Untangling the Roots

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ABSTRACT

Around the world, mangroves are disappearing. Many species, including animals, plants and human beings, depend on these areas to survive. To try to combat the loss of these valuable ‘forests of the sea’, a number of mangrove restoration projects have been set up. Some of these projects can be found on Palawan, an island in the Philippines. As a large number of the population of Palawan live on the coast, local communities are affected by, and may affect, the conservation or preservation of these mangroves. This thesis examines the role of local community involvement in mangrove restoration projects by focusing on a Case Study in Barangay San Jose, a semi-urban subdivision of the Municipality of Puerto Princesa, the capital of Palawan. The two projects in the Case Study are a government initiated ‘Love Affair with Nature’ project and the Palawan State University (PSU) ‘Adapt a Barangay’ student project. These are analysed by doing informal interviews with the local community of Barangay San Jose and relating this to secondary data collected in the area. The Filipino concept of Pakikiramdam, a form of non-verbal communication that asks people to use all their senses to understand each other, is used to reflect on both the data collection process and its interpretation. This is particularly important in the context of a hierarchical society structure such as found on Palawan. Some important lessons can be learned about the link between the level of local community involvement and the overall effectiveness of mangrove restoration initiatives. Clearly there is a need for better communication between the projects and the local community as this can lead to new ideas for more effective projects in the future.

Key words: mangrove restoration projects, community, involvement, participation, hierarchy, pakikiramdam, benefits, livelihood, the Philippines
ACKNOWLEDGEMENT

A very wise man once told me that learning was like growing fingers, additional knowledge adding length to each finger respectively. These fingers become part of a hand and it is only then, together, that these bits of knowledge can really reach their full potential. This idea is comparable to the roots of a mangrove tree, extending far beneath the trunk and branches which bear the colorful leaves and flowers that are the product of our efforts. This thesis is the seedling of my years at Wageningen University. Thank you Mr. V, for continuing to echo through the corridors of my mind, from the skies in which you fly, even so many years on.

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It is amazing how a person can have an impact on your life, even when they leave it. Grandma, I always assumed you would be at my graduation and the reality shakes harshly beneath my feet - leaving me with little words to describe how I feel. I know you were with me these last few weeks, giving me strength and to hold my hand as I stumbled through the finish line. This thesis is dedicated to you.

"If you take a flower in your hand and really look at it, it's your world for the day" - G. O' Keeffe
TABLE OF CONTENTS

1. INTRODUCTION ........................................................................................................................ 7
   1.1 Background and Research Problem ................................................................. 7
   1.2 Research Objectives & Research Question .................................................. 10
   1.3 Organization of the thesis ................................................................................. 11

2. METHODOLOGY ..................................................................................................................... 13
   2.1 Conceptual Definitions ...................................................................................... 13
   2.2 Data Gathering Techniques ............................................................................. 16
   2.3 Constraints ......................................................................................................... 18

3. THEORETICAL FRAMEWORK ................................................................................................... 21
   3.1 Human Ecology ................................................................................................. 21
   3.2 Political Ecology ............................................................................................... 24
      3.2.1 Political Ecology and the 'Greening' of Governments ............................... 24
      3.2.2 Government Legislation in a Hierarchical Society and the Participation Paradox .... 25
   3.3 Pakikiramdam ...................................................................................................... 26
      3.3.1 Sikolohiyang Pilipino and Pakikiramdam .................................................... 27
      3.3.2 Pakikiramdam and Hofstede ...................................................................... 27

4. PAINTING A PERSPECTIVE ....................................................................................................... 31
   4.1 Human Ecology ................................................................................................. 31
      4.1.1 Ecosystem functions and ecosystem services of mangroves ....................... 31
      4.1.2 Measuring the status of mangroves: ......................................................... 33
      4.1.3 Measuring benefits (direct income) from mangrove: .................................. 33
   4.2 Political Ecology and the Greening of governments .......................................... 36
      4.2.1 Political ecology and greening in the Philippines ....................................... 36
      4.2.3 Property rights ......................................................................................... 39
   4.3 Government Legislation and the Participation Paradox in the Philippines .......... 40
      4.3.1 Government Legislation and Decentralization .......................................... 40
      4.3.2 Participation Paradox (Local community perspectives) ............................. 41
      4.3.3 Alternative Mangrove Policy Options ...................................................... 42

5. CASE STUDY ........................................................................................................................... 47
   5.1 Mangrove restoration in Puerto Princesa, Palawan, the Philippines ................... 48
   5.2 The research site: Barangay San Jose, Purok Masagana .................................... 49
      5.2.1 Mangrove projects ................................................................................... 49
      5.2.2 Government Legislation in Barangay San Jose ........................................... 56
      5.2.3 Barangay San Jose and non-extractive mangrove uses ............................... 59
      5.2.4 Livelihoods and other sources of income in Purok Masagana examined: ........ 61
   5.3 Local community involvement in mangrove projects: ...................................... 63
   5.4 Environmental Management and pakikiramdam .............................................. 65
6. CONCLUSION .......................................................................................................................... 70
7. DISCUSSION ............................................................................................................................ 72
8. REFERENCES ........................................................................................................................... 74
APPENDICES .............................................................................................................................. 79
APPENDIX (i) Mangrove Identification Key ....................................................................................... 79
APPENDIX (ii) Mangrove restoration project sites ............................................................................ 80
APPENDIX (iii) ECAN map of Puerto Princesa, provided by the PCSD ............................................. 81

LIST OF ABBREVIATIONS

BGY - Barangay
CENRO - City Environment and Natural Resource Office
CI - Conservation International
DENR - Department of Environment and Resources
ELAC - Environmental Legal Assistance Center
KSK - Kilusan Sagip Kalikasan
MEPCOM - Marine Environment Protection Command
PCGA - Palawan Coast Guard Auxiliary
PCSD - Palawan Council for Sustainable Development
PNNI - Palawan NGO Network Inc
PSU - Palawan State University
UNESCO - United Nations Educational Scientific and Cultural Organization
WPU - Western Philippine University
WWF - World Wildlife Fund
1. INTRODUCTION

The roots of a mangrove tree are one of its most prominent physical features. These aerial tentacle-like extensions come in many shapes and sizes, protruding above the water in different ways - some species have more immediately visible roots than others. Their function however, is mostly the same; they allow the mangrove tree to live and grow in brackish water, and stand firm between land and sea. It may be battered by stormy waters, but it holds together the earth beneath it in a loyalty to the species it protects; crabs, birds and human beings are among some that benefit from the mangroves in many places around the world. These partly submerged roots are symbolic, reflecting how every other sociological phenomenon ebbs into our perceived reality in some ways and stays hidden in others. Only by choosing to explore them, do we uncover the mysteries beneath the water’s surface; by acknowledging each entwined root that forms each context, can we begin to understand the complexity of the many roots that criss-cross through and between different perceptions of reality.

Living on the coast, many Palaweño rely on mangroves for their livelihoods. Population growth, coastal development and externalities such as pollution and global warming, affect the security that these mangroves provide. Different projects have been initiated to replenish these coastal forests and different forms of management are implemented to support the sustainable exploitation of mangrove resources. These projects may be initiated by governments, non-governmental organizations or local communities. In a few countries, these projects have led to a positive effect on the total mangrove forest area and The Philippines is believed to be one of them. There is much debate about the accuracy of statistics gathered over the years (Spalding et.al, 2010:124) however, and it is clear that total mangrove area is still far less than it was originally, even as recently as the 1970s (Alongi, 2002:342). The aim of this research is: 1) to get a deeper insight into projects that have shown positive growth results; and 2) to analyze whether and how this affects the position of different local coastal communities in relation to the mangroves (in terms of benefits and non-benefits), and 3) whether mangrove restoration is really the ultimate solution to the problem of globally disappearing mangroves.

1.1 Background and Research Problem

All over the world, mangroves are disappearing, being degraded or reduced by overexploitation or competition for land use (Walton et al; 2006:341). Although there is rising global concern over the state of the environment and the realization some time ago that these ‘forests of the sea’ play an important role in livelihoods and food security - there has been a loss of about a third of mangroves worldwide in the last 50 years (Alongi, 2002:331). Protection from ‘extreme weather events’ (Walton et al; 2006:335), erosion and providing timber is just a short summary of the role and value of mangroves. Although these are globally well-known, it seems that one of the problems lie in the next step, the policy making (Walton; 2006:340). However, it is not just policy and implementation gaps that need consideration. As with many environmental issues, the ecological aspects greatly influence the socio-economic aspects of mangroves. It is for both ecological and socio-economic benefits that mangrove reforestation projects are taking place all around the world; but it is not self-evident that there is a sustainable balance between the two.
To give just a brief example, these projects often involve just two mangrove species, a meager shadow of the diversity of species that exist around the world (Alongi, 2002:343). Therefore it is not certain whether restored mangroves and the reconstructed habitats this forms, provide and ‘fulfill the same ecological services as natural mangroves’ (Walton et. al; 2006). For example, not all mangrove species house the same animal species, showing that it is fairly difficult to predict the success of mangrove restoration without some understanding of the ecological aspects of the re-plantation of these trees.

‘Most rehabilitation and restoration projects have mixed results, with the main reasons for failure being lack of adequate site selection and proper use of soil preparation and planting techniques’ (Ellison 2000 in Alongi, 2002: 343).

Next to the ecological aspects, socio-economic effects that need deeper consideration and deliberation include: mining, housing, industry, tourism, aquaculture and other forms of mangrove exploitation (Alongi, 2002:331). These are threats that will likely continue to be present as long as human populations grow in size and coastal areas are developed (Alongi, 2002:334). There is some hope that technological advances will help to reduce pollution in some respects but as long as there is a continuing desire to develop coastal areas there will most likely be some pollution, although low-level, from agriculture and industry (Alongi, 2002:340). The rise in atmospheric C02 concentrations, global temperatures and sea levels (IPPC, 2001) also present another threat to the survival of mangroves (Alongi, 2002: 343). In response to these important aspects, some guidelines have been developed ‘by a number of organizations and agencies’ (Alongi, 2002: 343) to assist the sustainable management of mangroves:

- Within a national boundary, mangroves should be assigned to one or other of the following categories: conservation reserve, forest reserve, fisheries reserve and alienable mangrove land;
- Mangroves on alienable land should be maintained;
- Specific management goals and practices should be clearly identified and implemented;
- Appropriate laws and regulations should be enacted and enforced;
- The best available technical expertise should be used;
- There should be a buffer zone between mangroves and adjacent industry, housing and tourist development;
- Pond aquaculture should not be permitted within mangrove reserves;
- Within permissible areas, ponds should not be closer than 200m to mangroves;
- And environmental impact assessment and feasibility study should be required for all development projects; and
- Strict pollution controls should be established

However, the above guidelines do not give a good impression of the (global) involvement of local coastal communities, whose direct dependence on the mangroves make them one of the most important stakeholders, and perhaps one with much knowledge to share. Clearly, mangrove restoration transcends the boundaries of many scientific disciplines, and that in such a plural society where many of the themes are complexly intertwined, the roots of the mangrove trees become quite symbolic. It is a challenge not to get lost in this tangle of roots and try to unravel them, while looking critically at how these issues are dealt with in the specific context of Puerto Princesa. Therefore, a case-study will hopefully provide an in depth example of community involvement in projects that aim for successful and sustainable mangrove restoration.

The Philippines is a country made up of many different islands and this is possibly an important factor in creating a large percentage of the population of coastal communities - living in close proximity with the oceans around them. Palawan is an island that lays south-west of Manila and, renowned for its abundance in natural resources, is also sometimes referred to as ‘the last frontier’. Mangroves are recognized as one of the most important resources, providing various ecosystem functions; being a nursery for sea life, preventing erosion, providing a buffer against storms, firewood and other sources of income for coastal communities. Tourism, timber and fisheries can provide local communities in the Philippines with considerable revenues and thus mangrove re-plantation can have a significant economic impact on coastal communities (Walton et al; 2006:335). However, ‘...the future of mangroves is intimately linked to changes in forest use, which is directly tied to changes in population growth and development...’ (Alongi, 2002:342). In addition, there are many local communities who are affected by, and may affect, the conservation or preservation of these mangroves.

A range of different organizations such as government, non-governmental organizations, business/tourism organizations and local communities are all part of a complex social-ecological system. This calls for an interdisciplinary approach to the restoration
efforts of mangroves. To start at the beginning needs a critical reflection of the historical background of mangrove reforestation and how it formed as a reaction to their initial disappearance or degradation. Mangrove conversion may take place for numerous reasons: increased population, migration from other islands and unsustainable fishing practices are among some of the activities that threaten these coastal resources. Conservation and preservation are activities with the aim to prevent or reverse the impact of nature degradation and in which the social factors of the area are not always prioritized and may lead to excluding non-owners and transcending property rights (Constanza, 1999:204).

‘...the problem of conservation is highly (“wickedly”) complex, involving interactions between natural systems, social systems, and human values across temporal and spacial scales’ (Farley, 2010).

To deal with the many environmental issues that the country faces, Puerto Princesa as a city has initiated a number of environmental projects. Some examples are the ‘sanitary landfill, forest protection and mangrove rehabilitation’ (USAID, 2010). Many billboards around the city carry the face of Mayor Hagedorn, who is well known for his involvement in various environmental projects. There is much promotion of environmental awareness around the city; reflected in the many billboards, posters and policies such as Oplan Linis (Operation Cleanliness) (Municipality of Puerto Princesa, 2010) and the Bantay Puerto program (Environmental Watch), launched in 1992 by Mayor Hagedorn (Klow and Salvaña, 2009:78). As conservation may at times mean that certain resources become protected and thus illegal to extract or use, Bantay Dagat (Sea Watch) and Bantay Gubat (Forest Watch) have been set up with the idea that they provide alternative jobs as ‘watchers and protectors of the environment’ (Klow and Salvaña, 2009:79).

As mentioned before, mangroves in the Philippines appear to be doing well. This positive growth also appears to be present in the mangrove areas of Puerto Princesa where local communities are involved in different environmental initiatives, including mangrove restoration activities such as the event ‘Love Affair with Nature’ and the ‘Adapt a Barangay’ student program of the Palawan State University (PSU), which will be explained in more depth in the Case Study in Chapter Four. How the local community is involved in these many environmental activities requires a good look into the history and context; formed by many different factors, and influenced daily by many more. Physical environment, politics, resource access and property rights are just some of concepts that will receive attention within this critical reflection on community involvement in mangrove restoration activities in Puerto Princesa.

1.2 Research Objectives & Research Question

Research Site

This research was focused on the Island of Palawan in the Philippines. Barangay San Jose, a city subsection in the Municipality of Puerto Princesa, Palawan, was chosen as the main research site. Palawan is an island known for its abundance in nature and being part of an archipelago may be one of the reasons why so many people are living on the coast and are dependent on marine resources. Although I had travelled to various other mangrove sites, these areas were mostly very sparsely
populated and inaccessible, leaving me unable to get hold of a good starting point. Barangay San Jose is still part of the municipality of the city of Puerto Princesa, a city which is growing and therefore there are changes taking place in the area and its surroundings. I selected Barangay San Jose as my research site partly because as it is a semi-urban area, indicated as an area that has ‘not yet been commercialized’ (Interview, 2011). The two main mangrove restoration projects that are located there are ‘Love Affair with Nature’, an annual government initiated project and a smaller project initiated by the Palawan State University (PSU), as part of an ‘Adapt a Barangay’ student project. I collaborated with the PSU on the research and throughout my fieldwork stayed in contact with several PSU professors, mainly from the Department of Science. With the city’s noticeable display of its dedication to preserving its green image, this thesis intends to investigate how this influences the level of involvement of the many different stakeholders of the mangroves.

Research Objective

The main goal of this research is to gain more insight into the role of local communities in mangrove restoration activities and the consequences this has for their livelihoods, by focusing on a case study on Palawan in the Philippines.

Research Questions

1. How effective is the mangrove restoration policy in Puerto Princesa, in the semi-urban areas bordering the mangroves?
2. What lessons can be learned about local involvement in mangrove restoration?

1.3 Organization of the thesis

Chapter One began with mapping the issue of mangroves globally, and painting a picture of the global context in which this research finds itself. Zooming in on the Philippines, the more site specific context is shaped by background information on the situation of mangroves in the city of Puerto Princesa, on the Island of Palawan. Chapter Two will present the methods and techniques of data collection, providing some conceptual definitions with which the theories for the analytical framework of the thesis are also partly selected. The research type will be explained and how data was collected and analyzed, as well as some of the constraints met during the process of the research. Chapter Three will present the Theoretical Framework which will form the backbone of the research and which will be used to analyze the case study data. Human Ecology will be discussed, using the definition by Walters (Walters, 1997:280) to approach the research topic. Political Ecology is explored and it will be discussed in how far we can speak of a ‘greening of governments’ in Puerto Princesa. The Filipino concept of Pakikiramdam will be given some attention, with which the perceptions of local community members on mangrove restoration can be analyzed from a more cultural perspective. It will also be used to explore the level (and role of) hierarchy in the mangrove restoration projects in Barangay San Jose.

Next, in Chapter Four, the context will be sketched in which the case study takes place. This is done by giving broader perspective of the Philippines, which is examined using the theoretical framework. Political Ecology recognizes people as social actors and emphasized the global character of
environmental issues which prompts the greening of governments as a move for political advantage. To elaborate I will discuss in how far we can speak of the ‘greening’ of Puerto Princesa. Chapter Five will provide an overview of the data collected in the case study and use the theoretical framework in its analysis. First the two mangrove projects, the ‘Adapt a Barangay’ PSU student program and the ‘Love Affair with Nature’ project will be discussed in more detail using the field data gathered. Then it will be shown, using Human Ecology as a framework, how the different stakeholders in the two mangrove restoration projects stand in relation to the mangrove environment. The hierarchical society structure will be questioned, especially using the Filipino concept of ‘Pakikiramdam’ and how and in how far this leads to a participation paradox in mangrove restoration projects such as in Barangay San Jose.

Finally, Chapter Six will provide a conclusion of the data collected, its analysis and conclusions or recommendations that have been formulated as a result. It will be debated why there is little sharing of knowledge and experiences between different mangrove restoration projects, as well as between the projects themselves and the local community in whose backyard the activity is taking place. From these conclusions some recommendations will be presented, for example for further research to enhance the current mangrove restoration initiatives in Purok Masagana (one of the subdivisions that make up Barangay San Jose) and perhaps contribute to mangrove projects around the world. Finally Chapter Seven will embark on a discussion of personal perceptions of the ‘other’ which was encountered during the research, in an effort to make recommendations for further research.
2. METHODOLOGY

During my internship I took part in an Environmental Education program for the foundation of a small aquaculture company, South Sea Exclusive. As it was in the starting phase, I was involved in the research, writing and illustrating of a children’s booklet and implementing a pilot project with a local school. During research in preparation for the project, it became clear that Puerto Princesa is a city with numerous environmental projects. These were promoted in billboards and banners throughout the city. Reading a book dedicated to the Mayor of Puerto Princesa, ‘Hagedorn, The man and The City in a Forest’ (Klow and Salvaña, 2009) and being involved in an environmental education project initiated by a foreign company, raised some questions about the level of involvement of local community members in such environmental projects.

2.1 Conceptual Definitions

Before doing any actual fieldwork I made some working definitions of some important concepts, which were elaborated on by experiences, local understandings and literature reviews. Making these definitions also helped to select some of the literature and to choose the theories (described in more depth in Chapter Three) would be of most value to my research. In this chapter, the most important concepts will be given an operational definition using a combination of literature reviews and observations/clarifications made in the field. This will be followed by a description of the data collection process and some constraints that were faced.

Conservation, Preservation and Restoration

The management of natural resources may have two different methods of the way it protects the environment: conservation and preservation. Each has different final aims. For this research, the concept conservation will refer to the management of a resource for later consumption, whereas preservation indicates that there will be no interference with the resource in question, for human resource consumption at all (Carter, 2007:27). Restoration however is a process of the improvement of a degraded landscape and does not indicate which method of management will be implemented to support it during or after this process. The restored mangroves could for example be placed under a policy promoting conservation or preservation.

Mangrove Restoration

Within this thesis the word restoration is used rather than replantation or reforestation, as the latter is a term often associated with (inland) forests. Replanting gives the impression that the mangrove forest was initially also planted by people, destroyed or lost, and is now being planted (again). Mangrove restoration however refers to mangrove areas that were primary mangrove areas, lost through natural causes and/or human exploitation, and are now being restored as much as possible to their original state.

Community

Community, for the purposes of this thesis, refers to the people living in Barangay San Jose, in the municipality of the city of Puerto Princesa. Local groupings are constantly re-aligning and re-defining
themselves (Fabricius, 2004:22) and therefore a community is never a homogeneous ‘unified, organic whole’ (Agrawal and Gibson, 2001:633). However, acknowledging the heterogeneity of community, for this thesis there is no further distinction in local community by ethnicity, length of residency, or gender. There is also no further distinction of immigrants from other islands or religion. Within the case study there will be some attention given to different livelihoods; income generating activities such as rice paddies, fishing, tourism etc. as this may have an effect on the dependency of the community on mangrove.

**Culture**

Within this thesis the concept of culture is an important aspect. Culture is ‘a way of thinking and feeling that is based on norms and values, all which ultimately leads to a particular kind of behaviour in a group of people at a specific time and place’ (van Nispen and van Stralen, 2009: 41). The way in which people communicate or behave is an important part of this research and a particular aspect of Filipino culture will be used in the analysis on the data. Kapwa, the core Filipino value of the ‘reciprocal being’ (Mendoza and Perkinson, 2003:278) will be explored focusing mainly through the related concept of ‘Pakikiramdam’ and how this is important for understanding both the methods and the final data collected.

**Involvement versus Participation**

To focus on community, is also an attempt to determine group agency and level of mobilization through which ultimately, ‘mere enrolment is transformed into active support’ (Broekhuijsen, 2006:99). This notion of agency and mobilization ties onto the use of the word involvement, rather than participation. Therefore for this thesis I will focus on the involvement of local community in the mangrove restoration projects, to include both participative and the more passive or non-active roles of local community. We can refer to a typology of participation by Pretty (Atuhaire, 2009: 14) describing 7 types of participation to distinguish between the various levels in which local community members can be involved:

**Pretty’s Typology of Participation**

<table>
<thead>
<tr>
<th>Typology</th>
<th>Characteristics of each type</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Manipulative participation (A)</strong></td>
<td>Participation is by pretence. —People have unelected representatives on official boards without power. Almost no interaction occurs between local stakeholders and managing institutions.</td>
</tr>
<tr>
<td><strong>Passive participation (B)</strong></td>
<td>People participate by being told what has been decided or has already happened. It involves unilateral announcements by an administration or project management who do not listen to people's responses. The information offered</td>
</tr>
</tbody>
</table>
belongs only to external professionals.

**Participation by Consultation or information giving (C)**

People participate by being consulted or by answering questions. External agents define problems and information gathering processes. They control data analysis. This process does not concede any share in decision making and professionals are under no obligation to adopt people's views. People have no opportunity to influence proceedings.

**Participation for Material incentives (D)**

People participate by contributing resources, e.g. labor, in return for food, cash or other material incentives. This is commonly called participation, yet people have no stake in prolonging practices when the incentives end. Decisions are made by the managing institutions alone.

**Functional Participation (E)**

People's participation is seen by external agents as a means of achieving project goals, especially reductions in costs. People may form groups to meet pre-determined objectives. This participation may be interactive and may involve shared decision making, but tends to arise only after major decisions have been made by external agents. Local people may only be co-opted to serve external goals.

**Interactive participation (F)**

People participate in joint analysis, development of action plans and the formation, or strengthening, of local institutions. Participation is seen as a right, not just as a means of achieving project goals. Formalized decision making structures such as management councils involve local stakeholders and meet on regular basis. Local people take control over local decisions and determine how local resources are used, thus maintaining structure and practice.

**Self Mobilization (G)**

Local People participate by taking initiatives, independently of external institutions, to change systems. They develop contacts with external institutions and there is primary transfer of authority and responsibility for the resources.
In this thesis, these concepts will be used to show the levels of local community involvement in mangrove restoration projects implemented in Barangay San Jose, Puerto Princesa, the Philippines. Next I will describe the techniques used to gather the data that is analysed using these concepts.

2.2 Data Gathering Techniques

The case study is selected as the main research strategy as this allows me to gather the information about a contemporary situation and answer the ‘how’ research question. Cultural inference is done from three sources; 1) informal conversation 2) texts and the interviews 3) observation of activities and behavior. The focus was on the involvement of local residents in mangrove restoration projects in Barangay San Jose, more specifically in a subsection of the barangay, Purok Masagana. The Case Study is particularly relevant for this research because it was done in a specific geographic location of mangrove restoration sites, allowing for a more in-depth look at local community perspectives on their involvement in the projects, as well as their perspectives on the changes that have taken place (benefits or disadvantages) since the projects have taken place. As mangrove restoration is a space-bound phenomenon local accounts can paint a picture of the time-line associated with this particular space but many aspects have been kept in consideration. Triangulation, combining different sources of information to reach a better understanding has been very important.

This research was carried out between November 2010 and the end of January 2011. I had remained in contact with my previous internship address and was able to arrange a place to stay with them in Barangay Tagburos, not too far from the site of my research in Barangay San Jose. First I tried to arrange all the necessary documents and permits that were needed for a social science research (of which the constraints are discussed further below) as a foreign student. As my topic was slightly different to what my internship had been based on, I needed to find different contacts but was assisted and advised by contacts I already had. I came into contact with the head of the research department, Dr. Ramon M. Docto, at the Palawan State University (PSU). Interested in my research, they made me an offer to help me obtain a research permit if I would agree to collaborate with them. Partly because I had little time and my other attempts at finding suitable case study locations had not been fruitful, I agreed on the collaboration.

Selecting a case

After submitting a number of documents from Wageningen University confirming me as a student doing field research, I was introduced to Dennis Macolor, the head of the annual PSU student mangrove reforestation project in Barangay San Jose. Dennis provided me with the first steps of information on the PSU ‘Adapt a Barangay’ mangrove project. As the project was located in Barangay San Jose, one of several that make up the Municipality of Puerto Princesa, I narrowed my research site to this barangay. After visiting the area and realizing the vast area it covered, I used some data provided by the Barangay Hall to narrow down to one of the subdivisions or Puroks, located close to the PSU project site. While in the site doing observations and getting to know the site, it turned out that the big government initiated event, Love Affair with Nature, was located in the same Purok. The two areas were separated by mangrove and were reached by two different roads that forked some distance from the highway. Both the areas were sparsely populated near to the mangrove sites, so I decided to include both in my Case Study. I mapped out the households...
located closest to the mangrove project sites, and chose to limit my research to those included in my map.

As I found that it was not useful to work with any type of direct recording during the interviews, such as a tape recorder or a notepad as people seemed to be less comfortable to talk, I instead made my notes as soon as I left the site. Using informal conversation felt more effective in getting people to open up than using an interrogative style. Visits to the sites were made during both the week and the weekdays. This was to account for people who worked during the week, but also to make observations about the other forms of livelihood. Saturday was the day that I had the most success in finding people in the case study site, especially in the morning before lunch and after lunch at around three, most likely because of any siesta’s people were having during lunch hours. At the times of my visits, people would usually be in the household, with their children or sometimes in the garden or attending to vegetables.

Selecting informants

As Barangay San Jose covers a large area, to select informants, I chose households by focusing on the Purok (barangay division) nearest to the mangrove restoration site. Both the Love Affair with Nature project and the PSU student project were located in Purok Masagana. I then drew a map of the two areas, and the location of the households. As I found there were few houses near both project site locations, I approached each house. In the event there was nobody home, I would return at a different time of the day until I was able to find a person to talk to. When people were not interested in an informal interview, I made notes about other aspects as much as possible, about any comments or observations made. In the end I had about ten informal interviews in Purok Masagana and about ten ‘unresponsive’.

The informants ages ranged between 20 and 60 years old and their main livelihoods were very all different from each other; a nurse, carpenter, tricycle driver, farmer, one retired, two vendors and two with office jobs. The topic of the interviews was the mangrove near their homes, their visits to the area, important resources, changes since the implementation of the mangrove protection laws, the PSU and Love Affair with Nature projects, relationship with the barangay captain and communication with the projects and more generally about their livelihoods, family and their perceptions of their environment. For data triangulation purposes, I combined the informal interviews with participant observation and literature reviews. These literature reviews included research reports on mangrove areas on the whole Palawan, as there was limited to be found for Puerto Princesa City specifically.

Other sources of information

Throughout my field research I collected both primary and secondary data. Secondary data I collected from various sources; the Palawan Council for Sustainable Development (PCSD) library, City Panning Office, Department of Environment and Natural Resources (DENR), Palawan State University (PSU), Barangay Hall San Jose, City Environmental Office (CENRO), Environmental Legal Assistance Center (ELAC) and The Palawan Times newspaper. Data collected data included area maps of Barangay San Jose, Environmentally Critical Area Network (ECAN) maps from the PCSD,
reports and statistics on mangroves from CENRO. Mrs. Eunice Bicera, from West Philippines University (WPU) had done a number of studies on mangroves which she allowed me access to. With the assistance of Dennis Macolor, I was able to obtain more information in a Barangay Profile folder (Opisyales ng Barangay, 2010) at the Barangay Hall, and I was introduced to the barangay captain as an important ‘ritual’ for obtaining support in doing research in an area.

Besides interviews with the local community living in the case study area and the organizations where I collected secondary data, I did informal interviews at a number of other organizations; the Palawan NGO Network Inc. (PNNI), Kilusan Sagip Kalikasan (KSK), Marine Environmental Protection Command (MEPCOM) and the Palawan Coast Guard Auxiliary (PCGA). These were not directly involved in the case study area, but I tried to form an idea of other mangrove projects on the island. The interview was usually done with a representative of the organization, and revolved around the mangrove projects they were involved in, their role in those projects, local community involvement, strategies and methods of communication with local communities and their future plans concerning mangrove projects. I also did participant observation and informal interviews at the two project sites of the PSU student mangrove plantation site and the Love Affair with Nature site. These interviews were done together with my translator and without Dennis as much as possible. This was to minimize Dennis’ presence influencing their responses, particularly as he is directly linked to the PSU student project. To increase my ecological knowledge I was given a practical lesson in identifying mangrove species (APPENDIX i) at the WPU from a professor and author of a number of publications on mangrove studies in the Philippines, Mrs. Eunice Bicera. It was useful to become more familiar with the Latin and local names of the mangrove plants, and to have an idea of the different characteristics and preferred habitats.

2.3 Constraints

Research Permit

Without any extra funding, financial and visa restrictions were one of my biggest constraints. I was very eager to do research in the same area as where I had done my internship as I had already spent four months in the area, made contacts and knew the area quite well. Unfortunately, despite trying to have everything well-organized before I left the Netherlands, on arrival it became clear I needed a special research permit. Despite inquiring about the appropriate permits beforehand, it only appeared I needed a specific permit to do research when I had already arrived at the research site. The confusion lay in the type of research I was conducting, as a special permit was to be applied for Biological research - if you intended to take samples from the environment. As my research was a Social Science research, it was not clear which documents were necessary. There had been some new laws implemented recently about this kind of research, but I managed to acquire a permit from the Palawan State University after providing proof of enrollment at Wageningen University, and agreeing to collaborate on the research.

Time

Unfortunately the process of obtaining a research permit took about two weeks, but during that time I rode local transport and I rented a motorbike (for the less accessible areas), making a survey
of the different mangrove areas in the vicinity of the municipality of Puerto Princesa to determine an appropriate research site. For future students doing individual research and not through another locally based company or institution, I recommend they are well aware of the growing bureaucracy surrounding research in the Philippines. Also, the shift of the rainy season played a significant role in the (lack of) ease with which visits to the research site and other appointments were made. Palawan unexpectedly experienced quite some heavy tropical rainfall in the months I was doing my research and relying on a motorbike a great deal of the time, especially for certain research sites, was sometimes a difficult combination.

Language

Despite having some background in the local language because of a previous, longer, stay in the Philippines for my internship, not speaking Tagalog was a constraint. Luckily I was able to arrange for a translator to accompany sometimes to the research site – my previous internship partner and a recently graduated student PSU student. With her biology background she was able to also assist me in the biological aspects of the mangrove restoration. Because her level of English was excellent, it made it easier to communicate my thought and questions to her, as well as to avoid too much alteration and information to be ‘lost in translation.’ However, as always in intercultural communication there are aspects to consider, such as the nuances that are not always translatable into other languages. These types of constraints will be discussed further in the thesis as it provides important context building material for the data as I try not to undermine the perceptions of the local community by letting the barriers and effects of intercultural communication overshadow my interpretations. Within this research the idea of ‘otherness’ is not be excluded and will be briefly debated in the discussion.

Field Notes

During my interviews and visits to the barangay (Figure 7), I decided not to use a recording instrument as it was quite clear they were already very weary of being questioned, with the idea that they were ‘in trouble’. I also quickly abandoned my note pad, as people eyed it uncomfortably when I scribbled anything in it. Therefore I had to remember as much as possible about the situation, observations of my surroundings and the important answers or remarks which I wrote down as soon as possible after leaving the site – usually finding a little ‘food bar’ or café in which to fall into a memory retrieving trance. I am aware that this may have led to some important data to have been forgotten somewhere along the bumpy ride from the site, but have tried to keep what I remembered as accurate as possible. After making some observations in the area, I realized that making photographs was not always an option especially as this was a sensitive topic in terms of the political nature of the environment in the area and people being reluctant to give away too much information already in fear of the repercussions. However, hopefully the few photographs of the research site will provide a good impression of the area, especially combined with the hand-drawn maps.
Response

The area in Barangay San Jose near the mangroves is not very densely populated (see Figure 8), and on many of my visits to the households selected I found that there were not many people present, probably working elsewhere or attending to other chores. I always greeted people and (indirectly) asked for permission to be present, but sometimes despite them agreeing I sensed an feeling of discomfort at my presence or feeling obliged to ‘entertain’ their guest, to show hospitality even though they had other things to do. In these cases I usually backed off and asked if it would be convenient if I came back another day. Just presenting this option sometimes seemed to help people relax. I would also have liked to spend much more time in the area and had more Tagalog lessons, but perhaps in future this will be a possibility. This could have contributed to gaining more trust from the respondents. Another factor that may have affected the response was being in the presence of a professor from the PSU, as he had a certain status. This was dealt with by also doing visits without his company, but I may have been already associated with him by some of the barangay members.

Ecological knowledge

Another restriction at times was my limited knowledge of biological jargon. Despite some research about the mangrove types, their specific characteristics and a lesson in mangrove species identification from a professor at the Western Philippines University (WPU) which led me to make my own mangrove identification keys (APPENDIX i). However, this provided me with just the basic knowledge of the mangroves and having more ecological knowledge could have helped me make more interesting links and data.
3. THEORETICAL FRAMEWORK

The main concepts used in this thesis were discussed in the previous chapter (Chapter Two) but in this chapter the chosen concepts will be placed in context by further explaining the three theories that act as the trunk of my thesis. Human Ecology will highlight the relationship between people and their natural environment how this can be best understood. Political Ecology will go into more depth about the forms of governance and the effect of the level of decentralization on the participation of local communities. Finally the Filipino concept of Pakikiramdam is introduced and its relevance in interpreting data collected, such as to understand more about the level of participation of local communities from a cultural perspective, is examined.

3.1 Human Ecology

‘Human ecology is the scientific study of people and their interactions with the natural environment’ (Walters, 1997)

Planet earth is becoming increasingly globalized, and it is more recognized that environmental changes are not restricted man-made boundaries. To elaborate more on the relationship between people and their environment, some elements of Walters’ definition of Human Ecology are especially useful. He states that human actions have an impact on the environment with global consequences, but that human ecology allows us to look at this from a plurality of perspectives (Walters, 1997:276) By using methods and concepts from a range of different disciplines - anthropology, political ecology, anthropology, sociology and ecology - a range of different factors on different scales (social/economic and regional/local) can be acknowledged (Walters 1997:276).

According to Walters, Human Ecology has three general arguments about why it should be used in tropical forest and mangrove restoration projects. Firstly; existing human impacts are widespread and need to be addressed to avoid them having the same impact again (Walters, 1997: 276). Thus, sharing knowledge and skills can benefit restoration projects (Walters, 1997: 276). Secondly, there is a moral aspect as there are so many people who depend on the direct exploitation of the mangrove resources. It is argued that restoration (with the goal of conservation or preservation) would be most valued by those that have ‘the luxury of enjoying nature for its own sake’ (Walters, 1997: 276). This is why the employment opportunity provided by the restoration project is important to consider, as it adds an incentive for those who place a different value on mangroves from a livelihood perspective (Walters, 1997:282). Finally, there is recognition by human ecology of an intertwined network in nature, of which humans make an important part (Walters, 1997: 276).

‘The complex nature of mangrove ecosystems – their productivity and biodiversity, their role in physical coastal processes, and, of course, their close linkage to adjacent ecosystems – cannot be considered in isolation from their value to humans.’ (Spalding et.al, 2010: 24)

This holistic view does not consider it possible to exclude humans from nature and also asks us to question the very notion of a ‘pristine’ environment (Walters, 1997:277). Humans have been interacting with its environment in an intertwined network for many centuries. Therefore, it should not be assumed that human interference has always been negative for biodiversity. This assumption
is dangerous especially in the development arena as local knowledge of natural resources and ecosystem functions may be undermined.

For this reason it is important to sketch a clear picture of the many laws governing restored mangroves, and in how far the local communities are involved in the decision-making, implementation and monitoring of such policies. Exploring the human ecological factors in mangrove restoration activities can give a good idea of the socio-economic importance of the project, as well as really understanding the relationship between local communities and their involvement in mangrove restoration.

A Mangrove ecosystem is different to mangrove environment, as the latter regards where the mangrove is found; this can be at river deltas, estuaries and coastlines for example (Spalding et.al, 2010:5). Linked to many different species of animals and plants as well as bacteria and fungi in a complex ecosystem (Spalding et.al, 2010:15), it is important to understand the complex relationships in mangroves and their significance, if indirectly, for humans. Unfortunately this is often ‘overlooked by central planners and sometimes even by the very people who benefit directly from them’ (Spalding et.al, 2010: 23). Such ecosystem dynamics and its relationship with humans can be best explained by distinguishing between two aspects of mangrove; ecosystem services and ecosystem functions’ (Constanza et al, 1987:2).

‘Ecosystem functions refer variously to the habitat, biological, or systems properties or processes of ecosystems. Ecosystem goods (e.g. food) and services (e.g. waste assimilation) represent the benefits human populations derive, directly or indirectly, from ecosystem functions. For simplicity, we will refer to ecosystem goods and services together as ecosystem services’ (Constanza et al, 1987: 2).

To investigate the ecosystem functions and services of mangrove in the Philippines, we can refer to Walters’ checklist in Table 1 (Walters, 1997:280). This list was originally provided as a guide for tropical forest restoration as it questions the economic impacts, land use, tenure systems, local

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<thead>
<tr>
<th>Questions about economic impacts</th>
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<tbody>
<tr>
<td>How are local people likely to be economically affected by the proposed restoration?</td>
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<tr>
<td>Are there particularly vulnerable groups that may be impacted by the restoration? If so, how?</td>
</tr>
<tr>
<td>Can the restoration be used directly to economically benefit local people?</td>
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<table>
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<tr>
<th>Questions about land use, resources management and tenure</th>
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</thead>
<tbody>
<tr>
<td>How was the proposed restoration area previously used?</td>
</tr>
<tr>
<td>Who owns the land in the proposed restoration area and who has rights to its use?</td>
</tr>
<tr>
<td>What are the current uses of the area and how can they best be managed for restoration?</td>
</tr>
<tr>
<td>How can expected future uses of the area best be managed to ensure long-term sustainability?</td>
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<th>Questions about local knowledge, skills and customs</th>
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<td>Have the local people done or are they doing ecological restoration activities of any kind?</td>
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<tr>
<td>Do local people have knowledge that might be relevant or skills that might be applicable to the proposed restoration?</td>
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<tr>
<td>Are there any local customs that could benefit or conflict with the proposed restoration?</td>
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<th>Questions about local social organization and institutions</th>
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<tr>
<td>How might local social groups and networks contribute to or impede restoration efforts?</td>
</tr>
<tr>
<td>What opportunities might there be for collaboration with local, non-government organizations?</td>
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<th>Questions about government administration, policies and capacities</th>
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<tr>
<td>Are relevant government laws and policies friendly to restoration?</td>
</tr>
<tr>
<td>How committed are relevant government administrations to environmental protection and restoration?</td>
</tr>
<tr>
<td>What opportunities might there be for collaboration with interested government agencies?</td>
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knowledge, social institutions, government administration and policies (Walters. 1997:280). Although the checklist is specifically aimed at (inland) forestry, the questions hardly need to be adapted to fit the case study on mangrove forests. For example, prompted by ‘Questions about economic impacts’, we can examine data from interviews to ascertain how and to what extent local residents have been affected economically since the implementation of the mangrove restoration project. This makes the question about previous land use of the area, equally relevant and valuable. ‘Questions about local social organizations and institutions’ are important for considering the position of the both local residents and ‘Questions about government administration, policies and capacities’ can give insight into the role of various other stakeholders in mangrove restoration projects, such as NGOs and governmental organizations.

Applied to the case-study of mangrove restoration it can question a number of important points and give us more insight into possible gaps in this research. I will elaborate on the aspects of mangrove restoration that are highlighted within Walter’s table (Table 1) and place this checklist side by side with the data collected. However, to get more insight into the current policies governing the mangroves, I will first discuss environmental politics – how to analyse government legislation of mangroves in a hierarchical society such as the Philippines.
3.2 Political Ecology

Whereas Human Ecology is particularly focused on the relationship between people and their environment, Political Ecology is useful to explore these different social and environmental aspects by linking them to economic and political factors of mangrove restoration.

3.2.1 Political Ecology and the ‘Greening’ of Governments

‘...different perceptions and knowledge opens up different approaches to environmental improvement.’ (Bush, S. 2009)

The preservation of the mangrove resources on Palawan is undeniable entwined with politics and economics. The role of inequality, conflict and change and the various cross-scale power networks that are present between users of local environmental resources need to be accounted for. By recognizing the cultural processes prominent in these countries and recognizing people as social actors, political ecology can work towards a global-scale solution of local environmental issues (Adger, 2001:684). However, the special physical characteristics of oceans and coastal zones, such as the vast area they span across and the unseen world they house below the surface, make their sustainable governing a challenge. Concerning mangrove areas in Palawan it is especially important to consider the ecosystem functions and services that are generated there, and how this relates to who is ‘responsible’ for their protection.

Some example design principles for property rights are; clearly defined boundaries, clearly defined rights of access (defined individuals or households), rules around the amount of harvest, monitoring, sanctions when rules are violated, long-term tenure rights and ability to devise own institutions etc. (Constanza, 1999:208). How this is done can also be further analyzed by first differentiating between a representative body (government), and a process (governance).

Table 2: Comparison between Traditional Management Model and Governance model

<table>
<thead>
<tr>
<th>Traditional Management Model</th>
<th>Governance Model</th>
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<tr>
<td>Technical tool (management)</td>
<td>Global, holistic perspective (governance)</td>
</tr>
<tr>
<td>Based on “closed” knowledge (bio-economic science)</td>
<td>Based on “open” knowledge (the interaction between science and social or folk knowledge)</td>
</tr>
<tr>
<td>Top-down</td>
<td>Multi-level (from global to local level)</td>
</tr>
<tr>
<td>Pre-established values (economic efficiency, technological</td>
<td>Values under construction (social and environmental sustainability; cultural diversity; political effectiveness; democracy)</td>
</tr>
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<td>development, etc.)</td>
<td></td>
</tr>
<tr>
<td>Static power relationships (State, associations, market</td>
<td>Dynamic power relationships (devolution, co-participation, accountability, policy networks, etc.)</td>
</tr>
<tr>
<td>lobbies)</td>
<td></td>
</tr>
<tr>
<td>Traditional actors (government agencies, fishers)</td>
<td>New actors (citizen, environmental, mass media, and non-extractive fishery sector representative organizations)</td>
</tr>
<tr>
<td>Bioeconomic paradigm (Maximum sustainable yield)</td>
<td>Integrative approach (ecosystem base approach)</td>
</tr>
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</table>

De Vivero defines governance as ‘...an interaction between state, civil society and the market’ (de Vivero, 2008:320). In the case of mangrove restoration, the socio-economic importance of the mangroves refers to the roles of the state (local government), civil society (local community) and the
market (economic importance of mangroves) (de Vivero, 2008:322). In de Vivero’s definition of governance, there is no particular mention of the position of the environment. However, Table 2 presents his comparison between the traditional management model and the governance model (de Vivero, 2008:322). Using this table, an analysis of the management of restored mangroves can be studied (briefly) to gain clarity about the degree of traditional management or governance methods being used and how the environment, or specifically the management of reforested mangroves, fits into this model.

The issue of type of government is an especially important consideration as the Philippines is a country that has been colonialized twice (by Spain and America) and is also made up of separate islands (thus through geographical segregation perhaps creating distinctly different groups). Coastal zones are, much like the ocean beyond them, difficult to fence off and place under appropriate policies. With an increasing awareness of environmental protection, the greening of governments (Carter, 2007: 291) is an important dimension to consider, especially concerning who should be held responsible for coordinating the sustainable strategies for coastal management. The efforts of governments to incorporate these environmental considerations will be used as an indication of their process of ‘greening’. Trying to keep in mind the socio-economic, cultural, political and biological relationships (de Vivero, 2008:324) present in mangrove restoration projects, these ideas will be used to discuss the ways in which Puerto Princesa is ‘greening’.

3.2.2 Government Legislation in a Hierarchical Society and the Participation Paradox

A basic sketch of the various laws directly connected to mangrove reforestation in Puerto Princesa is necessary to shape the context in which it all plays out. Not all the social institutions such as family, religion, education, government etc. will be elaborated on, nor will their roles in mangrove restoration be extensively investigated. This goes beyond the scope of this research for now. It is merely intended to gain some ideas of the many factions, and factors that can influence local community levels of involvement. This research intends to focus on the perspective of the local communities involved in mangrove restoration, ie. zooming into a particular branch in the network of relationships around mangrove restoration. In this way, the context is given more form, by asking the community, as a stakeholder, to express their position and share their experiences.

The relationship between local communities and mangroves by its focus on the various power networks, across horizontal and vertical scales (from an actor perspective), although not elaborated on extensively, help form a good understanding of the context within which the local communities of Puerto Princesa find themselves. The term ‘devolution’ is described in Figure 3 (de Vivero, 2007:321). As there is a shift from a more centralized state to more self-management, there is increase in participation on the local level. This process may lead to a rising number of actors, which can be beneficial as there are more actors involved and more perspectives or stakeholders can be represented. However, this same increase in the number of actors can result in a ‘participation paradox’ in which the greater numbers involved results in a smaller role for each actor (de Vivero, 2008:319), leading again to the debate between involvement and participation.
Devolution and an increasing number of participants from different levels in society, does not say much about their actual desire to be involved in activities such as mangrove restoration. Residents of the case study site may simply be ‘...seen as members of a community, who have obligations to one other beyond immediate material interests’ (Scott, 1985:196).

According to Scott who examines ‘everyday forms of peasant resistance’ (Scott, 1985:29), forced involvement or participation is just one of the ways ‘weapons of the weak’ (Scott, 1985) are provoked to the surface. These daily acts of resistance may be extremely subtle, from ‘feigned ignorance’ (Scott, 1985:29) to ‘false compliance’ (Scott, 1985:29), just to name a few. Such behaviour may not be immediately visible or understandable by those who stand outside the group. Although efforts to understand these ‘weapons of the weak’ (Scott, 1985) will most likely only brush the surface, the effect of and reaction to such forms of social pressure may be better understood by digging deeper to uncover the cultural roots of the Philippines. In the next subchapter it will be explored how certain cultural values can ‘appeal to their sense of responsibility’ (Scott, 1985: 169). Using a specific Filipino concept, pakikiramdam, the role of culture in the level of local community involvement in mangrove restoration projects will be examined.

3.3 Pakikiramdam

As we have previously discussed, Human Ecology touches on the intricate relationship between humans and their environment whereas Political Ecology digs even further into the human aspect of this relationship in terms of the organization of the human network, such as politics and economics. However, an important part of human relationships is the cultural context in which it is found, which influence and are influenced by decision making in the different spheres. I will first go into more depth about a particular Filipino concept which I believe can provide a good perspective on the intercultural communication that can teach social scientists even more about their research. To understand more about the particular characteristics of Filipino society I will present an anecdote
about an experience that triggered my interest in learning more about the small gestures and interactions that signal unspoken feelings and thoughts. This is directly relevant to understanding the level of local community involvement in mangrove restoration project as it can give more insight into the ‘weapons of the weak’ (Scott, 1985), the subtle forms of resistance that may be overlooked without an understanding of the cultural context in which they take place.

3.3.1 Sikolohiyang Pilipino and Pakikiramdam

‘If you just learn a single trick, Scout, you'll get along a lot better with all kinds of folks. You never really understand a person until you consider things from his point of view...Until you climb inside of his skin and walk around in it.’ (Lee, 1960)

One of the most important parts of a sociological or anthropological research is recognizing and appreciating context. Decision making such as Environmental Management involves, has an effect on and is affected by various different levels in society. However, putting aside our own cultures and opening up to the situation asks for a sensitivity of all five senses and perhaps more. In different contexts, communication takes place in different ways across networks and power scales, influenced again by cultures and history - but this thesis will look at the importance of communication particularly in a collectivist and hierarchical society structure such as in the Philippines. Cultural differences such as found in communication can influence the decision making processes in political spheres in a number of ways, but, instead of venturing too deeply in to psychological explanations, I would like to focus primarily on how cultural values inspire society structures. How these might in turn influence decision making in environmental policy based on the example of Palawan, an island in the Philippines, is needed to understand the degree of involvement of local communities.

This thesis explores the link between the Filipino value of pakikiramdam and the management of natural resources in the Philippines. First, the concept of pakikiramdam and the significance of studying its relationship with mangrove restoration will be explained. To shape the context within which these kinds of communication take place, I will try to place the value of pakikiramdam in Filipino culture by focusing on a collectivist structure of society and hierarchy as described by Hofstede and how these cultural values can influence decision making in Environmental Policies. Next I will describe how I became interested in pakikiramdam in the first place and examine the role of pakikiramdam in communication, such as the effects it has on the use of language in the Philippines and intercultural communication. Finally, I fuse together these different values and look at how pakikiramdam can have an impact on the involvement of local community members and perhaps lead to specific typology of participation as described by Pretty (Atuhaire, 2009: 14), discussed in Chapter Two.

3.3.2 Pakikiramdam and Hofstede

There needs to be a distinction between the core Filipino value of kapwa and the concept of pakikiramdam. Using Hofstede’s idea of a collectivist society, I will further analyse their significance in Environmental Management and Policy making.
The concept of Pakikiramdam

One of the central cultural values in the Philippines is ‘kapwa’ (de Guia, 2011), which promotes unity and working together to achieve common goals. Part of this core value are the concepts ‘kagandahang-loob’ (de Guia, 2011) which can be understood as a shared humanity and ‘pakikiramdam’ (de Guia, 2011), which can be understood as having a sensitivity towards other people and being able to put yourself in their shoes (de Guia, 2011). Particularly this latter concept is known worldwide, but it is not often given a name. It is sometimes compared to empathy but this is not entirely the same. A famous quotation from the novel often used in classrooms, ‘To Kill a Mockingbird’ by Harper Lee (Lee, 1960), describes the essence of pakikiramdam by describing how you need to try and think as someone else in order to understand things from their perspective. It is a quote I often referred to in various circumstances, keeping it as an intercultural red thread - but it was not until the Philippines that I was given food for deeper thought on the subject. Many people are aware of the small differences in intercultural communication that can lead to huge misunderstandings but that when thoughtfully considered can illuminate decisions and behaviour in different cultures. Pakikiramdam is thus a concept that is important to understand the Filipino culture and the context in which mangrove restoration activities take place. The concept can help to explain context by emphasizing the ways in which communication can be a stumbling block in field research.

It is a skill to be able tell when a person does not want to go further on a topic when they do not tell you directly. The way they speak as well as their body language becomes important, but even then different cultures have different ways of expressing things; a simple eyebrow lift can have multiple meanings such as ‘yes Mr. Jeepney driver, I want to ride with you’, a gesture that a Filipino bus driver can see and interpret through fifty meters of bustling traffic but that the untrained eye might miss or pass as an insignificant expression. These subtle expressions exist also in more personal relationships and communication; often so restrained they seem not to exist at all. Clearly amongst themselves, there exists Pakikiramdam, an intuitive form of communication; ‘knowing through feeling’ (de Guia, 2005) or the ability to translate what is expressed in the smallest daily gestures. Pakiramd is ‘often described as an all-important “shared inner perception”’ (de Guia, 2005). It is through this and Kapwa, in which the self and the other are not seen as separate, that Filipinos can experience emotions mutually (de Guia, 2005).

Pakikiramdam is said to have a number of positive and negative effects (Mansukhani, 2005:186). On the one hand it may have the advantage of making people more flexible and allowing them to adapt to changing situations (Mansukhani, 2005), showing a loyalty to each other across the different levels of social status in society. As people are less direct and focus more on similarities, there is less chance of being hurt by criticisms, while at the same time improving sensitivity and intuition that can add to a more open-minded approach to things (Mansukhani, 2005). However, there are some less positive results that can come from the emphasis on pakikiramdam. Being less direct and focusing on the positive aspects can also lead to an exclusion of constructive criticism, encouraging pretension and hypocrisy (Mansukhani, 2005:200) also reflected in acts such as ‘feigned compliance’ (Scott, 1985:29). People may sometimes take more time to get to the point, if at all, which can ‘…cause unnecessary delays, even in important situations like business meetings, court cases, and group discussions (Mansukhani, 2005:200). It can be confusing for people, especially foreigners, to
interpret ‘communication patterns based on pakikiramdam’ (Mansukhani, 2005:200), and it may also lead to the foreigner being misunderstood as blunt when they are merely trying to be frank (Mansukhani, 2005:201). In such ways, pakikiramdam might ‘encourage conformity’ (Mansukhani, 2005:201) because of people not wanting to be different and who, as a community, feel ‘obliged to one other’ (Scott, 1985:196). Such an attitude brings us to the idea of a collectivist society, and for this we will at Hofstede’s definition.

Hofstede and the collective society

Hofstede describes the difference between individualistic and collectivist societies as being a difference between one with loose ties and one with a strong cohesive group formation (Hofstede, 2001). According to him ‘culture learning starts in the family’ (Hofstede, 2001: 225). Society can be therefore be seen as being a construct of all its families, at the same time its families are a construct of society (Hofstede, 2001: 225). This is particularly interesting when considering the clear important role of family in the Philippines. The idea highlights the interrelationship between family and society, rather than posing it as simply a causal relationship in which the one is formed than the other in a ‘what came first, the chicken or the egg’ kind of debate.

Hofstede states that there is a public and a private self-consciousness, where the public self-consciousness in individualist societies refers to presenting yourself as an individual (Hofstede, 2001: 231). In the case of the Philippines, a collectivist society in which Kapwa plays an important role, you are presenting not only yourself, but also your group, which is probably why the members of this group are ‘partially kept in order by the threat of shame’ (Hofstede, 2001, 229). This can be best understood by understanding how children learn about shame in individualist and collectivist societies (Hofstede, 2001, 229). In the former, children learn to feel guilty about breaking rules, thus developing an individual consciousness whereas in the latter, also called ‘shame-cultures’ (Hofstede, 2001, 229), the child’s in-group members are made to feel shame (Hofstede, 2001, 229). This last explanation can be extended to the Filipino concept of ‘losing face’, an expression that is found in more Asian countries. Losing face is a ‘sense of being humiliated’ (Hofstede, 2001, 230) and can also be seen to promote a concept such as pakikiramdam so to avoid such situations.

Hofstede (Hofstede, 2001: 80) describes the presence of inequality to be in a number of areas;
- Physical and mental characteristics (This is a basic fact of human existence)
- Social Status and prestige
- Wealth
- Power
- Laws, rights, and rules (“Privileges” are private laws)

The inequalities in physical characteristics are particularly evident in the Philippines in their perception of foreigners. The many bleaching creams and a desire on being as pale as possible show their view of westerners as having more social status. Often it seems that such physical characteristics are synonymous with wealth and power. These however can also be attributes of politicians, who do not have different physical characteristics. Professors at universities for example enjoy a higher social status, perhaps driven by the strong culture of achievement and excellence in
education and reflected in the many award ceremonies. Thus, according to Hofstede (Hofstede, 2001:80) there are within collectivist societies also different levels of inequality, whose entrenchment in society can be attributed to the prominence of hierarchy, and vice versa.

In such a society, the lack of communication between different stakeholders seems to point to a number of Pretty’s typologies of participation (Atuhaire, 2009: 14) for different characteristics. Typologies such as Typology (A) ‘manipulative participation’ with ‘unelected representatives on official boards without power’ (Atuhaire, 2009: 14) and ‘passive participation’ (Atuhaire, 2009: 14) describe situation in which the local community would possess little power. In a hierarchical society in which local community participation is seen as a vital aspect of projects, there are different levels to which this can be approached. It may be that the problems are already defined and the local community does not have a part in sharing decision making, such as Typology (C) promotes through ‘Participation by consultation or information giving’ (Atuhaire, 2009: 14). If the local community is consulted, it may only be to ‘serve external goals’ (Atuhaire, 2009: 14) that in its forged interest in local participation merely serves to win local support.

Although there are some local groups that are trying to gain more control, with a hierarchical society it can be expected that Typology (F) and its ‘Interactive participation’ (Atuhaire, 2009: 14) is not easy to implement. Also taking initiative such as described in Typology (G) through ‘Self mobilization’, may also be particularly difficult for particular groups in a hierarchical society. On the other hand, developing contacts with external institutions may actually be easier considering the current emphasis on more ‘bottom up’ approaches around the world, and the growing number of international organizations. However, any authority to manage mangroves cannot be given to local communities unless there is a drastic change in the current mangrove policy. This will be discussed further in Chapter Four with the analysis of a number of policy alternatives.

What has become clear in this chapter is that different cultural values and forms of communication can have a big impact on the way opinions about environmental policy are expressed. When collecting data in other cultures, it is important to understand the structure of the society and to be aware of intercultural communication. Taking the Philippines as an example of a collectivist society with clear hierarchy, it is necessary to consider the role of inequality in environmental management decisions and how pakikiramdam might both explain and enforce this. This will be discussed in the next chapter, looking more specifically at mangrove management and current mangrove policy on Palawan, in the Philippines.
4. PAINTING A PERSPECTIVE

This chapter uses the theories discussed in Chapter Three to sketch the context in which the case study takes place. Doing this will allow us to form a clearer perspective of the Filipino cultural values that form a red line throughout all the elements important in the case study – from the political system to local voices, that partly form the intertwined roots under the case of the mangrove trees.

4.1 Human Ecology

It may be hard to imagine now, but the capital of the Philippines bears a very melancholy name. Manila, a local name, apparently recalls a time when Scyphiphora hydrophyllacea was an abundant mangrove species (Spalding et.al, 2001: 121). The adoption of the name of a plant species for that of a big, representative city is a symbolic example of the connection between people and their environment. Three general arguments proposed by Walters’ can be analysed using the particular situation of the Philippines. Firstly, he speaks of human impacts on the environment being widespread and how they need to be addressed with this in mind to stop them from repeating themselves (Walters, 1997: 276). In other words, we should learn from our previous mistakes. A first step has been made by the increased recognition of the importance of mangroves and their role in the global ecosystem - moving away from the belief not so long ago, that these were useless swamp areas. The various projects dedicated to mangroves throughout the Philippines accompany this recognition, trying to save what is left of the primary forests and contribute to replenishing their decreasing numbers. The formation of a National Mangrove Committee, the involvement of NGOs such as the Critical Ecosystem Partnership Fund, legislations such as restrictions on aquaculture which were found damaging to mangroves are just a few examples of such efforts taking place in the Philippines (Spalding et.al, 2001: 124).

Walters’ checklist (Walters, 1997:280) asks some important questions about the economic aspects of tropical forest restoration that we can apply to mangrove specifically. In the Philippines local communities are economically affected by mangrove restoration in a number of ways. To understand this fully, we first look at the general ecosystem functions and ecosystem services that mangroves provide for local communities in the Philippines.

4.1.1 Ecosystem functions and ecosystem services of mangroves

Mangroves are amongst the most productive ecosystems on earth and these properties can help explain their local importance (Spalding et.al, 2010:12). As there are many complex relationships in mangroves and how these relate to humans can be better understood by separating them into ecosystem functions and ecosystem services. Three critical ecosystem functions are 1) the provision of wood 2) support of fisheries and 3) protection of the coast from erosion and other natural hazards (Spalding et.al, 2010:23). There have been a number of changes in the uses of mangrove, partly because of a shift to commercial and high intensity exploitation of natural resources, but in some places there is still traditional use with a lighter and more sustainable impact (Spalding et.al, 2010: 24). The different benefits that can be derived from mangrove, commercial or on a more subsistence level, are; wood products, fuel wood, tannins, roofing, food, medicines and fodder (Spalding et.al, 2010: 24). Using an example from the specific uses in the Philippines we can further explore their uses as food, fuel and products (what Constanza terms ecosystem services).
Wood products:

Mangrove trees can range in height and diameter significantly, depending both on age and species, paired with good conditions (Spalding et.al, 2010: 24). Much of the wood and timber used is more often poles than planks but nevertheless it is a much desired wood because of ‘resistance to rotting in saline water’ (Spalding et.al, 2010: 24) making it excellent for both houses on the coast and boats. In an area such as Barangay San Jose where there are many fishing communities, it would be a particularly beneficial quality.

Fuel wood:

Considering Barangay San Jose is an area where some houses are without electricity (Opisyales ng barangay, 2010), it can be imagined that mangrove would be useful for fuel wood. In fact a number of households interviewed, particularly furthest along the edge by the mangrove did not have electricity. Although there are also other shrubs and trees in the area, there is indication that some of the wood from mangroves has qualities that make them preferable as firewood (Interviews, 2011). The mangrove are also literally in the backyard, which would make access easy as well as cheaper (considering both direct costs of buying charcoal or indirect opportunity costs).

Tannins:

One of the uses often mentioned in informal conversation during field research was the production of tannins which is useful for preparing leather (Spalding et.al, 2010: 24). Thus, although this was not mentioned by any of my key informants in interviews, it is still important to consider. Some trees of Rhizophora and Brugeria have a bark rich in tannin, and both species are found in the Philippines (Aragones, 1998:85). Perhaps the species are not found in Barangay San Jose, but also due to the nature of all the mangroves on Palawan (protected), this may simply not have been mentioned.

Roofing:

Nypa, or Nipa, is a palm that is known as ‘the mangrove palm’ (Gee, 2001: 182) and can be used for building houses. Although it is sometimes debated whether Nipa Palm is a true mangrove (Interviews, 2011) it has many uses. The leaves are dried, woven and sewn together and can be used for roof thatching or the walls of houses such as are often seen in the Philippines - on Palawan, many people live in a traditional ‘bahay kubo’ as they are called locally.

Food:

Although not mentioned in the interviews, Nipa also has other uses such as medicine (treating herpes) and as its sap contains much sugar can be used to make vinegar and alcohol (Hamilton and Murphy, 1988:207). The fruits are also eaten and gathered at a commercial scale (Spalding et.al, 2010: 25). The fruits of other mangrove species are also consumed, but in many cases they need to be cooked or soaked for quite some time to remove tannins which do not taste so good (Spalding et.al, 2010: 25). The nectar however produces very good honey and can be used by bee-keepers. It is a darker type of honey that can be found on Palawan (Interviews, 2011). The surrounding area of the trees are home to various fish and shellfish which are collected (interview, 2011) as well as molluscs.
found in the rotting wood of mangrove that are seen as a delicacy in the Philippines known as ‘Tamilok’ (interview, 2011).

**Medicine:**

There are a number of medicinal uses of mangrove (interviews, 2011), such as treatments for bowel disorders and wounds (Spalding et al, 2010: 26) and perhaps others.

### 4.1.2 Measuring the status of mangroves:

Before we look at the possible economic values of these different mangrove uses, I will briefly introduce how the different attributes of mangroves can be assigned or measured. One of the important factors to determine the level of threat to a mangrove area is to measure its status in terms of ‘...structural formation, stand growth, species association, zonation, and species diversity.’ (Cabahug and Savella n.d: 1) There are different methods to measure these aspects but a study done by Cabahug and Savella n.d: 1) from the Marine Science Institute at the University of the Philippines will be used for this thesis to give a slight impression of how this is done. It is important to be aware of these methods as it gives insight into the complexity of determining the level of threat to a mangrove and developing appropriate management interventions (Cabahug and Savella n.d: 1).

Study sites are divided into plots of equal size, and in each plot, each tree larger than 5cm was recorded for their total height and the diameter of the trunk at breast height (Cabahug and Savella, n.d: 1). The number of trees in a plot gives an impression of the density of trees. The diameter is first measured with tape but can after some measurements be estimated using the data already collected (Cahabhug and Savella n.d : 2). To measure regeneration, saplings bigger than 2mm [sic] and smaller than 5cm are recorded and their species determined (Cabahug and Savella n.d :1 ). Seedlings, less than 2mm [sic], are also recorded and species determined. The mangrove species are classified into:

- timber sized trees >15cm 2)
- pole size trees >5cm – 15cm
- regeneration – saplings (2mm [sic]– 5cm) and seedlings (>2mm [sic]) (Cahabug and Savella, n.d :2)

During the measurement of the trees, observations and recordings are also made about other species, crab mounds, avifauna and wildlife seen (Cabahug and Savella n.d: 2). Altogether the quantitative and qualitative collected data can provide information such as the density of the mangrove area, the number of different species of mangrove (and other), the level of regeneration, the total size of the area and, if data is collected across time, a comparison can be made of the changes that have taken place.

### 4.1.3 Measuring benefits (direct income) from mangrove:

To begin with, it is necessary to understand the value of a Philippine peso and to have an idea of an average daily income to be able to compare this to the mangrove resource data calculated by Cabahug and Savella (n.d: 6) below. At the time of writing, 1 Euro is equivalent to about 62
Philippine Pesos (PHP). The daily minimum wage for Palawan is officially between 144 PHP (2.3 Euro) and 264 PHP (4.3 Euro) for non-agricultural sector (NWPC, 2011). These rates are used to give an impression of the daily average incomes and to translate the calculations by Cabahug and Savella (n.d: 6). However, the nineteen year old café waitress Malaya earns about 120 PHP (1.9 Euro) per full working day, not including meals and seven days a week. She said that if she did not accept the job, someone else would, and this makes it possible for her boss to pay her less than the minimum wage rate. In comparison a cup of coffee in the same café also costs 120PHP which gives an impression of the gap between rich and poor in Puerto Princesa.

From a number of informal conversations throughout Puerto Princes, Malaya’s case is not unique. In comparison, a couple of fruits at the market may cost as much as the unofficial daily wage. A warm meal with rice and meat or vegetable sauce at a local restaurant costs around 30 PHP up to 60 PHP, depending on size of the portion of rice. Filipino families often eat rice three times a day, if not more. This is combined with different types of meat or fish, depending on the family’s choice (and ability) to buy them. Tapsilog for example is a warm breakfast consisting of rice, egg and meat, and Chicken Adobo is a rice meal with chicken and soya sauce that is often eaten for lunch and dinner. If a family is large with many children as is common in the Philippines, then the average daily wage is relatively little as the above calculation for one meal only includes food requirements for one, for one person.

Cabahuga and Savella n.d: 6) use the collected data to measure the income generated by different uses of mangrove by calculating the monetary value of the different uses. In Table 3 (Cabahug and Savella n.d: 6) they show the comparative estimated benefits of different mangrove uses in a number of municipalities in Palawan (Cabahug and Savella n.d: 6). These uses are categorized into ‘extractive’ and ‘non extractive’ (Cabahug and Savella n.d: 6). The first includes the use of mangrove for poles and piles (for domestic/household consumption) and charcoal production. The latter refers to the use of Nipa, crab capture and shell gathering. Altogether, they calculate that an ‘extractive’ use of mangrove such as for charcoal and poles would provide an average income of P12,321 (roughly 199 Euro). This is calculated by taking an estimate of 292.5 sacks of charcoal per month (mo) per household (HH) valued at 50PHP (81 eurocents) per sack and 2500 poles/year at 10PHP (16 eurocents) per pole.

Table 3: Table. Comparative estimated benefits derived from mangrove, based on the interview of key informants in Sto. Nino, New Quezon, Busuanga and in Danleg, Dumaran, Palawan, May 2001. Adapted from Cabahug and Savella (Cabahug and Savella,n.d:6)

<table>
<thead>
<tr>
<th>Mangrove Use</th>
<th>Harvest</th>
<th>Price</th>
<th>Expected Direct Benefits per Household (HH) per month (mo)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Nipa thatching Making</td>
<td>50 pieces/day/person x 26 days = 1,300 pieces/mo/person</td>
<td>1,300/100 pieces = 13 bundles P 170/bundle x 13 = P2,210/person/mo 5 member/HH P11,050/mo/HH</td>
<td>P11, 050/mo/HH</td>
</tr>
</tbody>
</table>

1 Based exchange rate at time of thesis research, between November 2010 and June 2011.
2 Pseudonym
| 2. Crab capture | 10 Traps (bobo) HH  
Average capture = 1.5kg/night  
X22 night/mo = 30kg/mo  
Average capture = 3.75kg/night x 16 nights = 60kg/mo | P 150/kg (gate price?) x 33/kg/mo = P4,950/mo  
P 150/kg x 60kg/mo  
P 9,000 | P13,950/mo |
| 3. Shell Gathering | 1 liter/hr x 3hrs/day  
3 litres/day (low tide)  
X 30 days = 90 litres/mo | P15/liter x 90litres/mo = P1,350/month | P1,350/mo |
| 4. Poles and piles for domestic/household consumption | Annual average number of poles per baklad (fish coral traps) = 500 pieces/baklad with average size of 5cm diameter and 5m length.  
1 pole = P10.00/piece  
= 500 poles/baklad  
Annual requirement = 2,000 poles + fencing = 500 poles = 2,500 poles | P10/pole x 2500poles = P25,000/yr  
= P2,083.33/mo |
| 5. Mangrove used for charcoal making/production | Average charcoal capacity/kiln = 32.50 sacks x 3 cycle prod/mo  
HH = 3kilm x 97.5/sacks/mo  
= 292.5 sacks/mo | P35/sack x 292 sacks/mo = 10,238 | P10,238 |
| 6. Non-extractive uses (nipa, crab capture, shell gathering) | P11,050 + 13, 950 + 1,350 | P26,350/mo |
| 7. Extractive uses (poles&piles, charcoal) | P2,083.33 + 10,238 | P12,321.33/mo |

‘Non-extractive’ uses of mangroves are estimated to provide P26,350/month (426.5 euro), when taking an estimate of P11,050 (178.8 euro)/mo/HH for Nipa thatching, P 1,350 (21.8 Euro) from the gathering of shells and P13,950 (225.8 Euro) from crab capture.3

In this table ‘...the income/benefits derived from the non-extractive/destructive utilization of mangrove is much greater and more sustainable than benefits/income generated from cutting mangroves for charcoal and poles and piles’ (Cabahug and Savellan d: 5). Although this sounds like the most logical answer, it is also a very quick conclusion to make on the basis of the table alone. These above findings can help answer the first few questions of Walters’ table (Table 1). It is clear local communities directly dependant on the mangrove resources, with alternative livelihood options, are the most vulnerable when it comes to the impact of mangrove restoration projects. The replenishment of the mangroves may stimulate the increase of non-extractive resources which could help these communities, but as long as there is a ban on the use of extractive resources, these cannot be considered.

3 For a more detailed analysis per transect the document referred to the Appendices which unfortunately was not attached to the copy of the document at the Environmental Legal Assistance Centre (ELAC). Therefore some details about how data was obtained or calculated is not entirely clear. Within the table there is sometimes a reference to ‘Gate price’, but what this means exactly is difficult to infer from the text.
In a few cases on Palawan, tourism has embraced some mangrove areas and involved the local communities in its management to the extent that some are now living off all the profits the tourists bring in. A good example of this in the municipality of Puerto Princesa is Sabang, where local communities are in charge of a mangrove tour through a primary mangrove forest. This project was set up and funded by NGOs such as Conservation International (CI), but its management was transferred to the local community who are now independent. The volunteers are from the Barangay and are not paid but receive a share of the entrance fee and donations that are raised by the tour. However, with tourist peak seasons between December and April (Interviews, 2011), these kinds of income activities clearly need to be supplemented with others.

4.2 Political Ecology and the Greening of governments

With an increased attention for environmental issues and the adoption of various environmental programs and project throughout the country, there has been a change in the position of ‘green’ issues in global politics. However, the correlation between devotion to environmental concerns and social matters is not always positive and can be felt as unequal by different societal groups. Below I will discuss some of the observed affects and reactions to this shift in global politics, by highlighting some cross-scale power networks and the role of inequality and conflict in the Philippines.

4.2.1 Political ecology and greening in the Philippines

One of the best examples of the way in which a green image is used for politics and to promote the greening of a government is by examining the role of mayor Hagedorn in Puerto Princesa. Using a number of observations and a book written about his ‘Personal Saga of Environmental Advocacy in Governance’ (Klow and Salvaña, 2009), I will sketch a picture of Puerto Princesa in different shades of green. This includes the more unsettling kinds of green, tainted with a discord of political vibe that echoes a struggle for basic rights to natural resources and forces silence in media by violence measures. However, first we can appeal to a visual example of the way in which politics and the environment are fused in Puerto Princesa.

Figure 4: A big billboard located at the junction between the North and South Highway in Puerto Princesa, displays a message from the Mayor of the city.
Figure 4 shows a billboard located at an important road fork in Puerto Princesa, namely the junction between the North and South highway, each leading to different opposite ends of the Island. This is a very important junction as it is a central point of the single highway that crosses Palawan from north to south and is passed by many residents and tourists alike. The billboard refers to the ‘making’ of environmentally conscious people, which hints towards the leading role of the mayor at the top of a hierarchical ladder in Puerto Princesa’s society. It also shows the desire to display the environmental focus of the local government to both its residents and visitors, as the billboard resembles a film or theatre poster. This tarpaulin billboard is changed every so often, and always seems to promote the ‘green’ image of the city (perhaps aiming to instil pride in the residents while impressing the visitors). A Christmas holiday greeting for example is made more personal by the inclusion of a photograph of the Mayor and his wife Ellen, while at the same time promoting environmental tourism.

It has to be admitted that the billboards are complemented by a very clean city, reflective of a successful ‘Oplan Linis’ (Operation Cleanliness) policy implemented by the Mayor earlier. It is also clear that Puerto Princesa, especially the local government, could enjoy acknowledgment for its efforts at creating a ‘green’ image when it received much appraisal from the national government (Klow and Salvaña, 2009: 83). This was only stimulated by the ‘global recognition’ (Klow and Salvaña, 2009: 86) the Mayor received when in 1997 the United Nations Environment Programme (UNEP) elected him for the ‘Global 500 Roll of Honour’ (Klow and Salvaña, 2009: 86). As we have mentioned in the analysis of pakikiramdam and hierarchy, the Mayor is referred to as ‘the Man’ throughout the book, emphasizing and confirming his higher status in the city. This kind of flattery is a recurring style in the rest of the book, in which his actions for the environment are praised and topped with remarks about both his achievements and his ‘…rugged good looks that made many ladies swoon’ (Klow and Salvaña, 2009: 139).

![Figure 5: The big billboard at the highway junction in Puerto Princesa is dressed up for the holiday season](image)

Regarding his political achievements, it is said that ‘In three months, each citizen felt the change’ (Klow and Salvaña, 2009: 78) giving the impression that every person in Puerto Princesa was
rejoicing and basking in happiness. However well-intended this may be, this is clearly a rather over-generalized remark about the citizens of Puerto Princesa. The writers of the book (which is sold for about 500PHP or 8 Euro) themselves belong to a different social class than the local communities who live partly depending on the natural resources of the island for their livelihood. They are part of a group that have the means to spend their time supporting the causes dedicated to the environment, particularly as they do not have to make a big swing on the ladder of hierarchy for their voice to be heard. Often they have better access to different forms of media expression, such as billboards, environmental newspapers and the environmental radio that is heard throughout Puerto Princesa, and through which various environmental activities are promoted.

At the same time, the Philippines is known to be one of the most dangerous countries for journalists (Evans, 2009). This tension can be felt as a vibrating undercurrent, at times making it difficult to do any type of research. It is important to be aware of the extent of this danger, as often such things are not easily seen from the surface, especially when the place is unfamiliar and it is difficult to distinguish between feelings of an internal personal uncertainty and the anticipation of an external threat. Reading news reports that state that ‘...most of the journalists killed were covering government issues, which in the provinces are complicated by corruption...’ (VOA News, 2005) adds an extra dimension to field research when researching about the politics of the environment and related issues such as local community opinion. It is said that ‘there is a culture of impunity in the Philippines, and journalists there have to develop a "sixth sense" to operate in areas where law and order is weak, so they can tell where the danger is coming from even as they continue trying to tell the story of the people who live in those areas’ (Evans, 2009).

Getting caught in local conflicts is one of the dangers (Evans, 2009) and this is also the case in Palawan, especially related to environmental issues. Most visitors to the beautiful island under the sun are only exposed to part of the environmental struggles. In Puerto Princesa it is clear that there is an emphasis on environmental projects, an openness about the various problems they have had (with illegal logging for example), but now harboring a pride for the green achievements by displaying this throughout the city in pictures and multi-media events. When in January 2011 Dr. Gerry Ortega was shot in the streets of Puerto Princesa, most likely for his fight against mining on Palawan, there was a ripple of reactions in the streets of Puerto Princesa. Of the voices that were heard, many reacted shocked and angrily, expressing that this is probably (again) because of the corruption in the national government and suspected that gunmen were hired to silence his action for the environment.

Although most of these voices belonged to members of the public who are do not belong to the poorest, marginalized groups of Puerto Princesa, it clearly reflected that ‘environment’ had become a term tinted with politics - and no doubt mangrove areas are an equally contested resource. However, the efforts of restoration are also complicated because of the positive face of the idea and the way most environmental initiatives in the city paint the local government through a pair of pink glasses. How can the promotion of the environment be a bad thing? Perhaps when it is used for the ‘wrong’ reason, when protecting the environment adds to the green image that in turn gains government popularity and it becomes a vehicle for political games.
4.2.3 Property rights

One of the questions in Walter’s list regards the ownership of the land in question. Property rights are one of the economic incentives further explored in a mangrove policy analysis for the Palawan Council for Sustainable Development (PCSD) (Pontillas, 2001: 10). The table below shows Pontillas’s table of property rights arrangements set in hierarchy, from open access, private property, national patrimony, community property and patents - each of these thus reflecting ownership by a different individual or group of individuals (Pontillas, 2001:10). As the entire mangrove has been declared preserved, they have gone from open access to national patrimony or from unlimited access to the decision made under the current mangrove policy, to fully restrict access. This is indicated as problematic with local people in the table, which is what we are investigating into further concerning the mangroves in the case study.

According to Table 4, one of the problems that can arise from this kind of property rights arrangement is that under weak government the mangroves would be subjected to the same kind of use as under open access (Pontillas 2001, 20). In the case of mangroves we can refer to the lack of monitoring for example. This will be elaborated on in the case study, examining in how far this could be solved by financial and political support as suggested by Table 4.

<table>
<thead>
<tr>
<th>PROPERTY RIGHTS</th>
<th>ALLOCATION</th>
<th>DISTRIBUTION</th>
<th>PROBLEMS</th>
<th>SOLUTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open Access</td>
<td>Unlimited extraction</td>
<td>Who comes first</td>
<td>Tragedy of commons</td>
<td>Assignment of property rights</td>
</tr>
<tr>
<td>Private Property</td>
<td>Marketable values only</td>
<td>Unfair to future</td>
<td>Inadequate preservation</td>
<td>Restriction of ‘abuses’</td>
</tr>
<tr>
<td>National Patrimony</td>
<td>Depends on political decision</td>
<td>Problematic with local people</td>
<td>Open access under weak government</td>
<td>Financial and political support, home and abroad</td>
</tr>
<tr>
<td>Communal Property</td>
<td>Communal decisions</td>
<td>Local communities</td>
<td>Open access locally</td>
<td>Regulations accordingly</td>
</tr>
<tr>
<td>Patents</td>
<td>Incentives to invest</td>
<td>More north-south flow</td>
<td>Ethical concerns</td>
<td>Environmental regulations</td>
</tr>
</tbody>
</table>


In a few cases, the mangroves on Private Property have been known to suffer ‘inadequate preservation’ because the private ownership is often related to a form of tourism or other activity that clears mangrove for beach area or other reasons. However, looking at current mangrove policy which bans the extractive uses of the mangroves also does not allow for the opportunity of Communal Property, which through joint decisions would let local community members be more involved in regulation. This kind of property right arrangement can be related to the most highly recommended ‘Community Multi-Use Reserve’ (Pontillas 2001, 20) policy alternative by Pontillas, explored in more depth later in this Chapter. The problem with this as described by Table 4 is that under weak regulation, this may result in a locally supported open access (Pontillas 2001, 20).
Thus considering the distribution of property, the allocations of resources and the potential problems and solutions, there are different limitations to each set of property right regime (Pontillas, 2001:11). A property rights scheme was begun in 1995 by Department of Environment and Natural Resources (DENR) as a ‘tenurial instrument’ (Pontillas, 2001:12), but how this has worked out in practice is not entirely clear. However, assigning ownership over resources is one of the economic incentives that are discussed within the alternative policy arrangements that will be elaborated on later.

4.3 Government Legislation and the Participation Paradox in the Philippines

To sketch a clear picture of the different legal and social institutions in the Philippines I will briefly introduce the Philippines from a historical perspective and some of the effects on current local government. Then I will go into more detail about a Palawan mangrove policy analysis by Pontillas as well as a number of policy alternatives he suggested to the Palawan Council for Sustainable development (PCSD) in a policy report (Pontillas, 2001).

4.3.1 Government Legislation and Decentralization

The Philippines is a country with an especially intricate history, having been colonized twice, first by the Spanish and then the Americans. This has left behind an interesting fusion of cultures, often recognized in parts of the language and in religion. The Spanish legacy was the Catholic Church, which makes the Philippines a largely catholic country, with some Muslim minority particularly in the south. In terms of education, the Philippines provides free primary education for children until about 12 years of age and the adult literacy rate is about 94% (UNICEF, 2011). These kinds of details may seem minor, but they do add to the context in which mangrove restoration plays a part. Although the Philippines has quite some strong cultural values such as will be dealt with in further detail later, it cannot be denied that there is influence from the contact with diverse other cultures and globalization setting global standards which ask some flexibility if countries like the Philippines want to participate in the global market. This will affect lifestyles (particularly in bigger cities) as well as the type of education as many people become a potential representative of the Philippines in the world market in some form or another.

Revisiting Table 2, we can see a shift from the traditional management model towards the governance model, especially regarding the recognition of the importance of the ‘interaction between science and social or folk knowledge’ (de Vivero, 2007). This is partly made clear by the attention given to local involvement (attention not insinuating active and successful participation). However, it does seem as if the social values in the Philippines are under construction as there is still much debate about environmental sustainability and political effectiveness, but this characteristic can be attributed to a plural society in general. Going back to de Vivero’s discussion on devolution, the policy analysis for the PCSD describes the change that has taken place in the Philippines in the implementation of different development projects. It describes a shift from the implementation of projects in a ‘top down approach’, to the recognition of the need to involve local government units and communities in a decentralizing effort (Pontillas, 2001:11).
It is clear that in Puerto Princesa there are dynamic power relations as there are different unit levels are involved in various aspects of implementation. The United States Agency for International Development (USAID), funded the Coastal Resource Management Project (CRMP) is an example of a non-governmental organization which recognizes the ‘importance of community participation vis-à-vis national and local governments to develop and implement resource management processes and systems’ (Pontillas, 2001:11). A more diverse range of actors are joining in the mangrove restoration projects, such as educational institutions, religious organizations or other organized citizen groups such student fraternities. However, this does not indicate the extent to which the government is operating according to the governance model in practice and in how far it has moved from being a centralized state. One of the most important of these aspects for this thesis lies in what this means for the involvement of local communities that live on the coastal outskirts of Puerto Princesa.

4.3.2 Participation Paradox (Local community perspectives)

During my field research it became clear that there were mixed feelings about the form of management of the mangroves on Palawan which through their ‘preserved’ state, make them inaccessible for extractive resources. Although there has been decentralization and clearly recognition for more participation from different levels of society, this process seems slow to realize. Despite an indication of a process of decentralization set in motion, in the past ten years and although this is written in 2001 still ten more years on it does not seem there is much change (Pontillas, 2001:19).

‘Local community people and officials resent that they have no participation at all in the deciding what to do with the mangrove forest even as the forests are within their areas’ (Pontillas, 2001:19).

In his analysis of the policy alternative of a Community Multi-Use Reserve, which will be elaborated on later in this chapter, Pontillas describes the ‘high environmental awareness’ (Pontillas, 2001:22), as well as ‘an appreciation of and willingness to participate in community-based coastal management programs’ (Pontillas, 2001:22). He also states that the policy option is welcomed by heads of government, non-governmental offices as well as local leaders for a number of reasons, including its promotion of ‘a strong sense of community, concern for the environment, and self-reliance’ (Pontillas, 2001:22). It is this ‘positive attitude’ (Pontillas, 2001:19) and ‘high social acceptability’ (Pontillas, 2001:22) that is very interesting to take further in an analysis of the role of the Filipino concept of pakikiramdam. Pontillas attributes the possibility for success of bottom-up management as a result of the Filipino tradition ‘of democracy that encourages community – level participation and responsibility’ (Pontillas, 2001:220). Possibly this is hinting towards the Filipino value ‘Kapwa’ (Chapter Three) which promotes working together in unity (de Guia, 2011). This could also then explain in more depth willingness that Pontillas discusses. To compare the possibility of different policy options which would incorporate different levels of community participation, we can look further at Pontillas’ policy analysis of three alternatives.
4.3.3 Alternative Mangrove Policy Options

The framework for Pontillas’ analysis of policy alternatives is the economic concept of externality - what he calls a ‘market failure that leads to inefficiency’ (Pontillas, 2001: v). He discusses three mangrove management options: a State Strict Reserve, Community Multi-Use Reserve, and Communal Forest. To evaluate the alternatives he uses four criteria: cost effectiveness, fairness and equity, social and political acceptability and administrative feasibility (Pontillas, 2001: vi).

‘With sustainable development as the cornerstone of current development efforts in the province, the policy trend now is to find ways and means by which people’s quality of life and economic status are improved balanced with preserving the environment.’ (Pontillas, 2001:23).

Currently, the whole island of Palawan is a mangrove reserve as in 1990 it was declared a ‘Biosphere Reserve’ by the United Nations Educational Scientific and Cultural Organization (UNESCO)(Pontillas, 2001:3). During this time it became part of a World Network of areas of terrestrial and coastal ecosystems recognized internationally under the UNESCO programme Man and Biosphere (MAB) (Pontillas, 2001:3). In 1992 the Strategic Environmental Plan (SEP) was implemented that was very focused on the sustainable development aspect and was aimed to guide ‘local governments and environmental protection activities’ (Pontillas, 2001:3). The Palawan Council for Sustainable Development (PCSD) was created as a ‘governing and policy making body to provide direction and oversee the implementation of SEP’ (Pontillas, 2001:3). The Mayor of Puerto Princesa is just one of the members that compose this council, along with a range of government representatives and representatives from ‘public and private sectors, indigenous communities, government organizations, and non-government organizations’ (Pontillas, 2001:3). The council is there to formulate the plans and the policies as well as ensuring the adherence to the SEP of, and proper coordination between, government, local government and private agencies (Pontillas, 2001:4).

The Environmentally Critical Areas Network (ECAN) is the main SEP strategy, using the same strategy of the UNESCO biosphere concept (Pontillas, 2001: 4). Under its management scheme, Palawan is zoned by its three components; into terrestrial area, coastal/marine area and tribal ancestral lands (Pontillas, 2001: 4). This results in a land use plan that ranges from a completely restricted area or core, to an area designated to development, or a multiple use area (Pontillas, 2001: 4) - both found in the coastal/marine component. According to Pontillas, despite the declaration of Palawan as a Mangrove Swamp Forest Reserve, which disallowed entry into, sale of, settlement in the mangrove area, there has still been a decrease in the total mangrove cover and it seems that local community members still use the mangroves for these different reasons (Pontillas, 2001:7). Pontillas argues that under weak governance, the mangrove resources have an ‘open access’ status (Pontillas, 2001:7).

‘Although there is a legal framework mandating the DENR to restrict access and utilization, such is useless because of the agency’s failure to impose the restriction amidst the traditional and community use of this resource (Pontillas, 2001:7).

Through migration from other islands, drawn by the abundance of natural resources, there has been a large increase in population on Palawan; from 371,782 in 1980 to 755,000 in 2000 (of which about
60% reside in the coastal barangays) (Pontillas, 2001:4). This may not only be attributed to by the location of natural resources but also to the geography of the island, with a mountain ridge running through the centre like a spinal cord which pushes people to the more habitable areas, nearer to the coastline. Along with rice, fish is an important food in the Philippines and fisheries associated with mangroves are especially important for the ‘poorest of the poor’ (Pontillas, 2001:6) and mangroves themselves ‘have been used for centuries by Filipinos for food, forage for animals, building materials, fuel, folk medicine, and various other purposes’ (CRMP, 1009 in Pontillas, 2001:6). Therefore a suitable policy is very important for the livelihood security of the population depending on these natural resources. A number of Pontillas’ ideas are examined below.

To discuss the different policy options (policy alternatives) presented by Pontillas in his report for the PCSD, it would be good to first take a look at the summary table of evaluation in Table 5:

**Table 5: Summary of Evaluation of Policy Alternatives**

<table>
<thead>
<tr>
<th>Criteria</th>
<th>POLICY ALTERNATIVES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>State Strict Reserve (PP 2152)</td>
</tr>
<tr>
<td>Cost effectiveness</td>
<td>Rank 3</td>
</tr>
<tr>
<td>Fairness and Equity</td>
<td>Rank 3</td>
</tr>
<tr>
<td>Social and Political Acceptability</td>
<td>Rank 3</td>
</tr>
<tr>
<td>Administrative Feasibility</td>
<td>Rank 2</td>
</tr>
<tr>
<td>Mean Rank</td>
<td>2.75</td>
</tr>
</tbody>
</table>

*Adaptation of table by Pontillas (Pontillas, 2001:27)

The table provides an overview of the summaries of the different policy alternatives that Pontillas describes. From the mean rank we can see that the second alternative has the highest ranking, indicating that this is the one Pontillas found most suitable from his analysis (Pontillas, 2001:27). This is interesting to keep in mind while reviewing them all and later in the case study, to cross examine with the current mangrove policy.

**Alt 1: State Reserve**

The mangroves of Palawan are currently all fully protected as a mangrove reserve, thus excluding any economic uses altogether and placing them as a strict state reserve in the table. During field research it became clear that there were also a number of other organizations and institutions involved in the protection of mangroves through monitoring and regulation. According to Pontillas, the DENR was required to employ at least 35 foresters to guard the mangroves (Pontillas, 2001:13), but it is unclear who these are exactly. This would be what makes this the most expensive option. The Coast Guard in Palawan has a unit called the Marine Environmental Protection (MEPCOM) command, which is a militarized part of the Philippine Coast Guard (PCGA). They provide monitoring of the coast, while also having their own mangrove projects in different areas in and outside of Puerto Princesa (Interviews, 2011). On community level however, there was a forest and sea watch or Bantay Dagat and Bantay Gubat, in which local community members can volunteer.
Pontillas identifies that benefits from mangroves are ‘not fully recognized by the present generation’ (Pontillas, 2001: 18), meaning they do not get all the current possible benefits. Although they do profit indirectly, such as from the positive influence the preservation has on the ecosystem, there are a number of direct benefits that are missed. These described in more detail in the measurement of mangrove benefits (Table 3). Thus exclusive preservation is especially a disadvantage for the most marginalized and poor. Those with social connections and networks (often also ascribed to the wealthier and those with social status), have more means to get around the laws or even to pay off any punishment if they do get caught. Clearly, this form of management has a low level of equity and even increases the gaps in society by attributing more power to those who have it while letting those with little pay with what they, literally, don’t have.

Pontillas’ case study in Honda bay also showed that a great deal of the fisher folk there need other, supplementing, income opportunities as they have low net fishing incomes (Pontillas, 2001:18). This could actually help take pressure off the ‘already over-fished coastal waters’ (Pontillas, 2001:18). This is a very important interrelated problem, as with fewer mangroves there are less fish due to the destruction of nurseries for example, which could make people more dependent on mangrove – leading to a vicious downwards spiral. However, without the access to the mangrove, the fishermen are more dependent on the fishing, adding to the problem of overfished waters. The above elaboration on the first of the three policy option presented by Pontillas can be compared to the two other alternatives, as is done below.

**Alt 2: Community Multi-Use Reserve**

In this second option, the mangroves are still a reserve but their protection has been handed over to ‘qualified community groups’ (Pontillas, 2001:20). This is made possible by the creation of two zones; a core no touch zone and a multi-use zone allowing multiple livelihood schemes (Pontillas, 2001:20). The problem with this idea is the time needed to prepare for this kind of governance, to strengthen and build the capability to institutionalize the project - which could be three to five years (Pontillas, 2001:20) During this time, the community would need to be formed into a practical group and a management plan would need to be shaped with which information can be distributed as well as education and training to promote mangrove-friendly livelihood activities (Pontillas, 2001:20). In essence, the preparation time and the investment needed could be won back through the lower protection cost in the long run. This can be more rewarding than the way in which the mangroves are managed now, under the first policy option (Pontillas, 2001:20). As there will be greater local involvement at a smaller scale, there would be less need for the employment of forest protectors and other personnel for the monitoring and evaluation of the projects (Pontillas, 2001:20).

As this type of policy would be promoting a combination of uses, it has many benefits in terms both uses and non-uses of the mangroves (Pontillas, 2001:21). There are various livelihood activities for local communities that can benefit from such a policy, while also allowing for different production activities such as may be in the interest of other stakeholders, and it therefore holds a high degree of equity. Besides the increase in income, the increase in supply of mangrove products and utilities can ‘fill a market demand, satisfy consumers and benefit society in general’ (Pontillas, 2001:21). More than that, it is as mentioned earlier, there is a link made between two very important circles or ecosystem interrelationships - of the intricate connection between mangrove dependency and
fishing income. One of the main concerns shown in the case study in Honda Bay is that many of the communities are ‘squatting on public land’ (Pontillas, 2001:22). This kind of policy would provide a tenurial instrument to secure the residents’ tenure for a minimum of 25 years (renewable for 25 years) (Pontillas, 2001:22). This could provide an extra incentive for local communities to participate. Another positive aspect is that the implementation of this policy facilitated because it can rest on a legal and institutional framework that already exists under the forest management program by the DENR. However it still requires some monetary investment, especially the first five years (Pontillas, 2001:22).

**Alt 3: Communal Mangrove Forest**

Under the third policy option the protection of mangroves is the responsibility of the Municipal/Local Government Units (LGUs) under the communal forest scheme (Pontillas, 2001:23) and the whole mangrove area can be used for it timber purposes only. In this case the Municipal Environment and Natural Resources Offices (MENRO) would assume the administrative function (Pontillas, 2001:23). In the case of Puerto Princesa however, the function would be assumed by the City Environment and Natural Resource Office (CENRO), who have a big role in mangrove projects throughout the area (Interviews, 2011). This kind of policy would allow for great direct benefits but there is just a medium degree of equity as it would be the LGUs that can use or sell the timber products to residents (Pontillas, 2001:24). This means that only those who are able to pay for the services and products can really benefit and as only timber can be extracted, the other livelihoods mangrove can provide are excluded.

For local leaders this is an attractive policy as they received responsibilities and powers from the devolution process in 1992, and this policy further gives them direct control over mangroves (Pontillas, 2001:24). However there is a sense of concern about corruption tainting the transactions and even though this is also based on an existing legal and institutional framework, it may conflict with the CBFM program preferred by the Department of Environment and Natural Resources (DENR) (Pontillas, 2001:24). Consistent leadership may be an issue as the management involves LGUs where elections every three years can change the leaders and therefore affect project goals (Pontillas, 2001:25). Finally, besides the fact that the prohibition on mangrove cutting would have to be lifted off all the mangrove on the island, not all the mangrove is suitable for timber, leaving a possibility for selective cutting and favouritism for certain areas which can put pressure on some areas and overexploit others.

In the next chapter, the case study will be presented. Two mangrove restoration projects in Barangay San Jose (Figure 7) on the island of Palawan (Figure 6) will be presented and the theories will be discussed in more detail.
Figure 6: Map of the Philippines to show the location of the island of Palawan and the city of Puerto Princesa
Obtained from the PCSD tax mapping office in Puerto Princesa

Figure 7: Map of the Municipality of Puerto Princesa, showing the location of Barangay San Jose (outer circle) and within San Jose (inner circle), the approximate location of Purok Masagana

4 Obtained from the PCSD tax mapping office in Puerto Princesa
5. CASE STUDY

This chapter will start with an introduction to the case, shaping the context in which the research took place by describing the research site in detail. Next, the two specific mangrove projects examined in the case study will be presented in depth. Using pseudonyms for my respondents to respect their anonymity, I will apply the theoretical framework developed in the previous chapters to analyse the data to finally answer the main questions of this thesis.

5.1 Mangrove restoration in Puerto Princesa, Palawan, the Philippines

To deal with the many environmental issues that the country faces, Puerto Princesa (Figure 7) as a city has initiated a number of environmental projects. Some examples are the ‘sanitary landfill, forest protection and mangrove rehabilitation’ (USAID, 2010). As discussed in Chapter 4, Mayor Hagedorn is well known for his involvement in various environmental projects. Altogether there is much promotion of environmental awareness around the city; reflected in the many billboards, posters and policies such as Oplan Linis (Operation Cleanliness) (Municipality of Puerto Princesa, 2010).

Figure 8: ECAN map of Puerto Princesa showing the population dense (red) areas in relation to the mangrove areas (violet).

The Bantay Puerto program (Environmental Watch) was launched in 1992 by Mayor Hagedorn (Klow and Salvaña, 2009:78) As preservation of resources means that certain resources become protected and thus it often suddenly becomes illegal to extract or use certain resources for livelihoods. Bantay Dagat (Sea Watch) and Bantay Gubat (Forest Watch) have been set up with the idea that they

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5 Obtained from the PCSD (Last updated around 2005 due to lack of funding)
provide alternative jobs as ‘watchers and protectors of the environment’ (Klow and Salvaña, 2009:81). However, to learn more about the involvement of local communities who live close to mangroves and in terms of how these mangrove restoration projects impact them specifically, this research was conducted within the city of Puerto Princesa. It focuses specifically on Barangay San Jose and the two different mangrove projects Barangay San Jose located here (Figure 10 and Figure 12).

5.2 The research site: Barangay San Jose, Purok Masagana

The municipality of Puerto Princesa is divided into a number of Barangays. Barangay San Jose lies approximately 6km from the Poblacion (Puerto Princesa City Center) (Opisyales ng Barangay, 2010) and has a total population of around 10,000 (9,544 in 2009) (BGY San Jose profile, 2011). This population is divided into around 2000 households, which are distributed between 12 puroks (Opisyales ng Barangay, 2010). Each Purok has between 101 to 310 households and each have a president, who can be consulted by residents before approaching the Barangay Captain (but do not have the same authorities). The three major problems of barangay San Jose as indicated by the ‘Tanggapan ng Sangguniang Barangay’ (Opisyales ng barangay, 2010) are (a) Poor-feeder road condition (b) Rapid growth population and (c) Unemployment.

In Barangay San Jose, it is the Barangay Captain, Captain Yara, who takes charge of most of the activities and related decision making for the barangay, from marital disputes to environmental issues such as providing the land necessary for projects such as initiated by the PSU and the government’s annual ‘Love Affair with Nature’ event. The city forest rangers work together with the barangay to protect the mangroves and most likely also for monitoring. Within Barangay San Jose attention will be directed at one of the 12 Puroks that divide up the barangay; Purok Masagana, in which both the mangrove restoration activity of the PSU and Love Affair with Nature take place.

5.2.1 Mangrove projects

The Environmentally Critical Area Network (ECAN) map (Figure 8) shows Barangay San Jose as a highly residential area near the mangrove restoration site (for a full ECAN map of Puerto Princesa, see APPENDIX iii). There are more highly dense residential areas but there are not many mangroves indicated here. Barangay Tagburos has a high area of mangroves, as does the area near Iwahig Prison, but again here is not so much sign of residency as the center of Puerto Princesa. San Jose seems to be unique in its position (interviews, 2011). The images are from around the time that the mangrove restoration of the PSU began here, and it would be very interesting to have an even closer look at the area, if it could be compared to a more recent photograph which unfortunately does not exist (the map was last updated by the PCSD in 2005, due to a lack of funding). The area of the Love Affair by Nature site is not clearly distinguishable from the PSU site in this photo. What the maps may be able to show is where the mangroves (violet) are located in relation to the residential areas (red). The problem is that the map makes no distinction between original and restored mangroves, and the comparison of maps from different years could give a better overview of the changes that have taken place.
1) **Love Affair with Nature**

Love Affair with Nature, started in 2007, is a very big annual event initiated by the government and it takes place on February 14th, Valentine’s Day. Many different people participate in the Love Affair with Nature event. Residents of Puerto Princesa, residents of other towns on Palawan, fraternities and sororities and visitors from other islands as well as foreigners come to participate or watch the event. As an incentive to the local community, the city government provides the possibility of a free marriage, an otherwise expensive ritual for many Filipinos. In return for this free ceremony, each couple must plant a tree, adding to the symbolism of the event.

There are also activities to support the specific aim of heightening the awareness of the ecological role of coastal ecosystems, such as film screening and games on the beach. Beginning very early in the morning around 5:00 am, around 15,000 – 20,000 seedlings are planted each year during the daylong event (Interviews, 2011). Statistical data (Table 4.) shows the amount of seedlings and propagules\(^6\) to have risen from 2500 seedlings in 2003, to 15000 seedlings and 6,000 propagules in 2010, with variations in between but showing a gradual increase nevertheless (CENRO, 2011). The event has since its start taken place in two Barangays, but mostly in Barangay San Jose.

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\(^6\) Propagules are long cigar-like seeds that germinate into seedlings while still attached to the parent plant (Interview, 2011)
The photograph (Figure 9) and the map (Figure 10) show some detailed geographic characteristics of the Love Affair with Nature site (for more photographic details see APPENDIX ii, figure B). The photograph is taken near low tide, as on an earlier visit the water was much higher. From the many boats present, as well as the occupied boats as can be seen in the photograph, the area is actively used as a boat docking area for fishermen, many who likely live in Barangay San Jose. It is difficult to see newly planted seedlings but the project site continues further out into the sea with even lower tide, as well as extending far behind me as I take the picture (APPENDIX ii). If we compare this photograph to the hand-drawn map (Figure 10) below, there is a long road through the mangrove area to the households that clustered into small compounds, almost facing each other with a little communal space between them. They have a low bamboo fence between the households and the road, and there is a similar formation on the other side of the road. There is a small sari-sari\(^7\) selling basic items and also a pool table by one of the bigger households. There is a fork in the road with the right leading to the Love Affair with Nature site and on the left to the CENRO nursery, which could place them closer to the mangrove policy and regulations in a literal, and metaphorical, sense.

These observations are important for a number of reasons. They give an impression of the alternative livelihood incomes, the organization of the households in terms of ‘communal’ living and altogether this may influence how they experience the mangrove policy which disallows them full access to the mangrove. Comparing them to the other project site can help to create ideas on what kind of physical conditions, community organization and other details of location can impact the local community’s experience of mangrove projects.

\(^7\) A small local shop selling basic items. Often a number are found in local Baranganys and are run by families.
Figure 10: Map of households located near the 'Love Affair with Nature' mangrove plantation site in Purok Masagan, Barangay San Jose.
The Palawan State University started a community outreach program ‘Adapt a Barangay’, 5 years ago. Dennis Macolor is the coordinator the project and collaborates with CENRO (City ENRO) who prepares the plants for planting in the CENRO nursery in Barangay San Jose, near the Love Affair with Nature project site. The PSU College of Science was allocated Barangay San Jose for the Mangrove restoration project because of its coastal location and because the area is not yet a commercial area – making it more convenient for them to implement a successful project (interview, 2011). At the start of the project there were no mangroves (Interview, 2011), but if this is entirely correct and what the reasons are, is not clear. The area the PSU was planting is small in comparison with the Love Affair with Nature site, and is only a part of the mangrove area which stretches on beyond the project site. At the start of the PSU project, a Memorandum of Agreement (MOA) was signed between two parties; the PSU and Barangay San Jose, through the Barangay Hall and Barangay Captain. The PSU was to provide the manpower, technologies and ideas, whereas the Barangay captain would provide the land and the monitoring of the site. The Barangay captain has changed since the start of the project in 2005 but this, Dennis assured, does not have influence on the MOA as it is a continuous agreement. The MOA does however need to be updated at times and they are pushing to upgrade it in 2011.

The project has been faced with a number of problems. Firstly, a large number of trees are planted each year and it is difficult to keep track of the exact numbers, especially how many survive each year. They planned a monitoring event in January\(^8\), during which the students would measure the plant’s numbers, height, diameter etc. (Interview, 2011). With this data, a report is made for the San Jose office and the PSU research office (Interview, 2011). There are accounts of residents/individuals harvesting parts of the plants, for charcoal especially as the wood burns longer than other wood and there are some indications that despite the laws, wood of mangroves is also used for construction of houses and other things (Interviews, 2011). Monitoring of the area is problematic in the summer as there are no students to do the monitoring and San Jose is far from the city transport costs would need to be covered (Interviews, 2011). Lastly, the PSU finds that litter is an issue, which is attributed to the distance of the area from the highway which makes garbage vans reluctant to pick up the trash.

Below is a photograph taken from the beginning of the PSU student mangrove project (for more photographs see APPENDIX ii). This area is clearly very different from the Love Affair with Nature site. First of all, the access to the area is from a steep embankment, there is no clear road as there is in the other site. Secondly the area has much sharp coral, which means that walking through the area is hazardous for feet, unless suitable, protective footwear is worn. The picture is taken during a higher tide, and it is still not covered with much water which also adds to the impression that this is a different ecosystem than the Love Affair with Nature site. This is relevant when considering the possible local community uses of the mangrove. It is not suitable for boats as the access to the sea is very difficult, lying beyond corals and mangrove trees. There is the sound of muddy bubbles popping, indicating shells in the area and confirming data collected in which these are given as one of the food sources by some of the informants (Table 7).

\(^8\) This unfortunately did not take place on the date planned.
The seedlings planted by the PSU students are not clearly visible and with a sparsely mangrove populated area, it is still questionable which of the trees are as a result of the project. There are a few seedlings visible, but none are clearly marked – which may make monitoring and collecting survival rate data less reliable as it could lead to confusion about which trees to count and which were there before the project began, as well as which are from each year the planting took place.

Comparing the photograph to the sketched map below, we can see that there are relatively few households in the direct vicinity of the actual project site. The households are spread out, not clustered as in the other project site map. Although there are roughly the same number of households, they cover a larger area. Some of the houses are fenced off individually, one with a very long brick wall with a large metal gate. Others are screened off by bamboo fencing, some with wire mesh and others have no fence. Between these households, there are large vegetable gardens, banana trees, a piggery and these are examples of alternative livelihood income sources for these households. These data are further elaborated on in Table 5 and Table 6.
Figure 12: Map of households near 'Adapt a Barangay' mangrove restoration project site.
Barangay San Jose falls under the Environmental Laws of the municipality of Puerto Princesa City, a municipality authority under the provincial government of Palawan which is run by Mayor Edward S. Hagedorn and 12 elected councilors. In 1992, under the republic act No. 7611, the Strategic Environmental Plan for Palawan was created, of which the implementation was to be overseen by the Palawan Council for Sustainable Development (PCSD). A Memorandum of Agreement (MOU) was signed with the Department of Environment and Natural Resources (DENR). The MOU specifies the type and nature of programs to be implemented in Puerto Princesa City but large-scale projects still require DENR approval. The DENR also provides the necessary equipment, facilities and records. Balgos lists a number of agencies involved in Coastal Management in the Philippines (Balgos, 2005: 984). DENR, B-FAR and PCG are the most interesting of these concerning my research on mangrove restoration as they are involved in particular in various aspects and levels of coastal management in Puerto Princesa, such as through policy formulation (DENR); resource assessments: coastal (DENR) and maritime (B-FAR); mangrove reforestation (DENR); law enforcement of offshore, pollution, fishery (also PCG); monitoring pollution (DENR and PCG). With the exception of Coastal Environmental Program (CEP) it seems the projects are usually funded by the national government and all major coastal management programs mainly supported by external finding (loans/grants) (Balgos, 2005: 984).

The City Environment and Natural Resources Office (CENRO) collect wild propagules which are gathered by local fishermen in plastic bags and are bought at 1PHP (0,015 Euro) per piece. These are then taken to a tree nursery where they are prepared, in around 3-4 months, for anyone who wants to do a mangrove project, even individuals. (Interviews, 2011) How this wild gathering of propagules affects the wild growth of mangroves is unclear. According to the CENRO representative, Mr. Rogelo, more than 30,000 plants are raised a year, and the nursery provides for all the mangrove projects in the city, including the biggest event ‘Love Affair with Nature’ (Interviews, 2011).

<table>
<thead>
<tr>
<th>Date</th>
<th>Area Planted (hectare)</th>
<th>Barangay</th>
<th>Seedlings Propagules</th>
<th>Survival Rate (yearly)</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>February 14, 2003</td>
<td>2.0</td>
<td>San Jose</td>
<td>2,500 seedlings</td>
<td>60%</td>
<td></td>
</tr>
<tr>
<td>February 14, 2004</td>
<td>2.5</td>
<td>San Jose</td>
<td>3,500 seedlings</td>
<td>70%</td>
<td></td>
</tr>
<tr>
<td>February 14, 2005</td>
<td>10.0</td>
<td>San Manuel</td>
<td>6,000 seedlings</td>
<td>80%</td>
<td></td>
</tr>
<tr>
<td>February 14, 2006</td>
<td>10.0</td>
<td>San Manuel</td>
<td>8,500 seedlings</td>
<td>80%</td>
<td></td>
</tr>
<tr>
<td>February 14, 2007</td>
<td>10.0</td>
<td>San Manuel</td>
<td>12,000 seedlings</td>
<td>80%</td>
<td></td>
</tr>
<tr>
<td>February 14, 2008</td>
<td>12.0</td>
<td>San Jose</td>
<td>14,000 seedlings</td>
<td>70%</td>
<td></td>
</tr>
<tr>
<td>February 14, 2009</td>
<td>12.0</td>
<td>San Jose</td>
<td>10,000 seedlings</td>
<td>70%</td>
<td></td>
</tr>
<tr>
<td>February 14, 2010</td>
<td>11.0</td>
<td>San Jose</td>
<td>15,000 seedlings</td>
<td>70%</td>
<td></td>
</tr>
</tbody>
</table>
The nursery in San Jose had 3 ‘keepers’ during my visit in January, and about 6000 plants of four different species. However as the next ‘Love affair with nature’ was due to be in February, this is a low number considering that according to the records, up to 1500-2000 seedlings were to planted in 2011. When a volunteer group applies for mangrove seedlings, CENRO determines the suitability of the land and the species of mangrove that would thrive in that location.

Government Mangrove Legislation from a Local Community Perspective

There are a number of ways in which to interpret words. Sometimes it is hard to translate certain things into other languages because of a lack of vocabulary, and there are effects of cultural values on behavior (and its interpretation) such as pakikiramdam (Chapter Three). To analyze a few excerpts from the informal interviews done with the local community in Barangay San Jose, Scott’s theory of ‘symbolic compliance’ (Scott, 1985) will be referenced to, particularly his explanation of ‘weapons of the weak’ (Scott, 1985). Scott uses the example of a pedestrian walking on a zebra-crossing, picking up his legs higher to let the driver of the waiting car know he acknowledges him/her (Scott, 1985: 26). In fact ‘...the actual progress of the pedestrian is no faster than it would have been if he had simply proceeded at his original pace (Scott, 1985: 26). What is conveyed is the impression of compliance without its substance’ (Scott, 1985: 26). What makes this performance fascinating is that ‘It is almost as if symbolic compliance is maximized precisely in order to minimize compliance at the level of actual behaviour’ (Scott, 1985:26). So by lifting his legs up higher and pretending to walk faster to please the driver, he does not actually have to walk faster (Scott, 1985: 26). It is almost like a form of camouflage, or a clever method of diversion – perhaps the way in nature a lizard leaves his tail behind for the cat while he runs to safety.

When asking the local community about their opinions on the management of the mangroves, the answers were mixed. Some of the respondents believed the government was the main body in charge of the different projects, whereas others alleged it was the barangay officials who ran things to do with their mangroves. When asking for more details about the mangrove laws and regulations, most gave only a short, vague description or opinion.

Armando⁹: ‘the government doesn’t care’

Only one of the respondents, Armando, had a hint of negativity in his answer that the government was not really concerned with much, probably hinting towards his (and the community’s) welfare. Although the questions were directed more towards their role in the protection of the mangroves, his response was more directed at the government’s attitude.

Armando: ‘they should establish committees to handle mangroves efficiently’

Diyata: ‘it would be great if laws implemented and youth and residents taught’

Riza: ‘through an educational tour for students’

There were different perceptions and ideas on the ways in which the current situation could be improved. Armando for example suggested the formation of committees, which is a very relevant

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⁹ Pseudonyms have been used to keep the anonymity of the informants.
suggestion and one that will be elaborated on with my personal opinion in the conclusion. Diwata suggested the implementation of laws, which do already exist but in a sense this hints towards their elusiveness. Perhaps the greater worry (than the exclusion laws) is their transparency which is reflective of the level of decentralization. The idea to ‘teach’ youth and residents can be interpreted in different ways. First of all the word ‘teach’ carries the connotation of someone with more knowledge transferring this to one with less. With such wording however, and knowing that this is a hierarchical society, can also reflect a passiveness in the acceptance that there is someone else knows ‘better’ who can tell you what to do. Or it is a form of ‘symbolic compliance’ (Scott, 1985: 26), her positive attitude towards more laws similar to the knee-high expression, this time on a metaphorical zebra-path joining politics and the environment.

Riza’s suggestion of an educational tour also reflects the whole Philippine society’s emphasis on education and achievement which echoes through propaganda billboards and extravagant diploma ceremonies and award giving. This does not make the idea less valuable however for although there already seems to be a high level of awareness about the importance of mangroves (Table 7) the comment may not be about extra educational tours but sharpening the ones that exist. This could be done by increasing the levels of participation to include multiple actors of society, including the local community.

Jovelyn: ‘don’t know if people/citizens can manage because even they cut it for charcoal and firewood’

One of the most interesting responses was from Jovelyn who seemed to have little faith in the local community’s ability to manage the mangrove’s themselves. If we focus on the word ‘even’ this could imply that there are (other) people cutting the mangroves. Perhaps this is a way of saying that although there are some negative feelings about the way the mangroves are managed, they would not be any better off in the hands of the local community. The response is also informative on the other mangrove uses which were not mentioned directly, most likely because of its illegal character. On further investigation it turns out that sometimes mangrove charcoal is still sold because it burns well, which means the demand is high enough for people to risk being caught and fined. As it does not seem too difficult to track down these illegal charcoal vendors, the enforcement of policy is questionable.

Jovelyn: ‘if the government will work properly, our society will not allow the gradual loss of mangrove trees’

The previous opinions of Jovelyn seem to place the responsibility in the lap of the government (again). Whereas in her fist statement she showed a lack of faith in the local community, in the next she seemed to attribute this to a failure of the government. In a sense this brings us back to the policy alternatives of Pontillas in the previous chapter (Chapter Four) in which he acknowledges the need to strengthen the capability of local communities to adequately fulfil the responsibilities that the decentralization of the environmental policies would give them. Jovelyn also hints towards the interrelatedness of the government and society, implying the role of the government to be supportive.
Nimuel: ‘there should be a person who looks out for mangroves and there should be a contact with him/her’

From the different informal interviews, it became clear that there was not much communication between the two different projects and the local community. Every year during the organization of the events, there is no contact with the community to offer the chance of voicing opinions or making suggestions, excluding the local community. Especially when there are so many different stakeholders in the mangrove resources, the idea that Nimuel put forward is very valuable – to have one person (or a group perhaps, to allow for more validity of information through cross-checking), be specifically elected to hold the overview and to relay the information to those who are in any way involved.

5.2.3 Barangay San Jose and non-extractive mangrove uses

As mentioned earlier, on the island of Palawan it is now illegal to cut mangrove and therefore bans all extractive uses. Both Table 3 and interviews done in Barangay San Jose during the case study, point out a number of current non-extractive uses of mangrove. Comparing the data collected with the table, Nipa palm and shell gathering are two that overlap, whereas none of the respondents said anything about crab capture. This may have been simply because they forgot to mention it or did not want to tell me for various reasons. Another reason put forward by my assisting translator is that the PSU mangrove site is in an area where there is less movement of the tide - which could affect the suitability of the habitat for various edible animals such as crabs or fish.

To elaborate on the non-extractive mangrove resource uses in Barangay San Jose, I will analyse interview responses from the ten main informants. More than half of the informants indicated food as one of the most important aspects of the mangrove near their homes. When asked to elaborate, the main response was the collection of shells, with person adding that there were fish, ‘but now not anymore’ (interviews, 2011). My translator, who studied graduated in marine biology from the PSU the year before, said that it was possible that there were fish before but that with the disappearance of the mangroves the fish had also disappeared and had not (yet) returned. Another possibility was that the tide had changed, for especially in the project site of the PSU mangrove restoration, when the tide went out much of the water disappeared rather than leaving a shallow nesting area for fish.

Nipa palm is gathered by some of the respondents, but one of them also remarked that these grow in a different area making them somewhat ‘...further away’ (interview, 2011). How far away this was exactly, he could not say. His main point however he said, was that the mangroves are just a few hundred meters away and it would save him time – it would just be ‘better’ for him if he could ‘just go to the mangroves and use them’ (interviews, 2011). The topic of Nipa Palm was one of the most confusing because some said it was not a real mangrove, just a palm that grows in the mangroves, whereas others call it the only palm-like mangrove (Gee, 2001: 182). In an earlier mangrove (firefly) tour on a river in Puerto Princesa, the guide responded to a question about this by saying that it was allowed to take the palm from ‘that’ side of the bridge, because on ‘this’ side it is protected. It is also referred to as ‘non-extractive’ resource use in Table 3, but the exact laws around this palm are not entirely clear.
<table>
<thead>
<tr>
<th>Respondent</th>
<th>Land ownership (where household)</th>
<th>Visits to mangrove p/week</th>
<th>Important functions mangroves p</th>
<th>Who manages mangroves</th>
</tr>
</thead>
<tbody>
<tr>
<td>Armando</td>
<td>owns</td>
<td>not often</td>
<td>fish/ storms</td>
<td>the government</td>
</tr>
<tr>
<td>Diwata</td>
<td>owns</td>
<td>sometimes</td>
<td>nursery for fish, birds and fireflies</td>
<td></td>
</tr>
<tr>
<td>Nimuel</td>
<td>relative</td>
<td>sometimes</td>
<td>food/medicine</td>
<td></td>
</tr>
<tr>
<td>Nonoy</td>
<td>owned by others</td>
<td>does not go there</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jovelyn</td>
<td>owns</td>
<td>many times</td>
<td>birds live there</td>
<td>barangay officials</td>
</tr>
<tr>
<td>Ligaya</td>
<td>owned by others</td>
<td>everyday</td>
<td>food</td>
<td>residents</td>
</tr>
<tr>
<td>Rizal</td>
<td>owned by others</td>
<td>does not go there</td>
<td>Shells (food)</td>
<td></td>
</tr>
<tr>
<td>Riza</td>
<td>relatives</td>
<td>sometimes</td>
<td>food Shells</td>
<td>barangay officials</td>
</tr>
<tr>
<td>Liezel</td>
<td>own house (land unknown)</td>
<td>sometimes</td>
<td>food &amp; medicine</td>
<td>barangay captain</td>
</tr>
<tr>
<td>Arvin</td>
<td>relatives</td>
<td>twice a week</td>
<td>food</td>
<td>barangay or city</td>
</tr>
</tbody>
</table>

It is not possible to say how much the exact income benefits are for the residents in Purok Masagana, but using Table 3 we can make an estimate. There are no respondents that admit to extractive methods and uses of mangrove, so this will fall to P0/mo per household. Looking at non-extractive, crab capture is not mentioned so this is not calculated. The shell gathering only values at P1,350/month (22 Euro) and the Nipa would value at P11,050/mo (178 Euro), although it is not clear from my collected data in how far this is relevant for the residents of Purok Masagana as I did not make note of where the used Nipa trees are located. Including the Nipa trees, the benefits of the mangroves at purok Masagana would be P13,400/mo (216 Euro) (for now assuming they are being used as they form an important part of traditional Filipino houses). This is still significantly lower than the P26,350/mo (425 Euro) estimate that the authors calculated for other mangrove areas on Palawan. Whereas the authors also calculated that the benefits of non-extractive methods (P26,350) (425 Euro) were much higher than extractive methods (P12,321) (199 Euro) this is not really the case for purok Masagana based on the above data. We can compare these findings with data collected on other forms of income of the same respondents to get more of an indication of their level of dependency on the mangrove resources itself as well as to form an idea of any suggestions for mangrove policy.

10 The respondents have been given fictive names to protect their identities.
5.2.4 Livelihoods and other sources of income in Purok Masagana examined:

From the previous data analysis, it seems as if the two uses of extractive and non-extractive resources are presented as two opposite ends; the non-extractive methods are described as an alternative to extractive. However, it could also be seen that the two are complementary uses, that the value and benefits derived from one method is affected by the access of another. Because some of the lack of response from some of the households approached, only the ten most informative respondents were selected to include in the table below (Table 8).

Of the ten respondents, two of the ten said they do not go to the mangroves. Almost all ten informants nevertheless indicated a different job; a nurse, carpenter, pensioner, tricycle driver, two vendors (one market), two with office jobs, one who depended on farming and one who planted trees for a living. Six out of ten informants had another source of income than their current jobs (also including household work), such as the farming of different vegetables and a piggery. It would be interesting to relate the different income activities to possible uses of mangrove, to get a more descriptive idea of the possible opportunity costs of the denied access to mangroves under the current policy.

<table>
<thead>
<tr>
<th>Respondent</th>
<th>Age</th>
<th>Gender</th>
<th>Work/job</th>
<th>Farming</th>
<th>Other</th>
<th>length residency in BGY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Armando</td>
<td>27</td>
<td>M</td>
<td>nurse</td>
<td>N/A</td>
<td>N/A</td>
<td>2 years</td>
</tr>
<tr>
<td>Diwata</td>
<td>60</td>
<td>F</td>
<td>household</td>
<td>vegetables</td>
<td>children</td>
<td>since 5 years old</td>
</tr>
<tr>
<td>Nimuel</td>
<td>40</td>
<td>M</td>
<td>carpenter</td>
<td>N/A</td>
<td>planting and taking care of animals</td>
<td>N/A</td>
</tr>
<tr>
<td>Nonoy</td>
<td>36</td>
<td>M</td>
<td>tricycle driver</td>
<td>N/A</td>
<td>N/A</td>
<td>3 years</td>
</tr>
<tr>
<td>Jovelyn</td>
<td>35</td>
<td>F</td>
<td>office</td>
<td>piggery</td>
<td>N/A</td>
<td>2004 on</td>
</tr>
<tr>
<td>Ligaya</td>
<td>47</td>
<td>F</td>
<td>vendor</td>
<td>vegetables</td>
<td>N/A</td>
<td>10 years</td>
</tr>
<tr>
<td>Rizal</td>
<td>65</td>
<td>M</td>
<td>office</td>
<td>N/A</td>
<td>N/A</td>
<td>8 months po</td>
</tr>
<tr>
<td>Riza</td>
<td>20</td>
<td>F</td>
<td>farming</td>
<td>vegetables</td>
<td>N/A</td>
<td>&gt; 4 years</td>
</tr>
<tr>
<td>Liezel</td>
<td>21</td>
<td>F</td>
<td>planting trees (ban?)</td>
<td>N/A</td>
<td>N/A</td>
<td>8 years</td>
</tr>
<tr>
<td>Arvin</td>
<td>25</td>
<td>M</td>
<td>market</td>
<td>piggery</td>
<td>N/A</td>
<td>&gt; 1 year</td>
</tr>
</tbody>
</table>

The informant who indicated to be retired lived in a household of ten people (family) and also depended on her children for income. She has been living in the house since she was five years old. She was one of the informants that gave the most elaborate answers, acknowledging that the mangroves were also a nursery for fish, birds and fireflies, which had at that time not crossed my mind. She was aware of the Love Affair with Nature project and had also participated by planting a mangrove tree in projects in barangay San Jose and in Sabang (also the Municipality of Puerto Princesa). She was willing to participate again if she was not busy and if there was free food, also expressing some hoping that there would be more activities about the environment and mangroves.

11 N/A – Not Applicable indicates that this is either not practiced, unanswered or unknown
This informant is also the longest resident of the area, raining questions about the residency of other households.

Most of the informants have lived in the area for less than 8 years, which seems to indicate that this is a newly settled area. As the area is close to the city of Puerto Princesa, and regarding the different livelihood incomes, access to jobs in the city may be one of the incentives to live there. The way the households are spread out in the PSU area (Figure 8) and the space around the more clustered households in the Love Affair with Nature site (Figure 10) can also be compared with the data in the table (Table 8). A relationship can be seen between the space available in this semi-urban area and the presence of piggeries and vegetable gardens.

Mangrove species uses and livelihoods compared

To explore the possible motivations behind the uses of the mangrove by residents of barangay San Jose, we can refer to mangrove species identification. The ‘Botanical Identification Handbook on Phillippine Mangrove Trees’ (Aragones et al., 1998) indicates a number of different uses of various mangrove species. Knowing these different uses and benefits can give a different perspective on the opportunity costs for local community members not having access to the mangroves in their backyard. For example, the more or less common Lumnizera racemosa (APPENDIX i) grows in the inner edges of the mangroves, the sandy portions (Aragones et al., 1998:55). Its wood is fine, hard, and heavy and the bark can sometimes be used for tanning (Aragones et al., 1998:55). Such a tree may be good for building material for houses or perhaps pig pens for households with piggeries.

The Xylocarpus granatum (APPENDIX i) grows on the borders of tidal stream in swamp and its wood is comparatively heavy, moderately hard and moderately strong but prone to splitting (Aragones et al., 1998). Therefore it is most suitable for furniture, floors, doors, posts, beams and rafters. Its bark provides a red dye and tannin (Aragones et al., 1998:60). Again, the wood would be suitable for building houses and pig pens, but also for making furniture. One of the respondents is a carpenter and he could clearly have used this wood as this source of income. The oil from the seed can be used in hair grooming (Aragones et al., 1998:61), and although this may be seen as obtainable with a non-extractive method, seeds are very important for the mangroves to replenish their own numbers. This oil seed might have been sold by the two informants who are vendors. The bark as a decoction is described as a remedy for cholera and the fruit and seed as anti-diarrhetic, but none of the informants mentioned these uses.

The ‘rather common and dominant’ Rhizophora apiculata (APPENDIX i) grows on deep, soft estuaries normally flooded by tides and its wood is extremely heavy and very hard (Aragones et al., 1998:85). This wood requires careful seasoning to prevent splitting and it is difficult to dry and may shrink excessively (Aragones et al., 1998). However, this is a strong wood when it is given a weatherproof coating and can be used for foundation piles, salt-water piling and beams (Aragones et al., 1998:86). What is especially interesting about this particular species is that it makes excellent firewood and charcoal (Aragones et al., 1998) a use that all of the residents might have benefited from (although this might already be the case, illegally). The bark of this mangrove species can be used for tanning and dyeing (Aragones et al., 1998) and like many other of the above characteristics could have been indirect economic benefits for local communities.
However, with the Case Study in San Jose in mind, we need to discuss these findings by allocating a monetary value to them and to then compare the value loss created by the policy restrictions on mangrove use. To do this I will focus more closely on the non-extractive benefits of mangroves, because the other ‘extractive methods’ are illegal in that area today and are (officially) not practiced. According to the calculations of Cabahug and Savella, the ‘non-extractive’ uses of mangroves together provide for P26,350 (425 Euro) per month, thus the loss made by the protection of all the mangroves on the island of Palawan results in ‘only’ a miss of P12,321.33 (199 Euro) per month (Cabahug and Savella, n.d:6). However, since these estimates are all made in monetary value, it is difficult to substitute the opportunity costs of these extractive resources. Also these calculations do not consider mangrove zonation or the ‘spatial variation in structure and dominant species’ (Spalding et.al, 2010:12) that might be present in all sorts of different locations. Mangrove growth is also ‘driven by one or more gradients in the various factors that influence survival and growth, including salinity, inundation and sediment type’ (Spalding et.al, 2010:12). The specific mangrove uses in Barangay San Jose may depend on these differences and it is difficult to account for these in the table by Walters.

5.3 Local community involvement in mangrove projects:

From the interviews with the local community about the mangrove projects in Barangay San Jose, there seemed to be much knowledge about Love Affair with Nature but little about the PSU student project. A number of informants mentioned that there were some students passing by sometimes, but what exactly they were doing was not really known. One of the households was right next to the PSU project site and voluntarily provided some tools and assistance if necessary, meaning that every year the students came through this household’s backyard to go to the planting site. Others simply mentioned that there were some students planting mangroves sometimes, but they did not give more details about the student’s activities.

That more people were familiar with the Love Affair with Nature project is not strange considering the event was huge and thoroughly promoted throughout the city. As a government event that attracted thousands of participants in the marriage and ceremonial planting of a mangrove, it is difficult to compare with the PSU project because of the enormous difference in scale and the approach. Six out of ten informants had participated in the Love Affair with Nature project; one had been married during the mass marriage ceremony performed by Mayor Hagedorn, whereas four out of ten had planted a tree during one of the annual events. The numbers are much too small to say this is much unexpected, but considering the distance of the households to the planting site, the number of years the event has repeated itself in the same site (2003, 2004, 2008, 2009, and 2010 respectively) and the total number of participants, I had expected more of the informants to have taken part.

Armando: ‘if the government will work properly, our society will not allow the gradual loss of mangrove trees’

Regarding their involvement (or lack of), the informants all seemed to agree that the mangrove projects were important and of benefit to them. They mostly seemed to be interested in participating in one of the projects if they were given the chance. Nine out of ten informants said that they would like to participate in the projects quite clearly and one of the informants, a nurse,
answered with a dubious ‘ok lang’, translated as ‘just ok’ (interviews, 2011). I found this response very interesting because it can mean both yes and no, depending on the way it is said or used. More often I found that when it was said to me in other settings, it felt more like a reluctant yes, or a very careful no. Comparing it to the nine others that said yes does not immediately put both answers on different ends of a scale. In fact, many of those yes may in fact be closer to a no than ‘just ok’. The informant that answered ‘just ok’ may feel quite indifferent about participating and therefore gives an indifferent answer, open to interpretation. This is where pakikiramdam would have helped me understand the true answer as looking back at Scott, such an answer may contain ‘false compliance’ (Scott, 1985: 29). Perhaps my foreign appearance calls on such answers and ‘all these and other forms of reluctant compliance stop short of overt defiance and at least conform to the minimal standards of politeness and deference’ (Scott, 1985:26).

Ligaya: ‘Other people were busy with it, and I have other important things to do’.

One or more of the respondents may have answered yes, but are thinking no, simply wanting to give the ‘right’ answer or the one they think they should give, considering that if the interview concerns mangroves, the interviewer must be an advocate of the environment. These kinds of questions can all be related to pakikiramdam and the indirect form of communication found characteristic of Filipinos. Three of the ten informants did not express any comments at all about local involvement in mangrove restoration projects or did not seem to want to voice an opinion about that or the current management of the two projects. There may be a number of reasons for this. One of them brings us back to the discussion on hierarchical society structures and the indirect form of communication of the Filipinos, relating to pakikiramdam. By not expressing their opinions they are ‘saving face’ for the group members in their collective society, as well as showing a respect to those who are in power and making decisions.

‘It is with analogous forms of minimal compliance that poor villagers are able to insinuate the insincerity of their performance. They may come to the feast of a rich villager but stay long enough only to eat quickly and leave.’ (Scott, 1985: 26).

The opinions and ideas that surfaced from the interviews were mixed in favour of the mangrove projects. One of the informants actually said they should ‘establish stronger laws to protect the environment’ (interviews, 2011). However, whether they really think this is debatable and could be another expression of ‘false compliance’ (Scott, 1985: 29). On the other hand, perhaps with a job as a nurse and having a relatively small household of 3 people is indicative of less dependence on mangrove resources. The same informant answered ‘just ok’ to being questioned on her interest in involvement thus the suggestion of more laws may also indicate a disinterest in personal involvement and a preference for more government management. Two informants suggested there should be more activities like Love Affair with Nature (one of which had not actively participated in the event), and another respondent suggested that residents should be convinced to participate (Interview 2011). This last comment may relate to the previous discussion on the lack of communication between the projects and the residents, or it may hide a cynicism, untranslatable without an adequate mastery of pakikiramdam.

What the previous chapter has shown is that there is little communication between the two mangrove restoration projects and the selection of residents interviewed in subdivision, or Purok,
bordering the project sites in barangay San Jose. Although many residents seem to be reasonably well informed about the importance of the mangrove ecosystems, there are still mixed feelings about the current restricted access to the mangrove area. There is also mixed opinions regarding the lack of local community involvement in the projects, some express a willingness to participate more if approached by the project, whereas others are more eager to focus on securing their current daily livelihood. The following subchapter will discuss the Filipino concept of pakikiramdam, the evident hierarchy in Filipino society, and their roles in the current form of mangrove management.

5.4 Environmental Management and pakikiramdam

As has been discussed, particularly in Chapter Three, hierarchy is of much significance in the exploration of pakikiramdam. It therefore becomes important for this thesis to analyse how how hierarchy can play a role in environmental management or policy making decisions. The relationship between hierarchy and pakikiramdam will also draw the link between pakikiramdam and environmental management by taking a few examples from field research on the role of local communities in mangrove management on Palawan in the Philippines, conducted between November 2010 and February 2011.

Hierarchical society structures and mangrove management

Inequalities such as mentioned by Hofstede (Hofstede, 2001:80) might be expressed with status and hierarchy, which in Palawan is partly reflected in the local government structures. Puerto Princesa City is a municipal government run by Mayor Hagedorn, and within the municipality, multiple ‘barangays’ (villages) are headed by Barangay Captains. Within a barangay a president managed a smaller ‘purok’. At the same time, the Mayor has a celebrity status in Puerto Princesa, with his picture everywhere on billboards and crowds of people chasing his car for a glimpse of ‘the Man’ (Klow and Salvaña, 2009:22). This word use with a capital letter gives him a status and almost godly praise. The role of status is also reflected in the everyday language use in the Philippines. Elders, people with a higher position in society (such as the Mayor and University Professors) or foreigners are usually referred to as ‘po’, which is added to all sentences when they are being addressed to any of the above. It connotes recognition of higher age or status, and is an expression of respect.

Hierarchical societies conjure up images of unequal power structures. Issues such as oppression, deprivation and exploitation are just as well symptoms of such inequality in power (Fundamentals of Conflict, 2006). Some may blame such structures on capitalism, in which those with the power to monopolize certain sectors do so while leaving others far behind, a big gap forming between them that pick up momentum in a mutually dependent spiral (Fundamentals of Conflict, 2006). The privatization of beaches or coastal areas on Palawan is something that reflects one of the outcomes. As tourism rises, mangrove areas are cut to make place for swimming areas. This also happens on other privatized beaches but even government properties where mangroves are a protected resource show the exclusion of local communities and restricted access to resources that would in other cases be considered ‘communal’ or ‘common pool’. There is a clear government authority of the mangrove resources on Palawan and therefore the activity of reforestation of mangroves is an activity taking place in a sphere of supremacy.
The decisions for the creation, implementation and possible monitoring of the project or annual events on Palawan, are done by the local municipal government, the mayor, local NGOs, international NGOs or governmental institutions such as the Marine Environmental Protection Command (MEPCOM) and the Palawan State University (PSU). Local communities living next to the mangroves that were interviewed had hardly any knowledge of the different projects that were taking place practically in their back yard. Active or inactive participation can also reflect some of the power struggle of local communities living in the area. For example, when asked about their involvement in the mangrove restoration activities in their area, some informants said they joined in the big events whereas others said ‘there are people who are doing it already...let them do it, I have many other things to do’ (Interview 2011). This is an important statement in many ways. We go back to the idea of conservation of natural resources, such as mangroves, as a ‘luxury’, when some local community groups depend on its resources. For reasons such as opportunity costs, the local community does not get involved because they prefer to spend time on other income generating activities. Perhaps the local residents see through the government’s attempt to get the local communities ‘involved’, and how this is part of a political facade to gain popularity and remain in power.

Heirarchy and pakikiramdam

The concept of Pakikiramdam stems from the fundamental Filipino value Kapwa. If we explore Kapwa in more depth, it is clear that it enhances and promotes working together to achieve common goals (de Guia, 2005). Kapwa ‘coaches people to pool their strength and achieve common goals by working together’ (de Guia, 2005) and it is perhaps that attitude that accepts differences in status. For the openness that is central to kapwa and is also an important element in pakikiramdam, may be invaded by an abuse of trust (de Guia, 2005). Kagandahang-loob, also an element of kapwa, is a concept which refers more to behaviour. Concerned with a moral goodwill, it drives a person ‘towards genuine acts of generosity (de Guia, 2005)’ but also reminds people that nobility has to be ‘re-won every-day’ (de Guia, 2005). This, according to Filipino historian Reynaldo Ileto, also teaches Filipinos that it is ‘...ok to be rich, as long as the external signs of power were matched by an equally beautiful character’ (de Guia, 2005). Perhaps this is why the Mayor remains so popular in Puerto Princesa. For although mangrove protection may limit resource access for local communities, it may not be the fear of fines and jail alone that leads to the apparent acceptance of the Mayor of the Puerto Princesa City to create these environmental projects, but also the way in which particular Filipino values play a role in how they perceive and deal with them. Many people may not voice their opinions in their consideration of pakikiramdam – they may not agree with the decisions made by the municipal government about the mangroves, but ‘save face’ for their community by keeping quiet.

Talking to people about mangroves and their uses was experienced as quite difficult for a number of reasons. As mangroves on Palawan are protected and their use is illegal, people risk fines and jail for illegal use of mangrove resources. Whereas in other settings direct questions about income are not so much an issue as people and discuss income more regularly, asking about income from mangrove resources was slightly more complicated. People were not so eager to talk about their uses of the mangroves in many cases, even though they always said ‘yes’ to taking part in an interview, it felt like more of a ‘no’ when it came round to asking the questions. It was at such times that it seemed
appropriate to accepting this yes as simply a ‘courteous insincerity’ (Mansukhani, 2005:193) and not push too far with the questioning, thus respecting and exercising pakikramdam (unconscious of the concept) as far as possible.

Throughout the city of Puerto Princesa, there are multiple mangrove projects taking place and the events are promoted to a degree that becomes almost theatrical. Huge billboards and television screens repeatedly boom out with propaganda sprinkled images about the green image of the city. Its seems like a bizarre paradox when you consider the amount of families that are living below the poverty line, approaching life day by day and for who the state of the mangroves (nor all the other environmental projects on Palawan) is not an immediate priority. In fact, the debate on the idea of conservation and preservation as a luxury activity for the more well-off in society is not entirely irrelevant. However, if you ask inhabitants of Puerto Princesa about the green image of the city, they seem to boast a pride for the work that the Mayor has accomplished. Newspapers and even a book hail him as a hero (an ex-logger turned environmentalist) and he is followed by crowds of adorers wherever he goes. It is clear that he enjoys social status and prestige. It remains questionable however how this might influence, motivate or hinder, environmental projects such as mangrove restoration.

‘Those with power in the village are not, however, in total control of the stage. They may write the basic play for the script but, with its confines, truculent or disaffected actors find sufficient room for manoeuvre to suggest subtly their disdain for the proceedings. The necessary lines may be spoken, the gesture made, but it is clear that many of the actors are just going through the motions and do not have their hearts in the performance.’ (Scott, 1985: 26).

When asked about their involvement in mangrove projects, informants mostly remained polite and uttered sentences of understanding that seemed to have been more of a programmed response than an expression from the heart. A few key informants did show some mistrust of the local government ‘there is a lot of corruption’ (Interviews 2011), but this was mixed in with other positive and neutral remarks such as ‘the mangroves have improved since the projects started’ (Interviews 2011). When reflecting on the few cases of resistance to interviewing, as shown by a few informants in some of the field trips to research local community involvement in mangrove management, it can be questioned to who this was meant to be directed. Perhaps my foreign appearance, embodying the ‘rich west’ invoked mistrust about my intentions while at the same time my foreign appearance still received polite silence or polite, but prefabricated, answers.

One of the young women remarked in an informal interview ‘...so many people come to ask us questions and we don’t know what they do with the answers.’ (Interview, 2011) It may be that the resistance is actually being indirectly aimed at the government, with the idea that they might have seen me as a government spy, coming to check on their mangrove usage – which if found illegal could lead to fines and jail. Whichever this was, it seemed that there was a feeling of unequal power and that they felt in the disadvantaged position. Members of a group or village where mangrove restoration projects are taking place are ‘partially kept in order by the threat of shame’ (Hofstede, 2001, 229). Being are dependent on natural resources, they are dependent on those that control
these resources – placing them in a position where they can be oppressed and exploited, in this case in an environmental political game.

However despite this, there is some element of joking to a comment that suggests an informant is interested to take part in a mangrove restoration event ‘if there is food’ (interview, 2011). It is such comments, supplemented with a twinkle in the eye that opens a fascinating little trapdoor for a glimpse of the true experience of the local community. In that glimpse, it is possible to see the side of a story that is difficult to reach because of the skills needed to acquire just to walk the road towards it, for which it is not possible to take a crash course or cheat the amount of time needed to completely absorb it all. Just as Scott suggests, there is:

‘... culture that peasants fashion from their experience- their “offstage” comments and conversation, their proverbs, folksongs, and history, legends, jokes, language, ritual, and religion – it should be possible to determine, to what degree, and in what ways, peasant actually accept the social order propagated by elites’ (Scott, 1985:41)

In the subtle behaviours, use of words, unspoken words and in the air between them all, there is a chance to use pakikiramdam to step from the on group into the other. In the Philippines, singing karaoke is a very important activity which is taken very seriously. It is not acceptable to laugh at people despite a possible lack of singing talent and it is accepted to hold karaoke parties that echo into the night, and your neighbours bed, long past midnight. It is expected that at some point you will do the same and they will greet you with the same warmth the next early morning as everyone gets up for their different daily duties. That is why it is interesting that some contemporary artists have incorporated various elements of the current issues in the Philippines with a traditional element of music and singing. A Filipino singer, Joey Ayala, sings:

‘Lupa, laot, hangin...ay magkaugnay, Earth, sea, air...are interconnected,  
Tao, hayop, halaman..ay magkaugnay’  
Man, animals, plants...are interconnected’

This is a song that is widely known on Palawan, particularly fun and effective in classrooms for environmental education projects12 and shows the transcendence of environmental issues into traditional cultural activities. This way, these topics are already in the everyday reality of the local community and that these often merely need to be stirred and stimulated with the right incentives.

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12 Environmental Education internship with South Sea Exclusive, 2009
There are other examples of the use of music and song to make ‘off-stage’ (Scott, 1985:41) comments, or to use those made by others simply by listening to them. The group Gloc-9\textsuperscript{13} for sing:

\textbf{Upuan}

Kayo po na naka upo,  
Subukan nyo namang tumayo  
Baka matanaw, at baka matanaw na nyo  
Ang tunay na kalagayan ko

\textbf{Chair/Seat}

You who are sitting down  
why don’t you try standing up  
you might see, and you might see  
my true predicament

This song is provocative as it clearly talks about the hierarchy that exists in the Filipino society. It highlights a number of differences between the upper class who live in a ‘malaking bahay’ or a huge house’ that is ‘mataas na pader pinapaligiran’, - ‘surrounded by tall walls’. What is interesting is that this highlights the differences between the different households in Barangay San Jose. The households near the Love Affair with nature site were clustered together with a communal area in the middle (Figure 10), whereas near the PSU student mangrove site, the households were located further apart, one of them with a big brick wall surrounding it (Figure 8). This may reflect the different levels of income for the households in the different locations.

Despite the low income of many of these families and the few negative remarks made here and there about the mangrove projects, events such as Love Affair With Nature are well attended and people everywhere seem to respond positively to the many praises the mayor receives from the national government and international media. They participate though lifting him up to celebrity status whenever he is near, by the adoring attention they give him. Not to forget, they have kept him as mayor for almost ten years. The apparent reluctance to be open about their feelings about the projects and the distance they take from mangrove management or other environmental policy and decision making processes, might be seen as uncooperative behaviour by some western perspectives where the more direct voicing of opinion is valued. Where is there ever complete harmony between all the residents of a village or city, besides in one of our visions of Utopia? So instead, this can also be viewed in a more positive light – that by working together and using pakikiramdam, a ‘unique social skill’ (de Guia, 2011) that allows for a ‘deep interpersonal connection’ (Mansukhani, 2005:194) they reflect the kind of team-spirit loyalty that kapwa promotes – much like the tangled roots holding up a mangrove tree.

\textsuperscript{13} The name of this Filipino music artist is also a type of pistol
6. CONCLUSION

To conclude, this chapter will fuse together the data to and analysis to answer the two main questions:

1. How effective is the mangrove restoration policy in Puerto Princesa, in the semi-urban areas bordering the mangroves?
2. What lessons can be learned about local involvement in mangrove restoration?

The current mangrove restoration policy is primarily concerned with the preservation of the mangroves on Palawan. The Brundtland report defines sustainable development as that which ‘meets the needs of the present without compromising the ability of future generations to meet their own needs’ (UN, 2011). In the current mangrove policy of Palawan, the goal of future generations seems clearly present, but the needs of the present, of local communities who were initially dependent on mangrove resources and are now denied access due to strict conservation policies – seem to be less accounted for.

The extent to which the local community in Barangay San Jose is dependent on the mangrove cannot be accurately estimated from the data collected because almost all of the ten respondents (Table 8) have another alternative form of income. While being aware that the current restrictive mangrove policy also influences the resource use from the area, from the data it can be concluded that there the local community of Barangay San Jose does not have a strong dependency on mangrove resources. Still, the local community is denied access to some extractive resources without an alternative to substitute this loss. At the same time the current mangrove policy has been beneficial for the mangroves (Interviews, 2011) can result in some indirect benefits for the local community of Barangay San Jose in terms of the non-extractive resource uses, such as the collection of shells.

From the case study it seems that local communities do have a good understanding of the ecological benefits of mangrove restoration. Not many local methods of protecting mangroves were mentioned, except the protection of ‘mother trees’ (Interviews, 2011), or the trees that produce mangrove seedlings. These practices however do not seem to be enough in the face of a growing population but there is most definitely room for more research on local initiatives to plant mangroves. It seems that it is not merely a matter of ‘educating the locals’ but also to understand their motivations before being able to plan the right incentives to stimulate their involvement. These ideas can be incorporated into a policy alternative such as the Community Multi-Use Reserve (Pontillas, 2001:20).

What has clearly been learned from this research is that the main issue is the lack of communication between the different mangrove projects with the local community in Barangay San Jose. This lack of communication is a big pitfall, and can undermine an otherwise successful mangrove restoration project. Without adequate communication, it becomes difficult to first understand the situation of the local community and then making suitable project objectives. The two projects discussed in the case study have two very different structures but in essence their final aims are the same; to tackle the global problem of decreasing mangroves by beginning ‘at home’. However it is clear from the
case study that the involvement of the local community, although recognized, is not realized as well as it could be. Both projects are working towards sustainability but with much emphasis on the future aspect and evidently neglecting the present situation for local community residents. This results in may be why the local community of Barangay San Jose show subtle daily acts of resistance such ‘feigned ignorance’ (Scott, 1985:29) and ‘false compliance’ (Scott, 1985:29).

This kind of behavior seems to be enhanced by the hierarchical society structure in Palawan, and the Filipino concept of Pakikiramdam. This is vividly reflected in the organization of mangrove restoration events such as presented in the case study, and the (lack of) involvement of the local community of Baranagy San Jose. Despite the range of social groups that are involved in the mangrove projects, the PSU project only involves University students. The Love Affair with Nature includes a variety of groups including the local community of Baranagy San Jose. However, this involvement does not indicate a high level of participation from the local community, particularly in other aspects of the project processes such as decision making. As the government of Puerto Princesa tries to promote its green image further, it implements different environmental projects that often appear to be part of an image, a theatrical display of power, than for the true practical function. It is as though the environmental projects carry a sense of prestige, in a luxury event that draws certain members of the society and excludes others. Perhaps more attention could be given to the policy analyses and alternatives suggested by Pontillas (Pontillas, 2001).

Institutions such as the PSU seem to play along in this façade by organizing a student project that replicate the green image in an annual ceremonial planting of mangroves as part of a larger ‘Adapt a Barangay Project’. However, without the involvement of the community it seems a vital aspect is missing because while ‘Adapt a Barangay’ seems to indicate a socially focused project, few of the actual residents of the Barangay were aware of their presence. There was hardly if any communication between the local residential community and the students. It is as though these two groups of people were in the same ‘place’ but busy with their own activities in their own created ‘space’. However, there are also many positive aspects to projects such as Love Affair with Nature and the PSU student project. Although there does not always seem an interest from the local residents to participate, the local communities did put forward some good ideas to stimulate more local involvement. For example, they feel that local youth from the Barangay could be asked to join the PSU students (interviews, 2011) in their mangrove planting events. This could perhaps begin to bridge the gap between the project and the local residents – linking the tree to its roots.

The Palawan NGO network Inc. (PNNI) links together various organizations. Unfortunately the PNNI was left in the shadows during the field research as they were not directly involved in the case study projects. Also another organization that was not given the attention it deserved within this thesis is The Environmental Legal Assistance Centre (ELAC), which comes up for the rights of local community members. Together these two companies could have the right position and organizational structure on which to build such a communication network in the interest of local community members. Perhaps in future this could lead to a Mangrove Network Organization (MNO) that links together all mangrove organizations in an area to enhance information sharing between projects and with local community members.
7. DISCUSSION

‘The tendency in our culture is to treat such issues as simply scientific, technological, or political problems. But they are much more than this. These environmental and ecological controversies raise fundamental questions about what we as human beings value, about the kind of beings we are, the kind of lives we should live, our place in nature, and the kind of world in which we might flourish.’ (Preface, Des Jardins, 1997)

Des Jardins believes that we should not only rely on science and technology to make environmental decisions but that we need to consider ethical and philosophical issues as well. He says that ‘...leaving environmental decisions to the “experts” in science and technology does not mean that these decisions will be objective and value neutral; it means only that the values and philosophical assumptions that do decide the issue will be those that the experts hold’ (Des Jardins, 1997:5). I am drawn to such ponderings, as if they are my own – spoken through another authors hand, long before I have formed them into an adequate and comprehensible idea. I also believe that there is much more to any situation than is usually time/energy/money to work out before projects are started and this is how I approach the research I have done in this thesis. It is this recognizing of the complexity of context, like the metaphor of the roots I use throughout the thesis that I think should be the starting point of any such endeavour.

Des Jardin (1997: 9) states that environmental issues should be decided in political arenas instead of government bureaucracies, corporate board rooms and scientific laboratories. ‘Environmental ethics assumes that moral norms can and do govern human behaviour toward the natural world.’ (Des Jardins, 1997:9) Looking back at the exploration done on pakikiramdam, I cannot help but think there is room for more exploration of such cultural concepts in each specific context. Thus, when we speak of the greening of governments, the concept governance already indicative of a ‘greening process’, by the way in which the interaction between various ‘levels’ become highlighted because it is this interaction, this connection of roots, that can give rise to a tree. Through the discussion of all these aspects, sharing our knowledge and skills, we can learn from experiences as Walters (Walters, 1997:280) suggests in recognizing that environmental problems transcend any man-made boundaries to a global scale.

The Other

Research in another country brings with it that unknown context that is so important to understand. Much literature in the past saw the ‘Other’ from a particularly western perception, where ‘we’ were the west but in fact, what it really comes down to is that we are all in the same boat (Kapuściński, 2008:86). Every one of us living on this planet is an ‘Other in the view of Others – I am in their view, and they are in mine.’ (Kapuściński, 2008:86) It is fascinating to delve into the history of the way in which human beings have perceived each other, and the different options we all stood to face when we did. We could choose to put up a wall around ourselves, to wage a war or to communicate with the other in a dialogue – and these options have been hovering near each of us at the moment of an encounter throughout time (Kapuściński, 2008:82). The multicultural society we apparently live in now has always been such, the numbers of different cultures and societies in the world has not
suddenly boomed but they are speaking louder than before, many having thrown off colonial dependency in the last half of the twentieth century (Kapuściński, 2008:90).

The reason that the idea of the other is important for this thesis is particularly to help understand the different perceptions and to keep in mind how these can influence the communication and the final data collected. Approaching the Philippines alone has been an effort to step outside of personal boundaries and to try cast aside judgements and expectations as much as is humanly capable. The act of being alone in a different society is already a step in realizing the idea that ‘man when he is alone is usually more ‘human’ than when he is a member of a crowd, an excited mass.’ (Kapuściński, 2008:36).

Anthropology is described to be a new branch of social science ‘aimed towards the Other, dedicated exclusively to him’ (Kapuściński, 2008:28). Within anthropologists are two different branches; evolutionists, who believe that ‘all the people in the world follow the same common path of development and progress’ (Kapuściński, 2008:29) and diffusionists, who see the world ‘like a Persian carpet, intricate and extremely rich in its diversity’ (Kapuściński, 2008:30). It is not usually an easy and automatic encounter with the ‘Other’, but instead there is a bit of will and effort that is needed to be put in, and it can be difficult in the effects of such a meeting (Kapuściński, 2008:31). Kapuściński looks at the philosophy of Levina that feels so poignant ‘through his face he shows you yourself’ (Kapuściński, 2008:34). Even then, there is also the aspect of communication that needs consideration, and Kapuściński brings to light the ‘Sapir-Whorf hypothesis of so-called linguistic relativity’ (Kapuściński, 2008:43) that discusses the ways in which thinking may also depend on the way it is formed by the different languages we speak (Kapuściński, 2008:43). This is a thought that constantly flits through my mind, trying to grasp the sense behind it without perhaps articulating it so well into a concept. Communicating with a Filipino brings so much more to the table than a language barrier alone, attached to his words are a way of seeing the world that my minor experience in the Philippines cannot possibly begin to understand, whether the will is there or not. It is that idea of context that sociologists love to emphasize, but now with a deeper elaboration on the phenomenon of (the limits to) intercultural communication.

A trap that is difficult to keep at a distance is the idea of judging what we perceive in different contexts, and perhaps it is as Kapuściński says a danger for all civilizations to have a ‘tendency towards narcissm’ (Kapuściński, 2008:44) even though this is expressed in different forms (Kapuściński, 2008:44). Throughout this thesis, I may have made some errors, led by my ‘self’ or my ‘other’ at different moments. But I hope the essence of it all is clear. The way a researcher experiences another culture is also not entirely neutral, being in essence made up of two beings, the self and the other – coexisting and dynamic, depending on external contexts and even more personal attributes of character or life experiences (Kapuściński, 2008:15). The awareness of this is however an important step to explaining our encounters with the ‘Other’ in the most unbiased way possible. It is water to the seeds, that sprout the roots, that feed the tree, that, as an ecosystem in itself, whispers in the wind while the world worries about it.
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**Images:**

Cover image: painting by N. de Bats

Figure 1: Map of global mangroves: Encyclopaedia Britannica, 1997 <http://media.web.britannica.com/eb-media/76/6576-004-976E5CF5.gif>

Figure 2: Map of Philippines, <http://en.18dao.net/images/5/54/Map-Philippines.jpg>

Figure 3: Figure showing ratio between decentralization and participation (de Vivero, 2007:321)

Figure 6: Map of Philippines, <http://en.18dao.net/images/5/54/Map-Philippines.jpg>

Figure 7: Map of Puerto Princesa: Palawan Council for Sustainable Development (obtained at PCSD)

Figure 8: ECAN map of Puerto Princesa: Palawan Council for Sustainable Development (obtained at PCSD office)
APPENDICES

APPENDIX (i) Mangrove Identification Key

Mangroves in Puerto Princesa, Palawan, the Philippines

Figure A: Mangrove identification key, result of a mangrove identification lecture by Mrs Eunice Bicera from WPU
APPENDIX (ii) Mangrove restoration project sites

(A) Project site: Love Affair with Nature

Figure B: Love Affair with Nature Site, showing a section of the long road through the mangroves

Figure C: Seedlings planted during Love Affair with Nature
(B) Project site: Palawan State University students

Figure D: Photograph of the PSU site showing part of the coral path built by student to be able to access the mangrove planting site

APPENDIX (iii) ECAN map of Puerto Princesa, provided by the PCSD