants from the DNSAS and AusAID offices.

From the DNSAS office, the National Director, Director of Sanitation department, Director of SAS Districts, Vice-Director of SAS Districts, and the community facilitator of the sub-district Maubara, Liquiçá had all worked closely with the community for the previous two years. These key informants were very important because they were knowledgeable about the project situation thus far, they provided their own experiences and also the challenges they were facing, such as information on their experiences with the bureaucracy of the organization, the policies, financial issues, their contacts with the community, their

[11] During this period the researcher returned to the field four times. The road leading to the village was extremely bad and dangerous. The time between visits was two weeks due to the rainy seasons and road conditions.

perspectives on community participation, their expectation about the community and their comments about the process of community participation.

The AusAID gender officer who was involved in the project was interviewed to gain a larger picture of the development projects that operated in TL and also to gain insight into her opinions, analysis about the comments on community participation and also on gender issue.

In the community setting, the respondents of the two villages were classified as presented in table 5.

Table 5- Classification of respondents in the two communities

	Female	**Male**
GMF member	3	3
Village chief	-	2
Hamlet chief	-	1
Traditional leader	-	2
Community member	6	2

Source: information collected by the author in the field

I believed that by interviewing and contacting community members, I would obtain more comprehensive data relating to their socio-economic and demographic profile, as well as their experiences and feelings about their involvement in the project. The community members gave and shared their experiences, opinions, insights, and their perception of participation. Women also shared the structural obstacles in their participation and their expectation from the water supply and sanitation policy. I expected that the interview process with community informants would reveal not just data for this thesis, but the chance to reflect on and appreciate contributions towards this project by community members.

3.4. Techniques of collecting data: Between narrations, reflection and comprehension

3.4.1. Face-to-face interview

Techniques used in this research were direct face-to-face interviews (a general term that embraces interviews of, both, the semi-structured and unstructured kind) (Bryman, 2001), direct observation, and literature reviews.

The main flow of the interview is story telling by letting the participants freely express their feelings of joy, disappointment and hopes in the development projects as well as in their lives.

In addition, several directors at the national level, and a sub-district facilitator were interviewed. Direct face-to-face observations made during interviews with respondents was done in the community setting. This helped to further understand the interviewees, by assisting understanding through unspoken words, eye contact and non-verbal movement and facial expressions.

The direct observation that is non-participant observation on the field (Vanderstoep & Johnston, 2009) was adopted from one of various important ethnographic approaches. For this research, ethnography was essential and inevitable because it gave me a more realistic outlook of the research subjects that I could not obtain in numerical and statistical analyzes acquired in quantitative research. Furthermore, it helped me to read the nuances of rural society settings, the interaction among the people in the village, the way a director responded to a question, the uncertainty and confusion of the staff at the SAS office all helped to disclose the complex picture of the whole program in which water and sanitation are definitely BDN that require much effort from different counterparts to sustain.

Besides direct observation, I employed different methods of interaction with the participants in the whole interviewing process: I used follow-up questions, formulated the sentences of the respondents, made it clearer to understand and asked for their confirmation, using expressions such as: “As you mentioned earlier…” and “Is this what you mean?”. I took immediate intervention when the respondents gave ambiguous information with questions like: “How is it, can you explain more?”, and I allowed them to tell their story, because in this process “the people realize they have acquired a tacit knowledge about things that previously they would not have been able to articulate” (Lee, Bray, Smith, Yoks, 2000: 95). It is important to allow respondents to reflect, and gather meaning from their experiences.

Qualitative interviews took the form of semi-structured interviews, but sometimes an unstructured interview was used to establish an initial relationship between the interviewer and the participants, particularly in the initial phases. It was arranged so that the male research assistant would engage the male members of the community in conversation after their interview if they seemed reluctant to leave, so that I could disengage from them and find an isolated location to interview the women where they felt more relaxed to talk without being under the observation of their men. For example: when I finished interviewing the chief of the GMF, I was also interested to know what his wife’s role in the family and in the project was. The form of an informal conversation proved to be a very important setting to explore the non-written text in their daily lives. The women felt more at ease in this setting when they

talked about their own work, housework, dealing with children, doing handicraft and farming. My observation was that, if I asked them directly about their involvement and their knowledge about the project in front of the men, then they would be more inhibited because of the perceived cultural issues (culturally they are not accustomed to expressing their ideas in front of many people), which hindered them to talk openly. Therefore, I preferred to talk to them when they were not in the presence of men.

Semi-structured interviews in this research were conducted face-to-face and the process of the interview was flexible. Even though the interview was guided by an interview guide sometimes questions were asked spontaneously to maintain the flow of the participant's account (Bryman, 2001), however it was also imperative to cover all the major themes of the research. Some questions in the interview guide were changed to fit with the situation of the local village and the activity of the people there. For example, in Guleur, after I knew that most villagers have flush water toilets, I no longer asked about it. In relation to questions about demographics, I adjusted the question "how many people live together in your house?" this question was unclear and confusing, because in the rural context, the extended family is part of their family. Therefore, the question was changed to "How many persons live in your house all together including you?"

I paid more attention to the nature of the research relationship and I was also aware that "unhealthy barriers that exist between the researcher and the researched in the research process" (Hen, Weinstein & Foard, 2006: 35) could exist. An attempt to establish a more reciprocal relationship with informants was made, and an effort to build a "more collaborative knowledge-construction" process was made (ibid). People involved in the research were well respected and, as contributors to the research, they were not seen as 'information-giving beings'.

3.4.2. Direct (non-participant) observation: Insights, meanings and rediscovery

In addition to face-to-face interviews, required data on community participation was obtained by direct observation. The techniques of observation were employed in all research settings: at the institution as well as at the villages. Observation was made of important facts, behaviors or attitudes (Jorgejensen, 1989) and was conducted via "artificial immersion" (Vanderstoep & Johnston, 2009), meaning that some distance and a certain degree of objective separation were maintained.

A faint distinction is made between direct observation and participant observation. In this field study direct observation was made only on the field or when I interacted with the respondents. However, no participant observation occurred that required more time becoming involved in daily activities of the villagers to gain a more interior and subjective insight into respondents' experiences (Jorgejensen, 1989).

In the following paragraphs, I describe my participant observation and experiences in my own village in Dili, which also had unstable and infrequent access to water.

In the words of Dr. Ramirez: "qualitative research is the study that assumes that what is observable by our five senses is brought about by the intangible internal processes externalizing themselves in reality" (Ramirez, 2007: 1). I realized that what I observed might not reflect the essential meaning of a phenomenon. It could be understood as a limitation of the time I spent in the field. I agree with a saying: "it is only with the heart that one can see rightly; what is essential is invisible to the eye" (cited in Ramirez, 2007: 1). To a certain extent I felt that I understood the extremely deprived living conditions of people in the village. By participatory observation the term "Verstehen", as explained by Max Weber (Rizer, 2000), can be employed by putting ourselves in the situation of the ones we seek to understand. Observing experiences of the villagers revived personal memories of fetching water in Dili in 2002 when I had arrived in my husband's house for the first time. We did not possess our own well, so we had to depend on the well of a neighbor. The difference between my experiences of fetching water with the women in the village of Vatunau is the distance. The distance from my house to the well of the neighbor was only 20 meters (a 4 minute walk). However, the Vatunau women have to walk 2 hours. Nonetheless, I understood what it felt like to lack access to water. During the time of data gathering from February to March 2012, the Comoro river was overflowing and it swept away the water pipes causing severe damage to the water system. This problem affected many areas in Dili including my village and, consequently, we did not have access to pipe water for a month. I found it hard not having access to water at home. Having to fetch water consumed most of my time that I could have otherwise spent on other productive tasks.

I still recall the first day when I entered hamlet Vatunau: Everything was so unpredictable. I could not make contact with the chief of the GMF because there was no telephone signal (some areas in Maubara are not covered by the telephone net). The CF could not contact ahead or inform the villagers that we were coming. By chance or by luck we arrived there with the CF. The chief of the GMF said that we were lucky that we caught him because he

had planned to go sea fishing that day, but he cancelled it because his fishing partner had to go to indigenous ritual activities (‘Adat’ celebrations). The road to the village was extremely damaged. A private water tank of approximately $1m^3$ was located beside his house. This tank was used by his family as well as by his neighbors who did not have a tank of their own.

The house of the GMF chief was fenced by bushes and cassavas. There was a lot of maize, papaya trees, and cassavas in his garden. He owned a cemented house and on the balcony of the house stood a sewing machine, which functioned as a means of earning extra income by his wife. Some sacks of cement were stored in a corner of the porch, to be used to complete the unfinished construction of his house.

Dair village is located about 2 km from the main road, the road is also extremely stony and damaged and requires a powerful four-wheel drive. It is a green village with many trees along both sides of the village. When we arrived at the house of the GMF chief, a big and long distribution tank was located in front of his house. A fence made of branches surrounded the distribution tank. It was well kept and in a clean and dry condition.

During the interview with him, I observed the interior of his house. The chief of the GMF is a hard-working man. He constructed his own house and I could see some unfinished work with the sand, cement, and iron still on the ground and half of the wall was waiting to be filled in. Some other community members were also present. As usual I could see everywhere when I visited a Timorese house and it was the women or girls who were in charge of preparing drinks and snacks for the visitors.

Around his house was quite green, he planted many trees and he directed the residual water to his garden (it was explained that the product from the garden was not consumed only by his family, but also by the neighborhood).

During the interview the men seemed to have more information to contribute than the women, evidently since they were more involved in the project than the women.

However, it was apparent that the women and children retrieved the water from the public tank more frequently than the men.

I could not arrange to attend any meetings because most of the time the people held them in the evenings. The road condition during the raining season did not allow me to stay overnight in the village. I wished to observe the community meeting in the evening, but because of the distance, the bad road conditions, and the poor weather, travelling at night was not possible.

3.4.3. Written documentation search

The written texts are collated from reports, minutes of community meeting, and DNSAS policy papers, which aid understanding the national policy on water supply and sanitation and the scopes and space for autonomy of the community to manage their water system in rural areas. The BESIK manual guidelines provide some idea of what phases of the project the community has a greater role in. The financial report of the DNSAS revealed records on the professional characteristics of the DNSAS staff and the amount of capital they invested in human resources. The performance of women's participation in the structure of the GMF from the sub-district and district level was accounted by the directors, the gender officer from BESIK, and the CF. In addition, the documents provided better understanding of the social, political, and economic context of the community. Census 2009 provided information on the level of education of the community's population, their livelihoods, and means of earning a living, as well as the crops they planted. The follow-up reports on the community allowed a look at the participation of men and women in this process. The report on the water supply of SAS sub-district Maubara provided a general picture on the condition of the water system in Maubara, the number of GMF groups, and the number of water systems that did not function well. Information on the participation of men and women could be found in the community meeting minutes, as well as the ideas contributed to improve their activity and action plan in one month. In these minutes I could see a pattern of ideas based on gender categories, and the number of men and women who participated in the meetings.

3.4. Data collection process

I went back to Dili on 17th December, I was fully aware of the bureaucracy system of the university, therefore I prepared ahead the list of agency names and persons that I had contacted. I attached the list with the authorized letter from my advisers outlining the empirical research and submitted it to the director of the university in order to receive a recommendation letter. Then the first meeting with the director of the DNSAS was arranged one week ahead with the secretary of the director. After going through many delays and cancelations because of the director's busy schedule, I finally had an interview with the director of DNSAS at Dili, explaining the objectives, scopes and limitations of the research and its significance in contributing to the work of the DNSAS institution in promoting community participation. The director then organized access to the telephone numbers of the

other sections' head of departments including finance, sanitation, and water supply in the district level.

A meeting with sub-district facilitators led to a planned visit to the target community for my pilot interview.

Contact with the RWSSP of AusAid resulted in obtaining related documentation in the form of training manuals, policy papers and reports on gender mainstreaming work in cooperation with the DNSAS, which provided more visible details on the scope of the project. This additional material also helped to improve the interview guide with the director of DNSAS as well as the gender officer. However, arranging a personal meeting with the team leader of RWSS was not possible and a phone interview was necessary.

A pilot interview was conducted with a team leader and a female member of GMF in the sub-village of Dair, Gugleur. Afterward, the interview guide was revised, some questions in the previous interview guide were eliminated because of duplication, and some more questions for women community members were added while keeping in mind the structure of GMF. However the basic information remained and more questions relating to her function as a member of the GMF were added, especially in regard to her roles of coordinating other members.

A plan was made with the sub-district facilitator to choose women from other demographics for an interview in the second round of interviews at Gugleur village. Namely, one old woman, one young single woman, and two married women were planned to interview.

The following interview was after two weeks and included four women and one man. The research assistant helped me to translate from Tetum to Toquodede and reversely. Some information was repetitive, therefore I skipped some questions related to types of toilets used. I was under travel time pressure due to the rainy season, because the village was located at the other side of a broken bridge and whenever the heavy rain hit this area, it was impossible to pass the river. This also affected the reviewed plan for a longer interview. The list of respondents in Dair is presented in table 6.

The inter-personal approach proved very important and therefore it was necessary to always demonstrate a simple, understanding attitude and calm facial expressions so that the informants could feel at ease, which was conducive to unrestricted communication. This does not imply that I was faking these characteristics, but rather I was attempting to not express any negative or discouraging emotions.

Table 6 – Respondents from Dair hamlet of Gugleur village

Respondents	Sex
Chief of GMF	Male
Member of GMF	Female
Member of GMF and coordinator of cooperative	Male
Member of GMF	Female
Community member	Male
Community member	Female
Community member	Female
Community member	Female
Total	**8**

Source: information collected by the author in the field

I held on to the principle of voluntary willingness and cooperation and fully respected the respondents' choices. I could sense the cooperation of the community members and how they were encouraged to talk when I actively listened and gave importance to their stories. They were really enthusiastic to talk about their plan and experiences and I realized that their dreams were so practical and simple yet sometimes it was not easy to realize them. They knew that I was only a researcher, not a policy maker or a donator. I did not promise to give them anything, yet they were happy to share their problems and their needs. I was impressed by the cooperative spirit of this village, in fact I wrote about their efforts of initiating a cooperative from the maintenance fund in one national Timor-Leste journal (Timor Post) and I have since received very good feedback from the villagers.

The second chosen hamlet was Vatunau. Interviews here took much the same format as the first hamlet. I planned to conduct the interviews in this village over a period of two weeks. The day we entered this community was the first visit for me and also for the facilitator. We had to ask for directions from the local people to show us the road leading to the house of the GMF chief. The facilitator told me that he only contacted the chief of the hamlet by mobile phone. The day we arrived, the chief was away in another village attending to a traditional ceremony ('Tara Bandu'), therefore he could not receive us.

We arrived at the GMF chief's house who, according to the sub-district facilitator, is a relative of the chef of the hamlet. I was somewhat surprised that he knew this even though the SDF had never been to the village. The chief of the GMF also had never met the SDF. He always contacted the chef of the village. When I talked with the GMF chief I realized that my first perception was misleading. In this village, another form of community participation

occurred to sustain the continuity of their water supply that had not been recognized by the SAS office and was not documented and was achieved without any support from the SAS district or NGOs. A detailed description of this is mentioned in chapter 4. Table 7 shows the respondents involved in the second interview in Vatunau hamlet.

Table 7 – Respondents from Vatunau hamlet of Gugleur village

Respondents	Sex
Chief of GMF	Male
Member of GMF	Female
Community member	Male
Community member	Female
Community member	Male
Community member	Female
Total	**6**

Source: Constructed by author

3.5. Data analysis

In qualitative data analysis, the data collection and data analysis actually overlap, since the analysis of data begins after some has been collected, and this analysis will form the following steps in the data collection process (Bryman, 2001). Data obtained on the field was transcribed and cleaned every day. Any unclear or missing information would be clarified in future meetings.

Analytic induction techniques (Gomm, Hammersley, Foster, 2000) were adopted to generate the final conceptual framework. In addition, multi techniques of analysis were employed, such as typological analysis, comparison, enumeration, and presentation of observational data. (LeCompte, Preissle & Tesch, 1993). Typological analysis started from the transcribed database where typical themes were searched. The information was then categorized, or types of information, which were devised from the previous conceptual framework or 'mundane perception of reality' (ibid: 257). Within each category, the differences and similarity between men and women relating to some categories, like education level and types of participation in the meeting, were highlighted. Comparison techniques were employed intentionally to underline the differences between the two villages, Dair and Vatunau, in terms of their natural resources, geography characteristics, population, the nature of economic activity of the population, advantages and disadvantages in receiving development projects, and so on. For example, in relation to the geographic characteristics, Vatunau village is located near a river and is very vulnerable to floods and strong rain, which can wash away the water pipes that

lead to the village. While the water source of Dair village is located in a safe place that does not have any floods or erosion. In terms of economic activity, Dair village has more economic potentiality than Vatuanu. Men in Dair village mostly worked as fishermen, and women mostly did "*Homan"* (handicraft made from palm leaves).

An attempt to link categories was made for each social unit of one village (for example, experience in organizational involvement category can be linked to the quality of participation of one person, or the gender category can be linked to the type of role and tasks performed in the project, etc..).

New categories would rise from the three research sets (written documents, observation, interviews) and they were exhaustedly categorized and compared. This process contributed to building the final conceptual framework on community participation.

Significant and comprehensive quotations, phrases, and words from the participants are presented and quoted in the analyzing data section. Enumerated data is presented in table form, the stories and opinions from key informants and observational data are presented in narrative form.

Collecting multiple sets of data (interview data, written materials and observation) proved advantageous, because it allowed the opportunity to conduct data triangulation. For example, the interviews with the community members will be triangulated against written documents and interviews with external experts or the DNSAS staff.

In addition, there will be a tandem analysis process; reflecting the meanings of the data sets in the views of theories or findings from other literatures.

3.6. Validity issues: always an unfinished task

Ramires stated that, "The criteria for validity of a method in science is a strictly philosophical task. It must be based on the nature of the person and the world, the material object of science, and on the standpoint of the question asked by a specific science or the formal object of science" (Ramirez, 2007: 3).

Due to the case study method chosen, the validity problem in this research cannot be approached in the same manner as that of quantitative research. For this research, data triangulation was employed. Information was triangulated in three research settings, namely institutional, documentary, and field research.

Secondary data proved very important to complete the information from primary data and also helped to validate it. Secondary data was gathered by desk research through DNSAS

reports, DNSAS policy papers and statistic sources on demographic profiles of the two villages.

The validity of the research was unique and particular to each case and was triangulated with data from other institutions and local leaders.

To verify the results of the data triangulation, interview techniques triangulation was spontaneously utilized when the given field setting allowed, i.e. in my presence, the key informant and external surroundings (respondents with the other people and respondent alone with me). In some settings, I could interview female respondents alone, since it was presumed that the information given by respondents will somehow differ if there were people in the near vicinity. When I interviewed the chief of the Gugleur village, there were around eight people sitting around us (mostly men, only one woman). I believed that the information he provided was true and reflected the reality of the water projects in the village because he was giving his account in the presence of witnesses.

My research, as already noticed, is deeply ingrained in my own experience as an inhabitant of Timor-Leste. Validity was always a central element in this research and enough distance to allow for subjective analysis of the discourse, narratives and practices was preserved, while maintaining attention to phenomenological influences affecting the way these people see their world, construct it and are able to discuss it.

However, this research faced many challenges that were caused by some objective and subjective conditions, as presented in the next part.

3.7. Challenges faced in the research process: Between familiarity, foreignness and temporal dynamicity

When I began this research, I had no intention to focus the research on only women's issues. However I developed a special interest in interviewing more women. My questions were directed to men and women with the intention to challenge their unconscious thoughts on women and men in the community relationship with their accepted traditional roles.

The men in these communities appeared perplexed when they learnt that the women were the focus of the interviews. Male informants were also sometimes surprised when questioned about the participation of women. The expression of some men and the tone of their voices indicated that they thought women's roles in water projects were not so important. The men also had an abundant amount of data and information on the project, because they were more

exposed to the activity. However women also gave more truthful data about their daily life as women in a remote village, with various infrastructural disadvantages. Furthermore, the information they provided could serve as a suitable cross checking tool for the data provided by the men. An opportunity for validation in this research occurred when I asked a father: "where does your daughter defecate or urinate when she is in school?" he answered, "Well, in the WC of the school". When I asked the mother the same question separately she answered, "oh, my daughter just goes to the bushes at the back of the school, because there is no water to flush the toilet in the school and it is very dirty". Various information was given quite differently from the responses of men and women. Naturally, this research required gender sensitivity, particularly to women who are unaccustomed to public exposure and who sometimes refused to talk about something that was traditionally prohibited. They sometimes avoided conversing by saying, "you better ask the men, we are women, we are not allowed to talk about this."[12] Along this line, Capitolina Diaz (2012) said that "the important thing is not making science feminist but doing science as feminists."

In addition to difficulties inherent in researching gender inequality, are the difficulties identifying the patterns and perceptions of people during participation in RWSP. The projects' activities, at the time of observation, focused more on maintenance. Therefore data collection had to rely on the memories of the villagers, the GMFs, and the community facilitator to draw out important points of their experiences in participating. Some respondents were asked about their interesting experiences in the project. Some had forgotten and others needed their memory jogged with ideas or questions.

Another challenge that was noticed in the hamlet of Vatunau is that they were labeled as an example of failed community participation by the community facilitator. However, it was nonetheless necessary to objectively listen to the villagers as well to validate the information.

Another challenge that I confronted in this research is that I am not an original Timorese. A feeling of being treated as an outsider always existed. However, I realize that my research is meaningful and I endeavor to reveal the good and positive aspects of these people that have not yet been realized because they are so occupied with their immediate material concerns and basic needs that they have forgotten a precious communal asset that they possess, namely the social capital and the capacity to work together. I did not speak their language and I have not adequately mastered my Tetum to sufficiently convey what I wanted to express or to ask. The

[12] Author's personal recollection from research on traditional practices in Suai Loro, District of Suai.

research assistant and the SDF, who were very kind and patient to accompany me in the field, both helped me translate.

I fully realized that this was a deeply embedded problem that was only superficially unveiled. The fact that I am a foreigner actually was conducive: I could listen to information that the Timorese would not usually discuss with other Timorese. This information detailed the mismanagement of the organization and further informal information that will not be presented in this paper. All of this information served as a reminder to myself to be conscience of not being naïve when analyzing and observing the problems of the whole program.

The concept of 'stranger' of Simel (Rogers, 1999) can be applied in my case. I am not a member of a group, not a part of them, I maintained a distance to them but I felt free to move in and out of the community without having any binding commitment to the village. In fact I told them at the beginning that I came to the village to learn, understand their daily lives, and to know about the nature of their involvement in the water supply and sanitation.

I understand well the situation of the village women in relation to their division of time for family and for community work. I am a mother and a researcher. It was not easy for me to fulfill all the requirements in both sectors. As a mother, I know how hard it is to divide my time between my family and my research. I understand the daily dilemma of deciding which activity is more urgent and should take priority.

The travel distance to the villages was also a big challenge for this research. Maubara is not far from Dili (where we were located), it is about 2 hours by car, however in the raining season the river usually is over flooded and thus more difficult to cross. In addition, the road was badly damaged in some parts, leading to the sub-district Maubara. The poor communication infrastructure impeded fast Internet access to download the necessary materials for this research. During this thesis research, many trips back to Portugal were needed to download more secondary data and references.

The chief of the village of Vatunau really wanted to show off the community's water tank, however there was insufficient time. I wish I had more time to walk the 6 km along the dry river to see that tank (although I would have great difficulty returning to the village if the rain came). However I had to go back to Dili before the sun set because if the rain came, our car could not cross the river.

The other challenge was the problem of deciding "how many cases?" Initially, it was decided that two hamlets should be chosen: one with good practice of participation and one with less participation by screening the reports of sub-district community facilitator. I anticipated that

the more water systems that were broken, the lesser the community participation. But in fact, the field experience revealed that the situation of sub-village Vatunau was different, not because of their bad participation, nor their lack of group organization, but because of environmental factors that make them stay put. As the village chief said, “Even if we organized the GMF group, there was no water system for us to maintain.”

Therefore the second case study chosen was a case with disoriented, voluntary, spontaneous participation of the community members of Vatunau.

Some authors believe that a multi-case study will help them to generalize some patterns of the research objectives. The main purpose of choosing the two case studies was to find out, using the same intervention strategy from the NGO and government agencies, what makes one village have good participation and the other not. However the multiple case studies helped to identify the strengths and weaknesses of the policy intervention in terms of facilitating and guaranteeing the equal participation of men and women, and also to determine what are the strengths and weaknesses in community participation without the policy intervention.

The methodology choice of this research was not a simple, vertical process. Even though the chosen location, the respondents, the interview technique and the research instrument were sometimes not well designed or planned, they were eventually adjusted to the reality of the field. The case study methodology of this study combines a qualitative and quantitative approach. The ethnographic technique was used to deeply explore different layers of social, economic and cultural life of community members. In addition, a gender/sensitive approach was used to discover different levels of information, which was structured and processed differently between men and women. Organizing the rich mass of data from the three research settings, and the literatures from different researches was extremely demanding and was reorganized into specific themes. The interactive nature of the research design extended the overall process of the research, but this allowed more time to ponder and rearrange the research.

4. Research Findings

As Getachew (2005) indicated in his thesis entitled *"Determinants of Sustainable Rural Water Supply System in Ethiopia"*, the sustainability of a rural drinking water supply system is determined by community participation, women's involvement, community awareness raising and education, cost sharing and cost recovery, water resources and base-line survey, repair and maintenance service, the presence of a water users management body and structure, technology, and institutional support. Another assessments in Cameroon shared the same results as Getachew. The water schemes were mostly managed by communities and, among 438 schemes, only 9% of these schemes were disrupted (Bolt and Khadka, 2000). Other water schemes that did not involve community participation are also no longer in use, as evidenced by many researchers. A quantitative research done by Linda Prokopy (2005) also proved that capital cost contribution and households' participation in decision making were proven predictors of household satisfaction, equal access, and time saving. According to numerous observations in many other countries, besides the technical defaults and natural disasters, a lot of community-based management systems do not operate well due to insufficient management training and poor administration of the water committee (Bolt and Khadka, 2000). These research results suggested a great deal of meaningful implications for the data analysis in this chapter. In this presentation, the findings were categorized according to sub-themes that fit into the built-up assumptions and the objectives were set up in the end of chapter 2. It was supposed that the community members, the DNSAS officers and the staff would define the concept of participation differently and that their perceived benefits of participation brought to the RWSS project would also be varied. It was also assumed that the typology and the level of community participation would be very dynamic and diversified. Furthermore, the level of involvement of men and women was not the same in different phases of the project. In addition, the underlying social, economic and institutional factors, which facilitated this and restrained men and women from participating actively, in RWSS projects were put into discussion.

It is important to accept the reality that what was anticipated at the start of this study did not materialize, but instead, some other unexpected factors entered into the picture of this study, which were very important and complementary factors for other findings. Before presenting the research findings and discussion, which is based on different sources of literature, an overall review is presented covering the geographic, social and economic characteristics,

cultural background and patriarchal system, the situation of water distribution and sanitation conditions of sub-district Maubara. All of these factors are considered relevant and important to help examine, on a larger and smaller scale, the cases in two smaller hamlets that are part of sub-district Maubara. Furthermore, since the contexts of participation of the two hamlets are very different, they are presented separately. In addition, the main findings of the two villages will be presented combined as a single data set. Here, the different and common points are indicated and are presented in the following sequence:

(1) The perception of participation of the two villages and of DNSAS officers,
(2) the typology and level of participation,
(3) socio-economic and political factors that may have a certain impact on community participation. These are described in this section as: the income of respondents, the accessibility of population to toilet facilities, education level, land ownership status, and affiliations to groups and organizations,
(4) women's participation is examined in a separate section,
(5) the natural factors, particularly the natural disasters that interrupt the community participation, and lastly
(6) the institutional factors that have the greatest impact on the quality of the water and sanitation services and also directly influence community participation.

4.1. An overall review on sub-district Maubara

This section is divided into three parts. The first part describes the geographic, socio-economic and political situation in the sub-district Maubara. The second part provides more information about how the water projects and sanitation program operated in the whole sub-district. The third part describes the cultural and traditional background of Maubara, Liquiçá, which more or less has a great impact on the cause of gender inequality.

4.1.1. A general geographic, social and economic picture of the sub-district Maubara

Sub-district Maubara borders sub-district Liquiça in the East and sub-district Atabae, District Bobonaro. It also borders sub-district Hatolia, Ermera District in the mountainous part, and Maubara is close to island Alór-Indonesia across the sea.

Regarding its geographic and demographic characteristics, the total habitants in sub-district Maubara is 19,564 from 4,193 households (DNS, 2010). Maubara's degree of latitude point is

8^o 36’ 43” S and degree of longitude point 125^o12’ 22” E. Its annual temperature is more or less than 33^o C (SAS, 2010).

In terms of geographic characteristics, “A coastal plain and a fairly sharp transition to mountainous areas involving very steep slopes that are environmentally fragile.” (Ministry of State Administration, 2002).

Picture 2 – A broken bridge in Liquiçá

Taken by author

The majority of water sources are concentrated in central highlands. In rainfall seasons, after intensive big rains, the streams with broad and fast-flowing water bring with them silts and rocks, resulting in thick mud beds that overflow from the rivers to roads or to any place that is in a lower position. In contrast, in the dry season, the rivers turn to stony creeks (Ministry of State Administration, 2002).

Timor Island had two major western influences in their territory during the 16th century, namely Holland and Portugal. Maubara was known as a historical location of Liquiça. This is one of the factors that make Maubara a future economic potential, especially in tourism. In 1613, Holland made its first contact with the western part of Timor. Some remains of the defense wall in Maubara are preserved until today.

After the referendum for independence in 1999 until July 2001, the CNRT was the most influential political institution in the whole country including Maubara. After the restructure and formation of political parties, FRETILIN (Frente Timorense de Libertaçao Nacional) was established as the dominant political party in Maubara, however in 2007 the new political party CNRT was formed and it has since provided a counter balance to FRETLIN (Ministry

of State Administration, 2002; Matsuno, 2009). Most of the village chiefs in Maubara are FRETILIN members and only two are CNRT members.[13]

In relation to social services and educational institutions, Maubara has 8 primary public schools, 2 public and one private pre-secondary, 3 kindergartens, one community health center, 7 health posts, two research centers, 3 training centers, and 3 meeting halls. Economic activities include 1 restaurant, 1 Internet shop, 1 motor repair shop, 2 carpenter shops, and 1 fishmonger.

In terms of agriculture production, Liquiçá ranks at 5th position, after Oecussi, Aileu, Ainaro, and Ermera, with 70% of households planting maize.

Maubara has 3,299 households in which 69% of households produce maize, 62% of households produced cassava, and 53% of households produce coffee (ranked after sub-district Liquiça with 56% of households), 66% of households produce coconuts. Most of the products are consumed in the community and, at any rate, these agricultural products would be extremely difficult to transport to the town or city because of the bad roads and lack of suitable transportation.

The external walls of the houses and the materials that people used to construct their roofs reflect the economic situation of the households. In Maubara, among 3,299 households, 290 have concrete or brick walls, 1,323 use bamboo, 1,582 use palm-trunk (bebak), 2,226 use zinc roof, 774 palm leaves/thatch/grass (tali tahan), and 241 use bamboo (RDTL, 2010).

There are 5,425 women 15 years and above in Maubara. Among the 3,602 women who have experienced child delivery, only 147 were assisted by a doctor, 200 by a trained midwife, 309 by nurses, 139 by an untrained midwife, and 2,756 by relatives,47 women were with no assistance and 4 by others (ibid).

Overall, Maubara is an economically deprived sub-district. Its population hardly has appropriate health care services for prevention of community diseases such as malaria and diarrhea. Women, in particular, with their reproductive processes and all that it entails, lack sufficient government care services. Especially women, whose reproductive processes are not well cared for by the government services, lack sufficient care. This is also a result of lack of adequate infrastructure, transport, telecommunication and so on.

[13] Through the conversation with CF Maubara, the information about political party is quite a sensitive issue and is not an easy question to ask directly to the interviewee.

4.1.2. An overall review on water systems and sanitation projects in Maubara, Liquiçá

There exists 113 water systems in Maubara that are run by gravitation (this system makes use of the different land lattitudes from the higher to lower ground) (gravitasaun), 20 use an electric pump, 1 uses a solar pump, 9 use a manual pump, 79 use a bucket tied with rope, and 6 use a small Sanyo pump.

Table 8 – The condition of water systems in Maubara

Categories of water system	Functioning well	Broken
Gravitation	102	11
Electric pump[14]	0	20
Solar pump	1	0
Manual pump	6	3
Manual well	68	11
Sanyo pump[15]	6	0
Total	**183**	**45**

Source: SAS, 2010

These systems were constructed during Indonesian occupation and remain until now. According to the report of the CF (Facilitator Sub-district) from SAS, most systems did not involve the participation of the community during the planning, implementation, and post implementation phase. There was also no integrated follow up by the government. This becomes apparent on observation of the table above showing that 25% of the systems were not functioning.

From 2000 to 2002, the World Bank through CEP (Community Environmental Program) operated water systems in 7 villages in Maubara, however these systems were not sustainable. It was assumed that the local community did not cooperate or lacked the necessary responsibility. In 2003 to 2006, AusAID, Oxfarm Australia, and USAID worked with local NGO partners like Aplimentas, FOLSETIL, LODA, HTO, and Fundasaun HADER. According to the report from SAS, half of the systems were destroyed due to lack of maximum participation of the community (SAS, 2010).

In 2007, WaterAID implemented water and sanitation projects in 5 hamlets (Rainé, Lissa-Ico, Mau-Ubu, Lissa-lara no Baiuenolau) of 2 villages in Maubara: Maubara lissa and Vatuvou. Its

[14] Electric pumps usually use bigger engines to pump the water up. It can provide for 1,000 households.
[15] Sanyo pump refers to the smaller engine to pump up water. It is usually used for domestic purposes, serving from one to five households.

projects served 122 households with a total benefitting population of 683 people. In 2008 it expanded its projects to cover 13 hamlets (Samanaro, Vatunau (foho), Labuae, Lissa-Ico, Bouravei, Vatuguili, Bautalo, Baiquenolau, Lissa-Lara, Manuquibia, Darulem, Numulete, and Mau-Ubu) benefitting 903 households or 3,755 people in 3 villages (WaterAID, 2010). However one of the limitations of WaterAID is that they could not build the water system if the distance from the water source to the center was more than 6 km (SAS, 2010). This information was cross-checked when I did the interview with the secretary of the village chief of Vatuvou and community members in Vatunau community member in hamlet Vatunau.

In 2008, The Red Cross rehabilitated some water systems in the hamlet Dair of village Gugleur with 52 households, and 214 people benefitting from it. In 2010, CVTL rehabilitated 1 water system and built two new systems in 2 villages; Gugleur (Vatumori & Lebulugor) and Guiço (Pandavou, Vatuvei, Mau-Unu & Irlelo). These systems benefited 74 households, or 361 people.

USAID together with AusAID did not work directly with the community, but they funded local NGOs. In 2004, USAID funded local NGOs such as: LODA, Applimentax, FOLSETIL and BIAHULA to build some new water systems in village Guiço (Vatuvei), and Gugleur (Puuelete). These projects benefited 80 people in 2004 (Hader, 2004).

AusAID also gave funds to LODA, Applimentax, FOLSELTIL, and BIAHULA in order to build new water systems in the villages of Gugleur (Cai-Cassa, Raenaba & Lebulugor), Vatuvou (Vatunau, Raimé & Samanaro), Vaviqinia (kamaledagana, Nunuana), Vatuboro (Vaupú, Sabulau), and village Guiço (Irlelo) until 2005. These projects benefited a total of 347 people.

DNSAS and SAS Liquiçá (SAS-L) realized the importance of community participation to maintain proper functioning of the water system over the long term. They set up an integrated plan with the help and financial support from AusAID. RWSSP helped to recruit CFs in 13 districts, and by 2009, SAS-L had one CF for sub-district Maubara.

In 2007 and 2008, SAS-L provided spare parts to some communities in order to repair their own systems, such as the villages of Vaviquinia (Delesuwati) and Vatuvou (Vatunau), for example, assisting a total of 338 people. In 2010 SAS-L also provided spare parts to other communities like Gugleur (Lautekas) and Vaviquinia (Darulara-Kamaleramut), assisting a total population of 277 people (SAS-L, 2010).

In 2009 SAS-L also started two new water systems in the two villages of Vaviquinia (Delesuwati, Darulara & Lebumeta) and Guiço (Caicassavou and Maun Unu) to serve 760 people.

In relation to the sanitation situation, during the years 2002 to 2004 the sanitation program was run by NGOs. The toilet facilities were given to different communities but these systems were not sustainable. During 2008 to 2010 the CLTS (Community led total sanitation) from local NGOs and from WaterAID Australia started to raise awareness amongst the rural community to participate actively to prevent diseases caused by poor hygiene and sanitation. Table 9 presents the number of toilets that were used in Maubara.

Table 9 – Basic sanitation Situation in Maubara

	Until 2008	**2008 – 2010**
Using toilet facility	1,175	2,324
Open defecation	3,018	1,869

Source: SAS, 2010

According to the data indicated in table 9, there has been a significant change in behavior in Maubara from 2008 to 2010, prompted by the significant increase in the number of toilets. However the number of water related diseases seems unchanged in relation to acute respiratory infection and diarrhea according to the figures from table 10.

Table 10 – Types of common diseases reported in Maubara

	Diarrhea	Cholera	Acute respiratory infections	Malaria	Tuberculosis
Until 2004	1113	12	5,993	1,089	13
2004 – 2006	902	3	5,890	629	31
2006 – 2008	897	0	6,482	214	28
2008 – 2010	877	0	6,999	78	22

Source: DPHO-L, 2010 (Oficiais Serviço Saude Publico Districtal)(Official District Health Service)

4.2. The Dair hamlet: historical establishment and the context of community participation

The establishment history of the hamlet Dair is scant and insubstantial at best because there is no official record or archival notes about the history of the village, due to the limitation of the older generations in terms of writing. The story about the village Dair was handed down through oral storytelling from the older generations to younger generations. Sometimes these stories were disconnected and not well memorized by the storyteller. These recollections had to be gathered and then reorganized chronologically. Mr. Santos, an heir from a noble family of the hamlet Dair, recounted the history of his family as follows:

> Our great grandfather named Barokloi, I do not remember exactly what year was his rule, but as I remember my father told me he ruled the village before the Portuguese came to Timor, as we can see that, at that time our grandparents were animists, his name *Barokloi* was not a Catholic name (Baptized name). He married a sister of one hamlet chief from his neighboring hamlet. Barokloi was the first chief of the village. He put a big rock at the border as well and constructed a village gateway to mark the border of this village with the others. In reality, hamlet Dair borders with 5 other hamlets respectively named: Watuboro, Talistatla, Kaikasa, Fukelete, and Fatuk. For us the rock was a symbol of our village identity. Every year we bring betel nuts and areca to this sacred rock to pray in memory of our ancestors. Prior to this, we lived in Kailok (the upper part of the mountain) then we moved to Dair, at that time we had more or less about 40 households. Before we moved down to Dair, there were some members from family lines that had lived there to produce salt. And then, the Catholic religion gradually permeated all regions after the Portuguese started their administrative rule in Timor-Leste. Before our ancestors were animists, then one of our grandfathers, named Carlos, a Catholic who was the descendent of Barokloi, governed our hamlet around the years of 1880s (Santos, traditional leader, Dair).

Mr Santos' story bears a notion of boundaries; a concept that seems very strong in this community. According to Wilkinson (1991), the fundamental components of community are a 'locality', a local society, and a process of 'locality-oriented collective actions', usually understood as geographic fields in which people interact and relate to each other. They create an all-inclusive web of relationships for meeting collective needs and articulating common concerns. Wilkinson also stressed the social interaction that occurs in the locality, or 'community field', which describes 'locality-oriented collective action', i.e. bringing people of the community together to find answers to community problems. This explains the good participation of community Dair in the water and sanitation project.

The notion of locality does not solely bind community members; the stories and legends also create a sense of pride and identity for the community itself. In relation to the name of the hamlet, there is a legend that was told from generation to generation. The name of Dair actually has its own mythical legend, which is a source of pride for the community. The legend was recalled by Mr. Santos as follows:

> Dair is the name of the village but it also had its own story about this. Our ancestors used to live near the shore and most of them were fishermen, one day a man who went fishing in the sea felt something pull the fishing line, when he lifted up the rod, he saw a stone on the other end of the fishing line. He brought the stone to the village and worshiped it. Since then, the village has been named Dair (it came from the term *dada*, means pull) (Santos, traditional leader, Dair).

The mythical stories of the two hamlets, Vatunau and Dair, complement stories about the sacred objects of the indigenous people in Vietnam and in Timor, which include stones, trees, wild animals, rivers, mountains and so on. The most important object that cannot be absent in indigenous worship in TL is stone. Kahn conducted his ethnographic research in Papua New Guinea where he also found that the Melanesian tribal groups believed that: "Stones that have mythical significance are said to be paraphernalia of ancestral heroes or heroines – or the ancestors and ancestresses themselves – that have turned to stone." (1990: 51).

There are many myths existing throughout all the Melanesian regions in the Pacific Ocean. Timor Island also shares this geographic region and, therefore, the cultural interchange among these ethnic groups is inevitable.

Stones symbolize eternality, something solid, difficult to destroy. The story of Mr. Santos about his ancestor keeping a large stone at the village gateway and the stone that pulled at the fisherman's line both hold certain embodiment implications. The meeting point of this argument can be supported by the affirmation of Malinoski (1922) as follows:

> The mythical world receives its substance in rock and hill, in the changes in land and sea. The pierced sea-passages, the cleft boulders, the petrified human beings, all these bring the mythological world close to the natives, make it tangible and permanent. On the other hand, the story thus powerfully illustrated, re-acts on the landscape, fills it with dramatic happenings, which, fixed there forever, give it a definite meaning (1922: 330).
>
> .

Dair hamlet carries with it many mythological stories, including a myth about a water well near the shore. This water well was the only water source near the hamlet and this well still exists until now and the people from this hamlet fetch water from it when the public water tank malfunctions. Mr. Santos related:

> We had a well, it was natural, nobody dug it, it just appeared there, it was there near the shore, near those houses now located at the right side of the main road. A woman went to the shore to cook salt. She brought with her a puppy. Under the sunshine like that, her puppy appeared to her entirely wet. She kept on following and observing the dog, she wondered if the puppy soaked its body in the sea, but it did not do that. Then the puppy stopped at a well that was covered with 4 flat stones. She heard the voice of boiling water inside that well, she tried to lift up one stone to look inside the well, and then the water level went down. Since then our village used the water from that well, we have to use a string tied with a buckle to drop it down to the well to fetch the water. Until now, people still take care to use the well carefully and they consider it as sacred. During the intensive dry seasons we brought the betel nuts and areca to pray for rain, we believe that the well is sacred and it is the source of water (Mr. Santos, Traditional leader, Dair).

Although the woman in the story isn't attributed a special day, the village always appeals to her for water or rain. One mythical thing about this well is that it never dries and it always has water in it even during the dry season. The story really marks a significant symbol of sacred and strong community unity, which they are very proud of.

Dair hamlet is one of 11 hamlets of the village Gugleur with 55 households, with inhabitants totaling 243. The number of women in Dair is greater than the number of men with 125 women and 118 men. Compared with other hamlets, Dair is near to the main road leading to Loes and not so far from the sea, this is the logical reason why most men in this hamlet know how to fish and earn their living by fishing. The economic activities of women in this village are mostly handicraft. The population of Dair has long accustomed themselves with fishing and handicrafts, which provide means to earn a living. Both men and women usually plant their food crops as maize and cassava and other income generating crops. People of Maubara

are very religious, including the people of Dair, and they organize various religious activities throughout the year..

Dair hamlet is one of the most successful community participation examples. Before the water project, the people had to retrieve water from the open well near the beach. Women usually carried water for domestic use. It took them 1 hour to carry 20 liters of water home from the well. A girl from the community shared that:

> When the water project was not yet implemented, my smaller brothers and I had to go very far to fetch the water, it became part of our life, my brothers and I did not have much time to study, we had to walk to school and it takes us around 1,5 to 2 hour to go and return. It seems that we spent more time walking. After reaching the 6th class of elementary I decided to stop, because my mother needed me to help at home (A single women 23 years old, hamlet Dair).

After the project was implemented, the primary water source that the people from village Dair now use is the public tap, which is canalled by gravitation. In terms of toilet access, all the people of this village use septic tank toilets. Furthermore, when eight respondents were asked about girls' accessibility to toilets, they all answered that girls in this village have access to a toilet at home.

The water system in this village was built in 1996 by ICRC-PMI and it was rehabilitated in 2008 by TL Red Cross (SAS, 2011). The GMF group of this hamlet was restructured in 2009 with the help of CF. A marked transformation in the GMF group is the inclusion of one woman in the technical team and one man in the health promotion team.

4.3. The Vatunau hamlet: historical establishment and the context of community participation

Hamlet Vatunau of sub-district Maubara is the entrance space to enter Maubara. It borders with village Dato of sub-district Liquiça, which is one of the most populated among the three villages of Maubara with 3,828 people (1,960 males and 1,868 females). The total number of households in Vatuvou is 1,868 (NSD & UNFPA, 2011).

The establishment of this hamlet was told in an oral mythical story, which was handed down from generation to generation and, yet, nobody knows exactly when it was formed. A descendent of the first family line accounted a story about the village in an oral story telling manner with the witness of his other family members (his brothers and nephews). Avô (grandfather) Nando slowly took time and recounted:

> Since a long time ago, even before the Portuguese came to Timor, our great grandfathers had been governing this land. The name of this village before was Vatunau lete, the pronunciation before was Fatuknau (fatuk is rock), it all started with a rock. Before, far on the mountain up there, appeared a big long rock with an areca tree rooted in this rock. One day, there appeared a tsunami, the water rose up, the thunder, the lights, then the rock cracked and the areca tree flew away, nobody knew where it went. However the rocks were still there but did not maintain its whole shape, it took the form of pieces.

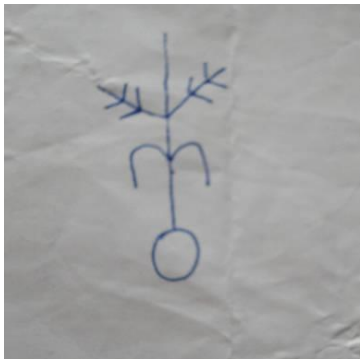
Once again like Dair hamlet, Vatunau's legend of establishing the village is also connected to a stone, and the legend also contributes to establishing the name of the village. Avo Nando also drew a symbol of the village (an areca tree on a rock), which has great significance until now. This symbol is carved on the legs of horses or buffalos so the people from other villages can recognize their property.

We can also notice that this hamlet has a highly hierachial structure and the clans are all connected, therefore it forms a communal type of community. Tönnies (2001: 27-28) named three types of community: 'community by blood', 'community of place' and 'community of spirit'. 'Community of blood' means that there exists a biological body in common, thus a kinship; 'community of place' means sharing land in proximity, thus a neighborhood, and 'community of spirit' embodies sharing the bonding of sacred places and the worshiping of the same deities, which identifies rural areas in TL where the worship of "Lulik"[16] is common amongst Timorese society.

The basic structured classification of class in the village was formed by agreeable norms among the community members, for example, when the village symbol is carved on the left thigh of the cattle (horses, buffalos), then others know that this cattle belongs to the common people, however, if it is carved on the right thigh of the cattle, they know it belongs to the *Liu Rai* family (noble class).

[16] *Lulik* comes from the Tetun word which is literarily translated as "forbidden", "holy" or "sacred".

Picture 3 – Symbol of the village Vatunau drawn by the brother of Avô Nando



Avo Nando also mentioned that the ancient grandparents of the mountains did not know how to use fire to cook meat, until those living near the sea taught them. At that time, they did not know how to plant food, they lived on the fruits and vegetables that naturally existed in the forest. They believed God showed them which food could be sweet and edible and which food could be harmful. Slowly they discovered or learned from the others and they started to plant. The arrival of the Portuguese in particular started them on their way to planting corn, coffee, etc..

In the past, there have been many conflicts within the village as well as between villages. Often the fighting has been over land, women and the like.

In summary, the accounts have provided an overview of the establishment of the village, the adaptation of the people who live in a fluctuating weather environment and its social status stratification among the local landlords and the common people. It plays as a foundation on which to understand the diverse dynamics of community movements and it explains, to an extent, how the community organized themselves to respond to their basic needs.

In terms of agriculture activities, 84.18% of the households farm various types of crops such as coconut, coffee, bananas, maize, cassava, and vegetables, and only around 6% of families plant rice. There are very few social services in this village; 1 kindergarten, 1 primary and 1 catholic chapel.

The literacy rate of adults from 15 to 24 years old of Vatuvou is 57.74%, compared to the whole of Liquiça, which is 73.84%. Almost 90% of the population speaks Tokodede dialect. 38.86% of the Vatuvou population is formally employed, and the rest involved in sufficient agricultural production or unemployed.

In terms of economic activities, Vatuvou has a high proportion of cattle raisers with 93.93% of households raising goats, buffalos and cows.

Vatunau was chosen from the start of the research as a second location to study. This village has 246 households with a total population of 1291 inhabitants composed of 640 female and 651 male (SAS, 2011).

This is a coastal village about 2 km from the sea. Oakerson (1992), and Crawford, Miriam & Cesario (2000) mention in their work the factors influencing the collective action: one of them are the characteristics of the locality. Some studies have shown that coastal regions are vulnerable to clean water scarcity, and usually the water is contaminated with saline and arsenic content (Harun & Kabir, 2012).

Finding the house of the head of the GMF proved difficult, despite the CF being present (this was an indication that the CF did not cover the entire community). The GMF explained that he had always met the hamlet chief in the administrative office of the sub-district Maubara. The house of the GMF chief of the village is about 800 meters from the main road, which is a narrow trail about 3 meters wide edged by low bushes. It is a non-cemented trail with a rough surface covered with small rocks.

The house of the GMF chief is fenced with a plantation of cassava and inside is a corn (milo) plantation. A small water tank, around 1 meter wide and 1,3 meters high with a small tap was in his garden. He explained that it was the private tank of his house, but according to him he also shares it with those who do not have their own tank. Hamlet Vatunau has two water sources: Dato Kolo and Lau Soro.

Another expedition to this village was made on January 23, 2013. The intention was to interview the traditional leader who was known as ‘abo Nando to learn about the history of the village.

This hamlet belongs to village Vatuvou and borders with Village Dato of sub-district Liquiça. The eastern part of Vatuvou is bordered by the main road, which is about 20 meters to the sea coast. Vatunau is the sub village of Vatuvou and it is divided into two parts; the upper part and the lower part. It is located at the riverside of a very fast flowing river, which, in the past, had destroyed a bridge crossing leading to the main road that leads to Dili. Since the bridge was destroyed all the vehicles have to cross through the river, which is impossible when it rains. Then all the vehicles have to wait until the water level reduces. The structure of the soil and rocks in this area are vulnerable to erosion when the water flow is very strong, since it

washed down all the small rocks, stones and soils, sometimes it covers the main road up to 0.5m thick.[17]

Augusto Pereira was elected as the third chief of GMF in 2011, after the first died in 2008 and the second resigned from his work in 2009.

In December 2011 the village experienced a natural disaster. The water source was destroyed by the (sizeable) river Pelapu. The distribution tanks, which are located about 6km from the village, were broken or leaking, the joints were broken, and the pipes were disconnected. The hamlet chief appealed to the local authority for help a number of times: "I made many proposals to the local authorities requesting help to rebuild our water system. They said that we have to wait for the PDL (Local Development Program) projects from the government. But what I had heard from the others was that the PDL will be discontinued in the future."

The hamlet also tried to follow the DNSAS policy by reestablishing the structure of GMF in January 2012. According to the conditions and criteria of SAS, the village has to organize a GMF group and start to generate the funds to prepare for the support from SAS. However the village chief accounts quite a different story.

He kept on repeating that this community is longing for water. He had tried many ways to appeal to the higher authorities to pay attention to the village. He said:

> I am really disappointed with this government; they did not pay attention to the population lacking clean water. Through radio and television I heard that there is a budget for clean water but the population is groaning for clean water, yet there is no water. No one from the top leaders of the government has come here to see our situation, maybe their eyes are blind. It is not until now that you have come here to ask about the situation of the village, they all know our situation, from the SAS of the sub-district to the administrator of the sub-district who also knows about this, but until now nothing has been done (Chief of the hamlet, Vatunau).

He complained because he thought that I would take his complaints to the DNSAS.

During the January, 2013 trip back to Vatuvou, the secretary of the village chief of Vatuvou, who also lived in Vatunau, informed that the condition of the water system had not changed. When the rain fell, clean water couldn't reach the village because the mud and small rocks blocked the outlet of the pipe. However, the good news was, as reported by the CF and the village chief, that a new water system was due to be built under the PDD program in May

[17] The researcher directly observed in January 2012 when she got stuck in a traffic jam of cars and trucks that could not pass the areas covered with mud and rocks washed down to the road. She had to wait 5 hours for a bulldozer from the the ministry of infrastructure to clear the road.

2013. In 2013, Liquiça gave priority to Maubara to have PDD[18] programs cover infrastructure projects. This is finally a positive outcome for the long waiting community members who had to endure a long bureaucratic process of almost two years.

4.4. Analysis of two case studies of Dair and Vatunau

The first two parts of this section (4.4.1 and 4.4.2) will lay out the different definitions of community participation of the villagers, DNSAS staff, and DNSAS directors. The third part discusses the pattern and level of community participation, while also examining the socio-economic factors in parallel, which were scrutinized and compared in a sex-segregated way, as well as impacts on participation. Gender issue was discussed in the light of examining the scope of participation of women compared to their men in the process of planning, implementation and post implementation.

4.4.1. Different definitions of community participation

In this section, all the definitions of each respondent will be presented in table 11. Each respondent presented the various ideas and some of the ideas have equal importance, therefore, the total number of responses indicated below can be understood as multiple choice responses from 21 respondents.

[18] PDD is the abbreviation of decentralized development program. It was criticized by some NGOs that this program has no system of evaluation and that there is no standard framework to control its quality.

Table 11 – Summary of different definitions given by respondents

Definition of community participation	Value ascribed to community participation	Respondents of two hamlets and DNSAS staff	Total
Voluntary works for the good of the community.	Collective effort to attain the common good	GMF members (3), community members (4), village chief (2), hamlet chief (1)	10
It is a learning process.	Self-development	GMF members	2
Participation should include women, the aged, children, disabled.	Social inclusion	GMF members (1), CF (1), community member	3
Following other people, not wanting to be isolated.	Imitation	Community members (2)	2
Planning and putting ideas together.	Consultation, plan jointly	National director (1), CF (1),	2
Contribution of labor, however, heavy labor is not always free.	Means to achieve the project objectives but not over exploited	National director (1)	1
Contribution of labor and money to the maintenance fund.	Means to attain the sustainability of the project	Director of SAS District (1), vice director of SAS district (1), CF (1), Director of Sanitation Dept. (1)	4

Source: constructed by the author

Looking at table 11, we can see that the first largest group of respondents (10), who derive from the 2 villages, whether they are the village chief, GMF members or community members, all have similar definitions of community participation. For them, participation is a collective effort to do something for the common good of the community; however some GMF members also added some definitions on participation (concepts learnt from training courses on capacity building), which emphasize greatly on the value of social inclusion and empowerment. The second largest group (4) amounts from the DNSAS directors and the CF who were concerned more about the sustainability of the projects. The third largest group (3) mentioned social inclusion in participation. The other ideas mentioned were self-development, joint planning, and voluntary contribution without exploitation: all of which are very good definitions and fit very well with the definitions found in various literatures.

A more profound discussion on the definition of community participation will be presented according to the majority of respondents who described them. However, lesser numeration of the responses does not result in lesser importance of the definition. Some definitions provided by the National Director, who has worked with many projects, are drawn on deep and meaningful observations and are worth further consideration.

Participation as a collective effort for the common good of the community

The local villagers define community participation quite simply and in easily understood terms. It seems that the perception of participation is closely linked to the visible benefits that the villagers get from the RWSS. The majority of respondents in hamlet Dair admitted that they have more time to do their income generating work since the water project was implemented in their village. They recognized that the children take baths more often and the sanitation conditions of their households are also cleaner than before.

The chief of the GMF in Dair expressed his satisfaction in having the water project installed in his village:

> We are so lucky that the project reached this village, before we had to go very far to carry water. Many villages still do not yet have access to water, they have to fetch water from the open well or in the river. That is the reason I participate voluntarily. I never calculate my contribution or labor (GMF chief, Dair).

It could be noted that community members from Dair are much richer in their concepts and expressed their ideas quite lucidly. People in Vatunau did not express their ideas about the concept of participation well. This could be explained by a lack of structured organization, fewer opportunities to join training, and fewer meetings realized within the community.

Picture 4 – A public tank in Dair community

Source: Taken by author

Different definitions were expressed by those from within the structure of the GMF and those who are common community members. Those who are within the structure of GMF gave a notion of participation as voluntary work for the common good of their community, especially in the area of meeting basic needs, which are the main drive for their participation. A chief of Dair GMF defined: “Participation is to work with one’s willingness, with one’s own

experience and one's own capacity to contribute towards the community endeavor for its betterness." He also contributed to the common good of the hamlet: "I help the contractors and NGOs with my technical skills and I have also learned a lot from them. I did not mind giving my time, I am willing to work and help." (the chief of GMF, married, Dair). This means that participation is also a learning process with interchangeable properties of giving and receiving.

However the chief of Vatunau GMF was a little reluctant to give his definition, after a few seconds of reckoning he said: "Now we live in a time of democracy, people just do what they like. The older people are more mature, they are more responsible. The youth now is very difficult to follow. It is up to them, if they want to participate." It seems that he had difficulty to mobilize the other community members. He realized that he could gather the community members to repair the water system, although not all of them: some members are very active, some are not. He recognized that this is a common tendency within a community.

A member of the GMF who is a member of the technical team, defined community participation according to his understanding:

> I do not know how to define it properly but I understand it in my own way, when one person takes part in a team or an organization, he has to become actively involved and it will be good if the whole team works together towards an agreed objective (A male GMF member, 30 years old, Dair).

An outstanding notion in this saying is that fundamentally teamwork requires joined thinking and joined hands with a clear objective to get things done. However community members' teamwork concept focuses on playing their role in a top-down structure. It suggests the responsibility of the beneficiaries to join their hands to get things done. Their participation in reality is far more than what they pronounced by words. Lessons learned from their experiences and creativity in a top-down policy framework are presented in the next section. This idea coincides with some literatures on instrumental participation in which the joined collective contribution of a community is to achieve a concrete goal of a designed plan (Taylor, 2004; Mahjabeen, Shrestha, Krishna & Dee, 2009).

A woman from the technical team of the GMF defined community participation within a frame of inclusion as follows:

> Talking about participation, it is not right to only involve those who are knowledgeable, men and community leaders, but we have to consider women, the aged, children, and disabled people in any community activities (Female technical GMF member, Dair).

A married woman of the community defined participation: “in every activity in the community, it is important to include women because they are usually absent in community activities due to their domestic occupation.”

These were excellent smart statements from a GMF woman and a leader of a women’s group in village Dair. The ideas expressed by women who participated in many trainings on technical maintenance, soap making, book keeping and community works as well as a woman who is the leader of a women’s group, were markedly different than other women who did not share their experiences. In addition, these ideas on participation marked a sharp transformation in their consciences and their awareness of injustice relating to gender, class and vulnerable groups in their community. The definitions from the two women have a similar implication, namely the notion of inclusive participation in development projects. There is a considerable range of literature on the subject of those who are usually excluded in development projects (Oakley, 1991; Kannan in Ife & Tesoriero, 2006).

Women in Vatunau define participation as following what the local authority told them to do. A youth in Vatunau also gives an ambiguous definition on participation, saying that he just follows what the others do, because he does not want others to perceive him as different or irresponsible. This is the different nature of the two types of participation from two distinctive communities and this is discussed in more detail in the following section.

Participation for sustainability of the projects but it cannot always be free

Different authors have emphasized the empowerment aspect of participation in terms of gaining shared experience and developing the personal growth of participants (Sager, 1994; Oakley, 1991). Decision making itself plays an important role (Uphoff and Cohen, 1979) and, in a more value oriented way, participation in decision making could be understood as an end in itself; it activates the notion of human rights, the right to participate in democracy and to strengthen deliberative democracy (Hickey and Mohan, 2004). However, the perception of the policy makers seems more pragmatic when they defined community participation. The perception of the directors seems that they see community participation as dominantly implying an instrumental meaning. Mr. Elias Monis, who was the director of SAS in charge of rural areas in 2012 and who is now the Secretary of State for Water and Sanitation, noted the difference before and after applying the participation policy:

> From 2001 to 2006 we implemented water and sanitation projects, but we were not concerned so much about participation. A study done in two districts, Manatuto and Covalima, showed that

> 50% of water systems were destroyed because of lack of community participation in maintenance.

Mr. Elias also expressed concern: "Rural communities have a poor economic condition and this affects the capacity of participation." Meaning that poor communities do not have money to contribute to maintenance funds. This concern reflects more on the instrumental function of community participation. For him, community participation is also a means to maintain the sustainability of the project.

The general director of DNSAS attributed importance to listening to the ideas of the local community: "Participation is a process of putting all the ideas together and planning together."

He also had another concern in relation to participation; he agreed that community participation is the contribution of the community in terms of their labor and money. He had another concern relating to over using the free labor of the poor:

> I do not agree with the NGOs's approach regarding free labor of the community people. For me a person carrying heavy water pipes, and other materials, who has to walk 3 to 6 km without paying them anything….I think this type of participation somehow is not right, I do not agree with the concept of 'sense of belonging'….for me if the project benefits them, they have to take care of it (Director of DNSAS).

These polemic questions were raised and they challenged the points of view from different institutions. Development experts from NGOs romanticized the virtual participation, however when they put it in practice, they had to rely on other inducements, such as, "if you participate we will lead the water to your village, if you do not then we will not." (General Director of DNSAS). This is clearly a type of manipulation of the development process instead of facilitating (Botes & Rensburg, 2000). It seems that it became a mutual exchange between the NGOs and the community, the beneficiary community gets water supply, on the other hand, the organization has the name of 'community participation' in their reports. This is another face of participation when it was put into practice that was probably covered with different colors and implications. Sometimes participation becomes one condition for development projects to obtain international funds, in this case the physical embodiment of participation occurred, but true participation in spirit did not really happen (Mohan, 2011).

There is another interpretation from Kaminer (1984) in relation to women's community participation as unpaid, cheap labor. By promoting the virtues of volunteering and the virtues of participation, the state will take the responsibility of looking after the welfare of its people

off their hands. However Naomi Abrahams (1996) sees women's community participation as the only avenue for them to become involved in political and social work to improve their lives and for the betterment of themselves, their families and their community.

Through the facts presented above and from the points of view from community level to the policy makers, we can see clearly that the community members realized their role in the development projects. They knew that when they contributed their labor and ideas they benefited in different ways; tangibly and 116ntangibly . They develop a sense of empowerment that needs to be very carefully examined to reveal. For example, the community in Dair had a negotiation with the contractors to install two more public taps for the community and in turn the community contributed their free labor to the contractors. Not all communities have the same capacity to negotiate and it depends on many factors, the leadership, the capacity of the CF, and so on. It is very important that the construction contractor who builds the water tank is from that community (local contractor). Here again, a sense of belonging works in its own way. This was not mandated in any document, but it depends on the creativity of the community leaders and the CFs.

Sense of belonging

One central idea recurrent in the literature review is that a sense of belonging is one indication of successful participation (Kasiaka, 2004; Paul, 1987). When the members of the community feel that they are the owner of the project, then participation of the community brings about a sense of belonging. That is the developmental objective of community participation. In this case, the two communities shared the same characteristic: All the respondents felt that their water system belonged to their community, not the government.

Table 12 – Sense of belonging of the two communities

	This distribution tank is owned by the community	
	Dair	**Vatunau**
Hamlet chief	0	1
GMF chief	1	1
GMF members	3	1
Community members	4	4
Total	8	7

Source: Constructed by author

Even though the manner of participation in the water projects of the two villages are very different: Hamlet Dair has a good water system and hamlet Vatunau has an unstable water system, which was constructed with limited material, and the community could only repair the distribution tank according to their own capacity (this tank was considered as a temporary replacement while waiting for a response from the government). In general, the two communities all felt that they were the owners of the project. This can further explain the good care of the water system in hamlet Dair. The initiative of the people of Vatunau to contribute their own materials and labor to repair their distribution tank, which is situated 6 km from the village, exhibits the community's sense of belonging.

4.4.2. Sanitation: usual practices and remaining problems

The health problems caused by poor basic sanitation and hygiene practices have been evidenced around the world. 40% of the world's population lacks access to sanitation facilities. Every day around 4,000 children from poor countries die of diseases caused by inadequate sanitation and hygiene and lack clean drinking water (UNICEF, 2013; Rosenquist, 2005).

Diarrhea is a major cause of child mortality under 5 years old in low-income countries around the world (Kosek, Guerrant, 2003). TL still bears the same risk, because only 35% of the population has installed latrines. Respiratory and diarrheal diseases remain the two leading causes of infant mortality, both of which are strongly linked to inadequate sanitation and hygiene. Diarrhea alone is responsible for more than 380 child deaths per year in Timor-Leste. There are also strong links between inadequate sanitation, intestinal worms and malnutrition (RDTL, 2011). A research from Peru also proved that the installation of a condominium water and sewerage system can help to reduce Diarrheal diseases of children under 5 (Hubbard, Sarisky, Gelting, Baffigo, Seminario, & Centurion, 2011).

Realizing the needs for improvement of the sanitation situation in TL, the IV Constitutional Government 2007-2012 stated that: "It will be especially committed to promoting health and nutrition, which is crucial, especially in more remote areas of the country."

Table 13 – Water and sanitation situation of households in the two hamlets

		Respondents in hamlet Dair	Respondents in hamlet Vatunau
Primary source of water used by community members	Public Tank	8	0
	Private tank	0	8
	Open well or neighborhood well	0	8
Type of sanitation facility that community members use	Squat toilet (using water to flush)	8	0
	Pit latrines[19]	0	4
	Open defecation	0	2

Source: constructed by author

The data from table 13 indicates that community members who do not have access to a stable source of water usually use pit latrines or practice open defecation. This practice risks further losses due to the impact of poor sanitation on health hazards of the population. It is estimated that TL suffers economic losses of US$ 16.9 million per year due to poor sanitation and hygiene. This loss was estimated at 4.8% of GDP in 2006, equivalent to US$ 17.00 per person per year. This evidence helps us to understand the preventable economic impact of mortality and morbidity attributable to inadequate sanitation (RDTL, 2007). However, changing people's behaviors and attitudes toward hygiene practices and sanitation requires time and patience, as a director of Sanitation Department of DNSAS shared: "Working with the community is a continual and patience necessitating task. We have to keep on talking, training, and raising awareness. We do not expect a change in one day, it takes time." (DNSAS).

Talking about sanitation is not easy in Timorese society. Certain themes and terms are considered sensitive, for example 'defecate' is considered offensive and 'going to toilet' is preferred instead. Timorese people see human excreting as impure and a sensitive topic to discuss with outsiders.

Looking back at table 13, two respondents sincerely reported about their open defecation habits. The justification for this practice is always the lack of water; however, further doubts were set: what if the toilet facilities are available but people are not used to using it. Table 14 below reveals two answers indicating that children do not use the public toilets because of dirtiness or unclean conditions. Furthermore, building such facilities does not guarantee that behaviors will change and that the facilities will be used. In Mindoro in the Philippines, for

[19] A pit toilet is a dry toilet system usually used in rural areas in developing countries where the water supply is not stable. It is constructed with a large container to collect human excrement.

example, a villager reported that NGOs had built many toilets, but the community people did not use them for their intended purpose, instead they used them for other purposes, such as raising pigs or chickens[20]. The problem exposed here is whether the reluctance of the population to use the toilet facilities is due to their habitual practices, which are affected by cultural factors, or is based on a lack of water. To understand this problem more profoundly, let us go through some literature that discuss the fecal product of the human body and the attitudes attached to it.

Lea (2001) had recognized that researching the cultural patterns of human defecation had been neglected in anthropology literatures, but she had suggested that the practices of defecation were not a biological or natural issue of the human body, but was rather socially and culturally influenced. The pattern of defecation is also decided by many factors, for example the level of acceptance of people around us. Loudon (1977, in Drangert, & Nawab, 2011) said that it depends on the level of social relationship, the distance, the legitimacy of intimacy, trust, antipathy or conjecture that might influence a person's negative or positive attitude towards body products. Loudon (1977) also remarked that the acceptance to the smell of excretion or of putrefaction was confirmed by socio-psychological factors (some smells are considered as detestable in some societies). Krepp (1867: 79 cited in Drangert & Nawab, 2011) justifies the pattern of defecation by saying that: "Human excrements are offensive only if they remain in the wrong place."

If we look at the issue of defecation from a religious point of view, we can see that most major religions appeal to purity and cleanness. From a biblical stand point, we can see that God created this universe and all the creations are deemed "very good" and it is expected that human beings have an obligation to keep it clean: "A clean environment is a reflection of a God-friendly place" (Ahiamadu, 2011: 3 cited in Ojewole, 2011).

Islamic teachings and values strongly advocate cleanliness and proper disposal of human excreta. Feces, urine and wastewater are considered najas (impure) and extra care is required to prevent direct and indirect contact. Defecation in the open is recommended in one of the Sunnas of the prophet Mohammad, but he did this in seclusion at some distance from the settlement and he buried excreta with soil afterwards (Sahih Muslim, book 022, number 0519 cited in Drangert & Nawab, 2011).

[20] Author's first hand experience in a field work In Mindoro in the Philippines when visiting a minority group there.

Rosenquist gave a general conclusion about the behaviors of human beings' practices of excretion, regardless of culture or religion that: "Humans want to be able to distance themselves, both mentally and physically, from perceived trouble and nuisance associated with excrement." (2005: 341).

Table 14 – Gender stereotype relation to sanitation practices in public place

Hamlet Dair	Sex	Are school toilets suitable for girls (reasons for not using)?	Hamlet Vatunau	Sex	Are school toilets suitable for girls (reasons for not using)?
Chief of GMF	M	Yes	Chief of GMF	M	Yes
Member of GMF	F	No (It's dirty)	Member of GMF	F	No (No water to flush)
GMF member and coordinator of cooperative	M	Yes	Community member	M	Don't know
Member of GMF	F	No (It's dirty)	Community member (CM)	F	No (No water to flush)
Community member (CM)	M	Yes	CM	F	No (No water to flush)
CM	F	No (It's dirty)	CM	F	No (No water to flush)
CM	F	Yes	Total	6	
CM	F	Yes			
Total	8				

Source: constructed by author

The data shown in table 14 evidences social and cultural aspects in relation to toilet practices of children in public schools. People of all cultures are taught by their ancestors to distance themselves from their excrement, however awareness to keep public toilets clean is not well educated and has become a major concern. We discharge our human body products at least 4 times a day, therefore it is surprising that very few reports and researches have been written about excreting behavior and toilet practices. Researchers ignore the theme as much as many cultures do: "Surprisingly, most people and cultures tend to act as though sanitation were not an issue of concern" (Rosenquist, 2005: 341).

In the case shown in table 14, accessibility to water does not correspond with good sanitation conditions. For example, in Dair, water is available in the school but not all the students use the toilets for the various reasons described in table 14. As is well known, sanitation requires behavioral changes and social awareness of everyone: at the household level and in public places. Table 14 gives us an indication of the problems remaining relating to sanitation

facilities in public places. It is presented specific to gender to understand male and female perceptions on accessibility to toilets in public schools.

There are different answers between men and women about the availability of public toilets in schools. The differences in the answers between married women, the single woman and old women are marked. This pattern was evident in both villages. The following table suggests different beliefs between men and women regarding accessibility of girls to school toilets.

Most men in the two villages believe that their daughters (or girls of the village) can access the school toilets. Village Dair has a stable source of water; all the primary schools there can access water, nevertheless, not all the girls can access the toilets because of a lack of maintenance and cleaning staff.[21] This also influences a low conscience of good hygiene practice in young children, who have been educated or habituated themselves at home.

Knowledge about the usage of toilets between men and women is distinctly different, reflecting the nature of the caring work that is socially attached to women. As a result of this, mothers and grandmothers are very sensible to the issue of girls' hygiene.

In Pakistani society, as commonly observed and also narrated by interviewees, it is mostly women who are responsible for keeping the home clean, which includes cleaning the toilet and managing excreta from babies, children and sick family members (Drangert and Nawab, 2011).

In Vatunau, finding water for drinking and cooking is sometimes impossible. Comparatively, water for toilets in schools seems like a luxury and an unlikely reality at the time of interview. A woman in Vatunau said:

> There is no way the children can access the toilets in school. We have no water to cook rice for the kids. Kids are advised to bring a little bottle of water with them to contribute to the kitchen so that we can cook the extra-meals in the school (A community woman, Vatunau).

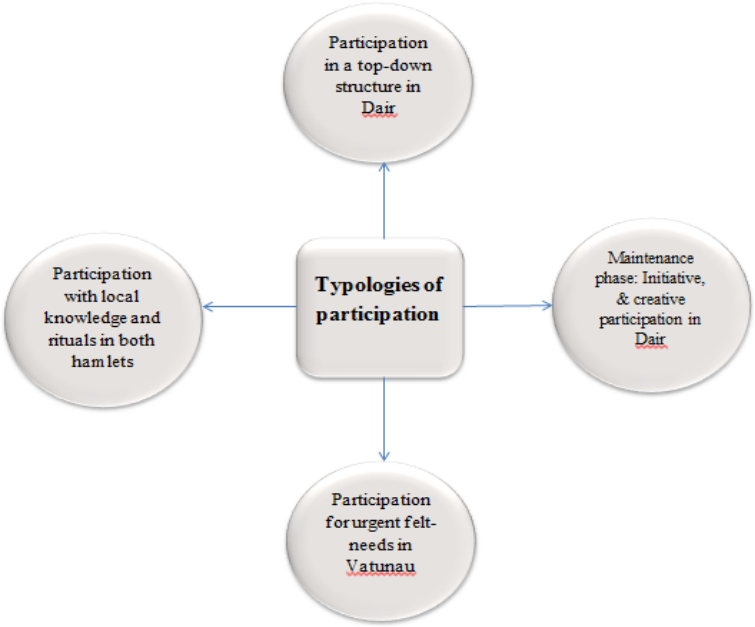
The table above also tells us that girls in the village do not have access to clean school toilets. A surprising revelation occurred when the GMF chief of the village reported that the girls can use the toilets because he believed that his daughter always brought water with her to school to flush the toilet. This is yet another blatant indication of the gender blindness that is manifested right inside every household in the community.

[21] This happens in every public school in rural and urban areas. In a Catholic school in Dili, the capital of TL, the toilets are not clean and not convenient for girl pupils, even though the school has a very good water supply.

4.4.3. Typology of community participation of the two villages

This section presents the different typologies of participation, which can be arranged from mandated to spontaneous ways of participation.

Figure 4 – Prominent typologies of community participation



The analysis of each typology helps to understand the mixture of different characteristics, for example, in the top-down structure of participation, some built-in constituents of free, initiative and creative forms of participation subsist. On the other hand, the spontaneous form of participation can only temporarily survive while waiting for another form of participation that is more organized and sustained. Figure 4 presents a summary of prominent types of participation in the two hamlets.

4.4.3.1. Participation in a top-down structure in Dair

Community participation was recognized as a very important component in management and maintenance of water systems by the TL government, which is clearly manifested in the Degree-Law No.4/2004 on water supply for public consumption (G-RDTL, 2004) assigned to the community to take care of the water system through the article 21, which states: "O sistema de abastecimento de água I das áreas urbanas é gerido pelos grupos de gestão da água designados pela comunidade, sem prejuízo do direito de intervenção do Estado" (G-RDTL:

11). (The water supply system outside urban areas is managed by the water management groups designated by the community, without prejudice of the right of state intervention).

This policy does not only exist in paper, but also was put into practice by government agencies and different development counterparts. At present, the dominant type of participation at the community level is the mandated, top-down approach. The CF takes responsibility to monitor the GMFs that represent the whole process of community participation.

Table 15 – A summary of participation phases in hamlet Dair

Respondents from Dair	Sex	Project phases	Short Description of the work	Interesting experiences
Chief of GMF	M	Planning, construction, maintenance	Accompany the survey team from NGOs, or SAS, organize the group, technical assistance	Enjoying working with other people. Being happy to see the result of the work.
GMF member	F	Planning, construction, maintenance	Attending the meeting, organizing village women to cook meals, monitoring hygiene practices in the community.	Sharing ideas and listening to others.
GMF member	M	Planning, construction, maintenance	More active in the maintenance phase, developing micro finance cooperative.	Creating the micro-finance cooperation unit, feeling proud of what he did
GMF member	F	Planning, maintenance	Soap making, technical training.	Learning new things in technical works that she never dreamt of before.
Community member	M	Construction, maintenance	Digging ditches, trenching the drains.	Working together with other people.
Community member	F	Construction, maintenance	Cooking and bringing food, cleaning the grass around the construction site, cleaning the public tank.	Nothing interesting.
Community member	F	Construction, maintenance	Cooking and bringing food, cleaning the grass around the construction site, cleaning the public tank.	Do not know how to explain, she forgot the experience, for her there is nothing special.
Community member	F	Construction, maintenance	Cooking and bringing food, cleaning the grass around the construction site, cleaning the public tank.	Learning new things with the Red Cross.

Source: Collected from empirical research in the community (January, 2012)

In hamlet Dair, the prominent characteristic of its participation is the top-down approach. Eight people from the community Dair said that they joined the project voluntarily; the motivation to join this project is to have water, an indispensable primary material for their survival.

The GMF members mostly partook in three phases of the project. The other community members joined in the construction phase, and maintenance phase, 3 women in the

community participated in the implementation and maintenance phases, but not in the action planning phase.

Projects that were initiated from external agencies, whether they were NGOs or government agencies, can actually provoke the participation of community members as long as that project brings a practical benefit to the community. A similar experience can be found in handicraft projects in Lesotho, South Africa where the community members, of which a majority are women, are actively involved, even though the projects were started by NGOs (Tanga & Maliehe, 2011).

The process of building the water system in Dair started in 1996 until 1997. After 1999, all of the water systems were destroyed and the rehabilitation commenced again in 2008. At that time, the GMF group was formed with the facilitation of the CVTL. At the beginning, the chief of the GMF group was Fernando do Santos, with one other male secretary, one male treasurer, two male technicians and two health promoters (one male and one female – the sole female member at the time).

In 2009 there was a reform in the structure of the GMF, Julio do Carmo, who was previously the chief of the hamlet Dair, was elected as the head of the GMF structure together with another six members. In addition, he also took charge of technical tasks. As chief of the GMF, and as an important representative of the community, he joined in the three phases of the project. In the planning phase, he accompanied the survey team to visit water sources, to see the sanitation reality and the pipe route. The most important task in the planning phase is the mapping and allocating of the water tap, he had to organize the people to consult their ideas, by measuring distance of households to the public tap, to ensure that no household is too far from the public tap.

In the planning phase, the CF worked closely with the old GMF structure to organize an election for the new GMF members, due to the new policy from the DNSAS stating that every GMF group should have at least two female members. During the on field research in Dair hamlet, it was learnt that seven respondents attended the GMF election while one woman did not. She gave her reasons:

> I did not attend the meeting for election of the GMF, at that time I was alone at home and my child was very small, my husband went out fishing. After that I heard from my neighbor that the new structure of the GMF was chosen. I accepted the decision of the other community members (A married woman, 36 years old, Dair).

It seems that this woman, at the moment of the meeting, was busy looking after her child and there was no special arrangement made for her so that she could attend. She gave the attitude that it was inconsequential whether she participated in electing the GMF members or not. This attitude is also a problem; the indifference of community women, who have too great a workload occupying their minds and exhausting them. This also inhibited them from taking an interest in other community tasks, which didn't seem urgent.

Conversations with other community members and a woman in the GMF, revealed a reality that very few women participated in action planning phases, for example a female community member noted that:

> We were not given an opportunity to attend the meeting during the consultation phase, and we did not make any decisions, if I was given opportunity to talk about the allocation of the tap, I would have wanted it near my house (A single woman, 27 years old, Dair).

This phenomenon is not uncommon in TL and a similar situation can be found in research on the water project in Malawi (Msukwa & Kandoole, 1982) where a majority of community members did not join the planning phase. This was also revealed in table 15, which showed only one female GMF attended the planning phase. She had a chance to participate in the consultation phase to decide where the public stand should be allocated. She really wanted to have the water tap near her house, but the common consensus was that the public tank should be located in the center of the community so that other households are able to reach it within an acceptable distance. Finally she accepted the 120 meter walk to the public stand to get water.

During the construction phase, community members were organized into several working groups. The work started with cleaning roads and carrying equipment and materials to the construction site. The GMF arranged for a place for the contractors to stay. Cooking meals for the construction team is usually taken care of by women. The community GMF organized people to look after and care for the equipment and the materials of the company.

Picture 5 – The community digging the water pipe ditch

Taken by: Lucio dos Santos

Besides contributing working labor, the community contributed their local materials, for example, sand and rocks. All of these materials were put together and were brought to the construction site. Some village men did some construction work for the contractors, but it was not paid for by the contractor. This issue has been raised by many people: of whether the labor from the community members should be paid for. In the case of village Dair, people worked voluntarily.

In some cases, not all the community members participated voluntarily; some avoided joining in on the work, as a GMF member shared:

> You know, I do not like people who are very lazy, they did not work, while others worked so hard, in the end, when the water was led to the community, his family also enjoyed the water. I was in charge of organizing a group of men to dig the ditch to lay the water pipe. I asked my neighbor, a man, to join the group, and he said that he had to go to an important ceremony. The following day his children told me he was at home. I really do not like this, it is injustice, not only him, several people do not want to contribute their labor or even their materials (Male GMF member, Dair).

This is the reality that existed in the Dair community, and most likely in other communities as well. It is hard to have 100 percent community member participation in the projects, even though the water project is very important to the basic needs of every member of the community. When the village chief was asked the reasons why some people were reluctant to

participate, he said that it depended on individuals' consciences; some may think that even if they do not participate in the water project, it still has to be implemented because it was planned. As Osumanu (2010) analyzed, the breakdown in communication between service providers and the community members can lead to reluctance of communities to effectively participate in water and sanitation projects or the perception of the people may be that providing water and sanitation services is the responsibility of the government and NGOs.

Women's participation during the construction phase involves cooking responsibilities and bringing food to the contractors and the workers. A female, community member shared:

> During the construction of the tank and leading the pipe from the water source to the village, I helped others in the village by cooking breakfast, and lunch for the workers, mostly men in the village. We had to cook a lot, and divided the tasks. Some other women were responsible for bringing the food to the construction site (A married woman, 36 years old, Dair).

When the construction was almost finished, the contractors and DNSAS technical staff organized training courses for the GMF members who were in charge of technical work to prepare them with sufficient skills to maintain the water system. At the same time they were trained how to monitor the work of the contractors to see whether the construction was of good quality, so that they could appeal to the DNSAS, or the NGOs if necessary.

When the construction was terminated, the GMF, together with NGO and CVTL, checked the quality of the construction. A checklist, which was prepared by SAS, is usually used to crosscheck criteria to see whether any technique problems exist, so that they could resolve the matter with the contractor. This phase does not always happen with other communities. Often the contractor delivers it to the government agency or the NGOs without the evaluation of the community. Dair village's pattern of participation stresses implementation and maintenance. A research on rural development in Iran also found that farmers involved themselves more in implementing programs than planning and evaluating the processes or outcomes of agricultural programs (Aref, 2011).

4.4.3.2. Maintenance phase: Creative, initiative participation in Dair

A considerable mass of literatures confirm that local level participation in development projects and the implementation of these projects has long been recognized as a factor promoting desired changes (Cernea, 1991; Chambers, 1983; Morss, et al., 1976; Rogers, 1969; Pomeroy, et al., 1997; White et al., 1994). For instance, in Indonesia before the

adoption of the community-managed approach, the functionality rates of the water and sanitation system were very low, however recently the functionality rate of the projects built with the participation of target communities has increased significantly (AusAID, 2009: 12). Prokopy (2005), in the study on participation and project outcomes in India, proved that the more households in the village that contributed to the project cost, the better was the outcome of the project. The research of Kleemeier (2000) in Malawi demonstrated a significant relationship between the maintenance fund raised by the communities and its project's sustainability. Further, Kleemeier (2000) has concluded that institution framework using a participatory model is best fit in the maintenance of small rural piped gravity schemes.

The case of hamlet Dair in Maubara is exemplar of a successful case of community-based management of a water system. The community participation in the maintenance phase was well organized and well controlled by the GMF team. When the water system was in place for delivering, the CF started to organize the community to set up maintenance funds. This fund will help the community to buy the necessary materials (taps, pipes, cements, etc.) to replace the broken ones. The CF mentioned that the support from the SAS at district level was only offered in the event that the system was struck by a natural disaster:

> During the first 5 years, if the water system was destroyed by technical or natural problems, then SAS will provide the spare parts that they have stored in the district storehouse. However if the system was destroyed by the carelessness of the community, then they have to use their own funds to buy the spare parts.

In relation to the operational fund for maintenance, village Dair has the best practice and has a good sense of creativity among all the villages in sub-district Maubara. So far the community has a fund of $4,500 (USD) and the community members have decided to create a micro finance fund[22] to give loans to members who are in need. This is a creative initiation of the community, and it is a manifestation of developmental participation. Benjamin dos Santos initiated this idea of creating a cooperative and all the community members supported him. Santos is the coordinator of this micro-finance fund. He shared:

> This 'cooperativa' operates well, we have one coordinator, it is me, and one cashier is a woman. Our money was saved in the bank, we have a bank account. We try our best to make it transparent to all the members (Head of the cooperative group, 30 years old, Dair).

[22] Another name for this is 'cooperativa' (cooperation) to indicate that this fund is from the community members who trust and contribute to this fund.

Santos is an elected member of the technical team; he was invited by the other community members to become their trainer. He shared his most interesting experience:

> I was trained in techniques and microfinance, and I can give training to the other people about what I learned. I am happy that the water system of the community is going well. Very few damages were found; we repaired them right after discovering any technical faults in the water system as a whole.

This 'cooperative' gives loans to its member with an interest rate of 10% and with a duration of 5 months. If the 5 months period has lapsed without returning the money in full, they are subject to sanctions established by the group.

In this phase the technique team from GMF will have the responsibility of learning the techniques during the construction so that, during the maintenance phase, they will be able to repair the system.

The creativity of this community was expressed by the aspiration of the chief of the GMF who nurtures a plan to create a common lake by using the residual water to raise fish. Furthermore, he hopes that, in the future when the cooperative fund is big enough, he wants to open more water stands nearer to the households that are currently far from the public taps.

The GMF group organized community members to take care of cleaning the distribution tank, the tap, cleaning the area near the tap, weeding the area around the tank, and keeping the waste water drainage clear. As well as fencing around the water tank to prevent animals entering the areas, and cleaning the public toilet. These tasks required community members to sit down and assign tasks and turnover of tasks to members to help the technical team during the maintenance, which were usually men while the other tasks were assigned to women. The tool kit was kept by a male member of the technical team. The other member of this team is a female, but she rarely repaired the tap or water pipe due to a lack of experience. She attended the technical training for 5 days.

Community members have meetings regularly to discuss management of maintenance funds to decide how much money they would collect from each household. Each member contributes 0.50 $ (USD) per month. Some households with a more regular income contribute 1$ per month. Vulnerable groups of the community like handicapped people, the aged, widow, or other families with special difficulties contributed only 0.25$. All of these decisions were decided by community members and not by any regulation from SAS.

The community always has meetings every month, which are organized by the GMF. The themes or issues to be discussed or that require decision making are not limited to water and sanitation projects, but also include other issues that have emerged in the community.

Table 23 in the section 4.4.6 indicates that more men attend the community meetings than women and the ideas contributed in the meeting tend to stem from the specific domain of their traditional role. The issues or concerns raised in these meetings will be determined by whether more women or more men who are present side with the issue. It is noted that ideas and reports on activities like cleaning, sanitation, preparing food, and protection of the water tank are usually offered by women. Opinions and activities in relation to organizing, monitoring, building tents, or protection of water sources are usually connected to men than to women. The last meeting of 2011, concerning choosing candidates for GMF, did not involve any women. The pattern of women and men in participating in the meetings clearly mirrors their traditional roles and functions. Therefore it is an extension of the domestic roles of men and women. We can find this pattern repeated everywhere in this country, from the government to the organization of the political party. Men are in charge of more important tasks like organizing, mobilizing, planning, and decision making, while women are in charge of finance, administrative work, secretarial work, logistics, food supply, solidarity work, caring work, and so on.

4.4.3.3. Participation for urgent needs in Vatunau

The distribution tank in hamlet Vatunau was originally built by Oxfam and LODA (one local NGO), however there was no proper mechanism in place for follow up and, as a result, in 2007 the water system was completely destroyed by a landslide. In 2008 the SAS-L office provided some water pipes and spare parts to the community to replace the broken pipes. The repaired water source remained until January 2010, when yet again rain and flood swept away the whole system destroying the distribution tank.

The Vatunau community had the initiative to repair their own tank to their own capacity. They gathered the money and cement to rebuild the distribution tank, using bamboo to replace the broken joints and rubber bands to tie some broken pipes.

The efforts to repair the damaged water system also resulted from the kinship relation of this village. This can be examined under the light of rural sociology, in which Max Weber´s concept of ‘Gemeinschaft’ (where the community is understood in the essence of the

‘communal’ or in relation to ‘kinsfolk’) describes the geographic closeness of the neighborhood and creates a kind of reciprocal bond. To a certain extent, the nature of extended families and kinship in rural areas in TL is well nurtured and strongly linked.

The chief of the village Vatunau proudly reported on his community: “We repaired the distribution tank, so that 119 families can benefit from this source, however so many families could still not access the water and they had to depend on other sources far from their houses” (Chief of the hamlet, Vatunau).

However, the primary data from 6 respondents from this community contrasts with what the village chief reported. Some women in the villages shared that the water they are using is very unstable and, when the heavy rains come, there is always a problem at the distribution tank with dirty water and sometimes it is blocked by sand and soil. Furthermore, despite the water leading to their private tanks at their houses, they cannot always use it. They have to fetch water from the river or the open well close to the sea, or ask for help from the households that have hand pump wells.

A woman shared her experience of fetching water when the water did not reach her community:

> We fetch water from very far, one hour to reach to the well and then one hour to return. We have to rest often, so it is longer than one hour when we return with the water. Therefore we use the water just for cooking and drinking. It is impossible to use it for any other purpose (A community woman, married, Vatunau).

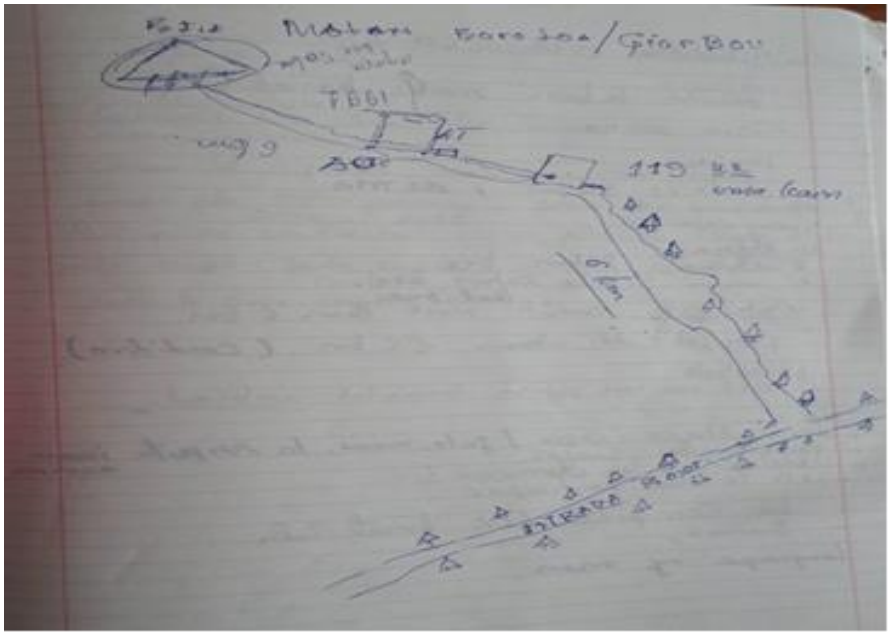
This woman is referring to latrine sanitation purposes. Most villagers have pit latrines and some still practice open defecation. Two respondents reported that their family still practices open defecation. They have pit latrines at home, but one woman said that she does not like to use it because of its bad smell. When I interviewed a male technician, who participated in the 2006 – 2008 project, he explained that at the time one NGO named LODA helped the community to create the GMF group, since the previous GMF chief had died. This new GMF structure was composed entirely of men. No women sat in the structure.

Eventually the distribution tank was built by the community, with the help of some pipes from SAS-L. Now there are about 619 people who depend on this source of water. A team of men usually check and control the distribution tank.

The situation in Vatunau village is different than Dair village. Reparations required by the Vatunau distribution tank were initiated by the villagers and their material contributions. The

real motivation for them to start this was the urgent need for water, as confirmed by Bhattacharyya (2004). The initiative and participation of the community, based on the felt needs, would stimulate active participation rather than necessitate needs from outside agencies Felt-needs driven participation can create a sense of belonging and ownership of the services or projects (Bhattacharyya, 2004). Felt-needs are considered strong motivation to encourage "personal and collective engagement in problem-solving…..entails the creation of – a political infrastructure for participation that empowers citizens and gives them an authentic voice in decision making about community direction and the means to achieve their goals" (Pigg et al., 2002: 390).

Picture 6 – A draft of water system drawn by Vatunau hamlet chief



This initiative evident in the Vatunau villagers is significant in terms of self-reliability of the community; however it should not be taken for granted by the government because what they have done is temporally endured with available local materials, which are not sustainable in the long term.

Bruhn (2005: 11-12) and Peck (1987: 59) also see the positive side of community. They emphasized the connection between groups of people and the connection among people in one group in a certain geographic space. Community members shared 'common goals, values and way of life', they shared mutual commitment and responsibility and they felt that they belonged to one another. Davidson advanced this concept to include a sense of welfare, for him a "sense of community" is certainly liked to a sense of well-being (Davidson & Cotter, 1989, cited in Day, 2006).

4.4.3.4. Participation with local knowledge and rituals in both hamlets

Participation of the community is not simply limited to following policy or NGOs' handbooks, the creativity of community participation is manifested in the way they used their traditional knowledge and practices to sustain their forests and their scarce water source. 'Tara Bandu' is one of the community rituals that is very popular in local communities around the country.

According to Guterres (2012), 'Tara Bandu' in TL means posting the sign of banning/prohibition. People perform the Tara Bandu ritual for the purpose of preventing spiritual and social environmental destruction. Those people who break the law of Tara Bandu will be submitted to a punishment. In other words, 'Tara Bandu' is known as a set of communal traditional norms done by individuals or by a group of ritual and traditional leaders (Lian nain or Lulik nain) and local leaders (Liurai) with the common agreement of all the people in the community. It is a local traditional and has been a community-based practice since before the colonial time of Portugal (Carvalho & Coreia, 2011). It is an important social capital for protection, conservation and also for strengthening local governance. The ceremony to warm up the ritual of 'Tara Bandu', the traditional norms, and the punishment of who violated the law of 'Tara Bandu' are different and varied in every village. They usually use 'Tais' (Traditional cloth woven manually by village women), buffalos, goats, and money in celebration as well as in punishment for someone who breaks the norms.

In both villages, Dair and Vatunau, people still respect the traditional norms that were enforced in the past and have continued to function until now. Dair village used traditional norms of 'Tara Bandu' to restrict people who cut trees at the water head or water sources. Vatunau also did the same things to prohibit people who destroyed water pipes for their own interests.

As part of the water source maintenance, community members of Dair had to plant trees along the hills close to the water stream. This act merited a traditional ceremony, which was held by tradition leaders. They banned cutting trees along the areas close to the water source by 'Tara Bandu'. The chief of GMF affirmed that: "who cuts the trees near the areas of water source will be sanctioned by traditional law."

According to Carvalho (2011), 'Tara Bandu' is seen as a symbol of community unity, conflict resolution and the governance identity of a community.

However in some cases ‘Tara Bandu’ alone does not always work. One such example occurred in hamlet Dair, and the solution required dialogue combined with ‘Tara Bandu’. Some problems emerged in relation to controlling the other community members who lived near the water source. Because they were not involved from the beginning of the project and they were not part of Dair, they used water directly at the water source and they had unhygienic practices like defecating near the water source, washing clothes at the water source and so on. These practices could have contaminated the water before it arrived at the distribution tank. The chief of the GMF had a plan to channel the water to this community that lived near the water source, so they had access to the water system, and to give them a sense of belonging, thus encouraging them to take better care of it. They organized a meeting with the CF, GMF members, and the leader of the community that lived near the water source in order to discuss the joined care of the water source. And as usual, this activity was accompanied with ‘Tara Bandu’ rituals.

The practice of ‘Tara Bandu’ in water and sanitation in the hamlet Dair is an indication of the environmental awareness and concern of its people in an era of increasing environmental problems (Dulap & Marshall, 2006). Indeed, local community participation, as Mahjabeen, Shrestha, Krishna & Dee (2009) concluded in their research on the same topic, is the process of collaborating all the information, local knowledge, and skills from different backgrounds in a manner that will enhance the process and the outcomes of a development project. In hamlet Vatunau, the local knowledge was demonstrated by their creativity of using bamboo to replace some iron connectors that were destroyed during the flood.

What the local community has done with their own initiatives and knowledge proved that they can be experts in problem solving. They are not law graduates, or engineers, however they can employ their own traditional norms and techniques to deal with emerging problems. This notion reminds us of the idiom of co-production under which many authors have discussed in the area of policy making, technology and social ordering, amongst others (Jasanoff, 2004a; Jasanoff, 2004b; Harbers, 2005). The local people, as knowledge producers, supplement the role of professionals and create a state of interdependence among them. As Jasanoff defined the concept of co-production:

> Co-production is shorthand for the proposition that the ways in which we know and represent the world (both nature and society) are inseparable from the ways in which we choose to live in it. Knowledge and its material embodiments are at once products of social work and constitutive of forms of social life;…. Scientific knowledge, in particular, is not a transcendent mirror of

> reality. It both embeds and is embedded in social practices, identities, norms, conventions, discourses, instruments and institutions – in short, in all the building blocks of what we term the social (2004b: 2).

Co-production proposes the idea that the domains of nature, (facts, objectivity reason and policy) cannot separate from those of culture, (values, subjectivity, emotion and politics) (Jasanoff, 2004b).

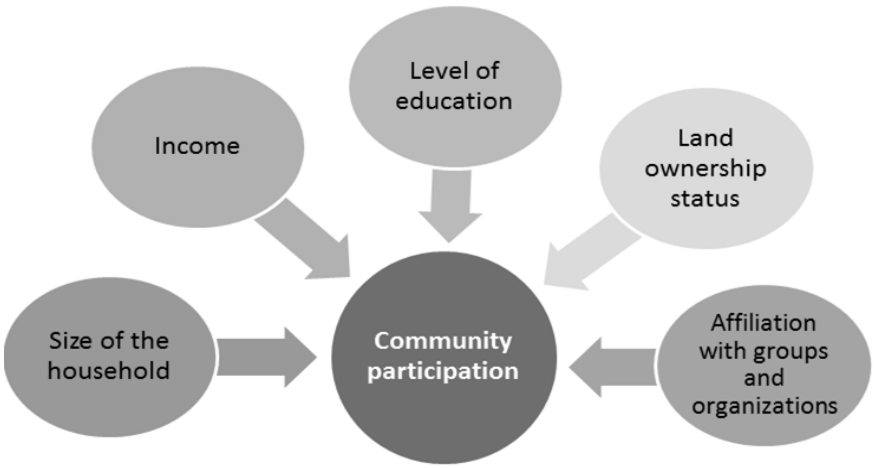
The co-production between service provider and the community is a great example of how social, cultural and scientific knowledge are, in fact, interplaying and supplementing. For example, the community learned technological knowledge from service providers and integrated and applied it in the maintenance of their water systems. The Vatunau community had a plan to pipe the water to the other community living near by the water source using the techniques that they had learned. Another example of co-production was demonstrated by the community introducing different local knowledge that contributed towards solving problems of disputes, environmental degradation and scarce resources. In this sense, we can say that scientific knowledge and technology (executed in the water projects) is tailored in the social fabric, and that technical innovations are conditioned and stimulated by this.

4.4.4. The impact of socioeconomic factors on community participation

A wide range of literatures affirmed that socioeconomic factors, cultural collectivity, and cultural homogeneity of the population were identified as factors contributing to the success of community-based projects (Jentoft, 1989; Pinkerton, 1989b; Tesshome, 2007; Ife & Tesoriero, 2006; Alambeigi, et al., 2008; Shila, 2006).

In the following part of this section, the social, economic and political aspects of respondents from two hamlets will be explored and analyzed by mirroring against other literatures related to popular participation in development projects.

Figure 5 – Key socio-economic factors affecting community participation



Source: Constructed by the author

Figure 5 represents a summary of factors that are the key influences of community participation. The economic status is demonstrated by the income of each respondent according to the characteristics of the job he or she does. The size of the family indicates the economic pressure on each household but is also an indicator to show the possibility of participation from each household. The level of education, land ownership status, and the affiliation of respondents to groups and organizations are also important indicators to determine individual involvement in the development projects.

4.4.4.1. Income of respondents in two hamlets

In Dair hamlet economic activities that generate income for women are mainly handicrafts. This village is rich with creative and different forms of weaving such as baskets, sieves, betel trays and so on. A special leaf from a family of palm like shrubs is used for making handicraft and has to be bought when it is not grown in their garden. Women of this community have planned to use the wastewater from the public tank to plant these palm like shrubs.

Handicraft (Homan) is commonly known as women's work: "it is the women who generally practice this activity during moments of leisure, during moonlit nights or on damp days when humidity makes handling the leaves easier" (IICT, 1989: 35). However, presently, handicraft is a means to earn a living. The few tourism establishments in Maubara accommodate all kinds of beautiful and creative designs of artwork made from palm leaves and bamboos.

Table 16 – Income per day allocated according to sex

	Dair		Vatunau	
USD ($)	Male (%) (3)	Female (%) (5)	Male (%) (2)	Female (%) (4)
0	0	0	50	25
< 2	0	40	0	75
2 – 5	33	40	50	0
10 – 20	67	20	0	0

Source: constructed by author

These handicraft works are, in fact, composed of a series of time consuming tasks and require a certain degree of technical skill, such as: "preparation of fibers, cutting into strips with a knife and gauge, enlacing the strips, complexity of forms revealing the dexterity of the operators - the profusion and the brightness of the decorated motifs obtained by adding colored threads to the achieved work." (IICT, 1989: 35).

Men in village Dair mainly fish, they usually work in groups of two or three men and then they share the income or the fish depending on whether the fish were sold out.

Contrary to Dair, women in Vatunau have different types of economic activity. The majority of people in this area cultivate maize, cassava and raise animals. Old women work on their own garden. One interviewed woman joined the microfinance group and bought a sewing machine and now makes school uniforms. She reported that some other women also sew clothes and curtains, or pillow suits and bed sheets. Here is an example of a woman's productive works:

> I work in one elementary school near this village from 7 AM to 11 AM. I cook for a 'nutrition program' for the education ministry in this school. After distribution of the food to the children, I wash up everything and then I go home. My salary is $50 a month (USD). In the afternoon I have more time at home sometimes I sew uniforms and sometimes I look after my plantation by weeding and watering (Community member, Vatunau).

The GMF chief of Vatunau shared:

> I moved my house to this village in 1998, before I stayed up there on the mountain. My work every day is taking care of goats and cows. During the rainy season, I plant cassava and maize. The average income I get from the plantation every day is around $1 day, raising animals can give an average income of $30 a month (Chief of GMF, Vatunau).

The women in the two villages had a lower income than their men. When I interviewed the men in the Dair village about their wives' work, most of them answered that their wives are housewives. Except the GMF chief in Vatunau village whose wife works in the kitchen[23] of an elementary school, and at home she is also a tailor sews clothes for her neighbors.

The results from both villages indicated that the majority of men, who are considered active in the water project, have a regular and fixed income source. Their wives mostly handle domestic work and stayed at home, restricting their opportunity to function in a paying working role and resulting in poor productivity and therefore poor income (Boulding, 1976).

The economic condition of community members is considered a determinant factor for sustainable community participation. A Director of Rural water supply of DNSAS confirmed that: "It is the government's policy relating to rural water supply that the rural community has to do the maintenance, while in urban areas they do not: The government facilitates the construction and also they do the maintenance."

One important source of information that is useful to understand the economic pressure on every household is the number of family members in that household. The following table indicates the family size of every respondent in the two hamlets: Dair and Vatunau.

Table 17 - Number of persons living in the house

Dair	Family size	Vatunau	Family size
GMF chief	4	GMF Chief	8
Member of GMF	5	Member of GMF	5
Member of GMF and coordinator cooperative	5	Community member	10
Member of GMF	8	Community member	11
Community member	8	Community member	8
Community member	4	Community member	8
Community member	8	--	--
Community member	8	--	--

Source: Constructed by author

To compare the number of family members of the two hamlets, we can see that there are no significant differences. It seems that the GMF members of Dair have a far smaller quantity of family members than the GMF members of Vatunau. It was assumed that the economic pressure was greater in hamlet Vatunau and, on observation of table 16 on the distribution of income, it can be seen that hamlet Dair's GMF members have greater incomes than those of

[23] It is the nutrition program of education ministry to supply free extra meals to children at primary school.

hamlet Vatunau. This can explain the good and ongoing community participation in Dair in the maintenance phase.

Interesting findings from research done by Nisha (2006) showed that the larger a family is, then the higher tendency there is to have at least one family member participate in the community meeting. It is true that most of the respondents of the two hamlets always had a family member attend the community meetings, even though some of the respondents interviewed had not attended any meetings or had only attended one.

4.4.4.2. Level of education

Education is considered an important factor that determines the level of participation in the development projects (Nisha, 2006; Tesshome, 2007; Ife & Tesoriero, 2006; Alambeigi, Zarifian, & Rezaei, 2008). The results presented in table 18 are also concordant with what the literature concludes, to a certain extent. There is an exceptional individual who has a low level of education, but participated in the WSS project actively and responsively.

Table 18 - Level of education of respondents in two hamlets

	Dair		**Vatunau**	
	Female	Male	Female	Male
No schooling	1		2	
Elementary	1	1	1	
Junior high-school	3	1		1
High-school		1	1	1
Total	5	3	4	2

Source: Constructed by author

In research by Nisha, knowing how to read and write is a basic means for community members to participate in the project (Nisha, 2006). However, it seems that a high level of education is not a determining factor for active participation, for example, the GMF chief of hamlet Dair has an elementary education level,[24] but he is a good team leader and he has a lot of experience working in teams and organizations. A GMF member of Dair, who finished high school, initiated the cooperative in this village: a dynamic, smart man. He was trained to become a trainer to the other GMF members. In contrast, a 19 year old Vatunau high school student participated in the community activities so passively. When he was asked why he

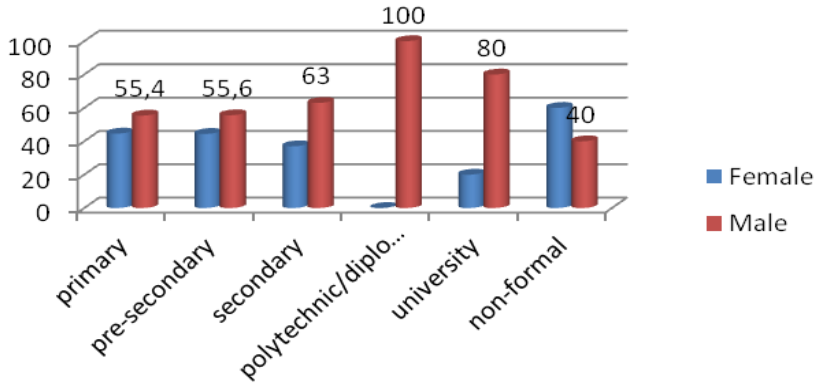
[24] It was commonly believed that the education system under Portuguese time was very qualified.

joined in the construction of the tank, he said that it was because he did not want to be isolated and he needed to follow what other people did. The GMF chief in Vatunau had a higher level of education (junior high school) but has less experience in organizing the community group than the GMF chief of Dair. Another example is of an old Vatunau woman, who did not know how to read and write, but was more communicative and more knowledgeable about her village. Another Vatunau woman with an elementary education is very active and creative in her work as a kitchen chief in an elementary school. In the community she joined the micro credit group and participated in water and sanitation projects. If we look carefully at table 18 we cannot deny the fact that the majority of GMF members from the two villages need a certain level of education to be in charge of the work that they are doing as book keepers, health promoters, technicians and chief of cooperative groups.

Data provided by empirical studies reveals that there is a connection between the level of education and the level of participation, but it also reveals some deviations of the assumptions held by existing literatures, which suggests a causal link between education level and the level of people participation (Nisha, 2006; Tesshome, 2007; Ife & Tesoriero, 2006; Alambeigi, Zarifian, & Rezaei, 2008). Therefore, in this case, the important role of education, which may determine the level of community participation, can not be ignored. Nonetheless, in these two villages, Dair and Vatunau, some exceptions are revealed, most prominent are the active participation of the GMF chief with an elementary education and an old illiterate Vatunau woman who was very active in meetings and community religious activities.

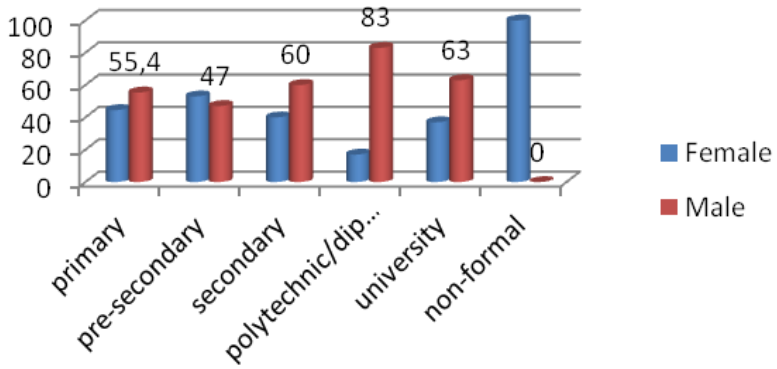
Table 18 indicates that women are comparatively at a lower educational level than men. This reflects the bigger picture of Guleur and Vatuvou with the following data in the two villages.

Chart 1 - Level of education of males and females in the village Gugleur, Maubara



Source: Population and housing census 2010 – Social and economic characteristics, vol.III. National Statistics Directorate (NSD) and United Nation Population Fund (UNFPA).

Chart 2 - Level of education of males and females in Vatuvou



Source: Population and housing census 2010 – Social and economic characteristics, vol.III. National Statistics Directorate (NSD) and United Nation Population Fund (UNFPA).

Women and girls in Vatunau spend up to 5 hours a day collecting an average of 12 to 40 liters of water and sometimes children are forced to give up schooling just to fetch water. Furthermore, many infectious diseases are associated with the poor water quality (Irura, 2008).

Education attainment and income, which can also be understood as economic capability of an individual, are two of the three major factors used to measure the Human Development Index (HDI) (UNDP, 2011) and they are two important components to measure the Gender Inequality Index.[25] Indeed, human education plays the most important role in building qualitative human capital, which is the most important component for economic growth,[26] because higher education can facilitate individuals to achieve higher paid professions.

In TL, girls have a tendency to leave school earlier than boys when they reach secondary high school. The government's CEDAW Report in 2007 lineated various factors that impede girls' access to schooling, such as long distances from school to home, parents concerned with girls in relation to issues of security, poor toilet facilities, and cultural beliefs and roles in the community (SEPI 2007: 14).

The Human Development Report 2011 also confirmed that: "Girls are more often adversely affected because they are more likely to combine resource collection and schooling. Access to

[25] The Gender Inequality Index is a composite measure reflecting inequality in achievements between women and men in three dimensions: reproductive health, empowerment and the labor market. The health dimension is measured by two indicators; maternal mortality ratio and the adolescent fertility rate. The empowerment dimension is also measured by two indicators; the share of parliamentary seats held by each sex and by secondary and higher education attainment levels. The labor dimension is measured by women's participation in the work force.

[26] A World Bank survey from 1995 (World Bank 1995), proposes to assess the sources of the global wealth in the context of three types of capital (natural, manufactured and human − with the latter comprising the social and human capital. According to this source, 20% of the global wealth is represented by natural capital, 16% by manufactured capital, while the remaining 64% is human capital (human resources).

clean water and improved sanitation is also especially important for girls' education, affording them health gains, time savings and privacy." (UNDP, 2011: 18)

In fact, schooling is a major issue dealing with gender questions within a society with these socio-economical characteristics. Data from the two villages in this study shows a great disparity between women and men.

Figures 1 and 2 from the empirical research show that women's participation in school in the Gugleur village is much less than that of men's. This observation is consistent for primary level, as well as for secondary level, polytechnic and university level. In the village of Vatuvou, males are also more dominant in education than females; however the gap between them in secondary and university in this village seems smaller than that observed in the village of Gugleur.

4.4.4.3. Land ownership status of men and women

Many specialists and development experts believe that women rarely participated in decision-making processes in the community because they have no right to land ownership (Touwen, 2001). The table above indicates that no women owned their own land. Only one woman said that her land was owned by her eldest daughter. Most women said that land is titled to their husbands, fathers or grandfathers.

Table 19 - Land ownership status of respondents

	Dair		**Gugleur**	
	Female	Male	Female	Male
Owned by respondent		2		1
Owned by husband	2		2	
Owned by father	2		1	1
Owed by grandfather	1	1		
Owned by eldest daughter	0	0	1	
Total	**5**	**3**	**4**	**2**

Source: constructed by author

Often the land-owners have to participate in the planning phase of the project because the public water pipes and tanks are allocated in the community member's lands. This nature of land ownership often excluded women from the planning phase of the project. The combined data from the two villages in the table shows absolute male ownership of the land, and this

also manifests a strong patriarchal tradition of male domination of land and natural resources in Timorese society.

4.4.4.4. Affiliation to group or organization

One distinguishing characteristic of the people in Maubara is that they like to work in groups. There are many cooperative groups in this sub-district. Some GMF-BS groups expanded their scope of activities to include, in addition to the main focus on maintenance of water system, a microfinance group, agriculture, sanitation market, and soap making cooperative. Some respondents who are strong community participators are also usually members of different groups and organizations. Portney and Berry (1997) also found in their research with Blacks and Hispanics communities that the self-help organizations and the neighborhood associations are the most successful for mobilizing the participation of its community members.

The two tables below illustrate an overall map on the scopes of social and political activities of respondents in the two hamlets. My observation, in general, was that Maubara's people have a strong sense of group and cooperatives, and this was demonstrated by the many different names of cooperative groups that can be seen while travelling along the main roads.

Table 20 - Affiliation with organizations and groups of respondents in Dair

	Sex	CVTL (Red cross)	CARE	Micro finance	Soap making	Women group	Chicken raising group	Vegetable planting group	Church	Political party	Fishing group	Total
Chief of GMF	M	Yes		Yes					Yes	Yes	Yes	5
Member of GMF	F		Yes	Yes					Yes			3
Member of GMF and coord. of cooperative	M	Yes		Yes						Yes	Yes	4
Member of GMF	F	Yes		Yes	Yes							3
Community member (CM)	M									Yes		1
CM	F					Yes	Yes			Yes		3
CM	F							Yes	Yes			2
CM	F	Yes							Yes			2
Total	8	4	1	4	1	1	1	1	4	3	2	

Source: constructed by author

Distinguished difference could be seen between the two hamlets: the people of Dair preferred to work in groups rather than those in Vatunau. Community members of Dair were involved in more groups and organizations (10) than community members of Vatunau (6). As observed in table 20, the GMF chief of Dair is involved in more organizations and groups (5) than the chief of Vatunau (2). This can explain the capacity of the Dair GMF chief to more effectively lead the group despite his lower level of education.

Table 21 - Affiliation with organizations and groups of respondents in Vatunau

	Sex	Micro finance	Soap making	Sewing group	Women group	Church	Political party	Total
Chief of GMF	M					Yes	Yes	2
Member of GMF	F					Yes	Yes	2
Community member (CM)	M					Yes	Yes	2
CM	F					yes		1
CM	F							0
CM	F	yes		Yes		yes		3
Total		1		1		5	3	

Source: constructed by author

A woman from Dair village knows very well the principle of group working:

> Working in a group gives us a lot of advantages, working together gives us strength, members of the groups give different ideas. The chicken raising group gives more economical advantages, we put our money together, when the chickens are big enough, we sell them and all the money is kept as a fund, when a member of the group needs money for spending on the schooling of children we allow, but we do not allow the member to borrow money to spend on the ritual of "kore metan" (strip mourning) (Married community woman, Dair).

It is quite insensitive to directly ask the people their political party affiliation. We can only know when we have a private conversation with someone who knows the situation of the village well. Nevertheless the CF told me that the majority of village chiefs are FRETILIN members and only two are from CNRT. While people are not particularly open about their political affiliations, they seem more open about the Catholic Church, religious activities and other traditional practices. An old woman, 60 years old, is an active member of the local Catholic Church. She never misses any important church days and is part of the daily praying group. She said:

> I am old, my husband died ahead in 1999, I had nothing to lose. My children all grew up and I have 2 grandchildren. I participate in the praying group almost every night. The other women in the village really missed me when I did not come one day (An old community woman, Vatunau).

It is not only in TL that the religious groups persist longer than other types of social gathering, but also in the USA. Some researches also revealed that religious groups or communities like the Jesus Movement last longer compared to other groups (cited in Argyle, 1991: 84).

4.4.5. Community leaders

Community leaders in Timorese society are highly respected by the community members. First of all, because most of them are from Liu Rai families (land lords or noble families), they were named as Chefe Suco (Chief of the village). Lia Nain (usually known as traditional ritual leaders) also are highly respected, they lead all the ritual ceremonies in the villages from "Tara Bandu" (symbols that prevent people from violating consensus norms set up by a community) to appealing to ancestors to bless their agricultural activity during the sewing time, harvesting time, or calling for rains, reconciling all types of conflicts in clans or in the community, and many other activities that traditional leaders have to be involved in. In this section I will explore the role of Chefe Suco in coordinating and mobilizing all the endeavors of the community in development projects.

Since 2002, the chiefs of the *sucos*[27] (villages) have been voluntarily working in most of the villages in TL, the people in the village usually choose those who are from the Liu Rai family line, or those who have devoted their time and energy for the good of their village. Sometimes they are veterans from the clandestine movement during the occupation by the Indonesians.

They work voluntarily; they earn their legitimacy from the community members and not through any election. The chiefs of the sucos do a wide range of work, such as receiving outsiders (political parties, research teams, NGOs, Developmental agencies etc…), organizing the community in maintaining the water system, irrigation, roads etc., acting as a contact point between community and outside counterparts, resolving disputes or conflicts that have emerged inside the community relating to land, and disputes on common land and forests. The community members rarely have contact with the state due to the poor conditions of the

[27] According to the Law 3/2009 suco is defined as "The Suco is a community organization formed on the basis of historic, cultural and traditional circumstances, having an area established within the national territory and a defined population. The village comprises a population cluster united by family and traditional bonds and connected to the sucos by historical and geographical relationships. Powers to delimitate the number and areas of the sucos and the relevant villages shall lie with the government."

infrastructure. Research done by the Asia foundation found that "four out of five Timorese are likely to view their community leader as responsible for making and enforcing the rules that govern their lives rather than any state institution, including the courts or parliament" (Ragragio & Everett, 2011: 1). Other research done by Kuponiyi (2008) in Nigeria also found that 80% of rural community leaders are very concerned about community development projects. In TL, despite many activities and tasks that a village chief has to cover, even the village chiefs do not have any planned budget that is channeled from the state, due to the decentralized system that has so far not yet been authorized and approved by the parliament of RDTL (Garagio, J. M, & Everett, 2009). In 2004 and 2005 the suco leaders and the suco councils have gone through elections according to the provisions of law 2/2004, of 18th February 2004 (Lao Hamutuk, 2009). On October 9th, 2009 the law on community leadership was officially enacted and the second election for the local suco council members was held in a peaceful manner (Gross, 2009). In 2009, law that defines community leadership is as follows:

1. Community leadership is the collegial body the purpose of which is to organize the community's participation in the solving of its problems, to uphold its interests and to represent it whenever required.
2. The community leadership is exercised by the Suco Leader and the Suco Council, within the limits of the Suco and the relevant villages, elected in accordance with the provisions hereof.
3. The community leaders are not included in the Public Administration and their decisions are not binding upon the State.

The chief of village Gugleur proudly said the following about his being reelected as Chefe Suco:

> For many years I was the chief of this village without payment or any fee for transportation. I used to walk from 6 to 15 km a day to the hamlets to coordinate, inform, and monitor various local development projects such as: water supply and sanitation, road rehabilitation, microfinance, and so on. In 2009 I was reelected because people saw that I walk (not because I drive a car or ride a motorbike), it was because my feet never stopped walking that made people choose me (he is laughing while he is speaking)….because they saw I dedicated my time to our common good. They know it very well (Village chief, Gugleur, Maubara).

Leadership roles in rural communities play a very significant role in making the community participation more successful and long-standing. A referential point can be found in the

argument of Fox (1992) that community leaders play a role in articulating the collective needs and concerns of their community members. Laverack & Wallerstein (2001) added that factors of good leadership and efficiency of organization structures are crucial to successful community participation, besides that it also demands a favorable political environment that facilitates and supports democratic participation.

A CF remarked:

> In Dair village, people believe him, the chief of the GMF, before he was the chief of the village, but now one of his cousins is now in charge of this position. They coordinate and work very well in the village (CF, DNSAS office, Dili).

In the context of rural development, many self-help development projects have been implemented. In such a setting, the organizations have to work in a very dynamic way and the role of local leaders is very critical to its success. Research done in Nigeria by Adeday found that 89% of the respondents agreed that community leaders are initiators of development projects (Adeday, 1985).

A wide range of researches proved that supportive local leadership contributes significantly to the success of community-based projects (Rifkin, Muller & Bichmann, 1988; Pollnac & Crawford, 2000; White, 1994). There are different arguments going on about the authoritarian communities and more democratic types of local leaders. Novaczeck and Harkes (1998) proved that the successful local level management system in the Moluccas (Indonesia) was likely to be associated with the authoritarian power of a strong local leader. However, I believe that the authoritarian type of leader could be relevant at a low level of social awareness of the local villagers.

In the locality where the research took place, I noticed that the local leaders are mostly from noble families (Rai Nain) or land-owners, the oldest settlers of the land. Botes and Rensburg named them as gate-keepers of local elites (Botes, 2000). This could be true of what I observed in the two communities, and the core members in the GMF groups from two villages somehow have a kinship relationship. This is typical of rural communities in TL and was confirmed during my interview with the traditional leader in Vatunau:

> Our village, actually we are one big family, started from our great grandparents, and handed down from generation to generation, they expand the clan through marriage and we multiplied our family line until now (Avô Nando, Vatunau,).

The hamlet chief in Vatunau (one of the descendants of the noble family of the village) was the one who set up the GMF structure, not through a democratic election organized by the community. A GMF member told me that her position in the structure of the water maintenance team was actually appointed by the chief of Vatunau hamlet. In addition, the contact point between the CF of Maubara and the community is the village chief, not the chief of the GMF (it is assumed that the CF has contact with the chief of the GMF). Through conversation with other community members, I also learned that the chief of the GMF is a relative of the hamlet chief. This is not an uncommon phenomenon; we can find similar situations around the rural villages all over TL, except in the urban communities, where the visitors and non-family members are usually together and live in a determined area.

The same thing happened with Dair village as well, most of the members in the GMF structure have a family connection, and the coordinator of the cooperative group confirmed that: "As we all have a family connection, we find it easy to work together, and we can trust one another." That is one of the positive sides of extended family, however, some exceptions exist because some community members do not actively get involved or avoid participating.

Traditional leaders and the village council in the two hamlets (aldeias) cooperated well with higher administrative officers and are not at conflict, unlike some villages in South Africa where traditional leaders were excluded in the development process and were often in conflict with the formal administrative authority (Peires, 2000).

In my observation in the two hamlets from the two different villages, the common characteristic that could be found was that the local elites dominate all the spheres of social, economic and cultural life in the community. Mansuri and Rao (2004) also recognized that the domination of the local elite might restrain broad-based democratic participation at the local level and manipulate the benefits of development projects for themselves. However, we have to admit that not all elite domination leads to monopolizing all the benefits of the development projects and this was confirmed by Rao & Ibanez (2003). The empirical findings of this research also showed that the majority of respondents are satisfied with the project, even members who do not have a family connection with the hamlet chief. This may suggest that changing the paternalistic and traditional structure of governance at the local level is not easy within a short time. The democratic structure of governance might work very well at the national level, but does not work at the community level. The national department of water supply and sanitation and NGOs who work with development projects need to pay more attention to the tendency of monopolizing the common resources, as well as the results of the

development for the local elite. This has to be undertaken while also seeking to enable the capacity of local leaders to work effectively in engaging more equal community participation in development projects.

4.4.6. Women participation in RWSS projects

There are many evidences showing that there is a link between women's participation and sustainability of WASH activities (AusAID, 2010). This section describes a real situation of participation of women in the two villages.

The findings in the empirical research done in Maubara indicate that most women in the two villages, Vatunau and Gugleur, were not given opportunity to participate in the planning phase, which is considered the most important phase of the project because it involves decision making power and the power to choose the appropriate location and technology according to their gender needs.

Table 22 – Women's participation in the water project in hamlets Dair and Vatunau

Women from Dair	Project phases	Short description of the work	Women from Vatunau	Project phases	Short description of the work
GMF member	Planning, construction, maintenance	Attending the meeting, organizing village women to cook meals in the construction phase, monitoring hygiene practice in the community	GMF member	Construction	Organize other women to cook and bring food to construction site
GMF member	Planning, maintenance	Soap making, technical training	Community member	Did not participate	Did not participate
Community member	Construction, maintenance	Cooking and bringing food, cleaning the grass around the construction site, cleaning the public tank	Community member	Construction	Cook and bring food to the construction site
Community member	Construction, maintenance	Cooking and bringing food, cleaning … (same as above)	Community member	Construction	Cook and bring food to the construction site
Community member	Construction, maintenance	Cooking and bringing food, cleaning … (same as above)			

Source: Collected from empirical research in the community (January, 2012)

What was said by the women from the village of Vatunau, Maubara confirmed that women need more opportunity to participate in the planning phase:

> I was not invited to the planning phase of the project, I wish I could, but I did not have information on that meeting. When everything was decided, people just asked me to join with

> the other women to cook and bring food to the construction site (A community woman, 27 years old, single, Vatunau).

Another woman, a GMF member in the village Dair, shared that she participated in the planning phase but she had no power to decide and just accepted what was already decided:

> I participated in the planning phase to listen and know what is going on, I wanted to suggest the public tap should be near to my place, but due to the consensus of the majority of men, the tap should be located at the center of the area. It is about 150 meters away from my house (community woman, 37 years old, married with 3 children, Dair).

In this case, we can suppose that the central location decided by the majority of men benefits other women, therefore this decision is acceptable. However there are many issues that need more women in the planning phase, in terms of choosing which technology to use, the design of clothes washing areas, bathing places for children and so on.

During the construction phase, women from both villages contributed by cooking meals and bringing them to the men at the construction site. Some women worked in the preparation phase before the construction phase, doing tasks like cleaning the grass, picking the rocks, and refilling sandbags. During the maintenance phase or post-implementation phase, women were inclined to do more tasks relating to sanitation and health promotion. The following records are the monthly meetings, which show the participation of women and men.

It suggests the different participation patterns of women and men in the community meeting in the post-implementation phase in Dair, Gugleur, Maubara.

Table 23 demonstrates that, at most community meetings, more men went to the meetings than women. The ideas contributed in the meeting relate to the specific domain of their traditional roles. The issues or concerns of the meeting will determine whether more women or more men participate in each issue.

It is noted that, in regard to activities like cleaning, sanitation, preparing food, and protection of the water tank, more women usually gave their ideas and reports on it than men. Opinions and activities in relation to organizing, monitoring, building tents, or protection of water sources are more often volunteered by men than women. The last meeting of 2011 concerned choosing candidates for GMF, however no ideas from women were contributed. The pattern of women's and men's participation in the meeting is a clear representation of the traditional role and function of men and women in their society.

Table 23 - Number of participants (women and men) in a community meeting (Dair, 2011)

Date	Female	Male	Main topic of the meeting	Men and women who gave ideas in the meeting (No.)	
				Female	Male
8/01/2011	32	42	Review what has been done and failed in last year	2	4
8/02/2011	21	43	Re-structure GMF group and cooperative	2	3
8/03/2011	24	48	Presentation of action plan on general cleaning around the water tank, building hand-washing places	4	3
8/04/2011	24	46	Follow up the progress of the activities of each group	3	3
8/05/2011	18	46	Action plan to build office of cooperative group, doing proposal, doing name panel of the office	0	4
8/06/2011	28	48	Preparation for healthy living environment	1	3
8/07/2011	22	34	Protection of water sources and sanitation facilities	2	2
8/08/2011	34	54	Building the chapel, mobilize, organize the material construction and voluntary labor	1	4
8/09/2011	25	48	Preparation to celebrate mass	1	3
8/10/2011	22	38	Preparation to receive the delegation from NGOs ICRC, PMI, CVTL and SAS	2	3
8/11/2011	22	47	Preparation for Christmas and planning for next year	0	5
8/12/2011	31	53	Choosing candidates to add to GMF structure	0	7

Source: Minutas enkontru GMF no koperativa karimbala kada fulan tinan 2011 (minutes of monthly meeting of GMF group in Hamlet Dair, Village Gugleur, Maubara)

Most Dair women who participated in this interview said that they participated in the post-implementation phase meeting. The five respondents said that they felt at ease and welcome in the community meeting. A female GMF member was very active in the meeting and contributed many ideas. She represented other women in the maintenance group to report the success and difficulties that her group experienced. Other non-GMF women members just listened to the others, they rarely contributed their ideas.

Vatunau women who were involved in this research were more passive in participation in the meetings. The sole female GMF member attended meetings, but she did not contribute much in the general meetings in which men were also present. However in small groups of women, she usually shared her knowledge about health, malaria protection, and reproductive health. She usually attends the planning meeting and listens to the tasks that have been assigned to women and then she returns to the community to inform the other women, for example, women are responsible for preparing food and water for the construction team, which were mostly men.

Another significant finding I noticed was that male respondents' spouses mostly stayed home and took care of children and domestic work and were not very active in the WASH project or other community groups. This is because of a low level of education and the married status becomes another added barrier to women's community participation. A quantitative research on women's participation in rural development projects in Nigeria also sees the positive and significant relationship between participation of women local leaders and levels of education and marital status (Okunade, Farinde & Laogun, 2005).

Married women who were interviewed in village Dair all recognized the difficulties to delegate childcare work to other family members. Married women with small children told how they had to ask for help from their mothers, sisters, or elder daughters to look after the young babies when they were busy with WASH project tasks. Only one woman from Dair reported that she can negotiate with her husband to take care of their younger children. She said:

> When I am too busy with my women's group I delegate my children to my sister or my husband. It depends on his availability. Sometimes I come home late at night and my husband does not complain or say a word, he understands my work. (A chief of the women group, 32 years old, Dair).

Islas (2010) in her study on women's participation in a community-driven development project in Nicaragua showed that the women who were involved in this project were much more confident and could negotiate with male family member to take charge of domestic work. The men started to change their perception about women who are usually economically dependant on men. I realized that this woman of hamlet Dair had successfully extended herself to the public sphere, however not all the women in this hamlet could do the same.

The community work participation situation of married women in Vatunau seemed worse than in hamlet Dair. A GMF member of Vatunau is a single girl. She shared her observation regarding participation of women in her village: "The majority of women who joined the rehabilitation of the distribution tanks are those who have older children, old women, or single women. Married women with small kids could not join." (A single female GMF member, 24 years old, Vatunau).

Most of the women interviewed partook in daily domestic work, two women shared that if their husbands had time, then they also helped by taking care of the children, the other single women said that their brothers helped them collect firewood.

Fetching water is considered as domestic work, women have always played a principle role in these tasks, but sometimes they got help from their sons, brothers, or husbands. After the water became more accessible, women are still the ones who have to fetch it because they are the ones doing the cooking and cleaning. This is a strong structural barrier prohibiting women from becoming involved in the public sphere. This was confirmed in the description of women's work in a research on cultural practices in TL:

> The day to day life of Timorese women – beyond the inter-lineage ceremonies and great rituals – is divided among the care of children, participation in certain phases of the agricultural life, making textiles, making baskets, making pots, and above all the preparation of food (IICT, 1989: 35).

This state is emphasized in the WASH gender adviser's report: "gender inequality in Timor-Leste remains a significant barrier to women's full participation in WASH activities in rural community….Certain patriarchal attitudes and traditions, as well as women's heavy domestic work load limit women's involvement." (AusAid 2009: 1).

A common phenomenon within the marriage institution in many societies, western or non-western, is that a man marries so that the woman can look after his offspring and prepare his daily food. A concrete example in a society mentioned by Haviland (1999: 253): "On the island of New Guinea, a man does not marry because of sexual needs, which he can readily satisfy out of wedlock, but because he needs a woman to make pots and cook his meals, to fabricate nets, and to weed his plants." This description about women's role is blatantly pragmatic. In a more refined manner of viewing women's role in the house, the Mambai in TL attribute a special respect to the house. For them, the house is a source of life and is attached to women who represent mother earth as described by Traube:

> The house is also metonymically associated with women, who "follow the Mother Earth" and preside over the inner realm of space. Symbolically, a woman's domain is the house, and she should not leave it. It is men as a class who venture outside, to work in the fields and gardens, to penetrate the bush and cut down virgin forest, to visit distant places, in short, to open up new spaces, while women, like Mother Earth, remain indoors with their children, waiting for the men to return (Traube, 1979: 80).

By going about their everyday life, the women's position in the public sphere or in decision making processes involving their own family becomes structurally reduced.

In relation to women's decisions in their family planning, two married women in Dair were asked about their plan to have more children: one GMF member said that she and her husband

had an agreement that they will not have anymore. The other woman said: "About having more children, I cannot plan it depends on God's plan, if he wants me to have more, then I will receive it." (A married woman, 34 years old, Dair).

I observed a married 27 year old woman with 4 children who was so emaciated and her expression was so tired and stressed. She had no idea about family planning and did not know how many more children they will have. When I asked her about this, she just smiled and did not want to discuss the topic of reproductive health.

Capacity building training sessions were attended by most of the female respondents who are in the GMF structure. However, not all the women could apply what they had learnt after the training session. A GMF member who attended technical training said: "I wished to have more training on technique. I only attended 5 days training, which is not enough for me to repair the tap without an accompanying man. I want to repair the pipe by myself; I want to do the same work as men do. So when there is something wrong with the pipe we can do it right away." (Female GMF member, 24 years old, Dair). Women were generally unknowledgeable about technical work. Only one girl was trained in this area, but she never put it into practice and when the water system was discovered broken they could not repair it by themselves.

A female GMF health promoter in the village was satisfied with what she learned and can apply it in real life:

> I followed several trainings on reproductive health and another to prevent malaria and diarrhea. These trainings gave me more knowledge to talk to the other women to promote my community to become healthier. Every month I have training on community health, about malaria, we have to protect ourselves from mosquito bites and keep our children clean by bathing twice a day (GMF woman, married, 37 years old, Dair).

One GMF member of the technical team said:

> I followed the training on health, gender, accountancy, and techniques relating to function of the pipe and tap of the water system. I also learned how to make soap from local materials. I learned many new things and it helped me to become more confident and I know more about what is going on around me. I wish I can learn more. (A woman GMF, single, 24 years old, Dair).

She also mentioned her experiences in relation to technical training:

> Even though I could not repair the tap or pipe alone, I know how it functions and operates. I know how to use the tool kit although it is a little heavy for me. I want to learn more and I want other women also to learn about it. Now it is time for women to also learn how to do the work of men. (ibid)

Picture 7 - Technical training for female GMF member

Picture taken by Lucio dos Santos (CF Maubara)

Some non-GMF women in Dair had training on emergency relief, health promotion from Red Cross, and soap making from a cooperative group. A 23 year old single woman, a regular community member, also received health training because she works voluntarily for the Red Cross organization. She shared her feelings of being useful to other people:

> I am happy to join the activities of Red Cross, it helps me have contact with other people, exchange ideas and thoughts, and I can use what I know to share with the other older women who did not learn about hygiene and prevention of some common diseases in the community.

Regarding the felt benefits from the WASH project, five women from Dair recognized that since they have had access to water, they have more time for handicrafts and other productive works. Married women said they had more time to take care of their children and keep them clean.

4.4.7. Natural factors and community participation

Prior to entering the research field in TL and for the purposes of this research, natural disaster was identified at the beginning of the research as an external factor that might affect the community participation process I mean: before i went the village to interview.

I assumed it would certainly impact community participation, both, indirectly or directly or in a negative or a positive way. Before starting to discuss the question: "whether natural factors induce or impede community participation?" I preferred to have a general look at the types and characteristics of natural disasters, their impact on development processes and human society as a whole. Natural disasters are recognized as flood cycles, landslides, cyclones, storms, droughts, and earthquakes and are mostly more intensified in temperate and tropical Asia. These natural disasters can severely damage the coastal infrastructure in particular (I

emphasize this because the relevant research site is in a coastal area), like roads, bridges, water systems and the like (Freeman & Warner, 2001). Among these, flooding is one of the greatest threats to stable infrastructure, particularly to water systems, irrigation systems, hydropower systems and others. In general, natural disasters have a very negative impact on development globally, and further, they severely worsen the development process in developing countries, not only in regard to macro-economic variables (for instance, it might reduce the foreign investment, therefore reduce the GDP per capita), but also the balance of payments and public spending, which also results in domestic inflation. For instance, natural catastrophes have caused infrastructure losses alone of $32.6 billion in 1995 (Freeman & Warner, 2001). On the other hand, natural disasters put developing countries at risk of failing to consolidate their resources to development, instead these countries have to channel development funds to emergency reliefs and infrastructure reconstruction to repair damages caused by the disasters and put projects back on track (Kreimer & Arnold, 2000).

Table 24 - Types of natural disasters and their impact on water systems and community participation

Natural disasters that have occurred in the village	**Impacts on water system**		**Impact on community participation**	
Heavy rain	Water is not clean	Community member (2)	People do not attend the meeting	Community facilitator (1)
Landslide caused by heavy rain	Destroyed the water pipes	Hamlet chief (1). GMF chief (1), Community members (4)	The maintenance fund was discontinued (water system was destroyed)	Hamlet chief (1). GMF chief (1)
Landslide caused by heavy rain	The sand blocked the water connectors	Hamlet chief (1). GMF chief (1), Community members (1)		

Source: constructed by author

The losses and damages associated with natural disasters are clear, not only at a global and national level, but also the direct impact on local communities is apparent. The poor (Freeman & Warner, 2001) in particular rely on public services to maintain their economic life, such as clean water, roads for transportation, or the simple house they can only afford to live in and, when a natural catastrophe hits, they are the ones who suffer the most. As one author confirmed:

> For both developed and developing countries, the lower the economic, political, and social status of the people…affected by disasters, the larger the loss burden… Consequently, the people and activities most affected by natural disasters are bound to be those belonging to the poorest and

> most powerless social sectors of less developed countries, especially in those countries undergoing rapid transition with little or no regard for social consequences at the margin. (Albala-Bertrand 1993 cited in Freeman & Warner, 2001: 23).

After going through a range of literature reviews I found that damages to infrastructure was mentioned, but none of these directly related the connection between community participation and the natural factors. Table 24 briefly presents the impact of natural disasters on village water supply systems as well as their impact on community participation.

In this section I stress how natural disasters can considerably interrupt the continuity of community participation. This is, to my knowledge, a unique finding of the study in Maubara. The empirical data of this research, which identified the impact of natural factors, particularly rainfall-triggered landslides and flooding in hamlet Vatunau, is an important example of how natural disasters affect community participation in this hamlet. The hamlet chief presented why the GMF group has not been active since 2010:

> Previously, the GMF group was organized by NGO Oxfarm and it worked normally. However, in 2010 a landslide caused by big rain and flood destroyed the distribution tank and broke the principal water pipes. Since then, we have not had regular GMF meetings and we also think "why" collect money when the water system has already been destroyed. And one more point…..there was no monitoring visits from SAS of Maubara sub-district or from NGOs. (Hamlet chief, Vatunau, Vatuvou).

The sharing of this event by the hamlet chief presents a dysfunctional GMF group that was formed and organized under the mandate and regulation of SAS and NGOs, which are both a top-down participation structure, and was disrupted after the Pelapu river flooded. However, despite posing a dangerous crisis situation to the community, the threat of a catastrophe enhanced community resilience and induced the villagers from hamlet Vatunau to come together in another form of participation. After the disaster in 2010, the GMF group in Vatunau has not functioned as mandated in the water supply policy, which is a top-down structure of DNSAS, because they no longer had a water system to maintain. The hamlet chief of Vatunau smiled at my question about the reasons behind the dysfunction of the GMF group and said: "Our water system was destroyed and so was the structure of the GMF, which was created by DNSAS and NGOs to maintain the water system. What is the point of doing things like collecting money, book-keeping, regular meetings and so on." (Hamlet chief, Vatunau, Vatuvou).

It was true that the Vatunau community members no longer had regular meetings and their contribution to the maintenance fund were no longer consistent as they used to. A research done by Berends (2009) in Mongolia also proved how the environmental degradation affectsthe community participation in economic production due to loss of water sources and increased dryness. In spite of this, the natural disaster brought the community spontaneously together to solve their emergency problems and enhanced their social resiliency. This idea was also supported by other studies on rural community participation confronted by natural disasters in Bangladesh and other countries. These findings revealed that, in certain circumstances, natural catastrophes triggered a collective action (Harun & Kabir, 2012; Oakerson, 1992).

How hamlet Vatunau came together to solve their lack of water problem after the flood is carefully explored in section 4.4.3. under "*Type of community participation of the two villages*".

Extreme weather events not only impeded community participation, but also prevented the SAS staff from doing their work. The CF of Maubara (SDF) complained that:

> In rainy seasons, heavy rainfalls make it dangerous for us to travel on the road from Dili leading to Maubara, during this time the river is usually full; I could not pass the river to arrive at the meeting previously determined with community members. When I arrived at the community, nobody was there. People did not want to come because of the heavy rain. (CF, DNSAS office).

It seems that in poor working conditions; poor infrastructure, and with a poor communication network, the CF could not effectively carry out his role and this also affected the community participation process (Ife & Tesoriero, 2006).

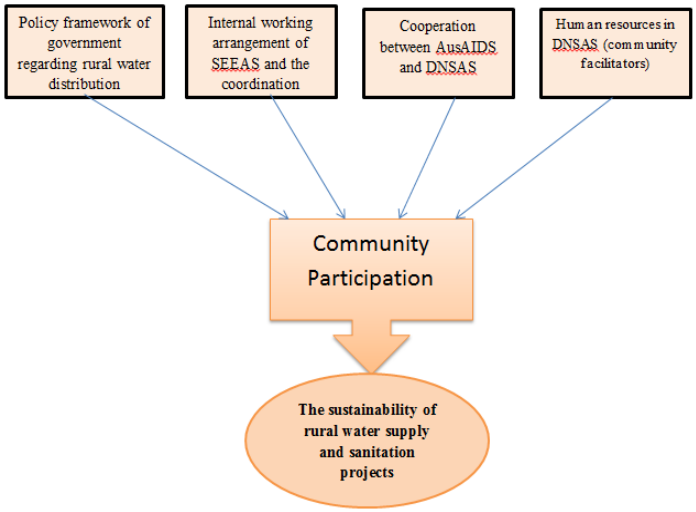
In this case it was clear that the degraded environment, natural catastrophe, poverty, and poor infrastructure formed a vicious circle. The poor infrastructure was impacted by the natural factors, for example, because there was no bridge (the bridge was broken by flooding and is now under construction) the people have to cross the dry stream, but during the rainfall season it is impossible to cross. This impeded the social-economic activity and even the health care of the communities that lived on the other side of the river.

4.4.8. Institutional factors and community participation

A sufficient amount of literature revealed that institutional policy and the institutional arrangement play a crucial role in either facilitating community participation or deterring the

community from participating. Besides that, an increasing number of practitioners and researchers agreed that intervention from government or from NGOs is very important in gender mainstreaming to ensure equal gender participation in development projects. This section emphasizes some aspects that deal directly or indirectly with the issues of community participation and the links between them.

Figure 6 - Institutional factors and community participation



Source: conceptualized from secondary data and empirical research by author

Different aspects will be put into discussion such as: (1) policy framework of the government regarding water distribution in rural areas, (2) Internal working arrangement of SEEAS and the coordination between government institutions, (3) the role of AusAID in supporting MoI to build up the policy framework as well as other strategic guidelines, and lastly (4) the condition of human resource in DNSAS.

4.4.8.1 Policy framework of Timor-Leste government for rural water provision

In the Degree Law No.4/2004 on the regime Distribution of Water for Public Consumption, the government defines the role and responsibility of rural communities in the maintenance of water systems. These tasks are delivered to the GMFs and outline their responsibility to organize, manage, and monitor the whole system, as mentioned in article 21: "O sistema de abastecimento de água fora das áreas urbanas é gerido pelos grupos de gestão da água designados pela comunidade, sem prejuízo do direito de intervenção do Estado. Quando não

existam grupos de gestão da água constituído, o sistema de abastecimento de água é gerido directamente pela comunidade. O Serviço de Água e Saneamento deve prestar assistência à comunidade com vista à constituição de um grupo de gestão da água."(G-RDTL, 2004: 11) (The system water supply outside urban areas is managed by the water management groups designated by the community, subject to the right of state intervention. Where there are groups consisting of water management, the water supply system is directly managed by the community. The Water and Sanitation Service shall provide assistance to the community for the constitution of a group of water management.)

This policy presents a wide range of functionalities of the GMFs in the 12 districts, nonetheless an evaluation assessment done by the AusAID office based in Dili reflects that the effectiveness of this policy needs further improvement in terms of putting it into practice:

> In East-Timor, the functionality of small community-managed schemes is highly variable, ranging between 10 percent and 70 percent. Generally, cost recovery is poor. In urban areas, it is reported to be close to zero and in rural areas it is chiefly in the most remote and poorest communities where 100 per cent cost recovery seems to occur…..very few water user groups are operational which means functionality is more likely to decrease than increase (2009: 12).

The vice director of OMAD (Operacional e Manutençao Agua Distrital) gave a more concrete description on the situation of community participation in general and especially on the reasons that inhibit communities from fully participating in terms of cash contribution:

> Since we paid attention to the aspect of community participation in the WASH project, I can notice a significant improvement in the sustainability of the program. One factor I was worried about is that the contributions to maintenance by rural households, of which a majority of them are poor, are still minimal (Mr. Elias, Director of Operacional e Manutençao Agua Distrital, now the State secretary for Water, Sanitation and Urbanization).

His remarks either recognize the progress and efficiency of community involvement in WASH or touch on the economic aspect, which was discussed in section 4.4.4, about how socioeconomic factors affect the participation of the community. Poor rural communities that usually have little income to contribute to water maintenance are not unique. Even in a country with better economic advantages, such as Portugal, rural communities can be found with far poorer households that have difficulty paying water tariffs (Egerton, et al., 2011).

The findings in the two hamlets gave us clear-cut differences in terms of their contribution to the maintenance fund; hamlet Dair, with its more well-off economic condition than hamlet

Vatunau, established a micro-credit cooperation to facilitate those who need means to initiate a small income generating project.

In addition to Degree-Law No. 4, the government's Rural WASH sector strategy 2008 – 2011 was delivered to guide and govern the whole water distribution and sanitation system in TL. The WASH sector strategy 2008 – 2011 also mainstreams genders into components of the GMF group. The table below shows how the number of women sitting in management position or technical positions is enforced by law. This is a concrete example of gender mainstreaming, which is defined as "the (re)organization, improvement, development and evaluation of policy processes, so that a gender equality perspective is incorporated in all policies at all levels at all stages, by the actors normally involved in policy making" (Council of Europe, 1998: 1).

The Council of Europe confirms that differences between women and men are not an essential obstacle to equality:

> Gender equality means an equal visibility, empowerment and participation of both sexes in all spheres of public and private life…Gender equality is not synonymous with sameness,…..their style and conditions as the norm…Gender equality means accepting and valuing equally the differences between women and men and the diverse roles they play in society (Council of Europe, 1998: 7-8).

Table 25 indicates the minimum representation of women in decision making positions in GMFs, however the reality is different in the hamlet Dair where I did my research. One woman is in the position as health promoter and one woman is in the technician position, but has never dealt with any technical problems due to lack of practice and experience. Actually the enforcement of regulation can attain a certain target, but does not reflect the real empowerment of women in the GMF structure.

Table 25 – Regulated minimum number of women sitting in GMF structure

The number of people in GMF group	Regulated number of women in group	Regulated number of women in group in the technical position or management
5	2	1
6	3	1
7	3	2
8	4	2
9	4	3
10	5	3

Source: WASH sector strategy 2008 – 2011.

In addition, the Government Rural Community Water and Sanitation Guidelines provide stakeholders with a general mandate or standard to implement rural WASH programs with detailed guidance on both hardware and software implementation for rural communities. (DNAS, 2005).

4.4.8.2. Institutional working arrangement of SEEAS (State Secretary of Electricity, Water, and Sanitation)

In 2013 under the Fifth Constitutional Government, the Ministry of Infrastructure was abolished and replaced by the Ministry of Public Work, which was previously under the Ministry of Infrastructure. The organ that took responsibility of water and sanitation services that was under the SEEAS now became the State Secretary of Water, Sanitation and Urbanization (SSASU). For the sake of consistency, and because this thesis began to take shape in 2010 and the data was mostly collected under the old organization (and the work has remained the same), I will persist with the original name of the organization.

The new structure separated water services and sanitation services into two directions. Now they have a general director of DNSA (National Direction of Water Service), which leads two major departments and is headed by two vice directors: Vice Director Operation e Maintenance of Water of rural District e Vice Director of Urban Water, Dili.

The Vice Director of Operation and Maintenance of Water District (previously named the SAS District) led 12 District Water Service departments.

As policy stated, the rural communities have a responsibility to look after the ongoing maintenance of their own water systems, however the SAS district and sub-district play a very important role in supporting the community to do this task, as well as immediately intervene when damage to the water system occurs. The SAS sub-district has to deal with many village maintenance systems and, as many GMFs have established, it is very challenging work for the SAS sub-district, stressing human resources as well as financial resources, which are centralized at national level. As a report of AusAID puts it: “SAS District’s ability to carry out these roles is limited by insufficient resourcing and cumbersome MoI financial management systems that restrict SAS mangers from efficiently accessing and spending funds” (AusAID, 2011).

The PDD (Programas de Desenvolvimento Desentralizado) development packages, which cover infrastructure projects and include water rehabilitation, road building and other public

buildings, were carried out and delivered under District Administrations under the MSATM (Ministry of State Administration and Territorial Management) and include procurement. Coordination between the SAS district and District Administration is on the basis of monitoring projects in relation to construction of water projects. However the coordination was unsuccessful and SAS managers found these monitoring tasks difficult and inevitably some poor quality projects were delivered to the community (AusAID, 2011).

In general, the weaknesses of the internal and external coordination reveal very significant flaws in the government institutions. The inter-coordination in one institution faced many challenges, but much less than the inter-ministerial coordination: For instance, it was found that the three ministries, MoI, MoH and MSATM, had ineffective coordination between them which had proved critically difficult to amend (Ibid). This result manifests more clearly at district level, therefore the quality of the PDDs are criticized and questioned by civil society and this directly affects the lives of community people.

The reasons for inter-ministerial coordination are based on the old institution arrangement, which was the DNSAS that was under the Ministry of Infrastructure. This Ministry is concerned with the infrastructure of water systems, but not with sanitation and hygiene promotion, which is the work of the Ministry of Health and the Ministry of Education. Therefore the necessity for inter-ministerial coordination exists, even though many found that it was complex and was still in the process of adjustment (AusAID, 2009).

The commitment of the government to improve the water services and sanitation was apparent in the 2012 budget. The budget for hardware (purely infrastructure development) was US $20 million (it was carried over to 2013 and is now 13.5 million) (RDTL, 2012). The budget for the infrastructure of water and sanitation in 2013 is about US$11.4 million. For rural areas the estimated budget was US$ 650,000 for 10 districts (RDTL, 2013). Furthermore, the budget for the total operation costs during the year 2013 for the State Secretary of Water, Sanitation and Urbanization is US$ 2.937 million (this includes the salaries and development capitals for the whole sector).

In general, the government's weak capacity to implement not only the water infrastructure, but also manage the budget of 2012, is apparent by the carry over of US$ 13.5 million to 2013. It is undeniable that there are certain drawbacks of the government being involved in the water and sanitation services. During the years 2002 to 2010, the government did very little to improve the water and sanitation services. Furthermore, in terms of operation and

maintenance tasks, the government did not generate enough money or a plan to support the local government and the community as stated in the policy (AusAID, 2009).

Despite major progress, constraints to effective financial management of the water supply within MoI remain. There is no internal audit function; procedures for the recording and reporting of DNSAS expenditures merit further examination (Mellor, 2011).

Role of construction contractors in Water Supply

Together with NGOs, the contractors provide services of construction, rehabilitation, and other maintenance works. They directly deal with the government, particularly with SAS, or with some NGOs that need their services.

In terms of water system construction, BESIK's experience has affirmed that contractor selection as one of the three key components (survey and design, contractor selection and supervision, and facilitation of community engagement) has a major impact on sustainability of a qualified water system (AusAID, 2011).

In general the contractors working in water construction and sanitation are competitively weak and they greatly depend on government projects. The Timorese company, in particular, has a lack of resources and experience to compete with other foreign companies.

Major international donors in Water and Sanitation Services

In the area of Water, Sanitation and Hygiene, the major international donors that are very active and contribute significantly are AusAID, USAID, ADB, JICA, and UNDP. In 2011, the European Commission (EC) started to fund for rural WASH programs (ISF-UTS, 2011).

Local and international NGOs contributed significantly to the development of water system and community empowerment. However, some Local NGOs depend on unstable funds for short term projects, so the work mostly is incomplete and assembled in a piecemeal manner. However some international organizations are also active in the WASH sector including UNICEF, Plan, WaterAid, Oxfam, Care, Triangle, CVTL, World Vision, and Child Fund.

An excellent observation made by Grumbley and Hamel (2010) in their study in the two districts, Lautem and Aileu in TL, noted that the local NGOs have been strict in their participatory approach and have provided better results in terms of sustainability (Grumley & Hamel, 2010). The result of the study revealed that 32% of water systems that are in good

condition and fully functioning were built by NGOs using a community participatory approach, while the other water projects built by 26 contractors with minimal participation of the community all eventually became totally dysfunctional (Grumbley & Hamel, 2010). This is good evidence proving that the local NGOs have greatly contributed towards reinforcing community participation.

4.4.8.3 The cooperation between AusAIDS and DNSAS: adjustment, disagree and hope for future cooperation

The main objective of Australia's support of the RWSS in TL is poverty reduction, health improvements and gender equality. In a wider objective that is beyond the basic needs, it also aims to strengthen the democracy, the role of civil society and the regulatory role of the public sector. So far BESIK (AusAID) has contributed towards the betterment of the quality of DNSAS evidence-based planning and budgeting. Further, it helped to improve a more inclusive approach towards annual budgeting by creating a Water Information System for following up the nation-wide functionality of water systems.

Initially, AusAID support was targeted at the emergency need for water and sanitation infrastructure through the Community Water Supply and Sanitation Program (CWSSP). During the years 2007 to 2012 the support focused more on capacity building and institutional sustainability under the RWSSP.

RWSSP (AusAID) stressed three main areas: developing and strengthening the institutional framework to support service delivery, forming capacity locally to enable services to be delivered, and delivering water and sanitation services. However the budget spent for the first area of interest was 68% of the total budget. Normally, the RWSSP is implemented through a managing contractor who coordinates with the government and other sector stakeholders.

So far the AusAID Rural Water Supply and Sanitation Program (BESIK) is the first largest donor in TL (within the period 2007 to 2012) with a total investment of US$ 40 millions (ISF – UTS, 2011) in which 68% of this amount was designated to policy design, institution planning and capacity development. 12% of it went to the delivery of water services, 5% for sanitation, and 6% for hygiene. In 2012 - 2017 the budget for the rural water, sanitation and hygiene sector (RWASH) amounted to US $60 million over five years. It continued investing in three components; firstly, "District RWASH agencies enable coordinated, sustained quality service delivery (planning, building, rehabilitating and maintaining water systems; and the

delivery of sanitation and hygiene promotion programs)". Secondly, "Central RWASH sector agencies provide effective strategic direction, coordination and appropriate resources to the sub-national level to meet RWASH related development needs", and thirdly, "Core public sector agencies provide the policy framework to enable effective and sustained performance of the Central and District RWASH Sector Agencies" (AusAID, 2011: 10).

There are some misinterpretations from the government officials when they look at the AusAID strategy of working with the water and sanitation sector. The DNSAS director raised his opinion about the cooperation between DNSAS and AusAID:

> I hope in the next 5 years of cooperation with AusAID there will be more focus on physical construction of water systems. In my experience, in the past 5 years they emphasized too much on capacity building, technical assistance…..you know, if you keep on giving training and training, but no water comes to the community, then what is the purpose of those trainings?

This clearly elucidates the tension between "long-term capacity building" and "short-term physical investment" or, in other words, finding a balance between investments in hardware and software to meet immediate needs and long term needs has not yet been accomplished (AusAID, 2009). Further, the intention of the two partners was misunderstood by the other, and the AusAID project designs were not based on the government objectives, consequently sometimes the two projects occurred concurrently, but were not aligned to government systems (AusAID, 2009). This problem demonstrates that there is a need for the external developer or donor to collaborate with the government agencies to clarify all the plans and processes they intend to do.

It is true that around two-thirds of the Australian support to the sector in TL has been in the form of long- and short-term technical assistance to personnel who manage and implement the project. The remaining one-third has been to support physical construction of water and sanitation facilities and a variety of community mobilization and local capacity building activities.

According to the evaluation team's analysis, the capacity building so far is more focused on individuals rather than the institution, and the capacity tends to circulate at the national level not at the local level. As we can see from the results of the research, members of the GMF at the local community, especially female members who have a technical position, have insufficient skills consequent to a short training period.

Individuals who are employed by NGOs are well trained and have a certain capacity to work, but when these NGOs no longer have funds to continue to operate, then these individuals find

employment in other organizations other than water or sanitation services. The most critical problem that the RWSS faces is the loss of trained individuals and the effective transfer of skills and responsibility to the local governance and community.

4.4.8.4 Human resources in DNSAS and the impact of community facilitators in sub-district Maubara

The human factor can be considered as the key determinant to success of a public institution. In the area of water supply, the field staff's role is very important when they are dealing with community members. The human resource of DNSAS to work well in the water and sanitation services became a very critical issue. In general, the level of education is still low, the majority of the staff (or 45%) finished high school, 13% had vocational training and 9% have university level. The low education profile also reflects the low capacity of the staff and the need for the institution to further plan its human resources management.

Table 26 - Level of education of the DNSAS Staff

Education level	Number of staff	%
Elementary	24	18
Pre-secondary	18	13
Secondary (12 years in school)	60	45
Diploma (3 years of vocational training or in university)	18	13
Bachelor degree (4 years in university)	12	9
Master (2 years in postgraduate)	**2**	1
Total	**134**	**100 (%)**

Source: Finance department of DNSAS (Feb. 2012)

Table 27 - Total staff of DNSAS

Employment status	Number of staff	%
Permanent	134	40
Contracted	113	34
Community Facilitator	88	26
Total	**335**	**100 (%)**

Source: Finance department of DNSAS (Feb. 2012)

CFs were recruited in 2009 and they are the only task force that mobilize and work directly with rural communities to involve them in action planning processes as well as in all the phases of the water and sanitation project. Furthermore, it is assigned by law that the SAS service has the responsibility to follow up the work of the GMFs. "o service de Águas e Saneamento deve monitorizar e avaliar e eficácia global dos grupos de gestão de água a fim de permitir que se atinjam os objectivos deste diploma." (The Water and Sanitation Service shall monitor and evaluate the overall effectiveness of groups and water management to enable the achievement of the objectives of this law)(G-RDTL, 2004: 12). This task has been assigned to CF.

At the time of conducting this research the CFs are not permanently employed. Therefore they cannot be offered subsidies or other rewards as the other permanent staff. In 2013, when I interviewed the SDF in Maubara, he told me that he has been working on a non-permanent contract and so far he does not know whether DNSAS will upgrade him to permanent status.

There are some constraints reinforcing the politics of gender mainstreaming. In 2009 the BESIK (AusAID) tried to enforce a certain number of CF positions. The DNSAS, and AusAID commenced the recruitment process. The gender officer of BESIK (AusAID) recalled some of her experiences with female facilitators:

> We tried to intervene in the process of recruitment of CFs. From 88 CFs, 26% were women, however, the day by day problems and difficulties of female CF were so clearly revealed. Some of them have a small baby, it is inconvenient for them to travel long distances. One big challenge for some women is the husbands will not allow them to work overtime. As CFs sometime they have to follow the time of the community members who are busy with their farming. In some communities they have the meeting at night when most community members are free from their daily tasks (Gender officer, AusAID).

It can be understood that the social structure barriers not only restrain the participation of women in the community but also the female CFs. They share the same problems and they have to fight for their independent space to become involved in the public sphere. This is a strong indicator for the DNSAS, as well as international donors, to take note of this dilemma and devise a strategy to support or back up the difficulties of females who work in the field.

In addition, there is a shortage of working facilities such as computers and working space for CF at the sub-district level and there is no payment for overtime work, all of which can reduce the productivity of the CFs.

The gender officer and the CF also mentioned the situation of human resource management policy of the DNSAS office, they said the same thing as: "Sometimes they would not receive a salary for 4-5 months, gasoline is not subsidized by the CF to go into the field. This becomes a barrier to effectively implementing their work." (Gender officer and CF Maubara)

The CF of Maubara further described his inhibiting working conditions:

> Sub-district facilitators receive only US$ 140 a month. Sometimes we do not have gasoline to fill our motorbikes; we would have to wait for a few days for the supply of gasoline. Little things like that make our work more difficult to go down to the community to monitor the GMFs. Our status now is not clear, we are not permanent staff yet. It is hard for us, especially for women, this work requires a lot of sacrifices (Community Facilitator, Maubara).

Despite facing certain material difficulties in implementing the fieldwork, the CF of Maubara contributed significantly to the community mobilization. In some communities of Maubara he proposed to the local contractors that they extend their work to build more public taps for the community in exchange for their free labor in helping the contractor to build the water system. Thus, the facilitator's creativity helped to maximize the benefit to the community. In turn, the contractors, if they are from the same locality where the water system is constructed, are more likely to cooperate and adhere to the master plan from the government office. For this reason the CF confirmed that:

> I preferred to work with the local contractors who are from the same village so that they have a sense of belonging and are willing to do better for their own villages, but sometimes we had no control over the decision of tender, it depends on the district council and village council to choose, it is not easy to influence to the village chiefs with my ideas....., not all appreciate and consider the social aspect as we do (Sub-District Facilitator, Maubara).

And this is a good extraordinary example of negotiating and generating discourse to gain a fair exchange (free labor and more water points) between the contractors and the community within a legal structural frame. It demonstrates a response to the DNSAS director's question about the 'free labor'. Indeed the community and the CF work closely to bargain with the contractors. They corrected the failure of the master plan, which designed the water distribution map without consultation with the community, and, as a result, the design did not respond to the water needs of the community (this is not the case of Hamlet Dair. The CF is reporting here about the situation in another village).

In addition to the successful stories of the work accomplished by the CF, there are also some certain limitations that I discovered during the interview in the field. His works did not cover all the hamlets in Maubara, for instance, he did not know the road leading to the house of the GMF chief of Vatunau. This fact evidences that the DNSAS has problems integrating their policy into practice at the district level. In policy, the constant monitoring by the DNSAS on the work of the GMFs in the communities was required, however in implementation, they did not allocate sufficient resources to develop the fieldwork staff. In addition, the institution has to support them in many aspects like creating suitable working conditions in terms of facilities, salary, capacity building and subsidies. Due to the poor working conditions in rural areas, the field staff need more support from DNSAS in terms of facilities, adequate rewards, and salary, all of which are necessities that have to be met. The effectiveness of human resources will have an impact on the outcome of the water projects. Some evidence showed that continuing support from the organization has a significant influence on the success of the community-based projects. In a qualitative research with the marine protected areas in the Visayas, Philippines, it was found that the continuing advice and follow-up from the implementing organization was needed for the success of its project (Pollnac & Crawford, 2000).

In general, a good and adequate policy does not always reflect a good program or good implementation. It requires a serious commitment to successfully implement it.

As Kasonga (2011), who conducted various studies on public administration, noted that when the performance of state public services does not meet the public's needs, then it will lose the trust of its people. In some cases, lack of a certain control, monitoring and evaluation system, or interference of politics could lead to disintegration in public administration or even corruption (Kasonga, 2011). Actually the corruption perception index of TL is 2.2, which is a very low rank (Transparency International, 2008).

In relation to the management of human resources, the unclear definition of tasks and lack of a policy of developing human resources can weaken the public institution and the process of transferring skills from experts to the staff will never end and the dependence on the external experts remains unlimited. Therefore the government has a need to cooperate with donor agencies and NGOs to develop an integrated strategic holistic plan for the water and sanitation sector in order to serve the community more effectively.

4.5. Toward a new Conceptual Framework on community participation

Some divergences emerged after the empirical research was analyzed; therefore a review of the conceptual framework (figure 3) is necessary because the process of community participation in the two hamlets was not the same and the application of local knowledge in WSS projects was assumed as a unique finding of this research. Some assumptions that were proposed in the first conceptual framework proved unfeasible in reality. For example: The pattern of participation of hamlet Dair is a good example of guided participation with a strong collaboration with the external institution, whether it is NGOs or government agency. However, I found many difficulties to distinguish the level of participation in hamlet Dair, which was supposed to be based on the model of 'Health for all Network' (figure 1). Hamlet Dair has similarities to the model in figure 1, because of its guided participation with a close cooperation with an institution. After scrutinizing all the findings from the secondary and primary data, it is clear that participation happened at different levels in each phase of the project (planning, implementation and post implementation). However it could be challenging to exactly attribute each phase in the model, like 'has control', 'plan jointly', 'delegated', etc. In this modified framework I would name the level of community participation in three phases of the project as community control, but it depends on each phase, therefore, they will be named as *strong* community control, *moderate* community control, and *minor* community participation. For instance, in the planning phase, the community are consulted as to the location of the public tap as well as the information on water sources and on other issues (*Adat,* or other taboos in the community), however, they depend greatly on the technicians from the agency for designing and the budget plan from the government or the donor (in this aspect, the community has no control at all) and there was much less opportunity for the participation of women in this phase.

Compared with what was theorized in the previous conceptual framework, namely that the level of participation of the community in the planning phase would reach a level of 'consultation' and 'joint planning ', I would say that the collaboration did not reach such a level and that it could be more appropriately named as 'moderate community control', since there were cases where the community did not equally plan jointly with the agency. The plans were mainly designed by experts with some consultation with the community. It was evidenced that the 'consultation' with community really occurred. In our figure 3, the "planning phase" starts with the initiation of DNSAS (Direcção Nacional de Service de Água e Saneamento) or NGOs. The planning phase is usually divided into sub small phases such as:

rapport building and community mobilization, social analysis and WASH, situation analysis (these were done by experts with community consultation), preparation of action plan (these were executed by experts with community consultation), technical survey and design (these were done by experts with community consultation), and finally the community agreement and finalization of community plan (DNSAS & Ministerio da Saude, 2011). In this planning phase the community elects the GMF members (SEESAS, 2010). This part has full community control because the community chooses their own representatives with the influence of gender mainstreaming policy from the DNSAS. The quota policy was imposed; therefore at least two women were chosen to sit in the GMF structure in hamlet Dair.

As a whole, women apparently were excluded in the decision making of the planning process. Therefore the whole planning phase process and the level of community participation will be concluded as 'moderate community control'.

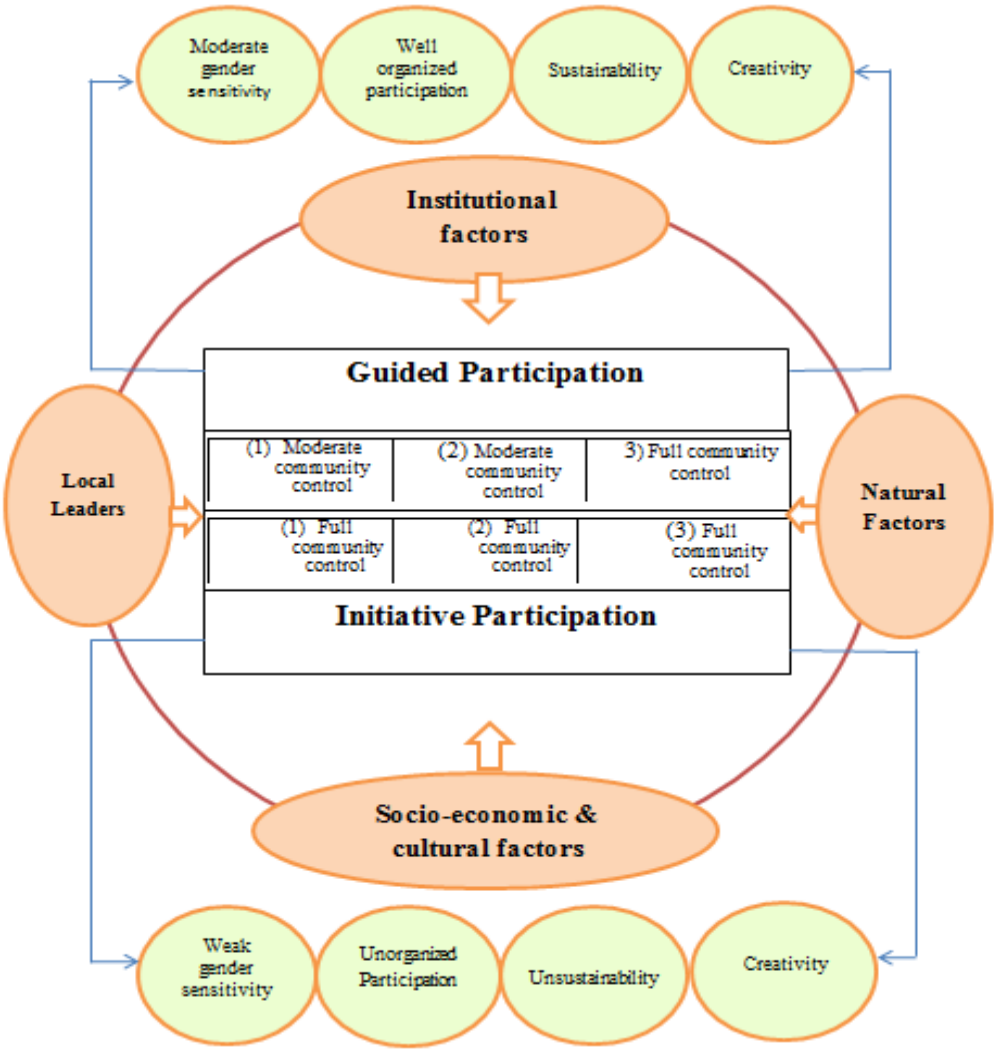
In the implementation phase, the previous conceptual framework supposed that the level of community participation would be the level of 'joint planning ' and 'delegation'. However, I suggest that, in this modified framework, the level of community participation in this phase is named 'moderate community participation'. The reality reveals that most construction works were put into service mainly by the contractors and under the observation of engineers or technicians from DNSAS or NGOs. The community participated by contributing their labor, some local materials, help in managing the construction work, and taking part in the public audit report. In this phase, the community exemplified their autonomous role by performing the *Adat* ceremony (traditional or ritual practices before beginning a project or a construction site to ask for spiritual protection as well as permission). On the other hand, women participated in this phase as an extension of their traditional role.

In the post implementation phase, or we can call it maintenance phase, community people had full control over the infrastructure and they decided the tariff cost to contribute to the maintenance fund for each household. Male technicians of the GMF can prepare the broken water system (except for major damages, which they then have to ask the DNSAS requesting a technician to repair it). The community organized and divided the tasks among the community members. They have full control of their funds and they have founded a micro credit fund. The roles and functions of women in this phase (although they are extensions of their domestic tasks) are very important in protecting, caring for water and sanitation facilities, monitoring the hygiene practices and sanitation, as well as keeping the environment

around the public tap clean. This plays a vital part in sustaining the longevity of the project for the future.

Another manifestation of the creativity and autonomy of the community is the use of indigenous knowledge like 'Tara Bandu' and using bamboo to replace the iron joints, which were not available in the community, to lead the water to their village (in the case of Vatunau).

Figure 7 - Constructing a Conceptual Framework



Note: 1. Planning 2. Implementation 3. Post-implementation

Source: Constructed by the author

During the post implementation period, the GMFs partook in further training and gained further management and organization skills. In this period the community fully decides and controls the operation and maintenance of the water system. The promotion of hygiene and sanitation, in particular, is actively led by the GMFs. Therefore, the post implementation phase is recognized as having 'strong community control' over the process.

In relation to the gender aspect, this empirical research did not find much gender negotiation in the domestic domain between men and women. In hamlet Dair, one woman reported negotiating with her husband to look after their children when she was occupied with meetings, but this was not always the case, and most of the time she depended on her mother to do this task. She continues to do domestic work even though she takes part in community work.

The presence of institutional factors, which are largely related to the features of bureaucracy and professionalism, were mentioned in figure 3. They include the policies and guidelines of DNSAS or of NGOs. Some drawbacks in their human resource management and the tensions between bureaucratic goals and those of the donors also affect the whole process of providing effective services. The established relationship between the CF and the community of hamlet Dair is very good. A certain level of transparency and impartiality of the decision-making procedure exists (Tyler, 2002). So far the community has not signaled any dissatisfaction or complaints. However with hamlet Vatunau, mechanisms proceeded differently (the facilitator did not visit the water tank, which is 6 kms from the village and the chief of the GMF has never met him).

The socio-economic and cultural factors are influential to participation, particularly in the WASH project: they may severely hamper or facilitate the extent and the effectiveness of participation (Ife & Tesoriero, 2006: 162). The empirical research once again affirmed that, generally, the level of organization affiliation, education level, household income, and gender are factors that interplay with the level of participation. Gender stereotypes strongly affect women's participation in the public sphere (Alambeigi, Zarifian, & Rezaei, 2008). In the community that fails to prevent gender mainstreaming, women have difficultly making their voices heard and attaining any extent of control on the project.

The 'leadership' factor also plays an inevitable role in community-based development projects. In a situation where rural communities still rely on their local leaders (some of them double as traditional leaders) to respond to their various needs. The leaders are those who organize the community members to contribute to infrastructure development such as roads, water systems and sanitation, and so on. Their role bridges external partnerships with their community. Therefore community leaders are very influential on community participation, either constructively or destructively.

In the previous framework it was theorized that the "technical and natural factors" might affect the community participation, for instance, the poor construction quality also affects the

collective action of the community (Nisha, 2006: 5). The findings in the two hamlets have showed that the natural factors - the geographical characteristics of the location, natural disasters like landslides, erosion or floods, are among the main causes for the breakdown of the water pipe systems and directly affect the participation. The technical problems in this research are not clearly revealed. The main problems found were the natural disasters.

This research has several limits to drawing up a comprehensive conceptual framework, therefore more quantitative and qualitative research that covers other locations in other districts of TL would be useful to develop a broader understanding of whether, and if so to what extent, the technical factors, political factors, and other cultural factors have an impact on community participation.

Conclusion

Talking about the water and sanitation issue in a post war country like Timor-Leste, which was restored and rebuilt on rubble, is not particularly novel. However, the politics of participation in water and sanitation services is a polemical issue that has been in debate for several decades. Therefore, a study on this topic still bears a certain meaning and implication to different interest groups.

The objectives of this study, which were proposed after the guiding conceptual framework was constructed, at first glance seemed simple and clear. However when the questionnaires were drafted and the communities were chosen for the interviews, the attainment of the objectives were narrowed down and I had to accept the fact that the objectives were not satisfactorily met because the actual condition of the research setting was completely different than anticipated, which could have been caused by many limitations like: finance, availability of necessary data, language difficulties, poor infrastructure, and telecommunication.

Case study methodology was most prominently used in this research and ethnographic observation was applied in the process of gathering information in the field: meeting with different types of people and interviewing respondents. The ethnographic approach proved very suitable to gain a more detailed grasp of the reality; however there are some certain limitations inhibiting the research. The 53 km distance from my house to the research field was not easy to reach in poor transportation conditions and damaged infrastructure. The raining season also accentuated the difficulty for me to remain in the village. These major obstacles prevented me from visiting the water sources and the distribution tank made by the community of Vatunau, which is a 6 km walk along the river side (there is no road) to the water source. I did not participate in the monthly community meeting because it usually took place at night when the community was free from their daily tasks. Some records on the community participation during the action plan and construction phase were not available in both villages, Dair and Vatunau. However the respondents involved in the research still remember the GMF election meetings.

Some technical problems occurred during the interview with the village women. An interpreter was necessary to communicate with some women who cannot speak Tetum but

those who knew Tetum could translate to and from Tokodede to Tetum. However, the respondents were reluctant to provide more specific or private information in the presence of other people. During the interview we were surrounded with a lot of children drawn by their curiosity, and I felt reluctant to suggest them to leave if their mother did not ask them to do so.

In relation to the methodology, in general, the advantages brought about by the case study approach helped to obtain both quantitative and narrative data. I could obtain the numerical data from the DNSAS and international donors' reports. Narrative data or stories were obtained from the villagers and the key informants from government offices. In addition, the empirical research has produced some surprising and unpredicted factors that are unique to the hamlet where the research took place. The multiple case studies helped to identify what the strengths and weaknesses of policy intervention were in terms of facilitating and guaranteeing the equal participation of men and women, and also the strengths and weaknesses in community participation without the policy intervention.

In fact, this research cannot be generalized universally, however some findings are similar with the results of other researches in other countries, and some issues found in this research could share some common points with other districts of Timor-Leste.

The two hamlets of Maubara, Liquiça, which were the focus of this study, are affected by geographical, demographic, economic, and social characteristics, which have a great impact on the sustainability of water distribution in these two hamlets. The weather along the coastal areas is extremely dry and lacks tree coverage and acts as a gateway for all the water flows to pour out to the sea, especially when the heavy rain comes from the mountains. Therefore these areas are very vulnerable to water scarcity and natural disasters. The two hamlets have their own mythical and oral stories and share similar tales of how the community and place were established based on the tradition of respect for the cultural properties that the ancestors had left them. The mythical stories were restored by narration from generation to generation, instilling a sense of pride of their own origin.

Overall, the present economic, social, and cultural condition of the community paved the foundation for how the community participation takes shape in the water and sanitation projects.

The research disclosed differences in understanding and defining the concept of participation. The community members understand participation as a collective effort to reach the common good of the community. They emphasized the value of being inclusive; it requires the

involvement of marginalized groups in the community. On the other hand, the community also admits the fact that too much involvement in community work also affects their daily income generating activity, especially women. This notion was also supported by Kaminer (1984), who reported that unpaid or cheap labor was sometimes taken for granted.

The institutional leaders are very clear in their definition that community participation serves as instruments or means to reach the sustainability of the project. They do not give importance to the fact that the concept of participation in community-based water supply institutions can empower the people through development of their capacities. In addition, the director of DNSAS questioned the free labor and free contribution of the community; this needs further examination and research to decide what is the right participation approach in development projects. This issue bears an important implication on the state-community relationship: the weakness of the institutions, in terms of resources, in the nation building phase requires "cost-sharing" and other types of contributions from the community. However various authors also proved that cost recovery or water tariffs enhance the sense of ownership of the project (Ditcher, 1992).

The participatory approach to community-based management in water maintenance is well suited in a small scheme gravity water system project. But it does not have a greater influence on the external structure that also affects their lives, for instance the slow response from the NGOs or government, monitoring or controlling from the responsible agencies are insufficient. Some community GMF members have never met the CF of the sub-district.

On the other hand, the community cannot yet take full control over the decision making process: they know very little about the ready budget for the water scheme, and the process of negotiation between the service providers, both state and non-state actors, with the contractors. The community is seen as a beneficiary or as a group of clients rather than as a transformative agent. This problem was also addressed in a World Bank report about service delivery in post-conflict States:

> In the post-conflict states, the possibility of the citizens to influence the policy makers and politicians is weak, and the public services often become the currency of political patronage and clientelism. This link can only be strengthened through better information and stronger legal, political and economic means to press demands against the government. Services, they still may not be able to. Stronger compacts are needed to hold both state and non-state providers responsible for service provision. And citizens need more power – by tailoring services to their needs and monitoring service providers (Baird, 2010: 20).

To a certain extent the GMF members of Dair hamlet still have a chance to approach the CF from the DNSAS office, and it is expected that he can represent the decision makers. However the function of the CF is to follow up GMF groups and the general water scheme in the community in order to report and suggest to higher level officers, however he cannot make any decisions.

In the top-down structure of the water and sanitation services decision-making body, free space is given to the community members to exercise their autonomy, such as: they can set their own rules for collecting the payment for maintenance funds according to the economic condition of each household; for example the Dair community had the creative initiative to transform this fund into a micro-finance cooperative. On the other hand, the GMF group was given adequate opportunity to improve their capacity in management, community organization, administrative skills and preparation on how to do an evaluation of the technical aspects of the construction. In this case, the Taylor (2004) four elements of participation, identified as; 'contribution', 'instrumental', 'empowerment', and 'development' and the 7-level model of participation of the UK Health for all Network were found in this type of participation. These elements were tailored and mixed with each other rather than segregated into a set of distinct, separate phases of participation.

The positive side to the water management group (GMF) is that there have been no complaints so far about the transparency aspect. There are two different approaches to fund management in the two hamlets. Hamlet Dair has organized their GMF group well and they have clear-cut tasks assigned to each member. The performance of the cashier and the cooperative chief was excellent. They both kept track of the outgoing and incoming funds every month. Dair hamlet has the biggest amount of money collected compared to the other hamlets or even villages in sub-district Maubara. Hamlet Vatunau showed us a different picture, as it doesn't have a permanent fund. Community members collect money when an emergency case arises, then they use it all for the reparation or restoration of the water system. This community is a typical example of participation in an emergency situation. It is not very sustainable in its maintenance; it lacks mobilization and organization in the group. Therefore, only a few people are active in the monitoring of the water scheme, such as the GMF chief and some men with technical knowledge. The case of Vatunau, once again contradicts conclusions reached by Jimu, namely that the "vulnerability to poverty and lack of resources at the community level defeat efforts towards genuine community development" (Jimu, 2008: 21).

There are some certain social and economic impacts on community participation, such as income of the households and the number of family members. The level of education is not a determinant factor that directly influences the participation of the community. There are some exceptions in this case study, however, affiliation in organizations and groups is the major factor that influences the participation level of community members.

Natural disaters were found as an indirect factor that affected the continuity of community participation in a regular contribution to maintenance fund. However, the study also found that the disruption of water system caused by the floods and landslides could trigger the collective efforts from the whole community of Vatunau.

The types of water systems in the two hamlets were mostly gravitation systems. They are simple and easy to repair. Another advantage of this system is that gravity schemes have no regular fixed monthly costs, the villagers only need sufficient funds to fix it when the system breaks down, unlike the other systems that need monthly expenditures to operate (for example, an electric pump).

Leadership issue in the water projects proved vital to encourage villagers to participate. We can see that the leadership role of the GMF chief in Vatunau was taken over by the hamlet chief. It is a manifestation of the extension of the traditional role in the rural village. The GMF chief in Dair was chosen by the community members, and his appointment is considered more legitimate. The success of the participation in Dair is also attributed to the efforts of the leader.

Government institutions, especially in a post-conflict state such as Timor-Leste, played an important role in maintaining effective and sustainable water and sanitation services to improve the living conditions of the poor and to enhance their potential in order to participate fully in the economy and the development of the country. However, as we saw in the findings, the institution's capacity to respond to the community needs was quite slow and overall insufficient. The poor conditions of the rural infrastructure also affected the quick response to local needs. The centralized administrative system became a great obstacle to allowing the working staff to completely function in their role.

On the other hand, providing services in fragile states also bares some risks. It can be used for political purposes to fulfill their promise in the election campaigns, or it can be prone to manipulation and this can lead to social conflict or a vulnerable situation.

Shepherd expressed the development path of Timor-Leste as "postcolonial forms of development and governance" and it reminds of the nation construction projects that have been implemented in many post war countries: "Reconstruction, security, state-building, and development came together in a way that recalls the Marshall Plan of 1949; just as the Marshall Plan became a model for American style postwar reconstruction and development" (Shepherd, 2009: 1). Indeed, since its independence, Timor-Leste has been influenced deeply by the masterminds or experts of several major international donors (World Bank and IMF), the large contingent of NGOs who were trying to fit Timor-Leste in the development blueprint designed for countries newly emerging from war and conflict. Therefore, it is inevitable that the pattern of participation in development projects, as well as in government policies binding these projects, were predominantly formed in a top-down approach. Participation was perceived by the authority leaders as instrumental and the community members perceived it as their duty and obligation to do good things in their community. Limited staffing resources, accompanied by financial resource beneficiary participation, are employed by government institutions as an antidote for the weakness of its centralized services. This is done for many reasons, for instance, the rural community may be too far to monitor or they may have limited knowledge of the local context. On the other hand it was assumed that the participation of the community will promote self-reliance and avoid excessive dependence on the government (Manikutty, 1997). Further, a community based approach could be seen as an alternative approach to address the weaknesses and lack of reliability of the centralized government system (Padawangi, 2009). Or it is implied that participation could be an additional burden on the shoulders of rural people (Oakley, 1991).

The approach of participation is shaped by NGOs, World Bank, and donors in the development path in which Timor-Leste was shaped is a mixture of conventional and alternative developments, where the influence of the international actors is huge and an attempt has been made to fashion Timor-Leste to suit the market "imperatives" of neoliberal capitalism (Shepherd, 2009) that resemble the post-colonial participation years of the 1940s and 1950s where citizenship participation in development projects was an obligation (Hikey & Mohan, 2004).

Superficially, the gender aspect in these water sanitation and hygiene projects appears to have been addressed. The research found that the gender mainstreaming policy in RWSS enforces the practice of women's involvement in planning and decision making of the Facility Management Group quite well. The empirical research has shown that policy intervention in

establishing a quota for women's participation is a matter of achieving the numbers, in other words, a matter of quantity and not of quality. However, the decision making discourse is still in the hands of men. The findings of the research have revealed the visibility of women in the decision making structure, even though their roles in these positions are aligned to the female traditional role or 'women's work'. Women are usually assigned tasks such as health promotion, cashier, and as accountants for the project, in addition to maintaining a clean environment around the water tap in the Facility Management Group. Only one woman was elected as a member of the technical team in order to fulfill the quota set by the SAS policy, and most of the time male members of the technical team are usually in charge of repairing the broken pipes or taps. Similarly, the same pattern exists in the health promotion team: Even though there is one man in this team, he rarely attends meetings and is not very active in this role; most of the time female members are more active. In this line, we can see the different patterns of participation between men and women. To change this pattern we need to commit to a long-term transformation of gender traditional roles. One interesting point that was noticed in the process of this research is that women worked together in groups quite well. They participated together in a soap making microfinance group. They raise chickens in a group and they are more active in these kinds of activities than in the water supply and sanitation projects. It is important for us to note that the women only groups, or women only organizations, are not always realized in all contexts of the development projects. In some cases, inevitably, women have to work hand in hand with men to achieve maximum empowerment for both sexes (Tam, 2012).

In the context of a post-conflict country, the social, economic, political and cultural aspects are finding their ways to assert, cooperate and consolidate. When these aspects do not work well together then the conflict and turbulence will threaten the security of a country (UNHRO, 2012). On the other hand, these aspects are also inevitable and vital in the developmental path of Timor-Leste. Economic aspects can ensure some establishments of the infrastructure and it definitely facilitates the social economic investment and contributes to the improvement of people's welfare in rural areas. The political aspects might dictate and regulate all the social economic policies to ensure equal distribution of resources and services. Cultural elements in the rural communities are inherited, nurtured, and consistent. Cultural norms are unwritten but were followed unquestionably by most of the Timorese (including intellectual people). It is very clear that, as detailed in the research findings, these social, economic, political, and cultural aspects are again interacting and shaping the pattern of

community participation of men and women in Timor-Leste. As Pieterse (2010) analyzed, the dilemma of good things do not always work well together. The alternative development path has much to do with integrating the new values of the democratic approach (such as participation, including the excluded, human rights, etc.) with the old values of indigenous culture, highly hierarchical or culturally protectionist. However the 21st century has marked the rise of the southern countries, many of them can manage to combine the modern and old elements to produce their own developmental path, which is not a complete replica of the Western model.

The gender issue presents another challenge. Pressing for gender equality in development projects in a local community context has raised various challenges and continues to be a contested issue. Particularly, in rural communities where traditional values are ingrained, the ideas of community values, community identity, religious values, traditional values, and community power are, most of the time, masculinized in all aspects of community life. Walby recognized these problems and saw that the practice of gender mainstreaming itself "encapsulates many of the tensions and dilemmas in feminist theory and practice over the past decade" (2005: 2). However, these gender mainstreaming strategies have to be applied in a more sophisticated way and merged with the specific socio-cultural condition of each society or each country. In Timor-Leste gender mainstreaming policy has been applied in many women's groups in different communities, women have started having more access to information, consequently increasing their income, and gaining their voice in public arenas. A considerable amount of women (38.5%) are occupying parliamentary seats, which marked an extraordinary victory in terms of achieving "strategic needs" before it really achieved the practical needs compared to other countries in the region. This strategic needs met has little to do with the violence and the injustice against women still prevailed in domestic as well as in public arena (Rimmer, 2010). For this reason, I completely agree with what Helen Hill has concluded:

> [T]he question is now whether the current generation of female leaders, many of whom are in powerful positions, can learn from their own history, including from their mothers and grandmothers, the history of neighboring countries, including their colonial experiences, and identify ways of addressing women's practical needs that will bring rural and poor women into the political and educational opportunities which they themselves have enjoyed. Such policies would truly address the whole community's practical needs in the coming decades. (2012: 221)

Indeed, in the process of building a country, all the state and non-state actors, particularly the citizens and the civil servants, have to learn to adapt to new conditions for survival. The villages interviewed from the two hamlets in question even created different ways of doing things and adjusting their behaviors to the local conditions. However not all these approaches produced productive results, practices are always being reproduced, adjusted and renegotiated.

Finally, this research was conducted with a number of financial restraints. Ideally, I would have had the opportunity to gather data from other Districts of Timor-Leste to compare and see the differences among the districts. A greater allowance for time, availability and finances would have allowed more frequent access to the villages, lengthier interviews and an opportunity to observe the unwritten text that happens in everyday life in extremely deprived rural areas. Notwithstanding, I am also aware of the time constraints of the villagers who need to continue with their daily living and also the unrealistic expectation of the community to continue to accommodate me.

Recommendations

Recognizing that the sustainability of the water source is very much connected with the ecological issue, human behavior, and attitudes toward natural resource management, I would suggest that a solid natural resource management policy and implementation should be socialized from the bottom up. Encouraging and enabling cooperation between local communities (using indigenous knowledge (Tara Bandu) or other resources) and the state (policy and programs) in protection of forests and the biodiversity is an important factor at this moment.

On the other hand, it is essential to pay more attention to the gender negotiation process at the household level as well as at the community level. The community GMF, traditional leaders and the CFs have to seriously sit down to find a viable strategy to promote a gender balanced way of working in the community and promote changes in domestic affairs A comprehensive understanding of women's triple roles is necessary for the community practitioners and policy makers to avoid assigning greater workloads to women.

Another important issue is in relation to local leaderships, the community leaders have to be aware of their limit of authority to make sure that they do not excessively interfere in all the other working spheres in the community. The resource should be developed and made available to support community participation in WSPs (more facility for the CFs), more

technique training involving more women. The paternalistic attitude of development professionals from both non-state and state agencies should be changed, they usually think that they know more than the local people (or even that men know more than women do), therefore they ignore the valuable local knowledge that can benefit the development projects and can increase the cultural pride of the indigenous community. Public policy on water and sanitation services has to create a balance between software (human capacity and empowerment) and hardware (techniques). If the policy puts more weight on technical issues then it will reduce the participation of the community members, especially the women and other marginalized groups. The concept of community participation should not only view the community purely as consumers, but also see them as changing actors who can participate in decision making processes. Accelerating the decentralized process however should be precautious of the tendency of corruption or interest-group capture (Faguet, 2002). The state actors as well as NGOs should include in their plan a specific agenda (with sufficient time) to involve the communities in the survey with the planning of the water scheme and sanitation services.

The DNSAS have to improve their human resource management to make sure that the community facilitators are equipped to fulfill their duties, such as monitoring the whole operation and maintenance of the water scheme, as already stated in the policy. In a possible manner, it is good that the state actors as well as NGOs have to demonstrate upfront their position as outsiders to the community and the scope of limits of their involvement.

For further research on the topics of participation in Timor-Leste on RWSS, I would suggest these themes: the connection between community ownership and control of water and sanitation projects, the impact of using local knowledge on the sustainability of the RWSPs, the cultural aspects of the defecation patterns of the indigenous groups based on gender. More researches in relation to ecofeminism would also be very important in the future. Further researches also should focus on both qualitative and quantitative approaches to generalize the common pattern of participation for the whole of Timor-Leste.

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Annexes – Interview guides

General interview guide A for the villagers

Contents	Purposes of the question
1. Could you tell me what do you do for your everyday living?	Initial questions to establish the relationship with interviewee.
2. How is it? Do you like it? (Why do you like it, or why not?)	To know the economic situation of the family.
3. How much do you earn from that work? Is it enough to sustain your family life?	
4. How old are you now?	To know social demographic profile and economic resources of respondents.
5. Are you married? If married, how many children do you have?	
6. Did you follow any extra training course in the past?	
7. What is your level of education?	
8. How many people live together in your house?	
9. Do you own this land? (continued to ask about land certificate especially if the respondent is a woman ask her whether she has it)	
In this box, more questions for female interviewee	To confirm the traditional role of women.
10. Do you do all the domestic works? Is there anyone helping you?	To see the women have any control over her body.
11. Do you think that you will have more children? If yes, why?	To see any change in women and men's role.
12. Before the project started, who carried the water most of the time?	
13. After the project finished, who usually carries water from the water point to the house?	
14. Have you joined any community groups or organizations? Religious, social, economic group or political organizations? Are you an active member of it?	Social and political involvement of the respondents (this information will support why the interviewee actively participated in the project).
15. What are the primary water sources you are using?	Water and sanitation situation of the family.
16. Do you boil water for drinking?	
17. How about toilet facilities, what type of toilet do you use?	
For women,	Situation of sanitation in the household, and how women and girls benefit from it.
18. Do you use a toilet in your house? If not, where and when do you go?	
19. How about the young girls in the village where do they go to defecate?	
20. Do they use toilets in the school? If not, why?	
21. How do you define participation?	Community perception on participation.
22. What are the reasons you chose to participate in this project?	The motivation behind participation.
23. Is this water only for domestic use or for other purposes?	

24. Did you join this project voluntarily or because you were forced to?	Level and quality of participation.
25. Who do you respect most in this community and who are you scared of most?	
26. What phase of the project were you involved in? And can you describe in detail what you did in each phase?	
27. Did you join the construction work voluntarily?	
28. If yes, did you have any training in construction work prior to doing the work?	
29. What is the most interesting experience that you have had during your involvement?	
30. Did you participate in the election of the GMF? If yes, how did it happen? Are you happy with the GMF elected?	
31. Are there things happening around your community that make you unhappy or disappointed? If yes, what is it?	To reveal challenges and obstacle factors.
Questions for women	To reveal gender stereotype issues.
32. Who looked after your children while you attended the community meeting?	
33. What do you do in community meetings?	
34. Do you feel that you are welcome in the meeting?	
35. Are your ideas respected and considered?	
36. Did you join the technical work of the project? Why or why not?	
37. Do you know how to repair the water pipe when it is broken?	
38. Do you usually attend the training for community members?	
39. What benefits did you (and/or the men) receive from the free time? Economic benefits? Healthwise?	To see how the women benefitted from the WSS project.
40. Do other community members contribute many ideas? How about you?	
41. Who usually dominates the meeting? Who makes the final decision?	
42. How much do you contribute towards maintenance of the water system?	
43. Did the work affect your daily activities?	To know the cost of participation and whether there is a trade-off.
44. When the sanitation facility broke down, who discovered it first and who initiated repairations?	To see quality of participation.
45. To whom do you report when you see that the water system is damaged?	To see the way the community organizes their work (quality of participation).
46. When you discover faults and technical problems relating to low quality of construction what do you do? What are your thoughts on that?	Another issue might be revealed (mismanagement, corruption, irresponsibility etc…)
47. If you were given more power, what would you do to improve the water and sanitation condition for your community?	The expectation of community member on the GMF.
48. In your opinion, are these water tanks (sanitation facilities) owned by the government or by your village?	To see the perceived extent of community ownership?

Interview guide B for GMF group – extra questions (interview guide A also applied to GMF group members)

1. In your role as GMF member, do you do your work exactly as described in the DNSAS guidelines?	To confirm the role of the GMF.
2. Can you tell me some initiatives from the community regarding the WSS project?	To determine their level of participation.
3. What is the most successful job that you had done as a GMF member?	To determine their level of participation and their capacity to lead the community.
4. What are you not very happy with or disappointed about in your work (relating to DNSAS, to your community)?	To see challenging factors they face.
5. In the process of involvement in the project, what are the challenges or difficulties that you encountered?	And the efforts that they made to overcome it?
6. How did you overcome it?	
7. If you were given more power in decision making, what would you do to improve the water and sanitation conditions for community member?	To see the expectation of the community on the role of DNSAS staff.
8. Do you often meet community facilitators or DNSAS staff?	To see the interaction between DNSAS and CF.
9. How many meetings did you have in the last 2 months?	
10. What are women's roles in health/hygiene education and related activities? Did men play a role?	To know women's and men's roles in sanitation activity. Is it an extension of women's traditional role?
11. Was there any performance differential between males and females?	

Interview guide C for village chief and hamlet chief

1. What do you think of the water project and sanitation in your community?	To determine the degree of acceptance of local leaders regarding the procject.
2. What did you do to facilitate the involvement of the community members in the WSS project?	To the extent of support of local leaders in the project.
3. What do you think about the participation of community in the project?	To know level of participation.
4. What do you think about the coordination between DNSAS, or NGOs with local community?	To see the coordination work between DNSAS and the community leader.
5. Have you been involved in the project since the beginning?	To see level and quality of participation at the local level.
6. Is there anything that made you unhappy regarding the WSS project?	To reveal challenges and obstacles of the project.

Interview guide D for community Facilitator (CF)

1. How do you define community participation?	To know his perception of participation.
2. What do you expect from the community members?	To determine level and quality of participation.
3. Can you tell me some initiatives from the community regarding to WSS project?	
4. What did you do to ensure that more women have management roles in the community?	To determine gender sensitivity and organization skills of CF.
5. What did you do to ensure that the community members elect the right person for the GMF team?	
6. If you were in the position of director of DNSAS what would you do?	Expectation of the staff of its leader.
7. So far, how many training sessions have you attended on gender issues?	To see how the organization prepares the capacity training of its staff.
8. In terms of GMF training, did you take into account the current workloads of women and men?	To see gender sensitivity and organization skills of the CF.
9. What month of the year is the training usually organized?	
10. At what phase of the project cycle do you think that community participation is quite significant? Why?	To see the level of participation?
11. Who is involve more? Women or men?	
12. What is women's role in health/hygiene education and related activities? Did men play a role?	To know women's and men's roles in sanitation activity. Is it an extension of women's traditional role?
13. When training is held for health workers, what percentage of attendees are male and what percentage are female?	

Interview guide E for the Director and the vice directors of DNSAS

1. How do you define community participation?	To know his perception about participation.
2. Do you think the Community Action Plan is important? If yes, how do you translate it into practice?	
3. In general, what do you think about the participation of the community?	To know the level of actual community participation.
4. What do you expect from the community?	
5. What are the challenges, or obstacles in promoting community participation?	To determine influential factors of participation.
6. As emphasized in the DNSAS policy that community participation is very important, what do you think of it in practice?	
7. Regarding the collaboration of the community, what part needs to be improved?	To see how DNSAS evaluates participation and the factors that impede it.
8. What are the challenges, or obstacles in promoting community participation?	To determine influential factors impeding participation.
9. Are DNSAS staff trained to apply participatory approach in their work?	To see how the staff's attitude and work encourages participation.
10. Most of your staff is male, do you have any plan in the future to make it more balanced?	Gather thoughts on institution policy regarding gender mainstreaming
11. In the 2012 budget of DNSAS, is there a budget for social processes and monitoring?	

Interview guide F with gender officer/Gender adviser of RWSP AusAID

1. In your point of view, is there any possibility to have gender budgeting to be put into practice? (from your agency and from DNSAS)	Institution policy regarding gender balance.
2. What difficulties are there in gender mainstreaming in RWSS?	To determine influential factors impeding gender mainstreaming.
3. What factors are you pleased about in your work with RWSS project?	To see improvements made in the project.
4. In 2011 how many training sessions did you organize for DNSAS staff and RWSS staff on gender issues?	
5. Regarding the collaboration of community, what parts need to be improved?	To see how the funding agency evaluates participation and the factors impeding it.