

**GENDER AND THE SUSTAINABLE MANAGEMENT OF THE MANGROVE
ECOSYSTEM IN MSAMBWENI DIVISION, KWALE DISTRICT, COAST
PROVINCE, KENYA ^**

BY

**SCOLASTICA JUMA
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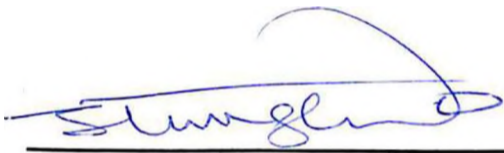
DECLARATION

This is my original work and has not been admitted for a degree to any other University.

Scolastica Juma

Date

This Thesis has been submitted for examination with my approval as a University Internal Supervisor.



26/03/03

Dr. Stevie M. Nangendo

Date

DEDICATION

To all the friends of the Mangroves and the Sea

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CDA
KEMFkI
ICWS

ABBREVIATIONS

Coast Development Authority
Kenya Medical Research Institute
Kenya Wildlife Society

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ABSTRACT (

This study investigated gender relationships in die mangrove ecosystem of Msambweni Division, Kwale District, on the Kenyan south coast. The general objective was to document the articulation of gender issues in the exploitation and management of the mangrove biodiversity. More specifically, the study focussed on the culturally ascribed gender roles in the utilization of the mangroves and marine resources. It also aimed at determining the economic, cultural and health constraints that women and men face in the exploitation and management of the natural resource systems in Msambweni Division. The study similarly set out to establish alternative sources of food and income as viable means of reducing pressure on the mangrove habitat.

The entitlement conceptual framework informed die study. Four villages in Msambweni Division; namely, iGasi, Bodo, Bomani and Shirazi were purposively selected for the research. A sample of one hundred informants consisting of fifty females and fifty males were randomly selected. An interview guide with both open- and closed-ended questions, key informants, and focused group discussions were die major methods used to provide the data described in this Thesis. Additional information was gathered through conversational interviews, observations, life histories and participant observation and; finally, the data were analyzed using qualitative techniques.

The research findings indicate that there are culturally prescribed gender roles in die mangrove ecosystem of Kwale District although these roles are not exclusively gendered. Similarly, both women and men face similar economic and health constraints. However, men are more vulnerable to greater health risks while women on their part are further constrained by Islam as a religion as well as being an institutionalised way of life. The local people acknowledge that their most valuable natural resources, which include mangroves and the sea, have been degraded. They, however, lack confidence in die current management system of die mangrove biodiversity. This is simply because they are not duly recognized as environmental experts without whose input the mangrove resource base will still be threatened. The study also revealed that improved infrastructure and economic empowerment of both women and men as well as enhanced institutional capabilities will probably lead to a sustainable use of the mangrove swamps in Msambweni Division.

It is recommended here that men, women and die youth be informed of the importance of group work. Feasible income-producing activities and social welfare projects be initiated to improve on the material life of the local people. There should be increased mangrove and marine conservation awareness campaigns. It might probably be helpful to involve the village committees and fishermen groups in die management of die mangrove and marine resources, respectively. Stakeholders should have an integrated approach towards die conservation of the mangrove ecosystem. Finally, scientific research should be carried out on die mangrove and marine resources.

CHAPTER ONE
INTRODUCTION

1.0 INTRODUCTION

After the Second World War, and particularly after the UN Declaration of the International Decade for Women in 1975, there have been numerous debates concerning women, poverty, feminism, development and gender in many Third World countries (cf. Conyers 1986/ Boserup 1970; N. Nelson 1981). The particular focus has been on the economic roles of women in the productive and reproductive spheres (cf. Nangendo 1994a, b). In every society, men and women have different roles, responsibilities, access to, and benefits from, various sources (Russo *et al.* 1991; Downs *et al.* 1991). The gender division of labour dictates the types of crops grown and the activities done. For instance, in Kwale District, the men dominate cash crop production while women major in the production of food crops (Kenya, 1994; Mwangudza 1983). However, today both women and men farm both food and cash crops.

Social scientists and environmental experts have over the years acknowledged the importance of incorporating gender issues in addressing environmental concerns. They have, for instance, recognized that the local people who are *de facto* environmental managers are prime movers of any projects aimed at conserving the natural resource base (Tobisson and Rudgvist 1992; Rutatora *et al.* 1996). However, women's significant contribution to the management of natural resource systems is invisible and rarely features in a country's GNP. Additionally, women's access to, and control of, the factors of production are also limited (N. Nelson 1979; Russo *et al.* 1989; Whitehead 1994; Adepoju and Oppong 1994). In Kenya, men and women are seen as environmental specialists, however, their physical, economic and psychological well-being that greatly determines the sustainable use of any resource base has hitherto been ignored. In fact, a majority of the concerned NGOs in Third World countries have been unable to effectively deal with gender-specific constraints, particularly poverty-related ones (Ensminger and Rutter 1991; Rutatora *et al.* 1996). Poverty has been identified as the major cause of resource base erosion without whose address, the natural resource base will continue to be eroded and, subsequently, lead to the collapse of well-tailored conservation projects (Tolba 1983; Mbuthi 1995). In addition, such projects lack funds and trained personnel to implement conservation strategies. More specifically, the conservation and management of the Kenya coastal and marine resources is a novel concept (World Bank 1997) and is, thus, crippled by lack of information on gender-related issues pertaining to the utilization of these resources.

1-1 STATEMENT OF THE PROBLEM

The Kenya Government and various non-governmental organizations are today addressing diverse issues relating to the coastal and marine resources. The major aim is to show that these resources are integrated in a holistic system where a change in one leads to a change in the other. Therefore, it has emphatically been stated that

the protection as well as rational development of all coastal and marine resources should be prioritized (World Bank 1997). The emphasis laid on the mangrove swamps has been propelled by the high productivity of this resource which is vital for the economic, cultural, social and ecological stability of the local and international communities (Semesi and Howell 1992; Robertson and Luke 1993).

The mangrove ecosystem is characterized by prescribed gender roles in its management with each gender facing either the same or diverse social, cultural, health and economic constraints. These constraints are propelled by the agents of change such as the cash economy, the advent of capitalism, urbanization and education. These agents have also dictated a further alteration in the gender-specific roles needed for the survival of the household as well as the entire community. Thus, to achieve sustainable management in the mangrove ecosystem of, for example, Kwale District there is a need to make women and men aware of the alternative sources of food and income. This is because in the long-term a diversified mode of production will improve the economic and health statuses of women and men as well as help to maintain the ecological balance of the mangrove habitat.

The call to mainstream gender in an attempt to achieve sustainable development has nowadays become the centre of interest in anthropology and related fields (Boserup 1970; N. Nelson 1979, 1981; Robinson 1991). However, much of this effort has concentrated on the traditional and changing roles of women in agriculture, labour, environment and natural resources (cf. Adepoju and Oppong 1994; Downs *et al.* 1991). The gender differentiated contributions to, and benefits from, development have, in fact, compelled many agencies to adopt gender-conscious strategies so as to make gender issues as visible as possible. The gender gap in reproductive labour, unequal access to, and control of, productive resources are now becoming articulated in the development and environmental discourses. However, there are no serious attempts to investigate the policy options and budgetary costs of tackling gender-specific constraints in different spheres (Adepoju and Oppong 1994). The continued environmental stress witnessed today, for instance, in parts of coastal Kenya, is largely due to gender-blind policies which have also perpetuated poverty, adverse social inequalities and, subsequently, over-stretched the natural resource base well beyond its maximum (Tolba 1983) . Indeed, in Kenya there have been very few studies by anthropologists which have focussed on the issue of gender in the conservation of the mangrove ecosystem on the coast. Therefore, this study aimed at providing information to fill this hiatus by answering the following questions:

1. What are the multiple roles of women and men in the mangrove ecosystem?
2. What are the alternative sources of food and income in the mangrove ecosystem?
3. What health-related constraints do women and men face in the exploitation and conservation of the mangrove ecosystem?

1.2. OBJECTIVES

1.2.1. GENERAL OBJECTIVE

The overall objective of this study is to determine and document the articulation of gender issues as well as the factors at play in the utilization and management of the mangrove ecosystem on the Kenyan coast.

1.2.2. SPECIFIC OBJECTIVES

1. To establish the culturally prescribed gender roles in the utilization of the mangrove ecosystem
2. To determine alternative sources of food and income in the area under study
3. To assess health-related constraints that women and men face in the mangrove exploitation and management

1.3. RATIONALE OF THE STUDY

A gender perspective in a study of this nature is highly commendable. This is because local men and women are always in an intimate relationship with the mangrove ecosystem. Thus, they are the central actors as well as the vehicles of any efforts aimed at achieving a sustainable management of the mangrove system. Such a study will also help to aggregate the gender-desegregated data on the various aspects of such natural resources as the mangroves and marine life. The availability of such information to the researchers, policy makers and the government will help mitigate present and future environmental stress.

Also, this study recognizes the fact that the best meaningful way of achieving mangrove sustainability is through a participatory approach as this is positively responsive and sensitive to the gender motivations and needs at the grassroots level (Tobisson and Rudqvist 1992). This approach is also flexible and adaptive to various ecological settings and the different local potentials and constraints pertaining to gender. In recent times, the focus of participation in relation to natural resource management is gradually shifting from the narrow perspective of only involving the community in the implementation stage of the project to their participation in the identification, planning and monitoring of project activities as well as results. Thus, community participation is increasingly being viewed as a process which should clearly be reflected in the objectives of capacity-building of individual women and men and the entire local community (cf. Bruce 1990). It is instructive to note that capacity-building is a logical prerequisite for sustainable control and management of activities affecting people and their lives. It has to be realized that strong capacity-building is also a salient feature for the continuity of the projects especially the post-project phase when the donors commission the projects to the respective communities. Therefore, actor-oriented participatory approach is a basic ingredient in any natural resource management project (Barbieri 1992; Tobisson and Rudqvist 1992).

Most people do not actually appreciate the immense ecological importance of the mangrove ecosystem. This lack of appreciation has partly led to the current depletion of the mangrove habitat in Kwale District. Therefore, in order to restore the mangrove ecosystem to almost its "original state" sustainable conservation and management strategies must be an urgent priority for the local community, the government and

international bodies. Also, the local people should be sensitized about the alternative potentials of the mangroves apart from the popular commercial production of poles. The various intervention agencies should similarly launch active awareness committees and campaigns to disseminate the relevant information concerning alternative mangrove potentials to the people. Lastly, policy makers should also collaborate with the local community to map out sound, viable management and sustainable strategies to help rehabilitate the mutilated mangrove ecosystem.

1.4. SCOPE AND LIMITATIONS OF THE STUDY

The primary aim of this study was to document the conceptualization of gender issues as well as the factors at play in the exploitation of the mangrove ecosystem. Economic, social and environmental variables were the major units of the research. Specific units in this study included the gender division of labour in the terrestrial, mangrove and marine resources, the conservation and management of the mangrove habitat, the economic, social, cultural and health constraints that men and women face in their daily struggles with the sea and mangroves. The food and production options available at the disposal of men and women also formed an integral part of this work.

Due to the time and financial limitations cultural factors such as taboos that each gender observes in relation to its ascribed roles were not considered. The taboos would perhaps have an influence on the people's perceptions and conceptualizations of the gender issues in the utilization and management of the mangrove and marine resources besides the factors mentioned above.

CHAPTER TWO
LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

2.0 INTRODUCTION

This chapter consists of two major components of the study, namely, the review of the literature and the conceptual framework. The literature review is divided into four main parts. The first part deals with the factors that influence the social inequalities between men and women. The second part explores how the Islamic religion manipulates the lives of women and men in various Muslim communities. In the third part of the review sound management strategies are examined as well as the strengths and weaknesses of conservation measures planned and implemented by various organizations. Lastly, solutions proposed by numerous authors towards achieving sustainable conservation and utilization of natural resource bases are similarly discussed.

2.1 LITERATURE REVIEW

2.1.1 GENDERED RELATIONS

Gender is the social and cultural construction of being female and male and it defines relationships between women and men but which are contingent upon a given cultural setup. Also, these relationships are natural resource specific, they change with time and, thus, they have a historical dimension. The gender relations influence the attitudes, activities, values, perceptions and expectations of women and men in any social and cultural system (SIDA 1995a, 1995b; Kibiti 1996; Synder and Tadesse 1995). It has been suggested, for example, that gender relations in the productive and reproductive spheres are highly asymmetrical, with the female gender being the most disadvantaged group. However, this underprivileged gender is not a homogenous category and, therefore, one cannot conclusively assert that all females across cultures and nations are accorded an inferior status relative to males (Johan 1995; Synder and Tadesse 1995).

Other studies have indicated that gender inequalities are aggravated by patriarchy and patrilineality (Johan 1995; Down et al. 1996; Funk 1991), decaying environmental and economic conditions (SIDA 1995a, 1995b; Johan 1995), structural and political policies (Funk 1991), religion (Johan 1995), modernization (Kariuki 1987) and customary and western legal status (Russo et al. 1989). In patrilineal societies, for example, men have almost absolute authority over the production and distribution of valuable economic resources. These strategic resources include land, capital, labour, cattle, women and children (Kibiti 1996; Funk 1991). In fact, the control over women seems stronger when men monopolize the distribution of scarce resources. This scenario is more pronounced in simple economies. However, only as executives, managers and professionals can women in industrialized societies gain power and equality (Friedl 1975). Also, the males in patrilineal contexts are considered as heads of households even in de facto female-headed households as well as being the sole decision-makers and sources of "rational and vital information" (Russo et al. 1998).

However, among the Tchambuli of New Guinea, the female is "the dominant, impersonal and managing partner" in a household in spite of the formal patrilineal institutions found in this society (Mead 1975:222).

On the other hand, women are expected to play their maternal roles as mothers, wives, food producers vis-a-vis providers and educators (Robinson 1991; UNEP 1988; Kibiti 1996; Kariuki 1989). Research has disclosed that motherhood motivates women to lower their consumption levels to cater for the interests of the members of their households, that is, children and men alike. However, in general women seem more altruistic than men (Whitehead 1994). It is, therefore, not surprising that a majority of the males, for instance, are not tied to the household needs and contribute to the family expenses at their discretion. This implies in essence that most women have to spend a lot of their time looking for income (Funk 1991). However, Russo et al. (1991) indicate that the women's search for earnings varies with their geographical location (that is, urban versus rural), the economic status (rich versus poor) and the type of household (*de facto* or *de jure* female-headed household). Kariuki (1987) further argues that women's roles are constrained by modernization which has increased their productive and reproductive responsibilities without accessing them technical and economic resources as well as powers. It is, therefore, logical to conclude that most women have little time for leisure (Russo et al. 1991).

In matrilineal societies, kinship, descent and property inheritance are through women. However, women in these societies still do not have total control over economic resources. Although they enjoy some degree of autonomy unlike their counterparts in patrilineal societies, these women are still answerable to males as uncles and brothers (Kibiti 1996). Downs et al. (1991), in a description of the matrilineal Ashanti of Ghana, indicate that the sources of income such as family loans, cash crop production and transport are all gendered with women having less access to these sources as their respective distributions are monopolized by male elders who are biased against the female gender. According to Kibiti (1996), therefore, in most parts of the globe matrilineality is not equivalent to matriarchy while Friedl (1975) conveniently asserts that true matriarchy is non-existent although the Iroquois of North America and the Lovedu of Africa would seem to come close to being described as "true matriarchical societies." For instance, while the Iroquois women controlled the production and distribution of food, they also nominated male political leaders. On the other hand, the Lovedu women officiated at various ceremonies, had ultimate authority over their sexuality and governed as queens (Friedl 1975).

However, Funk (1991), Ver Eecke (1989) and Kibiti (1996) indicate that women somehow enjoy budgetary autonomy as well as greater control over returns from food crops and those economic activities they engage in since a large portion of their income is channelled towards food and other household provisions. These economic activities include paid agricultural and domestic labour, petty trade and handicraft production (Funk 1991; Kariuki 1987;). However, the availability of capital, the size of the household, the transport system, male labour out-migration as well as women's

social and physical mobility greatly determine the types of activities that they can engage in (Whitehead 1994; Russo et al. 1991). In addition, Russo et al. (1991) point out that lack of access to credit facilities, cultural constraints, inadequate education and training, lack of market and price fluctuations are some of the factors which constrain women's economic endeavours. Conversely, Wariari (1996) asserts that most women engage in informal activities as a coping strategy for their financial stresses. Similarly, Kariuki (1987) notes that most women find themselves in the informal sector as they are too lowly educated to compete effectively in the modern labour market.

Kariuki (1987) argues that emphasis on marriage and childcare as the principal roles of women coupled with their lack of autonomy hinder most women from achieving higher or formal education at all levels, thereby greatly disadvantaging them in the acquisition of white collar jobs in comparison to their male counterparts. Russo et al. (1989) point out that customary, statutory and religious laws also relegate women to an inferior status. For instance, in most societies of the world women are not entrusted to own, control and manage property just as they rarely have a voice in crucial matters affecting their lives such as divorce, use of contraceptives, birth control and marriage. In fact, Robinson (1991) suggests that, paradoxically, even in countries where legal rights on women have been reversed, these laws are infrequently enforced and the huge financial requirement for the pursuit of court cases are too high for most women to afford. Therefore, such a scenario leaves women's legal problems still largely unsolved.

Both women and men have developed various means of coping with hunger. Some of these strategies include the minimization of selling harvested foods, stocking of most foodstuffs, foraging edibles from forests, a reduction in the number of daily meals, postponement of social ceremonies, free food aid from relatives and the government, diversified income-generating activities, food sharing, and grains, sale of livestock and wage employment (Funk 1991). As an alternative coping strategy, women in the western part of Madagascar control their men's expenditure on alcohol and clothing (Astuti 1995). However, Funk (1991) points out that some of the males use some of their savings to purchase foodstuffs, especially when they predict bad agricultural harvests. In addition, some men also sell their large livestock and cash crops since they are in control of their respective purchases, productions and disposals (cf. Astuti 1995).

The gender relations in a given environment are dynamic. The social and cultural construct of men and women seems to greatly influence the personality of either sexes. It appears that the natural, economic and political organization of any society explicates the inter-and intra-relationships between men and women. It has been observed by many scholars that gender imbalances perhaps cut across boundaries. In fact, a realization of gender equality is highly questionable.

A lot of recent literature has been written on women, with emphasis on the social, cultural and economic constraints affecting their daily lives. However, not as much has been documented on women in the Muslim world particularly those of East Africa. Ver Eecke (1989) asserts that the extra domestic activities of women have borne the blunt edge of scholarly research. Some scholars have put blame on Islam as a religion for the continual subordination of women, claiming that Islamic laws and traditions glorify the male gender to the detriment of the female gender (Qutb 1964; Aishalemu 1971). However, Mama (1996) argues that religion is an independent variable in any socio-cultural context and cannot, therefore, adequately account for the subjugation of women witnessed today. Some other scholars have argued that Allah, the Creator and Instructor of all the Islamic guiding principles was, and is, not biased against women (Aishalemu 1971). This is because women and men are spiritually equal and both have a common pool of interests and activities in the eyes of Allah. Therefore, according to Aishalemu (1971), the natural characteristics, roles, abilities, pursuits as well as determination of women and men explicates some of the observed differences between the two sexes. These differential abilities do not imply that women are inferior to men, psychological and otherwise (cf. Crapanzano 1980; Fuglesang 1994). In fact, the animalistic picture pegged on women, particularly those in the Muslim societies, is as a result of the misinterpretation of the *al Qur'anic* verses which address women. These misguided misinterpretations stem from non-Muslim scholars and others who seriously fail to articulate and establish the proper and the intended purposes of these laws as they are not well vast with the other *al Qur'anic* passages which equally need to be examined when addressing women issues (cf. Aishalemu 1971).

In the Muslim world, just like in non-Islamic societies, women predominate the domestic sphere of life while the men venture into the public sphere. Also, women are expected to be irrational, intuitive, impulsive and physically weak while men are perceived to be rational, physically strong and have greater self-control (Ver Eecke 1989; Abu-Lughod 1986; Fuglesang 1994). However, the description of a traditional subservient Muslim woman does not benefit women in Pakhtun village in northwest Pakistan (Lindblom and Lindblom 1975a). This is mainly because from an early age these women are socialized to be aggressive, assertive and authoritative as well as being physically and psychologically tough at all times. The two writers actually state that females among the Muslim Yusufzai Paktun of Pakistan are accustomed to violence right from childhood. Concerning marriage, for instance, the best advice a mother can give to her daughter who is about to be a new bride is " keep power over your husband, always speak first when he enters even if only to cough..." (Lindblom and Lindblom 1975a:166). These women maintain dominance over men through physical confrontations and magical manipulations. In fact, it has been reported that the women are very proud of domestic fights with their husbands and battle scars are proudly and casually shown off as an indication of their fearlessness (Lindblom and Lindblom 1975a).

However, the menstrual flow of women not only makes them vulnerable to the control of men but also alienates them from men as well as from certain socio-economic and religious activities. Paradoxically, although the semen emission and night ejaculation of a man are equally pollutive and prohibited by the aJ *Qur'an*, this kind of pollution is considered mild and does not lower the social status of a man. The semen in the foreskin is perceived as being unclean and for this reason among the Turks in Turkey, circumcision is performed at the ages of between seven and twelve before the first seminal emission occurs. The circumcision ordeal elevates the status of a man in this society (Rasmussen, 1991; Crapanzano, 1980). Delaney (1988), for instance, notes that the males are subjected to ritual purification after cohabitation. According to this author, women too must perform ritual ablutions after cohabitation and menstruation to cleanse themselves from these kinds of pollution (cf. Fischer 1975).

The western dichotomization of human social relations into domestic versus public domains are not mutually exclusive in Muslim societies (C. Nelson 1993). This is primarily because women tend to out-migrate to the privileged status of the public life unlike the men (C. Nelson 1993). Despite the fact that a majority of the Muslim women are confined to the domestic milieu, in other parts of the world women have demonstrated immense influences in the public spheres. C. Nelson (1993), in her analysis of women's public life amongst the Bedouins of Cyrenaica, in Libya, observes that these women are in charge of the exploitation of economic resources and the distribution of their economic returns. This status gives them more power in the economic decision-making process over the males who actually own the resources (cf. Rasmussen 1991). She also argues that the honour and dignity of males are contingent upon the reputation of females. For instance, among these Bedouins of Cyrenaica, the provision of shelter and hospitality as well as the culinary skills of a woman reflects a great deal on her reputation without which a man cannot boast of control and dominance over her and the household. On the other hand, in north-west Pakistan, the control of a woman is mirrored in the behaviour of the "captive woman" in her *pardah* household (Lindblom and Lindblom 1979b). This woman must neither be seen by nor be in the company of non-related males. She is always in the presence of older women who keep watch over her. She is never to leave the household without the permission of her husband and she has to put up with hostility from her marriage partner (Lindblom and Lindblom 1979a, b). Conversely, amongst the Bagara Arabs of the Mediterranean, women are the deciding factor in the political career of a man. This is because they are entrusted with the nomination of suitable candidates whom they can qualify or disqualify through songs of praise and malice, respectively (C. Nelson 1993; Fuglesang 1994; Mama 1996). Women among the Qashq'ai nomadic pastoralists of Iran are very active in paramilitary roles (Beck 1975). Similarly, it has been intimated that the elaborate visits and friendships made by women of Jeddah in Saudi Arabia enables them to gather vital information which gives them power over decisions on some prerogative issues normally considered preserves for the men. These issues

would include the distribution of resources and property, choice of marriage partner and education of females. Also, it has been suggested that in some Muslim societies women exert control over men through their contacts with the supernatural beings. For instance, it has been reported that in Morocco women, as saints (Dwyer 1975), magicians as well as healers (C. Nelson 1993/ Crapanzano 1980) influence social, economic, religious and political decisions made in the households. Crapanzano (1980) actually gives a detailed description of the political, socio-cultural and religious influence of a camel-footed she-demon over males in Morocco.

In most Muslim societies, the law requires that females should show respect and obedience to Allah and their husbands as well as to rear their children according to Islamic tenets (Ong 1990; Strobel 1979; Ver Eecke 1989; Aishalemu 1971). It is constructed that these prescriptive behaviours give a woman a sense of honour and dignity. According to Strobel (1979), this kind of behaviour is the one which actually helps to reinforce the traditional authority of the males but more significantly it is also viewed as a severance pay to the Islamic religion and which should serve as source of pride for all Muslims. Conversely, the *Sharia* law dictates that women practise *purdah* which has a double-edged meaning (Aishalemu 1971; Ver Eecke 1989; Strobel 1979). First, it refers to a loose over-garment worn by Muslim women when they move out into the public. Second, the term *purdah* alludes to the confinement of women at home, leaving these premises only under special circumstances and with the certified permission and authority of their fathers, brothers, husbands and other male relatives. These isolated circumstances may include seeking medication, attending funerals or circumcisions and paying visits to the tombs of saints (Ver Eecke 1989; Olela 1994; Fuglesang 1994; Lindblom and Lindblom 1979b). However, Aishalemu (1971) indicates that the second meaning of *purdah* was strictly for the wives of the Prophet Mohammed and, therefore, the other Muslim women are not legally compelled to seclude themselves.

Nonetheless, the degree to which *purdah* is practised varies across Muslim societies and more specifically transects different occupational groups. Lindblom and Lindblom (1979b) identify the Yusufzai Pakhtun of the Swat valley in north-west Pakistan as the most strict *purdah* society in the world. However, in Baluchistan Oasis in Pakistan (McCpastner 1975), on Larau island, Kenya (Fuglesang 1994) and in Tamacheg, north eastern Niger (Rasmussen 1991) women have greater physical mobility since they are not very restricted to their houses. Incidentally, women in the upper economic stratum can be more secluded than those in the lower economic bracket (Fuglesang 1994; Nath 1975; Maas 1991; McCpastner 1975). Indeed, Ong (1990) and Davis (1975) suggest that women from rich families seem to have sufficient resources to sustain their lives and they can hire domestic workers such that they actually do not have to be economically active. Conversely, those from poor families, widows and divorcees may usually be forced to seek employment outside their homes so as to contribute to the financial resources of the household. However, such women may only be allowed to take

up jobs that are an extension of their domestic duties and these could be constituted of paid domestic labour, nursing, midwifery and teaching (c. McCPastner 1975).

Both men and women in Muslim societies actually justify seclusion if it, for instance, enhances the reputation of the woman, her family and the Islamic religion. Similarly, seclusion is not frowned upon when the man is financially stable and the woman can be able to maintain her close kinship ties (Ver Eecke 1989). However, seclusion to most women and men in the Muslim world seems irrelevant in cases of economic stress and intellectual redundancy (Nath 1978; Strobel 1979; Tessler *et al.* 1978). According to Ver Eecke (1989), some of these secluded women are very positive about their confinement as long as first they are provided for, second, they can make visits to their near and distant relatives and third they can safeguard against their own honour, that of their husbands, families as well as their religion.

Conversely, some Muslim women view their seclusion as curtailing their economic, social and intellectual advancement (Nath 1978; Strobel 1979). Therefore, most such women have developed coping strategies against seclusion. For instance, McCPastner (1975) asserts that these women maintain a web of social relations which focuses on extensive visits amongst households. In addition, Ong (1990) and Fuglesang (1994) suggest that by sharing resources and information as well as by assisting one another with activities such as child care and the preparation of meals for guests, these women are palatably able to put up with their restrictions.

Incidentally, the male-female segregation is also replicated in Mecca, a place considered by many of the Muslims as being their symbolic home of origin. However, there seems to be a differentiation amongst the males also, as the various national pilgrims are guided through the ritual and sacred territory successively and, in fact, are accommodated separately (Delaney 1994). This categorization sharply contrasts with the views held by Crapanzano (1980) who states that the pilgrimage permits an unstructured and undifferentiated communion of individuals. Surprisingly, research has revealed that women can also be segregated from fellow women. For example, among the Olive farmers in Tripolitania in Libya (Peters 1975), for the most parts of the year women are isolated from other women since they are left alone to work on these farms as the men use this time to visit the local markets, the city of Tripoli and other pastoral areas to the south of Tripolitania. In fact, Peters (1975:312) reports that "this separation of women amounts to a segregation I have not witnessed elsewhere in the Middle East."

Apart from the *pardah* the Islamic law provides that women should maintain their modesty and decency by covering most parts of their bodies from head to toe (Abu-Lughod 1993; Aishalemu 1971; Ong 1990; Nath 1975). However, among the Kel Ewey Tuaregs of north-eastern Niger, men are the ones who actually veil their faces while women only cover their heads. Rasmussen (1991) reports that face-veiling is for the nobles amongst these Tuaregs and is viewed as a measure of their masculine modesty, in addition male face-veiling enhances one's honour and dignity, it serves to maintain matrifocal ties and safeguards the noble status. Lastly, these Muslim Tuaregs believe

that the male face-veil protects one from evil spirits which are believed to enter the body through body orifices and the noble pastoralists are the ones considered to be very vulnerable to such spirits (Rasmussen 1991).

Nonetheless, Fuglesang (1994) contends that there are different and changing styles of veiling across various Muslim societies although the original purpose of the female-veil may still be the same. Specifically, veiling helps to conceal a female's identification, it enhances her honour, gives respect to the religion and safeguards her from immorality (cf. Strobel 1979; Aishalemu 1971). This is partially the reason why in traditional and strict Muslim cultures it is considered a shame and a breach of the social mode of conduct for a woman to let down her over-garments particularly when she goes out in public (Strobel 1979). The same belief is found among the Kel Ewey of north-eastern Niger who construct that it is a real shame for a man of noble status to lower his face-veil (Rasmussen 1991).

Whereas some men find the unrevealing female dressing beautiful (Fuglesang 1994), the Government of Malaysia felt that women in full purdah are a scarecrow to foreign investors (cf. Ong 1990). On the other hand, in Iran President Reza Shah attempted to abolish veiling because it was considered as a symbol of backwardness (Fischer 1989). Nevertheless, many scholars have noted that veiling is on the decline in some Muslim societies, mainly as a result of modernization. They point out that it is becoming increasingly difficult to adapt some Islamic traditions to the changing lifestyles as many cultures, particularly the Western cultures, infiltrate into the Muslim environments (Strobel 1979; Ong 1990; Nath 1975; Tessler et al. 1975). On their part, the males in Muslim societies have a moral and divine duty to protect the morality of females and to extract obedience from them (Ver Eecke 1989; Ong 1990). Specifically, the males as husbands, brothers, uncles, grandfathers and fathers have been ordained by Allah to guide and guard the moral conduct of females as wives, daughters, daughters-in-law and sisters (Ong 1990; Qutb 1964). However, Ong (1990) points out that among the Muslims in Kuala Langat village in Malay, the moral contract of a male is not confined to that male's household alone but it extends to other kin relatives within and outside the village. She argues that this gesture circumvents shame on the woman, her family and the Islamic religion (cf. Davis 1975; Crapanzano 1980; Nath 1975). Ong (1990) similarly points out that the vigilance of males over their females varies in accordance with age and status. For example, those women who are past menopause receive less surveillance and have greater physical mobility. However, widows and divorcees have to be kept under strict male custodianship because they are considered as "dangerous scavengers" on husbands. Conversely, female youths receive less supervision but are not allowed to be promiscuous since shortly after puberty, these girls are nurtured for marriage. Also, all the unmarried women whose chastity is highly regarded are equally kept under strict male scrutiny who have to ensure that this category of women keep a circumspect distance from kinsmen and non-kinsmen alike (cf. Davis 1975; Nath 1975; Crapanzano 1980; Ver Eecke 1989; Ong 1990).

Among the Pakhtun of north west Pakistan, if a married woman is found with a non-kin man the other villagers will always assume the relationship is sexual. This woman would then be beaten or she would have her nose cut off or even be killed by her husband. If the husband does not shoot her to death, he loses the pride and honour of being referred to as a *pakhtun* and is instead called a *begherata*, which denotes a man without honour and one who has no control over his wife. All these forms of punishment must be acted upon after four reliable witnesses have established the guilt as required by the Islamic law (Lindblom and Lindblom 1975a). On the other hand, in the village of Kuala Langat in Malay, a married man caught red-handed having an illicit affair, would be forced to marry the girl with immediate effect or he could be beaten by the villagers or sent to the Islamic court where the man could be fined or imprisoned (Ong 1990). Abu-Lughod (1993) indicates that it is a shame among the Alwad 'Ali Bedouins in the Western Desert of Egypt for a girl to express emotional attraction and to show affectionate love to a boy as well as to go out with a man she is not married to (cf. Crapanzano 1980; Fuglesang 1994; Aishalemu 1971)

The debate as to whether Islam as a religion is a key factor in gender relations in the Muslim world is still largely at hand. However, the relationships between men and women in such societies perhaps should be understood in light of their respective cultural values and norms as well as the concomitant changes occurring over time and space. It appears that the articulation of the Islamic principles is slowly evolving to accommodate the dictates of modernity without necessarily diluting its original intentions.

2.1.3 ECONOMIC INDEPENDENCE OF MUSLIM WOMEN

The Islamic law entitles a woman to own and inherit property without a trustee of whatever kind and form (Qutb 1964; Ong 1990; Aishalemu 1971; Davis 1975; Ver Eecke 1989). In fact, the law on matrimonial inheritance provides that a daughter inherits a third of her father's property while a son receives two-thirds (McCpastner 1975). This standardized form of inheritance is subject to the size as well as the amount of debts of the household. This is because the Islamic law indicates that one must pay off all debts and legacies before making such property transfers (al *Qur'an*, 4-11). However, Qutb (1964) suggests that this differential partitioning of property may be due to economic responsibility of the males. Similarly, dowry gifts from parents to daughters are an inalienable property of the woman and daughters have a right to be given these gifts as stipulated by the Islamic law (McCpastner 19875; Fuglesang 1994). These gifts consist mostly of economic assets such as jewelry, utensils and wedding gifts (feasts) as amongst the Moroccans (Crapanzano 1980), the *al Quran* amongst the Muslims of Pakhatun village in north-west Pakistan (Lindblom and Lindblom 1975a) as well as gifts of residence among the Swahili Muslims on Lamu Island, Kenya (Fuglesang 1994) and among the Persian Muslims in Iran (Fischer 1989).

In addition, McCpastner (1975) points out that both movable and immovable property received by the bride from the bridegroom, is required by law to remain under the jurisdiction of the bride (cf. Crapanzano 1980). Also, the law provides that upon

the death of the husband the widow should receive one-fourth of her husband's estate if there are no children and one-eighth if the couple has children. A widow's share is bound to reduce to probably less than one-fourth or one-eight if her co-wives are still alive and the debts unpaid (McCpastner 1975). According to several authors, however, certain legal, cultural and religious institutionalized practices impede on women's control and management of the properties purported to be their own (Qutb 1964; Ong 1990; McCpastner 1975; Davis 1975). However, Ong (1990), in her study amongst the Malays, asserts that due to high population growth, inherited land has been paddocked into smaller portions such that females find it extremely difficult and uneconomical to farm small, fragmented and distant plots. Therefore, they opt to sell such allocations to brothers or husbands.

In as much as the Islamic law has declared men as the breadwinners, it does not prohibit women from economic involvement provided there is a justified cause; the women do not suspend their role of motherhood and they maintain their honour and dignity (Ver Eecke 1989); Qutb 1964; Abu-Lughod 1993; Davis 1975; Aishalemu 1971). For example, Nath (1975) illustrates the convenience of a working mother in Kuwait by indicating that the ability to pay for domestic workers, improved communication network and short working hours enable such a woman to attend to her domestic calls. However, various reasons have been put forth to show that women's economic contribution is uncalled for and insignificant. For example, Ver Eecke (1989) argues that working women are a challenge and a real threat to the dominant role and honour of men. Specifically, she asserts that the inability of a husband to support his household and, consequently, his negligence of his divine call is mirrored in a working woman (cf. Ong 1990). She also argues that the income of a woman is not supposed to be geared towards the budget of a household as this earning is considered to be her own and, therefore, it should be channelled towards personal belongings. Similarly, by allowing a woman to be involved in outdoor economic activities she is exposed to the public, thus, making her more vulnerable to shameful acts (Ong 1990; Ver Eecke 1989).

Conversely, Bernstein (1990) argues that the urgent need for money, inflation and psychological comfort as well as a sense of security, are some of the reasons why women really must work. And, also it has been suggested that working women are a source of pride to themselves as well as their own communities (Nath 1975). However, Ong (1990) indicates that some government policies are also a motivating factor for the active involvement of women in economic activities. For example, the Malaysian Government attributed mass rural poverty to women's laziness and, therefore, called upon them to shun irrelevant customary practices and prepare their children adequately for a more progressive and challenging society. In fact, the Malaysian Government's Development Discourse defined women's roles as "working daughters who could pull their families out of backwardness and as housewives who could inculcate progressive values in their children" (Ong 1990:266). Similarly, the President of Tunisia suggested that fasting was a threat to the economic security of the country since during this period

economic productivity is drastically reduced. He, therefore, called upon the people to base their religious practices on logic and reason so as to enhance development (Tessler *et al.* 1975).

Although the Islamic law entrusts a woman to her own economic independence, the particularity of the writing leaves a lot to be desired. The cultural, social, economic and political setup of various societies probably determines a woman's economic autonomy. It appears that the present-day economic hardships are a threat to the authority of men as they are dragged into allowing their women to engage in economic endeavours.

2.1.4 MUSLIM WOMEN AND EDUCATION

The Islamic law states that the quest and search for knowledge is a duty of every female and male who must seek knowledge regardless of the distance covered (Aishalemu 1971). However, Qutb (1964) and Strobel (1979) suggest that this prescription was only directed towards learning the Islamic law and traditions. This is because having equipped oneself with such knowledge, one is able to lead a purified and humble life before Allah. Thus, it is, for instance, argued that a woman who has *Qur'anic* knowledge is better than an illiterate one as she can effectively perform her roles as a mother, wife and homemaker (Strobel 1979; Ong 1990; Olela 1994). Similarly, Abu-Lughod (1993) indicates that women only need to know right from wrong and, thus, basic *Qur'anic* knowledge is just enough to make their lives worthwhile (cf. Olela 1994). Despite the emphasis laid on the acquisition of *Qur'anic* insights by women, they hardly receive scholarships to learn the *al-Quran* to greater levels as this is considered a preserve for men (Ver Eecke 1989).

Similarly, in most Muslim societies males numerically outnumber females in their acquisition of secular education (Strobel 1979; Mansur 1984). It has been suggested that the fear of intense promiscuity and pollution of non-Islamic ideologies prevented most parents from sending their daughters to Western schools (Ver Eecke 1989). However, Ong (1990) argues that modern lifestyle requires that a woman be educated in order to raise the social, economic and political standards of the community (cf. Strobel 1979). On the other hand, Ong (1990) also suggests that educating girls prevents endogamic unions as males preferred marrying educated women. However, Nath (1975) points out that women are hardly allowed to pursue professional careers and to take up political office positions which will expose them to a great deal of public scrutiny. According to Ong (1990), career women are not only a threat to the authority of the men but also to their own roles as mothers, wives and homemakers although Olela (1994) and Nath (1979) point out that there has nonetheless been an increasing number of educated Muslim girls in many countries. These authors argue that increased literacy amongst parents, government policies to promote women's education and training at all levels, for example, in Tunisia, and increased number of learning institutions, account for such a trend (cf. Tessler *et al.* 1975).

It appears that Islamic education plays a very important role in the lives of men and women in Muslim societies. More recently, secular learning seems to be gaining

ground in these communities. However, female secular education appears to be downplayed. Nevertheless, a majority of these countries have embarked on rigorous campaigns to enhance female secular education..

2.1.5. GENDER AND MANAGEMENT OF NATURAL RESOURCES

The relationship amongst men, women and the environment is very complex and often misunderstood by environmental experts (Tobisson and Rudgvist 1992; Idha 1997). This misunderstanding has often led to conflicts between policy-makers and the local communities as sound management plans which are people-oriented and natural resources-specific are lacking (cf. Semesi and Howell 1992; Idha 1997; Tolba 1983). It is, therefore, actually pessimistic to expect the local people to abandon their traditional environmental management strategies and adopt modern ones (Tobisson and Rudgvist 1992). This expectation has often caused reluctance on the part of the local community to comply with environmental experts as this calls for compromising their traditions. Thus, it can be argued that ignoring of the social and cultural aspects of natural resource management in general has contributed immensely to the failure of well-prescribed conservation projects (cf. World Bank 1997). For instance, Ostberg (1985) gives a detailed account of the conflict which arose between the Tanzanian Forestry Department and the villagers when the cutting of all mangroves was banned. The villagers found it extremely difficult to accept the ban since they could observe large areas of the mangrove trees being felled by licensed commercial cutters yet they themselves had been denied permission to cut down even a single tree for local consumption. Ostberg (1985) states that this contradiction prompted the villagers to cut the mangrove trees illegally and in the final analysis the ban did not really help to restore the depleted mangrove forest resources. It was after this realization that the Tanzanian Government carried out a research which was "people-sensitive" (Semesi and Howell 1992). In 1991, for instance, a National Mangrove Management Plan was developed which took into account the needs of the local people who, thereafter, participated in the management of the forests and continued to harvest the mangroves for local consumption on a controlled and sustainable basis (Semesi and Howell 1992).

Tobisson and Rudgvist (1992) observe that one of the conditions for the success of any natural resource management is that individual male and female must have access to land and other assets such as human resources, labour and capital. The two authors argue that as the propensity of time lengthens, such individuals will actually be motivated to view the management of the resources with a long-term perception of its sustainability. Similarly, Rutatora et al. (1986) assert that the success of any management project depends entirely on the level of the participation and willingness of the people to conserve the system. They point out that the local people should be given a chance to evaluate the cause-effect of their ecological degradation and put forth remedial proposals. The villagers should also be allowed to establish by-laws that guard against the destruction of project activities. This concept is referred to as the "decentralization of private enforcement" by Ensminger and Rutter (1991). The two authors point out that decentralization of private law is only applicable in

small communities because it is easier for one villager to be another's keeper. They also assert that such a strategy can only be effective if it is backed up by higher authorities. In addition, Rutatora et al. (1986) identify demonstration plots and study tours as powerful tools for change in people's attitudes. For instance, they state that demonstration plots help the local people to cultivate an interest in the project as they acquire knowledge *by doing* while environmental scientists instruct *by showing*. On the other hand, study tours can enable the local people to exchange ideas about their lives and works with other people and, thus, are motivated to see the practicability of their own conservation measures. Similarly, sensitization of the villagers through seminars, discussions, presentations, training of contact groups and regular village-based meetings can help to slowly erase the suspicions about the environmental scientists. This gives the people an opportunity to perceive themselves as project partners with common goals and interests.

Men and women as well as environmental scientists must work in partnership to conserve the natural resources. The local community is perhaps the backbone of any conservation projects. Careful evaluation of their participation is of paramount importance to the success of such initiatives.

2.2.0 CONCEPTUAL FRAMEWORK: ENTITLEMENT APPROACH

This conceptual framework was pioneered by Amartya Sen (1981, 1987) in his analysis of the causes of the persistence of resource shortages which lead to global deprivation, particularly famine and hunger, among men and women worldwide. Sen's (1987) analysis of the labour distribution, access to and allocation of productive resources brings out clearly the ideological, psychological, social, economic and cultural implications of entitlement which are very relevant to this study (cf. Mayor 1987). Specifically, Sen stipulates that an entitlement defines a set of cultural, legal, economic and political rules which empowers a woman or man to acquire, produce, and exchange rights over food, labour and other properties. This intimates that an individual's command over a commodity depends entirely on the assets she or he possesses or the labour power which can be converted to provide for the basic needs of a household (cf. Vaughan 1987). According to Sen (1987:8-9), for a majority of the people in the rural areas of the developing countries the only substantial asset that a person owns is his or her ability to work through his or her labour power. The conversion process of this labour power usually takes two salient forms. The first is through the process of endowment which is an original bundle of ownership that a woman or man acquires at birth through the traditional rules of inheritance in a given society (cf. Reyna 1991a, 1991b). The second is through the various alternative bundles that a woman or man may acquire "starting from each initial endowment, through the use of trade and production." Thus, Sen (1987:7-8) has called it the "exchange entitlement mapping" of an individual.

2.2.1. RELEVANCE OF CONCEPTUAL FRAMEWORK

This conceptual framework focuses on the specific relations between individuals, food, labour and natural resources. It therefore values cultural issues

such as gender in understanding natural resource systems. Specifically, this approach deals with gender relations at the household, regional, national and international levels. According to Watts (1991), the gender basis of entitlement raises the more general issues of intra-household access and distribution of resources. The framework, thus, lays a strong foundation for inquiries into the values, perspectives and knowledge of the individual man and woman concerning their environment. This approach for instance, integrates physical conditions, socio-cultural and economic factors which are relevant variables in any empirical environmental research. Within this theory the socio-cultural and economic variables which may cause the failure or success of a conservation project can easily be examined. Entitlement, therefore, helps to understand the perceptions, meanings and value systems as well as the lifestyles of the local people in relation to their surroundings. This information must be incorporated in designing conservation messages.

This approach also accounts for the specific reasons why the entitlement of a particular gender collapses in the event that a resource is depleted, thus, leading to a lack of command over that particular resource (cf. Vaughan 1987; Downs et al 1991) as well as market imperfection. According to Brown (19991:300) "discovering what a person owns, what exchange possibilities are offered to him or her, what is given to him or her and what is taken away helps to understand a man's or a woman's entitlement."

Similarly, this perspective guides us to unearth how individual men and women cope with the loss of their entitlement or endowment. It, therefore, makes it possible to consider the psychological, social, economic and cultural implications of entitlements and endowments so as to supplement the efforts of physical scientists. These scientists by the nature of their specialization have not been able to incorporate cultural values and perceptions in their move to conserve the environment.

2.3.0 ASSUMPTIONS OF THE STUDY

The first assumption of this study was that men and women are traditionally entrusted with certain responsibilities in the mangrove ecosystem. This is because previous researches have indicated that the gender variable is highly informative on the inter- and intra-household division of labour in both the productive and reproductive spheres (Kibiti 1996; Adepoju and Oppong 1991; Russo et al. 1991; Downs et al. 1991). Given that culture is adaptive, integrated and dynamic, learned behaviour, beliefs, attitudes and values are also bound to change to enhance the survival of the household and the community at large. The study also assumed that, to rehabilitate the depleted mangrove habitat, the local community is involved in its management. This is because previous studies have shown that local people are the central actors in achieving a sustainable use of the natural resources (Tobisson and Rudqvist 1992; Barbieri 1991). The second assumption was that there already exist some factors which constrain women and men as they try to earn a livelihood from the mangrove ecosystem. Since this ecosystem is characterized by culturally prescribed

gender roles, it implies that each gender faces some constraints, more particularly health-related ones because of the swampy environment of the intertidal zones.

The third assumption stipulated that the mangrove ecosystem is the only source of food and income for the local people. This study recognizes the fact that the best and meaningful way of reducing pressure on the mangroves is to make women and men aware of the alternative sources of food and income. It is a strong contention of this study that a diversified mode of production would help improve the economic and health statuses of women and men and also maintain the ecological balance of the system.

2.4.0 DEFINITION OF TERMS

GENDER: This refers to the socio-cultural differences between women and men as distinct from sex which is biologically determined.

PRESCRIBED GENDER ROLES: The socially constructed roles and responsibilities which are ascribed to women and men as regards the exploitation of the mangroves. Gender roles are constructed to suit the needs and situations of the people at the household level. The informant's views of what she/he is expected to do, her/his perceptions and attitudes towards what she/he does served to indicate the gender ideology in this particular community. Similarly, the duties carried out by women and/or men in the absence of the other gender and/or school-going children were used to measure changing gender roles.

UTILIZATION: This refers to the ways in which the mangrove habitat is transformed to provide for the livelihood of the people. The indicators were the use and possession of hand-saws, fishing nets, traps and fishing canoes. Information on the benefits of the mangrove swamps indicated how the mangroves are put to use. The number of foreign and local tourists to the mangroves was used to measure the aesthetic value of the mangroves. In addition, the tidal levels and climatic conditions determined how often the swamps are used as grazing grounds.

MANAGEMENT: This refers to the balanced exploitation and control of the mangrove resource to provide for the present generation without compromising the needs of the future ones. Responses showing awareness of the modern management strategies such as silviculture, ecotourism and other multiple potentials of the mangrove ecosystem were the main indices of mangrove management strategies. The objectives and number of groups and organizations indicated how these organizations manage their activities, more specifically those related to the mangroves. The composition of management committees showed the level of community participation in the management of the mangrove habitat.

MANGROVE ECOSYSTEM: This refers to the permanent marshy area with salty and brackish waters, whose depth at low tides does not exceed 0.6 metres as well as the salt-tolerant woody shrubs, wild animals and various species of birdlife which find solace here. The research was interested in how the above plant and animal life are exploited.

CONSTRAINTS: These refer to the limitations imposed on one's mobility and activity so that the potentials of an individual are not fully exploited. The differentiated gender roles imply that there exist gender specific constraints. The main indices of these constraints were the accessibility and availability of road networks, marketing facilities, water sources, alternative sources of energy such as paraffin, electricity as well as sound sanitary conditions, health-care facilities and the initial capital outlay of the various commercial activities of men and women.

ALTERNATIVE SOURCES OF FOOD AND INCOME: The mangroves provide edible vegetables, mollusc, algae, sponge and fish. The research was interested in finding out the extent to which the coastal communities utilize these foods to supplement their staple diet. This diet consists only of milk, meat, rice, sorghum, cassava and simsim. Also food coping strategies deployed by both men and women were deemed very important to this study.

CHAPTER THREE
METHODOLOGY

3.0 INTRODUCTION

This chapter is subdivided into four parts. The first part deals with a general geographical description of Msambweni Division while the second is concerned primarily with a specific description of the research villages. The methods of data collection and my field experiences are presented in the third and fourth parts, respectively.

3.1. GEOGRAPHICAL DESCRIPTION OF MSAMBWENI DIVISION

Msambweni Division is one of the five divisions in Kwale District and is located on the south coast of Kenya. It is bordered by Kubo and Matuga Divisions to the south, Kinango Division to the west, the Indian Ocean to the east and the Republic of Tanzania to the south (Map 1). The division covers an estimated area of 3,331 square kilometres. Administratively, it has ten locations and 22 sub-locations. The population in Msambweni Division was projected by the Central Bureau of Statistics to be 190,422 in 1996 with a population density of 57 persons per square kilometre. The number of households were estimated to be 22,912 in 1996 (Kenya 1994).

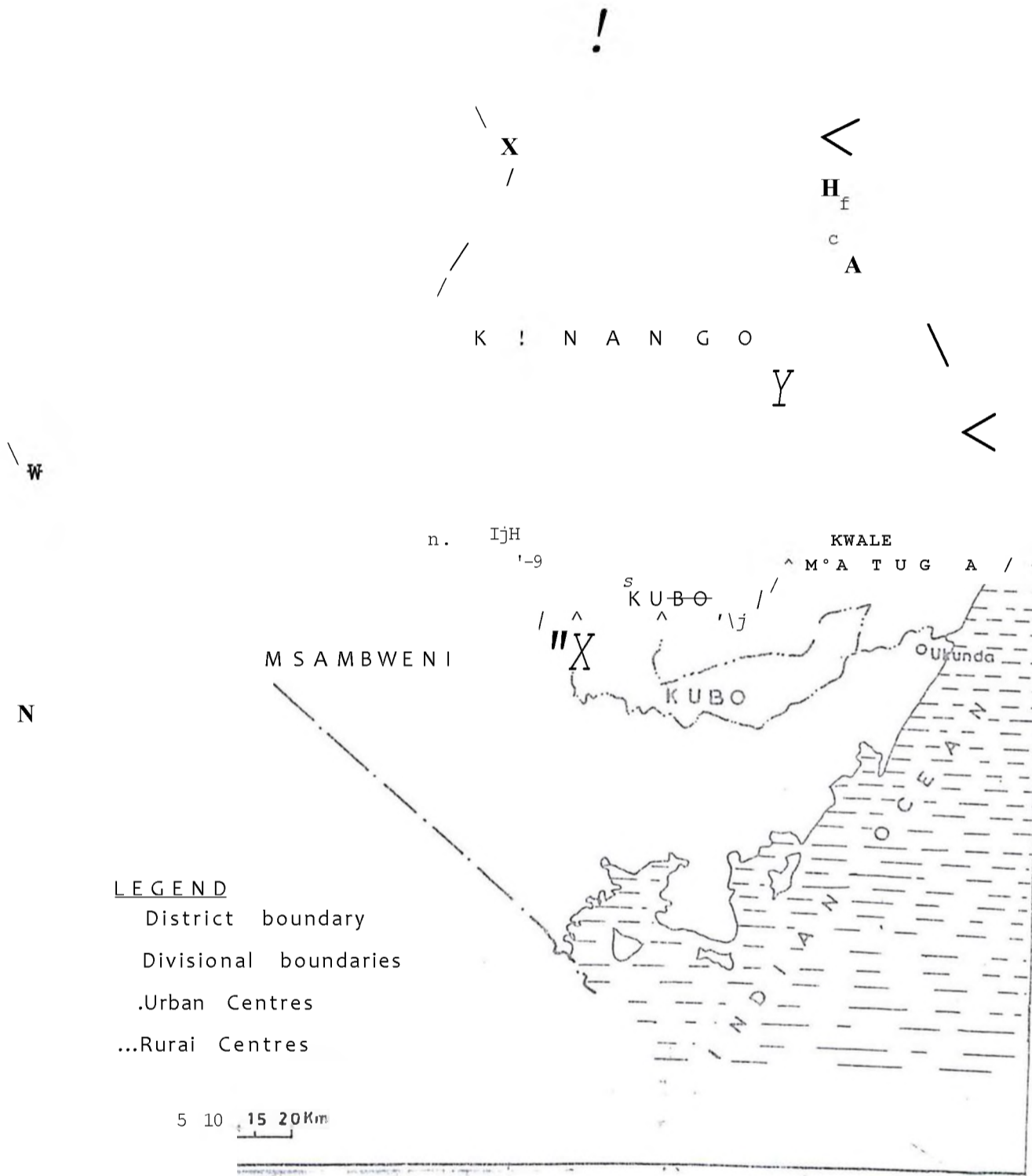
The physical geography of Msambweni Division consists of the Coastal Plain, which is 30 metres above the sea level and runs for about 10 kilometres inland. The coral reefs, which run parallel to the coastline, are 300-1000 metres away from the shoreline. The plain provides good attractive beaches, such as Ukunda, which have led to the mushrooming of numerous tourist hotels along the shoreline. Behind the coastal plain lies the Foot Plateau which rises rapidly at an altitude ranging from 60 to 135 metres. This area is very ideal for livestock production but this potential is not fully exploited (Jaetzold and Schmidt 1993).

The division has a monsoon type of climate which is hot and dry during the months of January to April with the long rains lasting from March to July. The short rains, which occur in October and November, are very insignificant for any agricultural pursuits in the division. The annual rainfall ranges from 900 - 1,500 mm., with its distribution being highly unpredictable. The mean minimum temperatures are 24 degrees Celsius while the mean maximum temperatures are 31 degrees Celsius. The highest temperatures are recorded in the months of November and April while the annual evapotranspiration rate (E.T.R.) ranges from 2,000-2,300 mm. During the E.T.R., the division experiences a lot of water shortages. The inland drainage is less dense and the ground water flow is rather slow. The area is partially underlain by *Maji ya Jumvi* rock formations which make many water sources saline. The salinity of these sources is further increased by the entry of the hydrothermal in the area. However, the Government of Kenya has heavily invested into supplying safe and clean water to the residents (Jaetzold and Schmidt 1993).

3.1.1 THE RESEARCH VILLAGES

top No- 2

KWALE DISTRICT ADMINISTRATIVE BOUNDARIES



Kwale District Development Plan (1999 - 2001)

Map 2: Location of the four research villages in Msambweni Division

This research was carried out in four villages in Msambweni Division, Kwale District, Kenya. The four villages included Gasi¹, Bomani, Bodo and Shirazi. All of the four villages are located on the eastern side of the main tarmac road from Kwale to Lunga Lunga, a town on the border with Tanzania (Map 1). Gasi is approximately 15 km. from the Msambweni Divisional Headquarters and which is situated on the south-west part of the main tarmac road. This administrative centre harbours government offices, a district hospital, several shops, a police post and residential houses. On the south eastern side of this centre, a distance of about 2 kms., lies Bomani village. As one moves further south from the divisional headquarters towards Lunga Lunga, for an estimated 25 km and 30 km. are Shirazi and Bodo villages, respectively. From the main road, Bomani is located about 100 metres away, Gasi is 200 metres, Shirazi is situated about one and half kilometres while Bodo is an estimated 2 kilometres. This means that it is only Bomani village which is visible from the main road. However, the other three villages are linked to this main tarmac road by all-weather roads. Gasi can be recognized by a long stretch of tall and neatly planted coconut trees which obstructs its visibility from the main road. Conversely, Shirazi can easily be located using the signpost indicating Shirazi Crocodile Village while Bodo village can be traced from the sign-post which reads Kinazini Dhow Safaris -- Ecotourism (Bodo).

The coastal populations living in these villages include the Digo, Duruma, Swahili, Arabs, Pemba, Zanzibari and Shirazi. There are also immigrant populations from other parts of Kenya and these include the Luo, Agikuyu, Akamba, Abagusii and Masaai. However, there is intermarriage among these groups and people have widespread kin relations in these four research villages. A majority of the inhabitants of these villages live in closely-spaced houses which are made of mangrove poles. The walls of the houses are commonly mud-thatched while the roofs are made of neatly layered dry coconut leaves locally referred to as *makuti*. Unlike the walls, the floors and patios are more often cemented or covered with neatly woven and decorated mats. These kinds of building materials, structures and decor actually constitute a unique characteristic of coastal settlements. However, there are also houses made of bricks or coral stone and roofed with corrugated iron sheets.

Most people in the villages have separate cooking spaces perhaps because more space is needed for their elaborate cooking, especially during the cultural or religious festivities such as the *Idd-el-Fitr* celebrations. It could also simply be the desire to maintain clear circulation of air in the living rooms. Most households have kitchen gardens either in front or behind household premises where they plant

Most of the literature usually spells this as Gazi. However, I have rendered it the way my informants insisted it should be.

indigenous vegetables basically for home consumption. Similarly, coconut (*mnazi*), cashewnut (*korosho*) and palm trees as well as bananas also dot the villages.

Additionally, a majority of the villagers have spacious pit latrines which are usually kept extremely clean. However, I was informed that most of the people in Bodo village do not have pit latrines because the ground is too soft. Most of the residents make use of the ablution facilities at the mosque. There are quite a number of water pumps strategically erected at a diameter of 100 metres, thus, members of each household have access to these water sources. The water in these sources is hard water but safe and clean for cooking and drinking. The other sources of water available in these villages include piped water as well as river and rain water. Most people boil river water before use and indicated that they actually prefer river and rain water for their washing since it is soft and, therefore, can easily dissolve various detergents. Except in Bomani and Gasi, the power supply is very low such that the people in Shirazi and Bodo can only use it for lighting purposes. Recreational facilities are hardly found in the four villages except at the divisional headquarters in Msambweni and the rural centre of Ukunda which is rapidly expanding due to its diverse tourist attractions. However, some households have radios, television sets and videos which keep them in touch with the outside world.

The people in Shirazi, Gasi and Bodo have to travel long distances to seek for medical services. For instance, they have to cover over 10 kilometres to reach the Msambweni District Hospital which is the only government-owned hospital in the division. Alternatively, they have an option of attending some other private clinics located within and without the division or they resort to traditional medicine.

The relatively high rainfall and fertile soils favour both cash and food crops, livestock production as well as poultry. The individual herds and group ranches in other parts of the division supply the villagers with livestock products such as beef, milk, hides and skins while poultry supplies them with eggs and meat. In addition, the Kenya Calcium Company in Waa, the Kenya Bixa in Tiwi, Msambweni Development Company, Msambweni Meat Purchasing Centre and the tourist hotels in Ukunda provide employment to these people.

3.2.0. **METHODS OF DATA COLLECTION**

3.2.1. **SAMPLE SELECTION**

The selection of Msambweni Division as the study area was purposive and intentional. This is because this division exhibits the kind of physical environment that was suitable for this study. The mangrove forests found here have all the mangrove tree species and characteristics documented as being available in Kenya (cf. Kairo 1995; Ruwa 1991). Therefore, any data on its potentials, exploitation and management will be representative of the other mangrove forests and ecosystems found elsewhere on the Kenyan coast (Idha 1997; Ochiewo 1998). Similarly, there is very little disparity concerning the gender roles among the Mijikenda and the rest of the coastal communities, therefore, data generated on gender issues will certainly apply in other parts of Kenya with a similar environment.

The District Officer of Msambweni, the chiefs as well as other gate-keepers helped to identify the four villages. The sample population consisted of 100 individuals, a number which was considered manageable given the time and financial dictates. Since the study was dealing with the gender variable, an equal number of women and men were sampled. A directed random sampling was used to arrive at the desired sample size. The sample distribution in the four villages was as follows: 37% of the informants in Gasi, 38% in Bodo, 15% in Shirazi and 10% in Bomani. This variation in the number of informants from each village was largely influenced by those people in each village who were actively involved in the exploitation of the mangrove and marine resources at the time of this study.

3.2.2 UNIT OF ANALYSIS

The individual as opposed to the household was the unit of analysis in this study. This is primarily because the overriding ambition of this research was to capture the perceptions of individual men and women and how each gender relates to the natural resource systems of Kwale District. A number of scholars have pointed out certain loopholes in the household surveys. For example, adopting the definition of a household from the Welfare Monitoring Survey II of 1994, of a "person or group of people living in the same compound, fenced or unfenced, who are answerable to the same head and who share a common source of food or income" (CBS 1994:10). It is, therefore, accepted as true that the household head makes key decisions and other household members accept with blind obedience or that all household members behave the same way in any decision-making situation. Sen (1987) identifies the first presumed state of affairs as a despotic family while the second as a glued-together family. However, empirical data have shown that the behaviours of men and women are relatively independent of the household structure (Anderson and Ngazi 1998). It was, therefore, suitable for a study of this nature to base its analyses on the individual while not underscoring the significance of the household per se.

3.2.3. **methods**

In this study, several methods were used to collect the data. Keen interest was taken to ensure that the objectives of data collection were achieved. The main aim of this study was primarily to elicit qualitative data.

3.2.4 **documentary sources**

This technique was used to supplement primary data and to give further orientation to the problem under study. Before embarking on the fieldwork, the available literature on gender, women and men in the Muslim world as well as the management of the mangrove biodiversity was reviewed. And although this study is anthropological in nature, some marine science books and journals were similarly reviewed so as to equip the author with some basic scientific knowledge of the mangrove swamps. Indeed, most of the relevant documents were made use of throughout the entire period of the study. However, the literature on gender roles in the mangrove ecosystem was particularly scanty. Medical records as well as others from

the Fisheries and Forestry Departments were also used although they were rather inadequate concerning the major issues of this study.

3.2.5 STRUCTURED INTERVIEWS

Using this method of data collection, a structured interview guide was administered to one hundred informants who were male or female heads of households. The research considered the male or female head of households because they are the ones who are mostly involved in the provision and decision-making processes. The questionnaire was also administered to male or female members of households who were eighteen years and above because this research regarded the informants in this age bracket as being potential, independent providers and decision-makers.

The semi-structured questionnaire had both open- and closed-ended questions. The open-ended questions gave the informant an opportunity to air his or her views that were not restricted to the perceptions of this researcher (cf. Permitt 1974). This also enabled this researcher to elicit the informant's subjective, personal views as well as observations and perceptions concerning the gender roles in the management of the mangrove swamps. Additionally, the unrestricted reactions revealed some unanticipated responses which gave rise to fresh probing and called for further systematic and rigorous investigations.

The questionnaires were administered with the assistance of two research assistants. These assistants were trained so that they could be conversant with the structure, content and form of the research instrument. The interviewers covered an average of four households everyday except for the first two weeks of the fieldwork. During this time, the interviewing process was adversely affected by the fasting period of the Holy month of Ramadhan. However, this researcher used this valuable time to make observations on the various social, economic and cultural characteristics of the new environment. Also, a lot of informal social interactions were made so that this researcher could gain entry into the community. These free interactions with the villagers made it easier for this author to establish rapport with the informants. Similarly, the research assistants did not have any problems creating a relaxed atmosphere for the interviews as they were local members of the community.

The direct interaction between the interviewers and the informants allowed for the modifications of the questions and research setting to solicit for the necessary information (cf. Permitt 1974; Pelto and Pelto 1978). Therefore, these interviews were not only carried out in the premises of the informants but also in their respective areas of operation. For instance, some fishermen, fish mongers and fish dealers as well as some mangrove cutters were interviewed at the fish and pole landing bays, respectively, while farmers were sometimes interviewed on their farms. Before any interviews were conducted the informants were usually briefed on the objectives and importance of the research and they were also assured that their responses were going to be treated with utmost confidence. During these sessions a series of cross-checking questions were asked to ascertain the consistency of the answers given. However, questions addressing the income levels were rather problematic as some informants were

unwilling to provide the exact figures of their earnings. This was perhaps because most of the people lack book-keeping or recording skills for the small-scale businesses, memory failure, or may be some informants considered such information as being very sensitive. Therefore, the only way to gain the cooperation of such informants was to solicit information on the costs of productions of whatever source of earnings they were engaged in. Such questions addressed, for instance, the time taken to cut and transport the mangrove poles and also to produce handicrafts, the cost of the inputs used in pole extraction, fishing and their concomitant activities as well as the market prices of the tradeable commodities. The kinds of information obtained from the questionnaire were: socio-cultural factors such as age, religion, education, marital status and economic activities. Similarly, data on the responsibilities of women and men (as well as their children) in the mangrove exploitation, the constraints that they face and the benefits derived from the mangroves and the sea were also collected.

3.2.6. UNSTRUCTURED INTERVIEWS

This took the form of conversational interviews (Denzin 1989; Cornball and Gauchos 1995) and were mostly held in the afternoons and evenings. These interviews were held with members of different households in the villages. It was absolutely important to make use of this technique so as to obtain data in a less controlled research setting and also to provide insights into the subjective views of the informants concerning the research topic. Some of the pertinent issues were tactfully clarified during such occasions. This research technique, therefore, elicited information on such topics as gender roles, gender division of labour, income-generating activities, food production, preservation and preparation, cultural beliefs and values attached to the forests and the aquatic life as well as the constraints faced in the mangrove swamps. The various responses were recorded in a field notebook to help in the analysis of the data.

3.2.7. KEY INFORMANTS

These were informants who were considered reflective, articulate and with vast knowledge regarding the mangrove ecosystem. They were conveniently and intentionally selected on the basis of the following criteria: First, their participation in the exploitation and management of the mangrove habitat and second, their social status and third their positions of leadership in the community. These key informants included licence holders, mangrove cutters, women mangrove fuelwood sellers, stockist, forester, forest scouts, fishermen, fish dealers, fishmongers, Fisheries Department officials and KEMFRI officials. These key informants provided in-depth data which enabled the author to gauge the level of community participation in the conservation and management of the mangrove ecosystem. It also enabled the author to arrive at some of the actual and perceived threats against this system.

Also, two men and two women of high social status, aged above 50 years, were interviewed. They provided valuable information pertaining to the changes that have occurred over time in the socio-economic status of the community in general and more

specifically in the exploitation and management of this ecosystem. In addition, two women and men leaders of cooperate groups were also required to give their own subjective evaluations and perceptions of their respective activities as well as the benefits that both women and men derive from these groups. Lastly, two Medical Officers were interviewed to provide more information on the disease occurrence and health status of the local people in the four research sites.

3.2.8 DIRECT OBSERVATION

This method enabled the author to have an in-depth coverage on the complex issues and relationships involved in the mangrove ecosystem. Regular observation and repeat observation of the same phenomena were made to differentiate between chance occurrences and accustomed behaviour and happenings. Similarly, chances of misreporting by the interviewees due to memory failure were equally minimized. Memory cues were noted down and notes made in the evenings.

This method was also used to collect data on the risk factors which are involved at present in the exploitation of the mangrove resource. At one stage, it involved taking a walk through the mangrove swamps in the company of KEMFRI and Fisheries officials to get a general feeling of this environment and also to confirm the physical nature of the forests. During this excursion observations were made on the mangrove species available, their heights and sizes, the occurrence of birds and other organisms in the swamps as well as the selective occurrence of the oyster shells. Keen interest was also taken in observing the conservation activities that have been put in place by KEMFRI. This was done so as to establish an inventory of the mangrove potentials. Also, regular visits were made to fish and pole landing bays in accordance with the tidal changes. The kinds of activities taking place there and the gender involved were similarly observed and recorded. The important quotes, statements and casual remarks heard during these visits were also recorded and these helped the author to make an assessment of people's emotions. It also provided more insights into what people felt and thought about their life, work and conservation of the system. Similarly, observations were made on the kind of equipments as well as the type of materials used in the construction of houses which revealed the extent to which the mangrove forests and the available local materials were being utilized. The kind of protective gears used by the mangrove exploiters, the state of the available infrastructural facilities such as road networks, telecommunication, recreational and health care institutions as well as water and sanitation facilities, were also observed and recorded. Also, the geographical endowment of the area such as rivers, swamps, forests (indigenous and exotic) and the general landscape of the area were of great interest. These types of information seem to reveal the health-related constraints facing the local people and also the feasibility of achieving a sustainable use management of the mangrove ecosystem.

A lot of time was taken to observe the day-to-day activities of the people and the participants involved in each activity. This gave additional information on the values attached to each activity as well as the gender division of labour. Such

information provided more insights into how and what best strategies to initiate so as to reduce an over-reliance on the mangrove resource. Similarly, observations were made on the types of crops grown, livestock kept, the types of soils in the area and the type of technology applied so as to obtain a general overview of the agricultural productivity of the area. In addition, the types of foodstuffs sold on the market and the shops told more about the diet of these people.

Lastly, observations were made on the physical traces of the mangrove swamps as this could perhaps recreate the past behaviour and activities of the people and help to ascertain the degree of the selective wear of the mangrove habitat. The occurrences of mangrove tree stumps, their regeneration abilities and capabilities as well as the analysis of sand piles along the ocean line seemed to reveal the ecological value of the mangrove forests.

>-2.9. PARTICIPANT OBSERVATION

This method accorded the author a humanistic relationship with the informants. It offered an opportunity to discover some of the cultural characteristics of the informants and what the informants really were as a people. In order to transit from the "greatest outsidersness" to the "greatest insidersness" the researcher used the three transitional stages as identified by Keith (1980). These stages were: 1) In the initial stages of the research the author had great local interest in the informants and a lot of questions concerning their activities were asked, thus, it was an all-inclusive procedure. 2) This consisted of a more specialized inquiry given that the author had now had a general background of the local people's activities to enable her make an in-depth investigation into certain specific issues. 3) This entailed subjective data collection since the study was basically descriptive in nature. The activities which the author participated in included: planting the mangrove propagules, clearing the oyster racks, preserving fish as well as other grains such as maize, beans and sorghum, food preparation and processing as well as the production of handicrafts such as mats and baskets. The exercise of preserving the aquatic species gave the author an opportunity of seeing most of the marine life being exploited. This proved very useful later on in the translation of the local names of the aquatic life. However, time and the author's cultural identity hindered a full participation in all of the activities of the local people.

•2.10. FOCUS GROUP DISCUSSIONS

A total of four group discussions, each consisting of ten members, were held, one in each of the four research villages. Participants were drawn from the various sectors of the mangrove ecosystem. These participants were gathered through the help of the assistant chief in Gasi, the village chairman and councillor in Bodo, the area chief in Bomani and the village chairman, the chairlady and secretary of a women group in Shirazi. The involvement of the local leaders helped to erase suspicion amongst the participants. Similarly, their presence encouraged the discussants to actively participate in the discussions and were, thus, very cooperative. In addition, the views of local leaders provided information on their involvement in the management

of the mangrove habitat. Such data enabled the author to evaluate the various institutional inputs towards the sustainable use of the mangroves.

It was very difficult to maintain a gender balance in these group discussions. This is simply because most of the aforementioned sectors are dominated by men. To counter this, the number of females was increased to equal that of the males and this was done on the basis of their area of residence, involvement in the marketing of the mangrove and marine products and group membership.

3.2.11. LIFE HISTORIES

These are narratives elicited by this researcher in which the informant described freely his or her life. During the narration, the researcher picked up key issues that were later expounded on after the life story was told. More specifically, a lot of probing was carried out on certain important issues relating to the exploitation and management of the mangrove ecosystem by males and females in these four villages. This method was used to describe the lives of the local people and their gender roles as well as to give a subjective view of the social and ecological setting. During the life history interview, the researcher and the informant collaborated to create meaning from the narrative and also to enhance reflective consciousness. A total of four life histories were conducted, two from men and two from women.

3.3.1. data analysis

Only qualitative methods of data analysis were used. These included frequency tables, averages and percentages which are very pertinent in descriptive studies of this nature. Also, **cross**-tabulations were also made to have a better understanding of the results.

3.4.0. FIELD ENTRY AND EXPERIENCES: "AN ALIEN RELATIVE"

The first entry point into the research site was through formal introductions to the gate-keepers who included Chiefs and Village Chairmen of Gasi, Bomani and Shirazi as well as the Councillor of Bodo. These local leaders were the ones available at the time of the first visits. During this time, the goals and objectives of the research were clearly spelt out. This made it easier later on for me to identify those informants who were considered to be endowed with the relevant knowledge and experience in the exploitation and conservation of the mangrove biodiversity.

In order to erase any suspicion and facilitate my acceptance by the community members, I identified myself with research guides who were selected purely on the basis of their local ethnic identity and place of residence. Therefore, in Gasi the research guide was selected with the aid of an employee of my host while in Bomani it was through the assistance of a civil servant. However, in Shirazi and Bodo I was able to identify the research assistants through direct approach and self introduction.

My first home was in Bomani, a village which consisted of many households with a majority of them related both matrilineally and patrilineally. Specifically, my "new homestead" was made up of four nuclear family units which consisted of a husband, wife

and an average of three children. I felt very comfortable living with my "new family" members because they were receptive and very hospitable. Like in many other societies, I had to be initiated into my present family. For instance, my "adoptive mother" presented me with a pair of *leso* and informed me that I was expected to tie one *leso* round my waist and the other to veil the head and cover the upper part of my body. This was culturally perceived as being the traditional and proper mode of dressing for females in this coastal community. Also, I was made to understand that the most preferable *leso* were those ones which were of the same design as these made a female appear neat, decent and dignified.

As we sat on the porch on the first day I arrived, I began to slowly learn the norms of my new community. During this particular day I gradually realized that the emphasis in most of the talks I was hearing was being laid on fasting (*kufunga* or *saumu*) as this was the Holy month of Ramadhan. For instance, one of my new female friends informed me that all people, except under ten years of age, are required to fast (*kufunga*) for one month according to the Islamic calendar. However, one is exempted from fasting if one is sick, pregnant or lactating. She, however, added that one had to later on compensate for the days one did not fast. Later in the evening, we had a hearty dinner with a variety of traditional dishes prepared in my honour as a visitor and a new member of the household. Although we ate as a group, I observed that there were certain subdivisions according to one's age, sex and adherence to the fasting prescriptions. Therefore, the children ate together as women and men also dined separately. However, on this occasion I also noted that amongst the females, there were also some variations according to whether one had fasted or not. Those females who did not fast on that particular day were either pregnant or lactating and since I did not fast that specific day I was included in this category. I was also told that menstruating women do not fast but they have to compensate for those days later during the year. On yet another occasion, I observed that there was some differentiation amongst the men and this time the males who did not fast were in ill-health. I, therefore, came to the understanding that besides age, the health status also determines whether one would or would not share the same bowl of food with other members of the community, particularly during the holy month.

These communal gatherings gave me an excellent opportunity to meet a number of other members of my "new household". These kin members were also ready and willing to see to the success of my fieldwork by teaching me "what to learn and how" (Astuti 1995:12). More specifically, two of my new family members became my research guides throughout the duration of my fieldwork. For the next couple of days, different household members took turns in showing me around my new village. During most of this time I made keen observations concerning my new surroundings. The many talks and conversations I overheard during this orientation week seemed to centre around the Ramadhan and the anticipated *Idd* celebrations. Indeed, such talks and discussions were

heard repeatedly for the next two weeks when the fasting period ended. This seemed to indicate to me how much these people valued their religion.

During this fasting period, I noticed that there seemed to be very limited economic and social activities going on in this village. Interestingly, the informants I worked with readily admitted that life was quite difficult during such times especially for those individuals in the fasting age bracket. However, on a more personal note I quickly realized that life was going to be even harder for me as an outsider since I was not accustomed to such cultural and religious norms. This was because I had very limited access to most of the entertainment facilities and services. Most of the premises offering such services started business shortly after 6 p.m. and my request for any refreshments at a time that was considered "odd hours" was often met with such remarks as "wewe sio mmoja wetu" (which literally translates to "You are not one of us.") Some other people also remarked that "wewe ni mbara au Mjalu" (which literally means, you are from upcountry or a Luo"). I was rather uncomfortable with these expressions as they alluded to my "outsider" identity. Therefore, I also decided to try my hand at fasting. Unfortunately, I could only manage to stay without food or drink for 48 hours. Seeing my frustrations and predicament, my new family members advised me not to strain at fasting. This is because, as an outsider, I would be classified together with those people exempted from fasting according to the Islamic law such as the sick, pregnant and lactating mothers as well as travellers. In addition, some of the community members from time to time noted that I would partake of refreshments furtively from time to time. I had to take this mode of action as drinking openly would have been offensive to the local people and particularly to my hosts. This would also have been a sign of disrespect for their local religion and culture.

Retrospectively, I noticed that the communal food sharing began to fizzle out after the *Idd- ul- Fitr* celebrations were over. I was told that food sharing was emphasized during Ramadhan so that both the fortunate and less fortunate ones would eat enough food to be able to go without food for the next day. Also, this was an opportunity for members of different households (those from the village and from distant places) to come together to share in each others' joys, sorrows and experiences. Additionally, and in retrospect, if given a chance to carry out another ethnographic research amongst an Islamic community, I would avoid the Holy Month of Ramadhan. This is primarily because I was actually unable to carry out any meaningful formal interviews for a period of two weeks as most people always seemed tired and hungry.

.After staying for three days in Bomani, I realized that I was not really very

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same paternal grandfather. At that particular time, I figured that my translocation had further served to endorse the wide spectrum of my new kinship ties. One thing which struck me as being significant in Gasi village was that despite this community being close-knit, there were certain households which were genealogically unrelated. Afterwards I came to realize that such individuals were not involved in the direct exploitation of the mangroves and marine resources. I later found that such people were immigrants from upcountry and most of whom were concerned with the conservation of the mangroves as well as the fisheries products.

Like my new relatives in Bomani village, the people in Gasi, and more particularly members of my cousin's household, were fully committed to teaching me about the finer details of the unique mangrove habitat. The people in Gasi were also very welcoming and within no time, I was able to freely interact with members of different households in the village. I made regular visits to these households, shared in various conversations, jokes and gossips, as I slowly learned their perceptions of life, their customs and the mangrove swamps. Before I began vigorous interviews, I was forced to master the proper words and the tone of voice for greetings and conversations. By this time I had similarly known when to greet and when to expect to be greeted. All this knowledge was acquired through verbal communication with various people I met and worked with. Lastly, by this time I was now accustomed to the traditional female mode of dressing and I seemed to be coping with the high humidity. I am convinced that this decorous behaviour on my part paved way to the success of my fieldwork later on. This is because I gradually learnt the proper manner in which to approach my informants and my informants too appreciated the kind of respect I was according their culture.

The formal interviews were highly influenced by the people's religious norms. This seemed to me to greatly determine which gender to be interviewed and at what times. I observed that their daily prayers are held five times and I was informed that each prayer time has its own term for reference. For example, the 4.00 or 5.00 a.m. prayer session is referred to as *asubuhi*, the 1.00 p.m. *adhuhuri*, 4.00 p.m. *alahr*, 7.30 p.m. *maghrib* and the 8.30 p.m. prayer session is known as *isha*. During these times, the males go to the mosques to pray while the females would either remain behind to do so in their houses or they go to their part of the mosque for prayers. Therefore, I was usually forced to interview the males shortly after their prayer sessions. However, if the interviews with the females overflowed into their prayer time the informants and I were required to observe a minute of silence in reverence to Allah before continuing with the interviews.

Additionally, those potential women and men informants who were not directly concerned with the exploitation of the mangroves and marine resources argued that they were unqualified to participate in the formal interviews. However, I would tactfully solicit and prompt for their subjective views concerning the use and management of the mangrove swamps in a more relaxed atmosphere as we would occasionally bump into each other in the village or on my way to the other villages.

Since Gasi was my research base and a village I considered my second home, I made regular trips to Shirazi and Bodo villages. The most convenient means of transport were the Nissan type of vehicles, locally and popularly known as *saa robo* (literally, "quarter an hour.") This nickname, I was told, was derived from the high speed of such public vehicles and whose operators boast that their passengers can arrive at their destinations within that short time. I noticed that most young people seemed to prefer the *saa robo* while the old ones popularized another type of public vehicle known as "box body". I was told that the term "box body" was derived from the vehicle's rectangular shape and the space available for conveying large commodities such as charcoal, huge bundles of coconuts, oranges and cassava. Apart from the old people, I equally noticed that most businesswomen and men, such as fish mongers and charcoal dealers, held a very high esteem for the "box body". I chose the *saa robo* which enabled me to be prompt in my interviewing stations and more particularly with government officials who were some of my key informants.

Although I was more at ease with the people in Gasi and Bomani, I was also accorded special treatment and attention in Shirazi and Bodo. For example, on one occasion after failing to get my targeted informants, the Councillor of Bodo advised me to come back on a Friday when most people would be available. He specifically chose Friday and particularly before 12 O'clock because it is the resting day for Muslims and, therefore, most people do not go out to work. His emphasis on the time was because at noon, the people would go for midday prayers that normally last longer than the daily prayers on the other days. On that material day the Councillor took the responsibility of gathering all the categories of informants I wanted as well as other villagers, both old and young. As I carried out the individual interviews, the Councillor was busy arranging for the group discussion session. With his help, I was able to select the group participants who could clearly express themselves about the major themes and issues I wanted to learn about. Indeed, before noon, my research assistants and I were able to conduct fifteen individual interviews and had a very successful focused group discussion. I personally felt that this exercise was made possible primarily because the informants were readily available as well as being very cooperative.

However, I was not always successful in my interviews. For example, on one occasion the focus group discussion in Gasi failed to take place as arranged. This was because the Chief, who was entrusted with the responsibility of gathering the participants, was held up by his administrative duties. However, another discussion was organized by the Chief later on and it turned out to be very successful. The group discussion in Shirazi was not well represented due to poor timing on my part. Also, by coincidence, most of the male participants had urgent individual problems to attend to on that particular day. However, the Shaza Women Group members, who formed a majority of the participants, clearly articulated to me their activities. I also used the opportunity to make appointments with the key informants such as the licence holders, mangrove cutters, fish dealers and fishermen,

Also, constant and consistent observation of the same phenomenon gave me a chance to find out whether or not my presence as an outsider but "alien relative" affected the behaviour and activities of the local people. Lastly, the observations I made seemed to confirm some of the literature written by marine scientists and other social scientists concerning the mangrove ecology, namely, that it is actually a threatened ecosystem which needs urgent redress.

Back at home in Gasi I would readily join in any conversation while sipping tea or *kahawa chungu* with *mahamuri* in the evening or at night. I would also participate in any discussions and informal meetings that I considered would yield vital information for my study. In such gatherings I would seek explanations about what I had observed and make enquiries on some of the unanticipated responses coming up in the formal interviews. I would also request the villagers to patiently explain certain emerging issues that appeared unclear and perturbing to me. For instance, some of the disturbing issues were: how the water tidal patterns influence the activities of the mangrove cutters and fishermen and how this effect replicates itself in the economics of the entire community. From their detailed answers I soon realized that, unlike myself, the local people knew as much, if not more, about the marine ecology, as the marine scientists did.

During my stay in Msambweni Division, I noted down some words and bits of expressions that seemed to reveal the people's perceptions of their environment. The use of certain words by the local people indeed explained in a nutshell what the exploitation and management of the mangrove ecosystem entails. For example, *nyavu* (fishing nets) and *dau* (a term used to refer to the locally manufactured canoes) denoted the kind of equipments and the level of technology used in the exploitation of the marine resources. On the other hand, *Wa Pemba au wavuvi kutoka Pemba* (fishermen from Pemba Islands) referred to the people who are perceived to be the cause of the continual massive destruction of the fishing grounds by their practice of beach seining. *Watu wa Fishari* (people from the Fisheries Department) and *Watu wa foresti* (people from the Forest Department) were the terms used to refer to the authorities concerned with the management of the marine life and the mangrove forest, respectively, thus, indicating that the local people have been pushed to the periphery in such management issues. *Mkoko imekwisha*, which translates to "mangroves are finished", denotes the depleted status of the mangrove forests while *cheti*, a licence or permit, refers to the mechanism put in place by the Forest Department to regulate the harvesting of the forest products. The use of a permit or licence was perceived by the local community as denying them free access to the mangrove swamps and so prompting a loss of ownership. The words frequently used to express their bitter sentiments were *sisi sio wenyewe* literally "we are not the owners." Conversely, *sisi ni wenyewe*, we are the owners, compelled my interlocutors to explain that a majority of the people who fish or cut the mangroves are from the coastal community. I soon found out that such comments appeared to be stating that the mangrove resource is the

major source of livelihood for the local coastal people. This served to reinforce the views pointed out by previous researchers that the mangrove ecosystem plays an important role in the sustenance of the people.

The reiteration of these words made me adapt questions in harmony with the people's own conceptualizations of a sustainable use of the mangrove and marine resource and also to what extent they thought the concerned authorities should exercise their powers over a resource that they considered "their own" but which paradoxically they did not own. Given the social environment in which I freely talked, listened and conversed with the people both at home and outside, it was not possible to use a tape recorder. Thus, tape recording was only carried out when interviewing key informants. The transcriptions made contain all the crucial aspects of the mangrove exploitation and management.

Despite having identified myself with the community to some extent, I still could not hide my second identity of a social intruder and the inhabitants would always go out of their way to tell me about details of local life. For instance, the first person I approached to give me the directions on how to locate the Shirazi village chairman started with a brief history of the Shirazi people. He drew a historical and cultural, but not a religious, distinction between the Shirazi people and the rest of the coastal communities, particularly the Mijikenda. Such ethnic subdivisions had not been anticipated at the time of proposal writing and, in fact, came as a surprise since I originally had proposed to work amongst the Digo who are numerically the majority in Msambweni Division. This necessitated that I readjust the questionnaire instrument to take care of the question of ethnicity. The historical background given really enriched my cultural knowledge of my new community. Besides, the ethnic question paved way for my understanding of some of the serious problems my new community members were facing in connection with the conservation of their natural resource systems. My new found friend also explained the benefits that they derive from the mangroves and gave a vivid description of oyster farming. He said that this activity is currently considered by the local people to be the pride of Shirazi village.

My foreign identity became even more pronounced when on one occasion I, through mistakes on my part, learnt the pollutive nature of women in this coastal Muslim community. On this particular day, while I and a number of friends were walking towards the market, we met one of our male friends and as usual we went through the "normal" greeting procedures. However, our friend was very reluctant to shake hands with me but I also noticed that he did not shake the hands of my fellow women friends either. Later on, one of the males explained to me that our friend must have had his prayer ablutions and that a handshake with a woman would have made him ritually unclean and, therefore, that would have forced him to make another ablution. I considered this to be a source of embarrassment but my women and men friends, being members of this community, seemed to understand the whole notion of females being considered pollutive beings. I later reflected that such religious avoidances perhaps

accounted for the popularity of the numerous verbal greetings between women and men that I observed in the area during my fieldwork.

Although I used participatory methodologies, I was not able to involve myself fully in all the activities of the local people. This was probably because of my gender, age, ethnicity and religion. The most significant exceptions were my inability to go fishing or cut the mangrove poles since these activities are considered exclusively masculine. Also, another reason given was that walking with me in an environment as hostile as the mangroves and the sea was going to be very uncomfortable. I was never directly told that I would inconvenience them in their work since they would constantly be worrying about my safety instead of going about their duties normally. However, I did have a feeling later as the fieldwork progressed that being incubus would have been one of the reasons. When I confronted some of my friends with this later, they confirmed it and added that they were ill-equipped with the finer details of my life since deaths are known to occur particularly during such marine expeditions. Also, being a non-Muslim, I could not participate in their daily prayer rituals as well as other religious festivities. Similarly, having been brought up in the interior, I was used to freshwater fish and so I was not able to partake of the sea fish despite the culinary skills that the local people applied in their cookery. In addition, I was not able to access certain information that was regarded by the local people as being secret. For example, most male informants were not willing and ready to discuss the cultural taboos pertaining to the exploitation of the mangrove ecosystem, let alone the terrestrial production.

Having set for my fieldwork shortly after the ethnic clashes in Msambweni Division which occurred in 1997 had ended, I initially felt that the political instability and insecurity in the area would negatively affect my work. I also felt that it would be very stressful living amongst these people since from the news reports, it appeared that most people from upcountry were the prime targets of the local people. I concluded that my life would perhaps also be in danger. However, all my apprehensions proved misconceived. This is because the local people were very friendly and welcoming right from the beginning. I attributed this gesture to the efforts made by the government of Kenya through the police force in arresting the main engineers of these political skirmishes. Above all the local people strongly felt that the fights were politically instigated and that only a few people benefitted at their own expense. Therefore, the local people felt that they would rather live in peace and harmony with the other ethnic groups as they pursued their daily endeavours of earning a living. Despite all these problems cited above I was able to collect as much data as possible for my study.

CHAPTER FOUR

GENDER RELATIONS AND THE EXPLOITATION OF THE MANGROVE ECOSYSTEM

4-0. INTRODUCTION

In this chapter, the data on the various themes of the study are presented. The first principal focus is on the demographic characteristics of the people in the four research villages of Msambweni Division. The second concern is on the gender roles in the mangrove ecosystem while the third is on the conservation and management of the mangroves and marine products as well as the feasibility of exploiting the multiple potentials of the mangrove habitat. The fourth part focuses on the sources of incomes and food while the fifth section deals with the health-related constraints which the local people encounter in their daily struggles to earn a living.

4.1. DEMOGRAPHIC CHARACTERISTICS

A total of 100 informants were interviewed and these consisted of 50 males and 50 females. Specifically, 38% of the informants were residents of Bodo village, 37% resided in Gasi village, 15% were in Shirazi and 10% were members of Bomani village. Our sample was determined by the number of people in each village who were actively involved in the exploitation of the mangrove and marine resources. Table 1 below shows us the sample distribution of the informants by gender.

Table 1: Sample distribution by gender.

Village	Female		Male		Total	
	No.	%	No.	%	No.	%
Bodo	16	16	22	22	38	38
Gasi	18	18	19	19	37	37
Shirazi	6	6	4	4	15	15
Bomani	10	10	5	5	10	10
Total	50	50	50	50	100	100

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The data indicate that a fair number of the informants (37%) were aged between 20 and 30 years while 30% ranged between 31 and 40 years. Those informants aged between 41 and 50 years constituted 8% and 5% were between 51 and 70 years. However 20% of the informants were not able or were unwilling to tell us their exact ages. Table 2 below shows the age categories of the informants by gender,

Table 2: Ages of the informants

Age (yrs.)	Gender				Total	
	Male		Female			
	No.	%	No.	%	No.	%
20-30	17	17	15	15	32	32
31-40	15	15	13	13	28	28
41-50	2	2	4	4	6	6
51-60	1	1	1	1	2	2
61-70	1	1	2	2	3	3
Can't tell	14	14	15	15	29	29
Total	50	50	50	50	100	100

Our sample distribution by religion shows that the community is largely Muslim as indicated in Table 3 below. The table shows that a majority of the informants (88%) are Muslim while 12% are Christians with an equal number being Catholics and Seventh Day Adventist (SDA).

Table 3: Religion and gender

Religion	Gender				Total	
	Male		Female			
	No.	%	No.	%	No.	%
Muslim	43	43	45	45	88	88
Catholic	3	3	3	3	6	6
SDA	4	4	2	2	6	6
Total	50	50	50	50	100	100

The data also indicate that 84% of the informants were married, 9% divorced while 6% were single and only 1% was widowed. Table 4 below shows the marital status of the informants.

Table 4: Marital status of the informants.

Marital Status	Gender				Total No. %	
	Male No. %		Female No. %			
Married	44	44	40	40	84	84
Divorced	4	4	5	5	9	9
Single	2	3	4	4	6	6
Widowed	0	0	1	1	1	1
Total	50	50	50	50	100	100

Source: Fieldwork 1998

Keen interest was then taken to find out how many males and females were from monogamous and polygynous marriages. The information is indicated in the table below.

Table 5: Marital union of the informants

Marital union	Gender				Total No. %	
	Male No. %		Female No. %			
Monogamous	43	43	37	37	80	80
Polygynous	1	1	3	3	4	4
N/A	6	6	10	10	16	16
Total	50	50	50	50	100	100

It is interesting that a society which is 88% Muslim demonstrate a high percentage of monogamous marital unions. This is because 43% males and 37% females were found to be monogamous while 1% males and 3% females were polygynous. Perhaps poverty and the harsh economic conditions have forced a majority of the males and females to rethink polygyny. This is further reinforced by the following comments from both single and married informants. For instance, one single man stated that:

I can only marry more than one wife if I have a lot of investments and money to take care of my wives and children properly. I only hope to continue providing for my wife and children.

On the other hand, a single female informant claimed that:

I cannot allow my husband to marry another wife if my children and I are not living comfortably. However, if my husband insists on marrying another wife then I would rather divorce him than see both of us (the wives) suffering,

the other hand, a monogamously married man suggested that:

do not foresee myself having many wives because currently I cannot even feed my wife and children.

The fact being polygynous to me is simply unimaginable.

However, one polygynous man was very proud of his wives and children because

he was able to take care of them adequately without straining. He added that:

I married plural wives because my fixed assets and money in Kwale and Mombasa were enough

to cater for them. My assets and money are too much for one wife and her children.

Table 6 below indicates that 26% of the females and 21% of the males did not have any formal education at all while 14% of the females and 16% of the males had received primary level of education. Also, 8% of the females informants and 12% of the male informants had secondary school education. Similarly, 2% of the females and 1% of the males had obtained college level of education. It appears that the females' level of education is lower than that of the males. This is because only 24% of the females have had secular education.

Table 6: Education status of the informants.

Educational status	Gender		Total No. %
	Male No. %	Female No. %	
Illiterate	21 21	26 26	47 47
Primary	16 16	14 14	30 30
Secondary	12 12	8 8	20 20
College	1 1	2 2	3 3
Total	50 50	50 50	100 100

Source: Fieldwork 1998

Interest was then taken to find out if religion influenced the achievement of secular education amongst these coastal communities and these data are portrayed in the table below.

Table 7: Education achievement and religion.

Education	Religion			Total No. %
	Muslims No. %	Catholic No %	SDA No. %	
Illiterate	45 45		1 1	47 47
Primary	27 27			30 30
Secondary	15 15			20 20
College				
Total	89 89			100 101

Source: Fieldwork 1998

The table above shows that their high illiteracy levels (45%) amongst the Muslims in the research site. 27% of the Muslims had Primary education while 15% had reached Secondary level. Only 2% had acquired College education and none had had University education. It appears that there is low level of education obtained among these Muslims. However, in-depth interviews revealed that both boys and girls of school age participate in al Qur'anic schools (madarassa) where they are taught Islamic laws and Hadith (plur. ahadith), which is an "authorized compilation of the prophet's words, deeds and exemplary practices" (Ong 1990:264) as well as being "Traditions . . . literature which deals with all sorts of matters including theology, ethics and exegesis (explanation of the Qur'an)" (al-Qur'an:

Vii) . in this part of the Muslim world, both men and women can teach in these schools so long as they are trained. However, only men instruct at higher levels of Islamic learning. A majority of women teach nursery and primary classes where both boys and girls are taught in one class. However, when a girl starts to menstruate, she is separated from the boys as she now needs special instructions on how to take care of herself. At the end of primary level (Standard 1-4) examinations are conducted and certificates awarded. Qualified pupils are allowed to proceed to secondary level. However, there are very few girls who reach secondary level, since most of them consider the primary level just adequate but they are not prohibited from it. Like the Muslim children in Lamu (Fuglesang 1994) and Mombasa (Olela 1994; Strobel 1989) these boys and girls go to the *madarassa* during the week and holidays. In order to cope with the western education schedules, lower primary pupils (Standard 1-3), attend *madarassa* in the afternoon while upper primary pupils (Standard 4-8), go to the *madarassa* in the early dawn and in the evenings. Candidates who are in standard eight are exempted from the week day classes. However, in Zanzibar (Eklund and Petterson 1992) children attend such schools every afternoon except Fridays. This is probably because their teachers have to attend Friday noon prayers which are more extensive than the usual daily ones. On the other hand, in Msambweni Division, children do not go for *madarassa* on Thursdays and Fridays because Thursday is a day set aside for religious ritual purification in preparation for the Friday prayers. Both men and women in the research site consider *madarassa* schools to be very important so that youngsters do not lose track of their religion.

4.2. GENDER ROLES AND RESPONSIBILITIES

4.2.1 GENDER DIVISION OF LABOUR

The available data indicate that the mangrove and marine resources, like any other natural resources, system are characterized by traditionally prescribed gender roles and responsibilities both in their actual extraction and marketing. The table below shows the prescribed gender division of labour in the mangrove ecosystem.

Table 8: Gender division of labour in the mangrove ecosystem

		<u>GENDER EXTRACTION</u>	
Mangrove <u>production</u> Fishing	pole	Males as mangrovecutters	Males as licenceholders and <u>stockists</u>
		Males	Males fish dealers Females and males fishmongers
Harvesting <u>vegetables</u>		Females	Females
Collecting <u>seafood's</u>		Females	Females
Collecting firewood		Males*	

Source: Fieldwork
-I qqr *The males found to be collecting mangrove
phalloid were hired by the females who for various
reasons could not venture into the forests.

Table 8 shows that the male gender predominates the mangrove pole production and fishing. These activities are usually carried out to provide cash to many households in the four research villages. The female gender majors in the harvesting of vegetables, seafoods and mangrove fuelwood. Specifically muridi (*Susuvium portulacastrum*) is the most common vegetable found and harvested in the mangrove swamps of Msambweni Division. The seafoods which are commonly collected by the women consist of: prawns (*kamba dogo*), Bull mouth (*dondo*), Giant spider (*nyale kubwa*), Tiger courier (*kungugu*) and common spider (*nyale ndogo*). Thus, the male activities are found both in the forests and sea while the female ones are centred only in the forest milieu. The informants stated that the seafoods, vegetable and firewood are collected purposively for domestic consumption although they can sometimes be sold to provide cash for some households.

The study then sought to find out the inter- and intra-household division of labour. The informants were asked who would perform these productive tasks in the absence of the responsible adult male and female. Table 9 shows the gender responsible in the absence of the adult male.

Table 9: Responsible gender in the absence of the adult male

gender	frequency	percentage
Sons	43	43
Male friends/relatives	11	11
Nobody	19	19
Always present	27	27
Total	100	100

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Table 9 shows that a majority of the informants (43%) entrusted their sons to cut the mangroves and/or go fishing. A total of 11% indicated that their male friends and relatives would pick up these responsibilities in their absence. 19% of the informants were very categorical that nobody else would perform these two tasks in the absence of the concerned male. Lastly, 27% of the informants were very certain that the mangrove cutters and the fishermen were always present to go about their duties. This information shows that the males were rarely absent for extended periods of time so as to warrant hired labour. It appears that these two commercial activities are exclusively in the domains of the male gender. It is suggested here that females cannot easily access economic returns from the mangroves and sea, therefore, households that rely primarily on the mangroves and sea for cash experiences financial stresses when the male gender is absent. However, the situation seems slightly different for the feminine activities. Table 10 shows who is responsible in the absence of the concerned female.

Table 10: Responsible gender in the absence of the female

GENDER			FREQUENCY	PERCENTAGE
Male	and	female	11	42
children				
Male	and	female	33	33
relatives				
Male	and	female	10	10
friends				
Always present			15	15
Total			100	100

Source: Fieldwork 1998

Table 10 shows that a majority of the informants (42%) stated that both male and female children would comfortably harvest vegetables, seafoods and collect firewood. Also, the table indicates that 33% of the informants entrusted their relatives such as husbands, brothers and sisters-in-law with the collection of the mangrove products. However, 10% of the informants delegated these duties to their male and female friends although all villages both men and women receive and perform these tasks. It appears that in the absence or even labour assistance from km and non female. While the females cannot encroach presence of the responsible male and female presence and/or absence, the males can on the male-oriented responsibilities in their presence and/or absence. The informants comfortably perform the female or these traditionally prescribed gender roles conversational interviews indicate that a child grows up knowing and responsibilities are society. Specifically, young male children who his/her responsibilities in the workable adult male usually assist in peeling off often accompany the acting or re considered less tedious. The older the barks of the mangrove poles, a duty and transporting them to the pole landing male children assist in felling the poles allowed to go fishing as the young children bays. Only the older male cleaning of the fish and the canoes. During these wait at the seashore to help taught the various parts of the canoe, how fishing expeditions, the male children sailcloth and how to swim. They are also taught to row, how to properly position ds and predict good and bad harvests. The how to determine fertile xx integral part of the instructions given, "secrets" of the sea similarly dominate these productive tasks, particularly the

The tendency for the male to dominate in the decision making process concerning these commercial ones, is also reflected in who would make the decision to cut the mangrove poles or go fishing when the informant is absent, the information shows that 44% of both the females and male informants will not entrust anybody decision making while 56% of the informants would entrust their older sons with such with the decision to cut mangrove fishing. It appears that the decision making process is restricted on the household unit. This seems to undermine the rational older male children are similarly when the informants were asked who would Potentials of the female gender. In the absence of the females, the following make decisions for the feminine male informants would delegate such a duty became apparent. 48% of both male and female informants would delegate such a duty to the males as husbands and

informants would entrust their male and female children with such decisions. 10% of both the male and female informants would entrust their male and female relatives while another 10% would leave such decisions in the hands of male and female friends. The following information is clearly shown in the table below

11- Decision-making in the absence of the responsible female gender.

GENDER	FREQUENCY	PERCENTAGE
Males	48	48
Male and female children	32	32
Male and female relatives	10	10
Male and female friends	10	10
Total	100	100

Source: Fieldwork 1998

Table 11 indicates that the males can make decisions concerning the feminine roles and that these decisions are not in any way restricted to the household unit. This is simply because relatives and friends are also entitled to make such decisions. It appears that the males as the heads of the household have the right to make decisions concerning both the masculine and the feminine duties while the female's decisions are only restricted to the feminine roles and responsibilities.

4.2.2 PEOPLE'S PERCEPTIONS OF THEIR GENDER ROLES

This study therefore took keen interest to find out the views, perceptions and attitudes of men and women towards their traditionally prescribed gender roles. Inquiries were also made into the people's expectations. When the informants were asked if they derive satisfaction from their prescribed gender roles, 68% of both male and female informants indicated that they did not find any satisfaction in their responsibilities. 26% of the informants stated that they enjoyed performing their prescribed tasks while 6% said that they were not sure. This information is contained in the table below.

Table 12: Satisfaction derived from gender roles.

VIEWS	F		PERCENTAGE			TOTAL	
	Males	NO	Males	Females	%	NO	%
Not satisfied	45	45	45	23	23	68	68
Satisfied	5	5	21	6	21	26	26
Not sure	0	0	0	6	6	6	6
Total	50	50	50	50	50	100	100

Source: Fieldwork 1998

Table 12 indicates that a majority of the men (45%) and women (23%) do not find any satisfaction at all in their prescribed gender roles. Deeper probing revealed that the people's dissatisfaction stems from the fact that the economic returns from the land, sea and the mangrove are not meeting the rising demands of modern living. They strongly and candidly stated that a majority of the local people in these four villages were just surviving. The males in particular are pushing life" or in other words they are just surviving. The males in particular are unable to such dissatisfaction because the Islamic law declares them as sole breadwinners of the household and the homebound wife and family enhances the dignity of the man. Muslim societies, as well as the accounts of the informants a majority of the and honour of the man. However,

local people cannot live up to the dictates of the Islamic principles and are, thus forced by circumstances to accommodate a "traditional" woman. This means that in the research site, women are neither strictly confined to the house nor totally dependent on the men for economic survival. In fact, women in these four villages are physically mobile as pointed out by Maas (1991) in her study among the coastal community in the neighbouring Kinondo Division, Kwale District. On the contrary, a majority of the economically active women in Morocco (Davis 1975) abhor appearing in public because it displays lack of male support thus, lowering the male honour.

Men and women in Mombasa Division perceive increased women's contribution to the household budget as being of great significance. This is because the financial burdens of a male are somehow lessened. According to the informants allowing a woman to have an independent income enables her to satisfy her own diverse economic needs as well as those of her family. These Muslim women are not obliged to share their incomes with their husbands and the money they earn is normally used to purchase personal belongings such as jewelry, clothing and also to meet household contingencies, investments in personal belongings are a security in cases of divorce and widowhood. Both men and women in these four villages felt that an economically active woman does not compromise the authority, honour and dignity of the man. One

male informant stated that:

I do not feel my position and authority as the head of the household is threatened, this is because whenever my wife leaves for money, she indicated that they have to respect and obey their

The females on their part "women's first duties are to their husbands, ... husbands because first and foremost should obey Allah" (Ong 1990:270). Second, they should obey them just like a husband's making that they cannot adequately cater for their families but it is because of the dwindling and less productive natural resources that their own incomes are not adequate

to cater for their needs. 12% of the females and 5% of the males found According to Table 12/21% of these particular informants felt that satisfaction in their present gender roles. They have no right, authority or means Allah had predetermined their roles should be in the name and praise of Allah. to alter it. Therefore whatever is available at their disposal.

The females felt content with their perceptions seem to be influenced by the Apart from religious beliefs in particular the constellation of the three-interpretation of the celestial bodies to west in the sky (cf. Nangendo and Wandibba star system which move daily or wishful thinking (tamaa), the second is a 2002). The first star represents a third star stands for evil (mauti). A popular symbol of a human being (binadamu) three-star system is tamaa mbele, binadamu . - to truth

Kiswahili saying referring means that greed in front, a human being in the katikati, mauti nyuma. This means that if an individual is guided by greed he/she middle and evil behind. They expect his/her desires, for example, by will be tempted to use «»blows stealing are socially and religiously unacceptable actions such stealing. However, actions such

and are thus punishable, one risks being beaten to death for a, • •
 ^ ' ^ trully ones. Therefore, behind every greed **there is** T* "
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 continual providence. This three-star system is a col ^ ^ ^ <«*
 uprightness amongst these Muslims. «" *nder of moral

It is important to note that although a majority of rh=
 ^issatisfaction with their specified roles, their e x p ^ n ^ ^
 r⁶ quite and their potential avenues very limited. This J_b jobs
 field information both men and women in these research sites look ^ ^
 ^ing incompetent in the current labour market as the majority s t a t ^ l ^ ^ ' "
 emphasis is iaid on skilled human power> Given thafc there ^ i that today more
 obtaining in the research villages, most of the informants believld thlt ^ l G V e l s
 a very limited range of choices at their disposal and the next best 3 * ^ ^ ^
 ^ explore the land, mangroves and the sea. 3 ternative is

4-2.3

FINANCIAL RESOURCES AND GENDER DIMENSIONS OF LABOUR

This study then sought to find out factors influence n r r
 div-i « • labour in these four villages. Iingquiries were made into why fem l observed gender
 °me males were not involved in mangrove pole production and fishina Th ^
 ac counts for their non-involvement.

able 13: Reasons for non-involvement in commercial activities.

L	REASONS	j	FREQUENCY	J	PERCENTAGE
	Lack of 1		35	1	35
[funds					
L	Hard labour 1		27	1	:21
	Low market I		18	1	18
[prices					
L	Age 1		1°		10
	Poor state		5		5
L°f health j					
1	Frequentl		3		3
a t t a c k s by					
[diseases					
	Harassment 1		2		2
from Govt.					
L?fficials		1			
L	TOTAL		100	1	100

Table 13 indicates that 35% of the informants viewed the huge finances required ^ fishing and mangrove pole production to mainly account for the non-involvement of ^e females and some males in these two activities. It was argued that most women are disadvantaged because they have limited financial resources at their disposal Perhaps, inadequate finances also accounts for the few number of licencees in the four villages. At the time of the fieldwork, there were only two licencees in Gasi, f i v e in Bodo and only one in Shirazi and another in Bomani. To engage in mangrove pole Production, therefore, one needs an estimated amount of between Kshs. 34,000-45,000 *hile to venture unto fishing, an individual needs approximately Kshs. 20,000 and

above. Specifically, the Kshs. 34,000-40,000 would cater for the following: a non-refundable application fee of Kshs. 1,000, the licence itself costs Kshs. 10,000, an estimated Kshs. 8,000 would be used to hire a vehicle to transport the poles to the market while another Kshs. 8,000 would pay off the cutters. Lastly Kshs. 5000 would cater for the contingencies. The above information is captured in the table below:

Table 14: Initial capital outlay for mangrove pole production.

Items	Costs (Kshs.)
1-Non-refundable application fee	1,000
2. Licence fee	10,000
3. Vehicle hire	8,000 - 13,000
4. Wages of the cutters	10,000 - 16,000
5. Contingencies	5,000
TOTAL	34,000 - 40,000

Fieldwork

According to Table 14, an estimated Kshs. 11,000, that is, the application fee and the licence fee, is to be spent annually while the other costs are incurred regularly. A potential licensee is identified and evaluated by the licencing board. This board is made up of 6 members, five of whom are from the Forest Department and only one member is from the local community. Some of the qualifications of a licence rest primarily on one's ethnic identity, place of residence and proven ability to pay Kshs. 11,000 annually. The emphasis laid on ethnicity perhaps explains the absence of non-coastal licences in the four research villages. All the licences in this area were found to come from the coastal ethnics such as Digo, Duruma, Swahili and Shirazi. When the licencees, the cutters and the Forest Department Officials were asked their views concerning the licence fees, the licencees strongly felt that they too should be given a chance to decide not only on the licence fee but also on the revenue to be paid to the Forest Department. The reason being the mangrove pole prices are decided upon by the demand and supply forces. Therefore, to them, it is very logical for the pole prices to regulate the licence fee and the revenue. In fact, most of the licencees suggested that the licence fee should at least be Kshs. 5,000 or even less. Others felt that the present fee should be reduced but could not tell precisely by how much that reduction should be. A majority of the cutters shared the same view. On their part they felt that they would have a better pay from their employers with a reduction of the licence fee. The Forest Department officials could only promise to voice the local perspective in their departmental meetings for consideration. They explained that they were not authorized at the divisional level to make or enact any law. They, however, decided that any reduction could be made, very pessimistic that a year as shown in Table 14, depends primarily on the location of the market, there are centers of Msambweni, Ukunda or to distant markets such as Kwale town, Likon and Mombasa. The Kshs. 10,000 set aside for

mangrove cutters can only pay off three mangrove cutters in a month. These cutters are supposed to produce 10 scores of medium sized mangrove poles in the 30 days. The number of mangrove cutters per licensee is a rule set by the Forest Department. These cutters are served with a copy of the licence of their employer which has to be produced on demand by the Forest Department. However, all the licensees as well as the mangrove cutters confessed that it is very difficult and almost impossible for three mangrove cutters to produce 10 scores of poles in a month. This is due to the harsh working conditions, scarcity of the mangrove poles and limited time for exploitation. The cutters explained that they work for an average of six hours a day depending on the daily tidal pattern. The diurnal water pattern reduces their working days to 22 days a month with two weeks to cut the poles and one week to transport them. In a bid to maximize production, the licensees indicated that they employed more than 5 mangrove cutters. The licensees expressed fears that given the prevailing environmental conditions, it will be needless to venture into mangrove pole production in the near future, since there would be no poles to cut, thus, no profit to be made.

The contingencies indicated in Table 14 include sales and marketing, fare to transport the forester from the Forest Department premises in Buda to the pole landing bays and payment of the royalties for the poles. The forester has to stamp all the mangrove poles before the poles leave for the market. The mangrove poles, therefore, must bear the white stamp of the forester otherwise one risks to have one's poles being confiscated or be charged in a court of law for contravening the Forester Act No. 385. The revenue paid to the Forest Department not only depends on the size or the poles but also the country's current inflation rate thus the revenue fluctuates yearly. The revenue Charges are decided upon by the Ministry of Trade, Tourism and Natural Resources and they are effected shortly after July when the national budget is tabled in the Kenyan Parliament. The table below shows the revenue structure.

Table 15: Royalties for mangrove poles to the Forest Department.

Mime I	Size (cms)	Revenue (KSHS.)	
		1996 - 1997	1997 - 1998
Fito	> 4	4	7
Pau	4.1 - 6	36.00	40.00
Zig	6.1 - 8	60.00	75.00
Bofiti	9.1 - 13	75.00	100.00
Nguzo	13.1 - 20	100.00	125.00
Banaa	20.1 - 35	150.00	165.00
Vigingi	<35	200.00	210

Kwale District, 1998

Source: Tsuda Forest, Msambwexu. Division,

The Table above shows that the revenue costs ranges from KSHS. 4.00 - KSHS. 210.00 depending on the size of mangrove poles. It also shows that these costs vary from one fiscal year to another. Forest Department Officials indicated that the revenue costs are bound to increase steadily over the years given the ever-decreasing

monetary value of the Kenyan Shilling. This indicates that the KSHS. 30,000 needed to go fishing

The available motor vessels, fishing nets and to pay revenue to the would be used to purchase fishing

Fisheries Department. The table below shows the financial breakdown for the fishing occupation.

Table 16: Initial capital outlay for fishing

ITEM	COSTS (KSHS)
Fishing vessels	10,000 - 15,000
Fishing nets	10,000 and above
Revenue to the Fisheries Department	50 - 10,000
TOTAL	20,000 - 30,000

Source: Fieldwork 1998

Although the above Table stipulates that the costs of fishing vessels and nets could be Kshs. 10,000, or 15,000 in depth interviews reveal that these costs could be much lower than estimated. The fishermen have put in place a number of strategies to ensure the survival of their households. First, most fishermen would provide almost 100% of the unskilled labour needed to make a canoe such as felling the recommended tree trunk and shaping the various parts of the canoe. Thus, the canoe builder would only provide technical assistance. In a case where the canoe builder is either paid reduced. The fishermen are usually paid in kind. Most fishermen preferred in cash for a fee of less than 500 Qr as this enables them to acquire the necessary skills needed to repair the canoe. Secondly, three or four fishermen would come together and contribute towards the purchase of the canoe. Lastly, other fishermen would choose to hire the canoe that the widely used contract formula is locally signed. Most of the fishermen contract money allocations are made for the known as *Fungo tatu* or *Patatu*. Percentage allocations are decided upon and regulated by the fishing crewmembers. Their decisions depend on the fish catch. Thus, whether it is hired or not. A majority of the *fungo la kwanza* is money for the first allotment is slightly higher if the canoe is hired but the amount is still affordable. The money is used for canoe repairs. However, since the canoes are hired after a long time, the money is often used to purchase of the nets while *fungo la tatu* is for the fishermen to divide amongst themselves. Department ranges from Kshs. 50 to slightly above Kshs. 10,000. Both the fishermen and fish traders have to pay revenue. Specifically the fishermen are charged for the fishing vessels. This particular fee is charged from Kshs. 100.00 to 10,000. On the other hand, is mechanized or not. The fee rate is the revenue paid by the trader. For the type of fish one trades or Kshs. 1500 while oysters sellers instance, those selling crustaceans are highly priced in this part of Pay Kshs. 200. This is probably additional revenue depending on his/her 41. The traders have the Kenyan coast, me

area of operation (whether rural or urban) and the means of transport he/she uses. For the traders based in the rural areas one pays Kshs.100 while their urban counterparts pay Kshs. 300. These figures are probably influenced by the purchasing power of the consumers. Traders using public means pay Kshs. 50, those with private vehicles are required to pay between Kshs. 500-Kshs. 1000 while those using the boats pay between Kshs. 1000 - Kshs. 5000. The above information is shown in the table below.

Table 17: Revenue Paid to the Fisheries Department

ITEM	REVENUE (KSHS.)
Non-mechanized fishing vessel	100-200 (1-5 metres and above)
Mechanized fishing vessel	200-10,000 (1-5 metres and above)
Crustaceans dealer	
Wet	1,500 -
Dry and live	500 -
Oyster dealer	200
Rural-	100
Urban	300
Movement permit	
Vehicle (1-3 tonnes and above;	500-1,000
Public means	1,000-5,000
	50

Fieldwork 1998

It is important to point out that these taxes are paid regardless of the amount of marine products. Both fishermen and fish traders strongly felt that the revenue should fluctuate according to the seasonal marine harvests. Therefore, higher taxes during high fish catching seasons and lower taxes during low fish catching seasons. However the Fisheries Department Officials could only promise to highlight their complaints during their regular departmental meetings for consideration. The major concern of the Fisheries Department was the need for marine exploiters to purchase fishing licences: This licence system was abolished in 1992 through a presidential decree and can only be lifted through the same. The officials said that they needed such monies to effectively manage and control the marine resources. Specifically, they would use the funds to purchase motorized boats and employ more personnel to carry out sea patrols. These would curb sea piracy as well as eradicate illegal and indiscriminate fishing practices.

To further highlight the economic status of an individual as a major determinant of one's activity, the informants indicated that the inadequate financial resources of most men and women

resources or market g^ estimated Kshs. 4000 to become a fish dealer and outlay. For instance, one fishmonger. It appears that a majority of the only less than Kshs. 500 to^ ^ ^ ^ ^ ^ ^ ^ ^ ^ research women cannot even afford t e ^ ^ ^ ^ ^ ^ dealers in Bod^ fQur ^ in Gasi, two villages were men. For example, ^ ^ ^ distribution of fish dealers in the in Shirazi and one in Bomanx. Table research site.

Tablets; The distribution of fish dealers.

NUMBER

Shirazi
 Bomani
 TOTAL
 Source! Fieldwork 1998 13

The table above shows that Bodo village has the highest number of fish dealer, because Bodo village is the second largest fish landing bay fmi at the border of Kenya and Tanzania. Thus its easily accessible across the Tanzanian seas and this increases the marine resource output. Both women were found to be fishmongers although a majority of them were women. The table below shows the gender distribution of fishmongers in the four research sites.

Table 19 Distribution of fishmongers

village	number	female
Bodo	20	30
Gasi	15	10
Shirazi	5	10
Bomani	3	10
TOTAL	43	90

The above table shows that a total of 43 men and 90 women are involved in fish trading in the research site. The key informants pointed out that the above figures were not very accurate as the number of the fishmongers in each fish landing bay keeps fluctuating, especially, during the low fishing seasons when most fishmongers have to visit several of these landing bays to obtain the fish. They also observed that there is a very high mobility amongst the females and they thought that this was perhaps because women are more concerned with food provision in the household and they would go to great lengths to make a variety of foods available in their houses.

4.2.4 LABOUR INPUT

The available data also indicate that the muscle power involved in cutting Poles and fishing hinder females and some males from these two activities (See Table 13). On their part, the females in particular felt that they were too weak to engage in such activities that they considered to be very strenuous. This research therefore, considered the work involved, the equipment used and the time taken to constitute the labour of males involved in the mangrove and marine exploitation. The cutters explained that after felling the poles, one had to peel off the barks and carry the Poles to the nearest water channel to await transportation to the pole landing bays. Transporting these heavy poles using the traditional canoes required not only a lot of energy but also expertise otherwise one risks drowning. When the mangrove cutters were asked what equipments they use, they said that they use small axes and machetes to cut and peel off the barks of mangrove poles. It appears that these traditional implements are not only conducive to mangrove pole production but they are also environmentally friendly. This is because these two implements make wading about the dense entangled serial roots of the mangrove forest far much easier than carrying a

heavy power saw. Thus, a mangrove cutter can save time as he has to compete and contend with the incoming waters. Although using a power saw would increase production, it would in the long-run render people jobless as it adversely affect the natural regeneration of the mangroves, (cf. Juma 1998). It therefore, appears that mangrove exploitation may not be mechanized at all. It can also be argued that a lot of time is wasted as these coastal communities go about their duties in the mangrove ecosystem. This seems detrimental to the stability of the household as more time is spent on less productive resource.

The mangroves cutters further explained that they work in the forests for only 22 days in a month. They are preoccupied all the days of the week except on Friday when they go for Friday mid-day prayers. Friday also doubles as their resting day. During working days they only spend six hours or less in the forests depending on the daily tidal pattern. They, therefore, cut the poles during the low tide and transport them during the high tide. The cutters were then asked how many poles they can fell in the six hours. A majority of the cutters stated that one can fell a maximum of 2 scores, of small sized mangrove poles, known as *pau* and 1 score of medium-sized poles known as *zio*. They added that nowadays it was becoming increasingly difficult to extract forty poles, a fact they attributed to the earlier extensive extractions of mangroves for export, industrial use, charcoal production and the traditional manufacture of lime. They lamented that due to this scarcity, their workload has been increased because they have to sail or wade through the mangrove swamps during their free time in order to identify fertile grounds for future exploitation. They reported that one's productivity in the forest depended entirely on one's state of health, one's agility and the **availability** of the poles. They also mentioned that one needs a mastery of some sort of his working environment, for instance, one must know the location of the water channels, the zonation of different mangrove species, the depth of the muddy swamps, areas prone to wildlife attacks and lastly how to walk swiftly on the mangrove aerial roots.

On the other hand, the fishermen indicated that they work all the days of the month except on Fridays. They stated that they would leave either in the morning or evening depending on the water levels and toil for more than 12 hours at sea. They would therefore leave during the low tide and return home during the high tides. Those using traps would lay them during the low tide so that the fish get trapped as the water floods the **seashores**. When the fishermen were asked which type of equipments they used they said that they use dugout canoes, gillnets and traps. These traditional wishing gears not only [^]the lives of the fishermen but also deny them plentiful harvest. The canoes [^]capsize when there is a lot of sea turbulence. This is because of [^]the [^]Door [^]quanity. The key informants reported that in three months there had occurred two deaths [^]capsizing. These deaths were in November 1997 and occurred two [^]deaths were a major concern of the key informants and the fishermen. They vehemently [^]that safety and rescue measures should be put in place, some of their [^]suggestions include, [^]first, constant sea patrol, [^]second, Providing free first aid training and first aid kits, snorkelling equipment and free

floaters. Third, assisting fishermen to purchase motorized boats. Lastly, constant monitoring of the fishing crew so as to stimulate quick response to danger signals

Additionally, these less sophisticated gadgets deny these coastal fishermen plentiful harvest as they cannot go into the deep waters. The seasonal and migrant fishermen from Pemba seem to fetch a lot of economic returns as they are able to go further beyond the reef. This is made possible because these migrant fishermen have better quality water vessels. In as much as the seasonal Pemba fishermen make use of the Kenyan marine resources, their fishing methods seem to be a threat to the sustainability of this natural resource base and also to the lives of trap the people in these coastal communities who eke out their living from the sea. These fishermen use the beach seining method which not only destroys the coral stone that provide shelter for most of the aquatic life but also trap the fish indiscriminately. This is because their net sizes measuring less than 5.1 cm, a size which only targets juvenile fish. The recommended net sizes by the Fisheries Department in Kenya are *mallema*, gillnets, handlines as well as *jarifa* of sizes ranging from 5.1 to 30 cm. Despite these well-defined fishing regulations, the beach seine crews have intensified their activities not only in these four villages but also in the neighbouring Kinondo Location. This destructive fishing activity has been carried out for over a decade now (King and Mallaret-King 1997). The local people in these locations have blamed the Forest Department for not enforcing the law. They are further angered by the presence of the Customs officer employed by the Fisheries Department to check on illegal fishing practices and smuggled goods. To them, the Customs officer don't seem to do

anything to wipe out the vice.

The fishermen in the research sites have passed through several local and higher authorities to air their grievances about these foreign fishermen, Unfortunately, their sentiments have hit a dead end and this has forced them to believe that the Fisheries Department receives bribes from these migrant fishermen, In fact the local people cannot understand why the Government has to compromise their future It is therefore, not surprising that "...The fishermen demanded to be heard but the Government prefers not to listen whether any enforcement of Fisheries Legislation will take place or not. The Fisheries Department denies that they actually do not have any proven evidence at the head office and the customs office are these fishermen present for inspection? therefore, that the migrant fishermen use normally the recommended net size. The forest Department does not the small net size once they are practically confiscate any illegal carry out sea patrols, if they have fishing equipment.

When the fishermen stated that they could not individually buy inadequate fishing equipments. They stated that the Fisheries Department has been modern fishing gears. However, the Fisheries Department has been encouraging them to form Fishing Co-operative Societies so that they could pool their financial resources together to assist each other purchase high quality fishing vessels and better fishing equipment. majority of the fishermen did not support the

idea of forming co-operative societies and rather preferred individual struggles. Most of them were greatly discouraged by the performances and final collapse of Msambweni Fishing Co-op. Society in Msambweni and Diane Fishing Co-op. Society in Ukunda. They said that the former members in these co-operatives did not benefit in any way from their respective societies despite having invested in them for over a decade. They argued that if these co-operatives were actually beneficial then at least one fisherman could have owned a motorized boat in any of the research villages. Other fishermen felt that these co-operative societies are so involving and they did not have time for such activities.

However a few fishermen were willing to form a co-operative society but the legal framework for the co-operative couldn't allow them to do so. For instance, the rules from the Fisheries Department stipulate that fishermen from two or more villages should constitute a co-operative society. These few fishermen felt that fishermen from two villages coming together would be such a big and unmanageable group and one may not benefit at all from such a group. Deeper probing revealed that the fishermen perceived that their financial problems could only be solved through cooperative work. However, they preferred forming groups to having co-operative societies. The fishermen would then organize themselves into small and manageable groups where each member trusted the other and are united by a common goal of improving their livelihoods. These groups, they suggested, would then be mandated to work closely with the Forest Department to regulate the prices of the marine products and also to formulate laws and regulations for the sustainable exploitation of the sea. Above all, the groups would mobilize funds for the purchase of the fishing gears. In this way, therefore, they would have solved their problems in their own way.

The available information indicates that just like the mangrove cutters, the fishermen have to understand the sea very well to harvest meaningfully. They are, for instance required to interpret correctly, the colour of the sea, the movement of the coconut tree leaves, the stars and above all they are required to observe the mutual taboos of the sea. However, a majority of the informants were not willing to discuss the taboos relating to the sea. This was, perhaps, because these informants considered such information to be secret and felt that as an outsider it was not very necessary for me to be equipped with such information. The male informants in particular were not comfortable discussing such issues with me perhaps because of my gender.

•2-5 MANGROVE POLES AND PHICES

The mangrove poles from involving in them. The cutters and the discourages some males and are offered for the various pole sizes. licencees were therefore asked how if part, indicated they earn as low as 40/= per score for The mangrove cutters on their vikingim similarly, the licencees stated that they fito and less than Kshs. 600/ 4000 for fito and vikingi, respectively. The are paid between Kshs. 100/- and mangrove poles per score, table below shows the prices of

Table 20: Prices of mangrove poles per score

NAME	BUYING PRICE (KSHS.) ^a	SELLING PRICE (KSHS.) ^b
<i>Fito</i>	40	100
<i>Pau</i>	50	250
<i>Zio</i>	75-100	300
<i>Boriti</i>	100-200	1,200
<i>Nguzo</i>	200-400	1,400
<i>Banaa</i>	400-600	3,000
<i>Viginqi</i>	>600	4,000

a. The prices offered to the mangrove cutters by the licencees

b. The prices offered to the licencees by the stockists

From the table above, it is clear that the licencees earn 3 times what the mangrove cutters earn yet the cutters are the ones who expend a lot of energy and risk their lives in the forests. Also, the table shows that the mangrove prices vary with their respective sizes. This study then sought to find out the views of the mangrove cutters and the licencees concerning the mangrove market prices. Both the cutters and licencees felt that the above market prices were low. The licencees also viewed these prices to be too low as they find it hard to realize much profits given the high cost of the licence and other marketing expenses. They mentioned that these prices should be increased so that they can realize meaningful gains. These low mangrove market Prices are reflected in the low payment made to the mangrove cutters. This is because Proceeds from the sell of mangrove poles are used to pay off the cutters as reported buy a majority of the licencees and the cutters. The licencees, therefore, depend on the stockists to pay off the workers. This means that a delay in the sell of the mangrove poles causes a delay in the payment of mangrove cutters. This insinuates an irregular payment structure.

The stockists explained that they usually give a down payment equivalent to half the total purchasing costs, They would then pay off the bills once they have sold all the poles. They confessed that sometimes there are delays in selling the poles causing a delay in the cutters payment. Some of the stockists argued that piling up the poles without payment creates bad relationships between them and the suppliers, not forgetting the cutters, and this is unacceptable to Islamic teachings which condemn exploitation and labour. One should specifically give another his or her rightfully earned ^{earned} ^{fa} ^S ^{Kairo} (1997) in his discussion of the mangroves in Kenya, Paying structure. In a one of the major constraints facing a majority of discloses that irregular mangrove cutter, who is married and has six the mangrove cutters. For ex y >

children said:

-fitted from this job which I have I have not ben ^ ^ ^ years_ This is because maintained ro avments I receive. Without any of the Pⁱe^ce^m ^ n o t afford school fees, none savings I coui _ received secondary education, of my children fppd and cloth my family members I cannot even tea as expected.

Another mangrove cutter who has a family of two children was already experiencing the negative effects of his occupation stated:

I find it pretty difficult to educate my lower primary children. I intend to switch to fishing so that I can start saving for their future education. I cannot fish around Gasi bay as the fish catches are ever decreasing. I intend to migrate to Kisauni in Mombasa to start fishing there.

Besides low and irregular pay, the cutters reported that they have very poor terms of services. For example, some of their employees are not concerned about their social life. They said that some employers rarely gave them assistance during such emergencies as sickness and deaths or even giving loans for school fees. They also indicated that there is no formal association to voice their grievances and, in fact, a majority of the cutters work at the discretion and mercy of the licensees. The licensees can hire and fire employees at will and any time because after all there is surplus labour in the villages. It is not surprising that most of the cutters, like other people in the villages, have very little or no saving, at all.

Keen interest was then taken to find out what factors determined the prices of the mangrove poles. The information shows that availability of mangrove poles, their sizes and utility in addition to their supply and demand, determine the price valuations of these products. In terms of use value, *fito*, for instance, are used as roof and wall fillings, a function which is considered by the local people as being of less value. This is simply because one can easily get alternative filling material such as stone, bricks and poles from the terrestrial forest. The people consider harvesting them as being destructive to the growth of the forests, thus, there is low supply of *fito* in the market. Similarly, the *pau*, *zio*, and *boriti* are mainly used as wall pillars. These categories of mangrove poles are readily available, they have a high demand and are highly valued by the villagers. Additionally, the high-priced *nguzo* and *Aanaa* which are used to support the roof and *vigi.gi* which are used for fencing, are very scarce due to previous over-harvesting of poles. This scarcity has inflated their prices.

On the other hand, fishermen and fish dealers lamented over low fish prices. The fishermen stated that fish prices ranged from Kshs. 40/= to Kshs. 200/= while the fish dealers indicated that their fish prices ranged from Kshs. 80/= to Kshs. 400/=. The table below shows the prices offered to the fishermen and fishmongers for some marine species.

Table 22: Prices offered to fishermen for different marine species		
SPECIES	BUYING PRICE PER	SELLING PRICE PER
	KG (KSHS.) ^a	KG (KSHS.) ^b
Dermersal Fish		
Rabbitfish (<i>tafi</i>)	40.00	80.00
Parrotfish (<i>pono</i>)	45.00	100.00
Scavenger (<i>changu</i>)	60.00	120.00
Pelagic Fish		
Kingfish (<i>nguru</i>)	100.00	200.00
Sailfish (<i>Sulisulil</i>)	100.00	200.00
Crustaceans		
Lobster (<i>kamba mawe</i>)	350.00	700.00
Crabs (<i>kxa</i>)	300.00	650.00
Prawns (<i>kamba ndogo</i>)	200.00	400.00

Source: fieldwork 1998

^a Prices offered to the fishermen by the fish dealers

^b Prices offered by the fishermen to the fishmongers

The prices in Table 22 were collected during the low fishing seasons and the fishermen noted that these prices could drastically reduce during the high fishing season. From the table, the crustaceans fetch more money compared to the dermersal and Pelagic fish. This is probably because the crustaceans are very popular in the beach hotels. The data show that the local people rarely eat these crustaceans and most of the fishermen would rather sell the crustaceans than consume them in their households. It appears that these people perceive the need for money from the crustaceans to be more vital than the nutritional value of these seafoods (cf. Astuti 1995).

Fish trading in these four villages is carried out in the villages, **markets** and on the beaches. As the canoe lands on the beach the fishermen sell their catch to the fish dealers. These fish dealers then weigh and retail the fish to the men and women fishmongers as well as individual villagers who come to purchase fish purely for their domestic consumption. These transactions continue until the last canoe arrives. The official of the Fisheries Department who is always present at the beach, keeps a record of the total weight and income earned according to the respective fish species harvested. He is in charge of revenue collection and the identification of fishermen and their crewmembers, the fish dealers and fishmongers. A monthly report is then compiled and forwarded to the divisional headquarters in Msambweni. Eklund and Petterson (1992) have reported that fish trading is exclusively in the hands of the men in Paje village, Mida creek on the northern coast of Kenya (Ochiewo Madagascar (Astuti 1998), the marketing of fish in Kenya both men and women are involved in retailing found that on the south seem to outnumber men as shown in Table 19.

fish although women fish sellers and buyers in Msambweni Division is The relationship while that in Betania village (Astuti 1995) is that of cordial understanding- sellers pride themselves in selling bad fish characterized by deceit, Vezo clients. However, in the four research villages to their unsuspecting and unwilling

buy,,. such kind Of fish is salted dried and it
 - used as chicken feed. Men and
 fish " - - - Islamic Z ^ ^ o ^ ^ " " ">
 ^ X3 risking another person's life which is tantamount to causLc tn" ' s e l u n g ^
 ; Vet .lah doesn. allow one to kill unless one is Z ^ Z t l ^

Til G
 ° available data indicates that the local people prefer fresh « k
 - of the fishmongers in the four research villages to use H ! ^ ^
 ^ until it reaches its market. The ice cubes seem affordable tTth ^ PrSServe ^
 3ders Although they are ineffective during extensive cooling 56 .Small_Scale
 Preservation methods such as deep-frying and drying are used but only durin^' ^
 lsh harvesting seasons when the supply exceeds the local demand t ^ 9 ^ Mgh
 aitem3fi' natlv preservation methods helps to prevent a lot of wastarr^ = ^ use of the>
 few fj,h dealers and mongers with refrigeration facilities. y e s as there are very
 fish ^ When the fishermen, fish dealers and fishmongers were asVoh their views on the
 market prices all of them felt that the fish prices shomrt k increased or
 ream d- according to the supply and demand market forces " a m i ^ -
 differeⁿt fish "u-nimum price for

species should be set to safeguard against price exploitati
 the high fish catching seasons. They also suggested that the Fisher--; ~ during
 shorn* assist them expand on their market outlets so as to avoid wastages d Department
 Plentiful harvests. The fish dealers were of the opinion that the Fish_eH_o durmg
 shornj offer them loans at reasonable interest rates so that they would purchase
 CTrigerators, they explained that in this way they would easily expand on th
 business. On the other hand, the fishmongers indicated that they only needed financi¹;
 assistance to improve on their business. On their part, the fishermen felt that
 should be accorded direct access to their customers. To them, the middlemen³ (fish
 dealers) were just exploiting their labour by offering them very low prices. Thes
 P^rices, they said, do not reflect the actual cost of fishing and the time expended ^
 this activity. They stated that although the beach offers them as ready markets, they
 ready to take any marked challenges as long as their economic returns could be
 w^orthwhile.

2-6 AGE AND HEALTH STATUS

This study shows that age is a factor in mangrove and marine exploitation A
 majority of the informants stated that these commercial activities require young and
 6n^ergetic men who can withstand the harsh environment of the forests and the sea All
 the old informants above 50 years explained that their ages could not allow them to
 go Ashing or cut the mangroves. In addition, one's state of health also determined
 whether one could venture into the forest on the sea. A majority of both male and
 female informants indicated that only healthy individuals could work in these harsh
 Editions. The forests and sea pose a lot of health risks to these individuals They
 easily be bitten by mosquitoes, be stung by poisonous spiders or be cut by sharp
 Ejects immersed in the swamps. One female mangrove firewood seller said:

I had to quit my business because whenever I went to gather firewood I would be down with malaria for almost two weeks. For this reason, therefore, I resorted to selling cooked foodstuffs in order to provide for my household.

A total of 3% of the informants stated that frequent attacks of diseases hindered them from engaging in the forests exploitation (see Table 6). They explained that these forests harbour disease-causing vectors such as mosquitoes, spiders, wasps and snails. Therefore, one risks contracting diseases such as malaria and bilharzia whenever one's is in the forest.

4.2.7 HARASSMENT FROM GOVERNMENT OFFICIALS

Harassment from government officials was a major concern of only 2% of the informants. The Forest Department in particular usually harasses those men and women who are caught exploiting the mangrove forests illegally. The Forest Department and also the female and male informants explained that anyone found cutting or carrying a mangrove pole must present a copy of his employers licence. Those gathering mangrove fuel wood are required to produce a permit to prove their legality. This permit costs Kshs. 50/= and its paid monthly. The informants were then asked to express their views concerning these restrictions. All the female and male informants explained that they could not understand why they had to pay to exploit a resource that they rightful consider theirs. In-depth inquiries revealed that these local people actually do not mind if the commercial exploiters paid some fee, but they were very bitter about paying exorbitantly for small-scale subsistence use. It does not make any sense for an individual to pay for the licence only to go and cut one or two poles for minor house repairs or to cut *fito* for making fish traps. They, therefore, suggested that subsistence users should be accorded free access to the forest. However, in order to avoid frequent confrontations with the Forest Department officials, the informants had a number of strategies to access the mangrove poles and fuelwood. For example, one would make local arrangements with the mangrove cutters to have one or two poles, Alternatively, one would approach the Forest Department and explain her/his position and intention. In fact a majority of the local people praised the Forest Department for being very considerate. They stated that the Forest Department preferred genuine present-prq to forest trespassers. Similarly, the fuel wood permits could be used by different households until they expires. Lastly, the mangrove cutters would carry back home the branches and stems they had p

•3.0 CONSERVATION ACTIVITIES

scribed gender roles and responsibilities, the study made Apart from the pre ivities men and women engage in the mangrove ecosystem, investigations into othe* and women as well as the youth are engaged in The information shows t a nqxave andmarine environs. These activities include, conservation activities m ^ ecotourism. Specifically, the males are involved in silviculture, aguaculture a ^ ^ ^ aquaculture while the youth ventured into silviculture, the women are .i Stlldy d-13' sOught to find out if the government or any NGO ecotourism. Similarly, KEMFRI was engaged in silviculture and aquaculture was involved in these activities.

while the KWS was involved in ecotourism. This information is clearly shown in the Table 22 below.

Table 22: Conservation activities in the mangrove Ecosystem

ACTIVITIES	GENDER	ORGANIZATION
Silviculture	Male	KEMFRI
Aquaculture	Women	KEMFRI
Ecotourism	Male youths	KWS

The table shows that the Government is involved in the conservation of the mangrove ecosystem. Both women and men participate in these activities. However, the female youths are not involved in these conservation endeavours. The Government indicated that it was planning to involve the female youths and school children in the conservation of the mangrove ecosystem in the near future. In this way all members of the local community would be engaged in the conservation of their natural resource systems. The local people involved in the conservation of silviculture performs their roles individually while those engaged in aquaculture and ecotourism do so collectively. Specifically, the Shaza Women Group in Shirazi majors in aquaculture while Kinazini Dhow Safaris in Bodo concentrates on ecotourism.

Keen interest was then taken to find out how the local community got involved in these conservation activities particularly silviculture, aquaculture and ecotourism. This was done to establish the level of community participation in these projects and what stages they were involved in. This is simply because it is the contention of this study that an actor - oriented approach is the best approach to sustainable conservation of the mangrove ecosystem. Emphasis laid on such an approach is to enhance capacity building for the individual women and men in the research villages. This will ensure continuity and sustainability of the projects especially, the post project phase when the donor pull out of the project. The available information is presented below.

3.1

SILVICULTURE

The informants were asked if they have ever planted mangrove propagules in areas where the mangrove forests once existed and/or where the mangrove trees are sparsely populated. It became apparent that only 10% of the males, and none of the females, had ever attempted to plant the trees. It was very surprising that very few people had attempted to plant mangrove especially in Gasi village that had a history of involvement in planting mangrove for the past three years. A brief history of this mangrove reforestation project Government/ indicated that the local people Project, which was sponsored implementation of the project. These male were not involved in the planting of seedlings out of their own initiative informants explained that the officials. KEMFRI initiated a mangrove hut were actually encourage years ago. This project was sponsored by the reforestation project in Gasi informed about it at a Chief's baraza where the Belgium Government. The village qualified KEMFRI officials tried to sell the local administrative officers and showed no interest whatsoever. The people rejected the project's objectives. Therefore, perceived the project as belonging to the project. The local people, therefore, be associated with it. Only a handful of KEMFRI and a majority of them refused to

People were employed as casual labourers for one month. Eighty percent of these casual labourers were not interested in knowing the fate of the labour, only twenty percent went back to check on the seedlings. These two casual labourers were lucky to be employed permanently buy KEMFRI to attend to the mangrove propagules.

The informants were then asked why they did not plant the mangroves on their own since they live near the forest and exploit it for income and subsistence. Over fifty Per cent (35% females and 23% males) stated categorically that such an activity was exclusively in the domain of KEMFRI and the Forest Department. The local people were strongly convinced that since the Forest Department had denied them access to the mangrove forest through the licensing system, it was the responsibility of the department to plant mangrove seedlings The government introduced the licensing system to protect the mangrove forest. The villagers conceptualized that this system as denying them access to the forest and robbing them of their ownership rights. A majority of them stated that they can plant the mangrove seedlings only and only if they are accorded unlimited access to the forest.

A total of 20% females and 27% males were actually not aware that he mangroves could be assisted to grow. This is because they had never head or seen the mangroves being planted. They stated that the mangroves planted themselves naturally. This category of informants felt that the mangrove forests have not been depleted to warrant reforestation efforts. Lastly, the physical labour involved in planting mangrove Propagules was the concern of 4% of the females. However, the males considered mangrove Planting to be a simple operation.

•³ • 2

aquaculture

According to the information from the informants, aquaculture is the farming of aquatic organisms such as fish, crustaceans, mollusks, oysters and sea plants. One of these, oyster farming, is currently being carried out in Msambweni Division. This Project was initiated by KEMFRI that put up a demonstration plot in Gasi in 1985 to raise local edible oyster species, known as *Crassostrea cucullata*. This plot was set up primarily for research to find out the feasibility of such a project on the Kenyan South coast and also to search by students and experts interested in also assist in further scientific practices. More, importantly, it was oyster farming as well as teaching aid to any local persons envisioned that the plot could be used for teaching about oyster farming. Thus, in 1994, showed particular interest in cultivating the oysters. The females decided to try and involve the officials because they are the ones who are were the primary targets of harvesting of seafoods such as oysters, it, was, traditionally involved them if any success was to be achieved, therefore, very appropriate of this project was first proposed to the

According to the informants, the rejected it. Various reasons were given for their Women in Gasi but most of the women argues that they would not have immediate benefits decision. A majority of them therefore, waste their time and labour. Quite a number from the project and could not, seen any similar projects that had been stated that they had never felt that the chances of such a project successfully implemented in the a

failing were high. In fact, they emphatically stated that they did not wish to invest their labour in vain. Other women felt that oyster farming is tedious and added that they did not have any interests whatsoever in learning how to culture the oysters. Nevertheless there were a few women in Gasi who viewed the project as being economically viable in the long run and indeed expressed a desire to participate if given a chance but unfortunately they were in the minority.

Despite this negative reaction, KEMFRI intensified its awareness campaigns and with motivation provided by CDA (Coast Development Authority) women in Shirazi village accepted to give the project a try. These women organized themselves and formed a group known as Shaza Women Group. The term *shaza* translates to oyster. The group is made up of 21 members who are all local residents of Shirazi village and they trace their descent from the same ancestry. When the women were asked at what stage they were involved in the project, all of them stated that they were involved right from the Planning to the implementation stage with KEMFRI officials who provide capital for the Project. They were very proud to say that they actually handle the affairs of the project, not even with KEMFRI. This does not interfere in any way with the returns from the sale of oysters.

The study then sought to find out reasons for the success of this project as such information and experiences would be useful to future projects of similar kind. All the women attributed their success to very friendly and not dictatorial and accountability. In fact, their group member is equipped with the finest leadership characterized by transparency. Their leaders are so transparent that each member knows exactly how every cent of the group activities for example, details of the group activities, members were united with one vision; the amount of the project has been spent. This vision has not only kept them united but it has also enabled them save all the money from the sales of oysters that amounted to KShs. 250,000. The money is intended for oysters so as to enter the international market. They are enthusiastic to increase the sale of oysters so as to challenge their farming abilities. In addition, with increased production, each member would have a good amount of money to start her own income-generating activity. The women greatly improve the standard of living of many households. They considered poultry keeping and retail trading to be viable projects because on the area were involved in them. The group receives a lot of moral support from members particularly husbands, fathers, uncles, and marine experts. The local community is a source of encouragement. It was the males who sometimes reminded or exempted them from other household chores so that they could attend seminars and workshops, attend to the oysters. The males allowed them to give the women a chance to invest their labour in the oyster farming as they considered the project to be viable.

3. ECOTOURISM
 According to Mutua (The East African Standard, December 13, 1998), ecotourism is responsible travel or visitation to enjoy and appreciate nature.

these multiple potentials will enable the research site to expand on its tourist attractions. This will consequently lead to an increased influx of tourists in Msambweni. With an increased flow of tourists, facilities such as hotels, restaurants, accommodation and recreational centres will be erected. These facilities will provide job opportunities to hundreds of the local people. Similarly, the local people could earn income as tourist guides in these tourist centres.

The data similarly show that 17% of both female and male informants explained that silviculture would help restore the somewhat depleted forests. This category of informants expressed fears that the country could incur a lot of losses and deaths in the absence of the mangrove forests because human settlement and properties would be destroyed by the ocean waters. A total of 16% of both the female and male informants felt that with highly populated mangrove forests, the aquatic species such as fish would be available in abundance since the mangrove swamps are the feeding and breeding grounds for a majority of the marine animals in the study area were strong finding, therefore, concurs with the assertion made by several scholars principally in the conservation and rational local community and the country lie' (1995) . exploitation of the mangrove swamps

4-2 benefits OF AQUACULTURE and ecotourism

Shirazi, the aquaculture project has 1 informant in Shirazi. According to the informant, *Rhizophora mucronata* (mkoko) mangrove species from served to protect the endangered traditional method of harvesting oysters by uprooting extinction. This is because the survival of this fringing mangrove the roots of the *Rhizophora* was a threat to and added that since the project was forest. The local community agreed with Shirazi has ever uprooted the mangrove initiated, none of the villagers that women took in search of the oysters roots to harvest oysters. Similarly, considerably. The group members felt that the muddy seawaters have been reduced with the expansion of their their living standards would be improved. The proceeds from the oysters had not been oyster farm. At the time of the fieldwork, in this way, members would divided yet because they intended to pursue their business of their choice. The group also felt have substantial amount to set up other farming. They gained a lot of scientific that they have been enlightened through firstly, seminars, field trips and knowledge on how to improve their skills through exchanging ideas with the students, on now, secondly, through exchanging thirdly, from their instructor, workshops organized by MFRRI. and marine activities employed. The instructor's example, and predators/ intricacies of oyster farming clean the harvest them. The women were also tiles at the right time finally how to oyster farm project would relocate the infant oysters gained from a member of the fieldwork, a member of Positive that the experience because, at the time on oyster farming. She was improve on their skills - Belgium project in Belgium. The trip was the group was due to travel to farm project to be hosted by 3 promoters

sponsored by KEMFRI. It appears that other women in Shirazi village have also learnt to non-destructively harvest the oysters. This is because, a majority of them reported that with the project they could now harvest the oysters much easily and not destroy the roots of the mangroves.

The project had enabled the women improve on their literacy levels. All the members of this group indicated that they had undergone Adult Education which was sponsored by KEMFRI. They can now exchange ideas with other literate persons from the community and outside. In addition, the Shirazi community has also benefitted from the Project. This is because KEMFRI has sponsored the building of a primary school, the only one in the village. At the time of the fieldwork, only standard 1-4 were learnt because standard 5-8 classrooms were still under construction. KEMFRI also offers educational scholarship- In fact, one Form IV student was recently awarded a scholarship to go and study *al-Qur'an* at one of the Saudi Arabian Universities. The local people were very grateful to KEMFRI for operating with this organization. Ecotourism had greatly improved their

On their part, the male youths source of income they considered economic status. This was because they now have their own dhows. Specifically, the cost of living in the village is very low. Also, their handicrafts as well as hotel business individual businesses of selling souvenirs reported that their skills had improved. have helped to boost their finances. Sponsored by the KWS to undertake short courses in Mombasa. These courses in linguistic courses in French and German, administration as well as tour guide skills could improve their main and regular clients. Their economic returns, their efficiency and, thus, boost their

plans on work

3.5-1 Shaza women group concerned with the conservation of mangrove ecosystem. Both the Shaza Women Group and Kinazini Dhows Safaris indicated that they had more than 3 oyster farms. This instance the Shaza Women Group environment, the financial status internationally. The local demand of these nutrient rich organisms Mombasa and Malindi while countries consist of the tour, hotels international markets. The male youths relatively faster. They also relevant short courses in . This would make the group members access to the local people. This intend to sponsor the other extending their whose numbers had reduced Mombasa and lastly, they thought on foreign that had engulfed this region was because the group relieved political skirmishes the financial stress that drastically due to the ethnic affair main source in 1997. This political movement

the group was experiencing at the time of the fieldwork. Lack of local market in Msambweni division further aggravated their financial stress. Very few men and women tour the mangrove during their free time as they are mostly preoccupied with their culturally prescribed productive and reproductive roles. In addition, most of the men and women have grown up in the mangrove environment and so they do not actually find the mangrove very attractive.

4 "3.5.2 KEMFRI

On the other hand, KEMFRI indicated that they needed to intensify the mangrove and marine conservation campaigns. These awareness campaigns would be carried out in *razas*, churches, mosques, men, women and youth groups as well as schools. KEMFRI also reported that it would train more experts in mangrove and marine ecology. It was particularly interested in training and eventually employing the idle Form Four leavers in the research villagers. Similarly, they vowed to solicit funds to enable them expand their conservation strategies. Agencies such as USAID, EEC and the Netherlands had shown interest in sponsoring various projects in the mangrove and marine ecosystems, inter and multi-disciplinary researches on the mangrove and marine ecosystem so as to achieve a proper balance between resource exploitation and resource sustainability. KEMFRI hoped to put up health centers in Shirazi and Gasi. This number of educational scholarships so as to improve the literacy levels and training as well as healthcare services more accessible to the People. Lastly, KEMFRI would increase research offering scholarships, employment

KEMFRI is taking into consideration the integrated and holistic approach to natural needs of the local people thus applying research has shown that ignoring the social and resource conservation. This is because conservation has contributed immensely to the cultural aspects of natural resource conservation. This failure of well prescribed conservation intensify awareness campaigns on the importance

3-5.3 the FOREST DEPARTMENT

The Forest Department needed to intensify awareness campaigns on the importance of silviculture as well as sustainable presentations and discussions with local community members. The department would also train more personnel to train local community members on mangrove ecology, bird sanctuaries and beekeeping. The department hopes to implement projects on such as silviculture, bird sanctuaries and beekeeping. Preliminary studies have been done by the department on the mangrove species *Avicennia* in these four villages. It has been shown that the mangrove species *Avicennia* which is known to harbor beehives, shelter in these forests can be easily farmed. Also, community members co-managers of the mangrove forests. Participation of the local villagers through their representatives who empower the local people to resolve and establish by-laws to forests. co-management will pose practical collaboration between the elected representatives and the Forest

overnment, will on its part, provide the necessary infrastructural inputs to back up private law endorsements. Through such a system of operation the villagers will be motivated to keep an eye on any destructive activities of fellow villagers. This kind of police strategy is practical because these villages are small in size. Co-management succeeded in Tanzania and it is thus possible to implement it in Kenya given that the Kenyan scenario is not very much different from the Tanzanian one (Rutatora et al 1989; Bruce 1990). It is suggested here that a co-management system would probably save the Kenya's mangrove forests from further destruction. Thus, the Forest Department should give it a try.

4.2 **fisheries department**

At the time of the fieldwork the Fisheries Department, in collaboration with KEMFRI and the CDA, had conducted different feasibility studies on the aquacultural and maricultural potentials along the River Ramisi estuary. The major forms of aquatic life they hope to farm were the mudfish, prawns and tilapia. KEMFRI for instance, concluded that the elevation and gradient, water and soil salinity as well as the presence of fewer pollutants in this region, make it suitable for aquacultural farming activities. Similarly, the Fisheries Department and the CDA in their socio-cultural feasibility study found that the local community was ready and willing to farm these forms of aquatic life. The department had however managed to construct a few ponds anticipating to get some funds to stock them up. These ponds will be primarily for demonstration purposes. They also intend to sensitize the community on their importance of marine conservation and also to encourage them to form co-operatives. They hope to involve the community in the management of the marine resources. The Fisheries Department would involve fishermen representatives elected by the fishermen and the villagers in the formulation and enforcement of the laws and regulations governing the and its operations. Marine management partnership has succeeded in San Miguel Bay the Philippines (Sunderlin and Gorope 1997) and, therefore, the Fisheries Department

intended to try the same system on the Kenyan coast.

6. **feasibility of IMPROVING ON the CONSERVATION strategies**
feasibility of IMF* considered in terms of the space available for Feasibility in this study sanitary conditions as well as the water

Mansion, the accessibility of the that there is vast areas of and electricity supplies. It could be used for construction of tourist

Particularly, along the coastline of the villages are far and apart facilities such as hotels. This is because the divisional headquarters are not yet overcrowded. The market centers as well as the immigrants amongst these four coastal communities. because there are still very few feeder roads which link them to the main

The four villages are served with a boarder with Tanzania. However, there is a tarmac road from Kwale to Lunga villages more accessible, in terms of need to improve these feeder roads surrounding have safe methods of

Unitary conditions, all the villages 39% of both male and female informants use sitting domestic refuse. For instance, during the fieldwork, it was found that Pits for their wastes, 54% burn the waste on the mangrove swamps surrounding the were no industries depositing

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the four research villages. Similarly, 90% of both male and female informants use pit latrines. All these informants live in Gasi, Bomani and Shirazi villages. However, in Bodo, latrine construction seems to be a major problem because of the shallow ground water, soft ground and 1997 *El Nino* rains which swept away some of the latrines leaving only 5% of the inhabitants of Bodo with latrine. A majority of the Bodo residents use the ablutions facilities at the mosque, while a few share the remaining pit latrines. The local people know that there is need to have a strong foundation for the latrines but they indicated that the cost of such materials as bricks or blocks was too high for them to afford.

Regarding the water supply, 83% of both females and male informants use boreholes some of which were constructed by the Ministry of Water in collaboration with IDA while others were drilled by individual villagers. These water sources were covered by well fitting lids while 11% of the informants use cemented boreholes which had pumps were well covered by well fitting lids while 15% of the informants use informants using river water. The voltage in Shirazi and Bodo is so low that it can only be used for lighting purposes. It appears that the infrastructure in the four villages need to be improved. Individuals willing to promote tourism coastline more attractive to those agencies in the area.

4.4 sources of food and income

4.4.1 sources of food Ecosystems the only source of food in

This study stipulated that: "the mangrove community depends entirely on the mangrove ecosystem". However, the data indicate that only a small Mangrove Ecosystem for their food from the mangrove Ecosystem. When the Percentage of the population obtain seafoods and vegetables found in the informants were asked whether they eat mangrove products, 63% of the male and 37% of these mangrove products while 21% said they prepared these foods, whenever the foods were available they prepared them once a week. 5% could not specify- informants as it is the case, of these people's diet what the local people's diet consists of. This study found that the diet consists of coconuts, cashew nuts, supplemented by eggs. Therefore, the chief traditional foods- mangoes and citrus fruits- informants consider food while the mangrove fish, cassava and maize and their main

Thompson intimates that the sea and land provide the forest is only a supplement to find explained that fish was always Keen interest was then The information means that fish is physically and community with adequate the year-liable and affordable through

economically accessible to both men and women in the research site. They were quick to add that although fish prices are relatively high during the low catch seasons, an individual man or woman cannot go home without fish for a meal. This is simply because the villagers can sometimes purchase the fish directly from the fishermen at the beach for almost a half the price offered by the fish dealers and fishmongers. Also, the fishermen can wholeheartedly give a fellow villager free fish for food. This, they said, was not only because the villagers are closely related but also because they are bound together by a common religion - Islam. Islam lays great emphasis on sharing the available resources. This is clearly demonstrated during the fasting period of Ramadhan when there's low productivity among men and women in the research site. During this Period, a majority of the villagers eat together although separate from those categories of persons exempted from fasting by the Islamic law. These persons include the sick, pregnant and lactating mothers as well as travellers, those who produce was not sufficient for a majority of the households in the research site. Interest was then taken to find out why there was low food production in the area. The following reasons became apparent; lack of land for cultivation, technical skills and rare visits by the extension officers as well as constant poor soils and pest attacks. Men felt that the low and unreliable rainfall. They also explained that the local people in these villages hinders plentiful fertility of the soils. They argued that this was partly because the local people can hardly afford pesticides and Extension Officers and also because the buffaloes and baboons which roam around the fields destroy a lot of produce leading to low farm yields, of great concern to both female informants was lack of morale to farm in the villages or at the seashore. Particularly among the youth who prefer and beaches.

"men in the research site consider farming to be a tedious activity. These men and women are very concerned about the time women decided to produce any meaningful harvest. They are very concerned about the time women spend chasing away monkey and the efforts put in by adult males and children take to chase away monkey. They are culturally considered to be night-guardians. Who have to guard the buffaloes and baboons.

They pointed out that it was more economic. Therefore, when the men produce them. A and insecure cultivate, 15% female and 5% males lack of land to cultivate. J how many hectares of land indicated that they farm less than 42% males and cultivate between 5-10 hectares. Deeper said that they don't farm, females and those who farm less than 5 hectares while 13% of those who do not. They do not have any legal rights. Probing revealed that almost the 17% of the informants do not own land. Similarly, 63% do not produce. Either to the land nor to

Ploughing between 5-10 hectares were found to be having title deeds to these plots while others were still in the long process of acquiring the title deeds. It appears that over 80% of the residents in these four villages are squatters,

back to the colonial era when more than 16 Km. along the coast was placed under the sovereignty of the Sultan of Zanzibar, thus, all the nine Mijikenda groups in particular were transformed into being squatters on land remained landless and squatters. now, a majority of these Mijikenda land owned by absentee Arab and Swahili. Therefore, the local people live and are in Gasi are owned by non-coastal landlords. Similarly, large tract community strongly feels that these huge People within and outside Kenya. The local people. Although Maas (1991) Pieces of land should be distributed to ukunda, Diani, Tiwi, Bongwe and

indicates that some resettlement landless in these four villages has Mbungu regions of Msambweni Division, patronage, lack of funds as well as been resettled. In fact, corruption, poor carrying out the resettlement of the Personnel have adversely affected the nature of Msambweni Division- It is, not surprising that Kanyinga (1998:1) in his graphic discussion on the squatting in coastal Kenya indicates that the Problem of land resettlement along to be realized. reported that they can only grow food crops such

A majority of the informants reported that they can only grow food crops such as cassava, sorghum, maize and rice but have planted these tree crops and bias which are a valuable source of income. Those who have planted these tree crops and thence be reclaimed any time,

This is primarily due to the insecure land affected are farm the land owned by experience. Those who are affected are seasonal crops such as and not permanent crops. Informants strictly instructed to grow the factory three hectares of land which such as coconuts. This was allocated to them. They added that the fact they also stated that each one of household food supplies which they would use to is not enough to secure them the households in these four villages cannot plant tree crops that a majority of are vulnerable to hunger.

Purchase foodstuff- Informants and they are, there strategies that men and women experiences food insecurity' are interested to find and women in the four

This study then took place at the research site as cassava and sorghum are planted in research villages practise in crops such as subsistence for most parts crop failures. Or gardens help these gardens as well as Plenty. In addition, the Kx vegetables which & relish provided an ideal of the year and the are cooked and cannot tolerate the wild edible vegetables vegetable and other foods are substitute for such importation was greatly impaired

environments (cf. Semesi and country reported into the study

by the severe damage of the Nairobi road following the *El Nino* rains in 1997. This translated into significant crops because such crops exhibit a majority of the local people prefer input and they have a multiplicity high return per hectare, they require provide the local people with a source of of use values. For instance, coconut trees can be harvested after an interval regular income. Specifically, ripe coconut Kshs. 2.00 or Kshs. 4.00 during of every two to three months and each fruit is respectively.

Peak and low harvesting seasons, states that both men and women tap men who tap coconut fluid. This fluid In Kuala Langkat village in men who tap coconut fluid. This fluid rubber unlike in our study area where it is brewing was for a long time is then used to brew alcohol locally Decree until 1997 when the ban was in Kenya termed illegal because of a some households, it is not common lifted. Although azi brewing the unripe coconut fruits locally known occupation in the research area. In addition markets within and outside the as madafu (Sing, dafu) are also harvested these madafu is highly recommended by the research villages. The juice contained in Similarly, these tree crops are leased out local people as a cheap rehydrating fluid. matters are able to derive economic Particular to the landless and in this way he squatter people who own land. Particularly to other people probably due to the insecure benefits from the crops, just livestock as well as Tree tenure in this Additionally, women in place to ensure Poultry which are kept by both these measures People are faced with subsistence the survival of the households. sources of

4.2 SOURCES OF INCOME were of asked in the following table below.

All the informants mentioned in Table 24 income and their responses are

Table 24: Sources of income

Sources of income	Men	Women	Total (%)
Sources of income	5	24	29
Dependants	16	2	18
Fishing, mangrove exploitation and farming	4	3	7
Formal employment	25	21	46
Informal employment	50	50	100
Total			

-Toqa " * the men relied on their wives and 24% of the women dependants were found From the above Table, 54 - On the other hand, the female dependants depended on their husbands. In perpetuity to be of old age and men.

staged that the Islamic law entitles a woman to be dependent on men although it does be Prohibit her economic independence. The woman and her household have a right to provided for by the husband as stipulated by the Islamic law. A well-cared for wife only enhances her status in society but also elevates the honour and dignity of the husband. Shepherd (1987:244) indicates that "both earthly prestige and heavenly reward (thawabu) accrue to good providers." Although both male and female informants Unanimously agreed that a home-bound and well-cared for wife enhances the status of man in the society, they also pointed out that the present-day economic hardships and Poverty has forced a majority of the men to allow their wives to be economically active. When the informants were asked whether an economically independent wife lowers the status of a husband, male informants stated that such a woman does not lower the honour and dignity of a man because the control and authority of the man over the woman and her household is not compromised in any way whatsoever. The female informants agreed with this and added that they still respect and obey their husbands despite working to earn a living. They stated that they are required by the Islamic law to obey and respect their husbands just like all men should obey Allah (Ong 1990) besides adhering to the five pillars of the Islamic faith. Both men and women are supposed to live upto the five major Islamic tenets which include witnessing to the Islamic faith, Praying, giving alms/ fasting and going for the pilgrimage.

When non-working women were asked whether they were comfortable with being dependants, 15% stated that they were actually very proud of being at home performing their reproductive duties. This is primarily because everything they need is provided for by their husbands. However, only 4% of these females did not feel comfortable being at home because their providers had just about enough for them to live. Also, they indicated that they would wish to be economically active so as to help improve on their living standards

the sea, mangrove swamps and the land (Table 19) are available from which the local people obtain their incomes, and the natural resource systems from which communities combine units of marine, forest and terrestrial resources into flexible production strategies. Using the local knowledge of the tides and to keep a steady flow of cash in good position to spread out their access of such a diversified form of production their households throughout the year. Understanding of the natural resource systems. require proper planning and an intrinsic understanding and a fisherman, said: informant, who is a mangrove cutter,

I have a - H ^ ^ t y calendar throughout the Y ^ ^ J e d experience is drawn from ?ccumul^ ^ qf the in such an envxronn^n^ ^ Qn people cannot a tion alone. q s a v trades//f that is, one must one source of P* dweller as a ^ ^

He thus defined a coastal a various natural endowments of Msambweni Use all his or her labour to exploit Division 4% of the informants who were formally employed According to Table 24 above th^ ^ ^ ^ ^ ^ inforinants were employed as worked as clerks and managers while

teachers and secretaries. Thus, the employment occupations of these working females still mirror their reproductive work in their own households. Also, it appears that men occupy managerial and other senior positions and perhaps this is a reflection of the stereotyped ideology of these coastal communities that men are more rational and, therefore, better managers than women. However, it is important to point out that this kind of misconstrued thinking is slowly fading away as these people have come to realize that women are also endowed with leadership qualities. Conversational interviews indicated that there are a few women in leadership positions and a few others do occupy less profile ranks. In 1997, a Muslim woman from Msambweni Division was nominated to Parliament and she was later appointed an Assistant Minister in the Ministry of Culture and Social Services. She has become an inspiration to most women in the research site. In fact, today women are capable of handling nomination is interpreted as being an indicator of formal sector simply because of the Public affairs and at the same time up to a majority of the local people are low literacy levels in these four villages in the formal sector. This perhaps not qualified for the skilled labour in the informal sector (see Table 19). accounts for the high number of women in the natural resource system, t, pke out a livxny Just like their counterparts who also engage in alternative the formally employed women and men report which they consider inadequate for the economic activities to supplement their income criticizes the stereotyped notion that requirements of their households. Mama convincingly argues that the either by the informal sector is only for women also. This is primarily choice or default some men find themselves therefore, compete effectively with because some men are lowly educated and a majority of the women and the skilled labour market. Not quite. The males in the informal sector were men engaged in economic activities such as tailoring, masonry, plumbing, n are engaged in informal economic activities such as plantations, the coconut their P- the females ventured into onyaged in casual labour the coconut their P- the females ventured into kiaged in casual labour m the coconut their P- the females ventured into sk operations and selling water n their making l«n» and p,*o decoration --making, kiosk in the trading of commercial " selling fish a n women to engag

While it is considered (Eeckel 1979; Nelson 1979) it is not surprising that the form of marketing among the women in the village in Malaya (ong 1990) the appears that it is actually hon Kuala Langa market foodstuffs. Like not have restn economic activities are home-based women in these four villages o woodn combine both their the research has revealed site, Hussein 1989; Bharya 1989). This nci a home premises, as a woman's convenience and nci is also in a Productive and productive role at one's household members. However, women because one can be able to travel to far off places tion to enlist some labouring engaged in handicraft produc

in search of markets because most of them feel that being away from home for long periods would compromise their motherly roles, thus, lowering their dignity.

This study then sought to find out how much income the informants earn at the end of the month, 18% of the females and 6% of the males explained that they earn less than Kshs. 1,000.00 while 20% of the males and 42% of the females stated that they had a monthly income of between Kshs. 1,000.00 and Kshs. 5,000.00. Only 7% of the males earned slightly above Kshs. 4,000.00. However, 28% of the females and 17% of the male informants could not tell precisely what they earned.

Perhaps because of memory failure and because most of the people in the informal sector lack book-keeping skills. It could be that these informants considered such information as being too personal and not to be divulged to an outsider.

To ascertain the sufficiency of their households' economic demands while males stated that their earnings did not meet that their economic returns were only 4% of the females and 30% of the male informant candidly stated that a sufficient. During the in-depth majorities of the local people in these villages, they "just survive." "u- " life" or in other words, "t-anslates to "they are pushing x" became clear that men and women on the

During the conversational interviews in Western Madagascar (Astuti 1995) prefer daily payments to purchase their day to day household requirements. However, in Paje village Tanzania, daily wage earnings are used for their support (Eklund Petterson 1992). Perhaps, in Msambweni agricultural yield necessitates the search for food on a daily basis. The empty-handed and, thus, they are always assured of a day's meal- inversely/ depending on the terms of contract. However, day payments either in cash or lumpsum upon delivering the poles. Apparently, here are a few cutters who prefer day to day payments.

those employed in the formal sector regulations to ensure that they are forced by the employer to be predictable. The main advantage of income where ensured unlike the other people as much as, and most probably A majority of these at the sea (1994). The people in these four believe that a good day's earning (working conditions of a wage earner. Higher than, an average region and the Mijikenda in Kwale District, gives villages seem to dislike the Swahili including: short-term, present day Wills (1993), in his study such an attitude the colonial masters and lack of job a graphic historical account that the cruelty of their pay at the end of the day. Minings. He hypothesized that people to do it and it can be argued that perhaps security may have motivated it persists in this division is also the driving force it: Spears that this attitude is today in Msambweni.

lack of food security expert behind such an attitude.

The study sought to find out if there were any groups involved in income-generating activities in the four villages. This because previous empirical research has shown that men and women mobilize themselves at the grassroots level in an attempt to repair the damages made and perpetuated by post-independence political and economic systems in Kenya. The contentious economic policies in Kenya have today seriously weakened and undermined the economic system.

Individual men and women with meagre resources economically (cf. Wipper 1984, Tumbo-Masabo 198b).

In the study area there were groups reported by the informants to be active were only 2 in Bomani and 1 in Shirazi. Correspondingly, there were only 3 men groups in Bomani and 1 in Shirazi, consisting of 2 in Bomani and 1 in Shirazi.

There were only 3 men groups in Bomani and 1 in Shirazi, considered to be functional. However, only 4 groups were sampled for this study including Shaza Women Group and Ujenzi Kaya Kinazini Dhow Safaris. The other two groups in Bomani village and Subira groups. This is probably because the call to emancipate women's economic stress and continue to focus, on women. Besides financial stress, the individual group members provide psychological and physical support to each other in the village. (cf. Wipper 1984; Tumbo-Masabo 1985)-

Therefore, during the activities they engage in and whether they own any assets. The Ujenzi Kaya Group in Bomani village.

Table 25: Projects/Assets owned by Ujenzi Kaya Group	
Current Projects	Future Projects
1. Awarding scholarships to needy students	1. conducting major fund-raising
2. Conducting merry-go-rounds	? Purchasing plots for individual group members
Assets	Assets
1. Coconut collecting point	1. Petrol station
2. Makuti collecting point	2. Rental houses
3. Hardware shop	3. Plots to lease out
4. Gristmill	
5. Floats	

Source: Fieldwork 1998. It was an urgent need to improve the educational achievement status of the members of the Ujenzi Kaya Group in Bomani village. A long-term strategy for economic development was needed.

empowerment. Sound educational qualifications would enable their children to compete effectively in the formal employment market. Therefore, the group awards scholarships for secondary school education because the group considers the cost of secondary education to be too high for most parents to afford. Scholarships are also available for those students willing and ready to continue with education in institutions of higher learning. At the time of the fieldwork the group had sponsored two male and two female students in various secondary schools in the division.

To empower its members economically, the group usually holds merry-go-round harambee-cum-fund-raisings which provide reasonable sums of money that enable an individual to meet his financial needs. During these mini-harambee meetings each of 90 members is required to contribute a sum of money voluntarily. This is because Muslims believe that these blessings are reflected in the future economic prosperity of an individual.

The host is expected to invite friends, relatives and prominent members of the community so that the minimum target of Kshs. 20,000.00. This target was set by the group members and no member of the group. The loan to any member of the group. The Kshs. 15,000.00 can be advanced as long as one is expected to pay back the loan repayment of the loan is without paid at once or in installments. However, at one's own convenience. The loan can be initiated four years ago. It seems that the group has no record of defaulters and engage in enable them to service the loan without any difficulties which include four plots in the neighbouring

The group has several fixed assets which have been developed. It also owns a village which assists in the collection of coconuts as well as a Makuti collection point provides the group with an estimated monthly income of Kshs. 20,000-30,000. This collection point has three rental houses which are situated in Bamburi in Mombasa town and one Haru jailing shop in Likoni, Kshs. 7,500 a month and 80,000 their gristmill in Likoni, which earns a monthly income of 50,000.00. Seated at the Kwale ferry, some is advanced to the bank account of the group at the end of 1998 so as to help

Members in the form of loans to hold a majority of other villagers who do not purchase plots for individual use to lease action would go a long way would also be used to buy plots believed that in the villages. The have any land to cultivate, experienced in the village and his would make solving food inadequate population

Members also aimed at putting to use what is involved in Makuti and petrol and paraffin easily available. Group representation of foodstuffs and On the other hand, the rotation of handicraft productions as

utensils. The group did not yet own assets. Its major activity is *makuti* production and each member is required to make an average of 20 medium-sized *makuti* in one week. The group meets every Friday afternoon to gather together the *makuti* made. The *makuti* are then sold to the collecting point owned by the Ujenzi Kaya group in Bomani village. This collecting point provides a ready market for these products and offers far much better prices than any other market outlets such as individual villagers who would rather produce their own *makuti*. Some members fabricate handicrafts such as mats and baskets which are sold by the group to the Diani handicrafts Centre in Tiwi in the neighbourhood of foodstuffs and household utensils to members on a rotational basis. A thorough filter of the individual's members decision. A majority of the group of opinions from various members of that of the food shortages they experience members preferred to be given foodstuffs poultry project as well as top in their household. The group anticipates National Women Group Funds are made build some rental houses if the Presidential raising at the end of 1998 to boost its own financial status. The intended to organize the activities of these groups include: the financial status. Some of the factors which determine materials easily available and This maximises geographical endowment of an area. Group can very easily access the raw thus less expensive. For instance, Suir The market assurance encouraged Materials used in *makuti* and handicraft? collecting points. Coconuts are the Ujenzi Kaya Group to put up the of the major cash crops of Kwale District. Subira Women Group to engage in the It was found that food insecurity equal importance was the land insecurity rotational distribution or foodstuff- in these villages, Ujenzi Kaya lonal distriou squatter members and it also aims at -nsion. Thus, to t-xp for some of its land community at an affordable cost.

Plintends to purchase the xandleSS P-P16 red mangrove forests, s, a woman ing some of it out to the endangere availability of funds Lastly, as Hi Srussed earlier, to F together wi activities of various groups Group took to oyster farming- that religion as well as the *n<* technological know-how as a b o <198*| the cooperate groups. In the study area. However, the activi i availability of funds, sound mode of subsistence also groups were members, positive receptivity, good Success stories of support from house o informants particularly reported management strategies, moral s leaders helped unite group members. Communication systems as " t y of the that the professional guidance that transparency and account*. Group good governance of its large example, members of the ly c<ntr teachers/ accountants, lawyers and some of its members had group m communication systems and networks Membership. Some professi and effect are considered. This is made Astern-medical doctors. ** interests

ensured that every

possible by the fact that almost all the group members reside in the same geographical area. They bump into each other in the village activities. Communication for any urgent discuss each other's interests in the group information spreads so fast that meeting is mostly done by word of mouth and assembled. However, within a relatively short period of time of postal and telephone services to for distant members Ujenzi Kaya Group members explained that its pass valuable information. Subira Women has helped to improve on the members are always ready and willing to quality of their handiwork. Experts were involved. Lastly, moral support from household designs and patterns in the cottage industry. The male and female groups in the four research members has enhanced the activity. The men normally grant permission and, in Ullages. In particular, the men attend to the group activities. problems whatsoever. fact, remind their women to attend to the group activities. did not have any y hinder the expansion

It became apparent that Ujenzi Kaya group inadequate funds were group lamented over. However, Subira Women Group also indicated that the current projects and the group produce production agreed group lacks adequate market informants engage flooded with low quality fact, most of the male and female local market fabrication of with their assertions and a who a selling price of their items is handicraft products. Those men because the complained measuring one handicrafts do not have a real. For example, a plaited mat measuring one hardly affordable to the local people. 3,000.00. can incidentally tre buy one metre and half cord in its utility and artistic character which People consider too high for substitute can be a easily get substitutes. Such a division are forced to one can get free of charge or a women. However, the women Given such a scenario, most women in Ukun are mostly y preoccupied with the actually look for markets in their side market as unlike in Bangladesh which has ample time to search for their products. Jumali 1,37; Hussein 1987; <re-giving and cara-ta>, their strategy, but products, lack of an well-developed in the government as- markets, really

Bhatti 1987,, here in Kenya inadequate and international support subsidy scheme into cottage industry Penetration of the local band outside markets. constrain both men and women. Less competition the malfunctioning majority of the handicraft commercialWACC: large membership. The Production and this makes group reasons and these as 200 members, a Conversely, a number of women consisted of the opinion that most < many women groups > that some information a of lack informants membership- Their periodic contributions as number they considered untemporary to the groups were composed groups were characterized with the felt < interest in group activities > female < U as poor health- <oweV

mainly of

because

^^

^ -selling They

Aii Z ^ I * and

knowledge in the formation -

Z : endowed

be sensif • agreed with this and added that the local , P^acts.
encoT the Social ~ - cooperate work They^ T* *
Awards group activities. " 9-ups and also' to_b^ P^itive

"Ualifi 111 other fem ale and male informants pointed out that ooor i -
^thorit f r In many of the defunct groups. They explained that corrupt poor leadership

the ^oup r i 16 ^ " 3 ClUng tC P^wer ^ t0^ ^^ GVen WhSn thSy WSre popular Jth
disstati mbers_ They said that such misguided leaders caused a lot of mistrust ^^
satisfaction within the groups leading to their disintegration.

hinder ^^ Concern of these coastal peoples was that the spirit of individual!

lhf. erviewoH most of the local people from engaging in cooperate work. All th* informants

°Wn openly confessed that most of the villages preferred struggling on their
one' ° P^olin<3 their financial resources. Individual efforts are viewed as enhancing
it- Shonour and dignity amongst these Muslims. In addition, self-pride and the know-
t|u ail attitude are some of the vices that impact negatively on group work. Due to

' therefore, most people are not enthusiastic to join existing groups and some of
out^ do not SVen intend to do so in thG foreseeable future_ ot^her studies have pointed

bee that most coastal People are proud, content and aloof and that such qualities have
i, r 3 major ^Pediment to the development of the area (Gerlach 1997; Maas 1991; Willis
at 3K T^e government and organizations such as CDA, KEMFRI and the KWS are making

6lnPts to sensitize the local people about the social and economic importance of
t ° o iing resources. However, their efforts have met little success as yet probably due

4.5 ^ Institutional and behavioural constraints.

Lth-Related CONSTRAINTS

Empirical data show that there are numerous health risks involved in +K
hgj-0 and marine exploitation. « laria and bilharzia are the most serious health
^Zards , This was a major concern of 40% of the informants
an * m the mangrove ^ 1 in o t s . Frequent attacks of malaria ^
^ C i a " M , f and females from going to exploit the forests. In the
wOrcjs Prevent some mal6S BJ simply stopped cutting the mangrove poies
be ^ U s one rStired mangrove " " eived the mosquito bites for one week and i aid
do Wn 6 of thS mosc?uito bites, do not think I will ever the mangrove forest again."
Anoth wltH malaria for one week. ^ inullyne to the mosquito bites.
er mangrove cutter boasted o rs and two grandchildren dreads going to the
° n S elderly widow WltH 6ight h never she goes into the forest to collect fireWood
for °Ve forests. This is because we ^ she was/ therefore, forced to stop
s sale, she gets a severe attac ^ ^ considered most reliable. After months Gf
St fuel wood a source of inc omG to ,lling mangrove fuel wood. This time she
arVa tion and hunger, she had to go ^^ nofc achieve her financial stability.
Cided to hire male labour, however, ^^ respectively, indicated that one risks
be . A total of 16% and 20% ** as being cut by oyster nests, sticks and sharp
^ stung by bees and spiders as we

objects immersed in the muddy substrata. Oyster nests. Sharp objects and mangrove
 logging can easily pierce an individual as she/he walks or forages in the forest and
 the body-aches and rashes that one gets after an excursion in the forests are equally
 irritating. To convince an outsider that actually one has been in the forest, one would
 show the scars on one's legs and arms. Daringly assert that they could easily
 bodies. a majority of these men and women would poisonously spiders around the
 with the wounds. A person is also not safe. Only 2% of the males
 rests. Wild animals such as butrains wading through the mangrove forest let
 expressed concern over fatigue. They said that nevertheless, 10% females
 alone cutting and carrying the poles is risky contracting in the mangrove
 and 8% males did not know the kinds of diseases have never been to the swamps and
 environment. The lack of knowledge was because disease which is well known to be
 also, according to them, there is no part of it associated with the mangroves.
 The changing water pattern endangers the majority of the local men
 drowning if trapped in the forest during high tides. A majority
 women are very conversant with the tidal calendar of the sea and they can make very
 accurate guesses when the headwaters are most lively.
 " " - p - d " retreat: he cutters, for example. felling
 especially water channel
 otherwise, exceed the low tide usually canoe cutters attribute
 grounds. However, many of them in fact, most or
 which comes in handy during their survival to the canoes when they are time barred.
 KEMFRI officials, who carry out all inventory of their canoes and some depend
 on their canoes. For instance, at the death by using standby canoes and some
 * * the Gasi bar area they " the shore ahead
 help from the cutters who were sailing canoes
 tide. risk drowning shellfish poisoning when they
 Conversely, the fishermen and fishermen villagers consented
 Whisk easily capsize in stormy weather. The fishermen normally cause a lot
 die into the sea to harvest fish. The dangers of these cutters are
 that a person delays treatment at sea. There has been no a especially
 pressed such patients see there especially
 health and sometimes of crocodiles.
 The crocodiles to be seen in the fishermen's hands as they
 The Fisheries Department nets their canoes. These cutters normally cause a lot
 attacks. Additionally, nets apprentice fishermen gradually a scar
 to punish and load the heavy young
 of discomfort, particularly

would eventually develop. As one ^{t-C HPPDIV} involved in the fishing profession, the ^{the callus of the fishermen}
nylon Une dust burns a red line in th ^{hand} ^{^^ ^ ^ ^ ^ ^ ^ ^}
Palms provides protection against such m] ^{^^ ^ ^ identity gr} "a sign that one
waists of Vezo fishermen have been descri e ^{^^ neighbours wh} are farmers (Astuti
is a Vezo" and not a Masikoro; referring ^{tified} these revealing features as a
1995:40). The present study has, ^{of Msambweni Division.}
health risk to the fishermen in the four ^{exploiters,} the Fisheries Department
The study revealed that mangrove and ^{have very poor} protective gear. The
officials as well as KEMFRI do not have or P^{machetes,} which are actually
mangrove cutters are only armed wi ^{with small axK}
inadequate protective devices against wi ^{animals} in the forests.
The forest scouts are equally faced w' ^{and also to protect the mangrove}
opposed to provide security to the forest ? ^{^^ ^ ^ the forest scouts cannot}
forest from destructive illegal cutters^{^^ first>} they lack adequate
Effectively execute their duties. This r ^{truncheons by the government.}
defense eaiuiment, they are ^{only f} attacks of wn ^{animals such as}
equipment, ^{protect one from} provided with superior
lightly, truncheons ^{f they should he} «amed and p
buffaloes. The scouts felt * » \ J i als are ' " J ^ TM * * ^
^fense equipment. These ^{fore3t scou s n} ^{^^ ^ ^ ^ ^}
orm of ^{ThSre T one in Bomani and « - exploiters} in their areas
in Gasi, three in Boao, d.stress calls from ^{^^ ^}
vast mangrove coverage
Ca cannot possibly respond to any ** ^{^^ make patro} have boats to patrol the
of jurisdictions. Similarly, ^{becaUSe they} ^{^^ patrol the forests}
to trap the illegal cutters- that once in^a ^{^^ However/} they stated
mangrove forests. The scouts ^{tes} ^{^^ x l leg} ^{^^ therefore,} to them
duing which time they may or ma ^{^^ mangrove} ^{^^ ^ ^ ^} the forests>
th*t there are very few cases o^ ^{^^ not suc} salaries as well as poor
illegal felling of the ^{^^ the low and} ^{^^ ^ ^} them from risking their
lastly, the scouts lamented a ^{^^ a n}
h°nsing facilities that lowers ^{options they use in case of}
l-es in the mangrove forests- ^{the-P} ^{^^ they go} h ba.
When the informants ^{gf e} ^{^^ lists use} both terrestria and
^sease 20% of the ^{, the males and seven per cent of the}
sn • ^{^^ traditional rem} ^{them} d 5% females stated
^Peciaiii3ts to seek trad ^{^^ per ce l} while 9% ma ^{^^ informants}
mangrove botanic ^{ail*ents.} ^{^^ J} ^{^^ the best remedy}
^ales combined ^{to *} they f ^{^^ and female Muslims,}
that they use self-***l***^ ^{and error} and 9% ^{^^ nformant in the sample}
said that through the tria ^{^^ t ,} ^{o^ though no Chr1s l} faith in **Allah** actually cures
for a particular disease.'th healing ^{^^ testifi ed th3t} ^{^^ traditional and modern}
tespectively, relied on f al ^{^^ tfusU*3} ^{gf seeking} ^{^^ without actually}
^ . r^th hea ling, ^{, • <= no n} ^{-n fact, arg}
as found using faith n ¹⁹ They, m
^ individual and to the* ^{^^ all~abl-} ^{^^ t be effe}
^dicai ^{advise}
the Power of Allah both tyP ^{because}

Western equal number of males and females (18*) mentioned that they only use modern medicine. They attend to Msambweni District Hospital while others said that privately owned clinics within and outside their natal villages. Msambweni is the only public health institution in this division and the local people pay the cost of health services offered to them. The hospital is situated at the divisional headquarters approximately 2 kilometers from Bomani, an estimated 15 kilometers from Gasi and over 20 kilometers from Shirazi and Bodo, respectively. This hospital has various health programmes such as Primary Health Care, the Bamako Initiative and Family Health. A variety of measures are undertaken by this health institution to improve the health status of the local people. For example, there are 116 Clinics which provide health care services at the doorsteps of the villagers which helps to reduce the long distances that most people would otherwise have to cover to reach the hospital. Lectures are given to both men and women at the hospital every Friday on issues such as family planning, hygiene and sound feeding habits. In addition, demonstrations are carried out on how to prepare a well-balanced diet. The key informants were asked about disease occurrences in their villages. Malaria and anaemic cases rank highest amongst other diseases. This is illustrated by Tables 26 and 27, respectively.

Table 26: 1996 Disease occurrence in Msambweni Division

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Malaria	730	746	714	879	1016	941	902	751	610	471	446	530
Anaemia	87	86	92	141	114	39	82	28	39	41	45	76
Bilharzia	4	15	8	6	3	4	16	11	8	3	9	4
Tetanus	4	-	-	-	-	-	2	-	-	-	1	-

Courtesy: Health Records and information Office, Msambweni District Hospital, 1996

Table 27: 1997 Disease occurrence in Msambweni Division

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Malaria	795	640	502	642	522	825	135	575	540	437	488	530
Anaemia	59	60	33	38	44	48	7	88	63	43	49	76
Bilharzia	3	6	14	23	5	1	3	3	7	9	5	4
tetanus	1	-	-	-	-	-	2	-	-	-	1	-

Msambweni District Hospital, 1997

... T I I L ---
 X ^ T ^ L S - R i S S E d i 3 because
 new of figures for December x ^ country y * malaria cases from the months of April
 pit operations throughout prevalence of * occurs at the same period. During
 > Juliv There seems to be the long rain which form breeding grounds for
 this - V probably due to ^ ^ ^ out that the district
 the thers usua es. The key in I ^ ^ the occurrence of malaria due
 h o 5 D, ! malaria ~ Ca Using mosquito been able to he P ^ ^ greatly crippled the operations
 4 B t .! at Msambweni has not in a de < J "acy 3
 * lack . . - ^ nancial i"



of mobile cli •
 Vision r and hindered the "Pid Spre3d of the Bamako initiative in the
 follow u" ack of adsqUate transport facilities had drastically reduced the number of
 ^ 1996 UPS carried out by the medical staff. For stance, hospital records show that
 (Heal the hospital had nine follow-ups while in 1997 they had reduced to only two
 1 Records and Information Office, Msambweni Hospital, 1997). in addi r-i«
 ethnic pi as "es which occurred in 1997 affected the hospital's delivery services since
 most of the medical personnel from upcountry did not resume duties even after the
 The 1G anirnositi es and skirmishes had ended.

The study revealed that the mangrove and marine exploiters protect their hands from
 he K arP oyster nests. All these informants explained that they do not have First Aid
 Kits t-
 ^ Co attend to such minor or even major injuries that often occur while at work.
 eve rtheless, the various mangrove botanic components provide a quick remedy against
 any injuries and all mangrove exploiters are equipped with the medicinal knowledge of
 he mangrove forest and those who do not know what action to take seek advice from
 eth nomedical specialists. These specialists use both terrestrial and mangrove plant
 parts to treat disease and illness. For instance, inwarobaine is used to treat malaria,
 other ailments that it can effectively combat. Conversely, the sap of Avice^j*

***** (mchu) shoots is applied on open wounds while the bark infusion of the Ceriope
 togai (M^ndaa) is used to prevent excessive haemorrhage. Also, the leaves of
 Pus g r a " fmkomaii) are powdered, mixed with coconut oil and used as an
 ^ hites Similarly, a tincture of Hummtzera racemosa
 CJ nent for open wounds and insect bites. and the most popular solvent within this regions
 (n^ and the most popular solvent within this regions
 i ^ T ^ 13 made for moUth ^^ f the Rhizophera mucronata (mkoko) is used to cure
 coconut oil while the infusion of the *
 diarrheal.

explained that the medicinal value of the
 Both male and female infoJ3^ e mangrove exploiters. This is because they stand
 ftian, a groves is particularly useful to t e ^ ^ the swamps. Some of the reasons given
 fo lgh risk of being out by various o re that they are readily available and easily
 fo the use of traditional medicines that most medicine men and women are found in the
 acce ssible. The informants explained tha ^ ^ ^ so, the costs of their treatment
 vlll ages and can, therefore, be locate a ^ 20>00/ which can either be in cash or
 very low/ with the minimum payment °

6sUMnarv

gender roles JUTO BESPONSIBIM^3 ^ in the mangrove ecosystem are culturally
 Gender roles and responsi^1"6 f and cutting mangrove poles simply
 the raale3 perform duties ^ ^ physically /t than the
 the males are traditionally P fgwer strenuous actrvrtres such as
 T e females in.*- in the mangrove =
 Coil wood, ve9e- ulps and sect in the mangrove =
 tinted whie t h e ^ ^ and the prices of mangrove
 ^ V s i ^ ^ " 6 3 are in r; ; b Tlity of among these -stal communities. It is
 ariv 31 Witness, avallaM ^ gender rol« ^ empowere d economically to venture
 marine products define en nee However, more emphasis should be
 9gested here that both men and ^ fishing.
 ^Ohp . nroduct-J-
 into the mangrove pole *

laid on empowering women since they have limited financial resources at their disposal. This will go along way in enhancing the living standards of many household in the four research villages. It is argued here that women can actually participate in mangrove P^ole production as license holders and in fishing as canoe owners. In this way they can hire the male labour. This means that today they are not physically involved in this activities as all of them confessed that they are physically too weak for these commercial tasks Also, efforts should be directed at improving not only the working gadgets of the fishermen but also to protect their working environment. This is simply because the local people are ready and willing to gainfully exploit the marine resource but t-ho i , ^ « Therefore, with better fishing gear the productivity u^e they lack the means to do so. Thereioxc, This will subsequently improve their living of the fishermen will be enhanced and tin standards.

• the conservation of the mangrove ecosystem. These The government is involved in aquaculture and ecotourism. Although both conservation activities include silviculture, conservation of the mangrove and marine men and women are somehow involved in threatened as ever. Community resources these resources still s a ent of the ecosystem as not been fully Participation in the conservation and man and constraints facing the local realied. Keen evaluation of the sustainable use of the mangrove and marine people is very relevant in achieving a major constraint in the active resources. Government policies were gervation of those coastal resources. These Participation of men and women in the a resource they have for a long time Policies have served to deny the people ac allowed free access Considered their own. The local people their natural resource system. to these resources and they will m tur v e ecosystem

6_2 ALTERNATIVE SOURCES OF mangroves and the sea are the only sources Although this study assumed tha groves and the sea provide of food and income, empirical The mangrove forests provide the local the local people with cash and subset fores Unities with food to supplied thexj This is because almost 70* of the xties with roo coinunit seafoods found in these forests.

paggers do not eat «*• are always avail used to supplement the diet of the Clfically, the sea pro consumpti^{on}nee theSe are o sorghum. On the other hand, ^ e! therefore, sufficien these are o ^ climatic conditions, lack of Sclicable vegetables and seafo^o^ fighl cassava, ^ d animals and lack of land for °c al people which consists ^ This is due majority of these coastal the land produce is insuffi^{cl} destruction by ^ food deprivation. However, women technical agricultural skills^ ductivity ^ coping strategies to avert cultivation. This low r, starvation J* beholds are vulnerable to hung^{er}, n^{er}

*en in these viH^{ag}es and food insecurity experienced here hUn^r and starvation. food deP^riva^o low economic purchasing power of the

It is evident that hun^r and .1 >e food pro^duction and also to ^ largely due to low *** P . ^ t - * local people. It is, therS

improve the economic status of both men and women. This will go a long way in enhancing the living standards of the local people.

4.6.3

SOURCES OF INCOME

Formal and informal employments as well as the natural resource system are the major sources of income in Msambweni Division. There are a few men and women in the formal sector, although the men outnumber the women. Most of the men and women are excluded from this sector because they are lowly educated and unskilled. The informal sector, therefore, absorbs a majority of these men and women. There are more women than men in this sector because most of the activities were found to require low initial capital outlay that women could easily afford. The natural resources, the sea - the mangroves are exploited by men only although they are fewer than those in the formal sector. The huge finances from this activity.

A majority of the males and women who do not go fishing mangrove poles do so due to poor health, old age or personal convictions. The women indicated that with because they consider them to be strenuous and hire the males to cut availability of funds they would purchase canoes and hire the males to cut and go fishing. In this way, they would benefit greatly from the sea and the mangroves, boost their economic status and improve on their living standards.

These coastal communities have diversified mode of production well spread throughout the year. This ensures a steady exploitation, these resources still as depleted as ever. It was the resource systems. This of production would reduce pressure on perhaps an intensive conservation efforts form of diversification is already in place ecosystem and return it to almost its original help restore the depleted improve the economic and health status of state. In the long run such efforts

the local mangrove swamps and the sea posed health ntualized that the dimension. Indeed, these resources This study conceptual have a gender resources risks to the exploiters and women who are some of the health hazards at heart to the health of shellfish fishermen. Similarly, crocodile and Malaria, tetanus, bilharzia (exploiters) and the study revealed that the males are more facing the mangrove cutters use death- This is longer in the forest and go deeper wild animal attacks can easily use they stay health care centres in the . Inerable to these health problems, and spend lots of money to receive into the sea. Despite these long people cannot afford the high medical and are The local people have to people cannot still afford specialized treatment. A effective, and faith healing. A ther before forced to seek medication, traditional health centres could not afford alternatives include sex health centres hospitals such as Msambweni ma-riety of the villagers. Although public hospitals hospital treatment due to funds- Although people cannot still afford district hospital has a cost

the subsidised expenses and are forced to languish in poor health. The achievement of good health in Msambweni Division is far from being achieved in the near future. This is because of the economic, cultural and infrastructural hardships that are experienced in the area.

CHAPTER FIVE

CONCLUSION

5.0.

INTRODUCTION

The first section of this chapter is the conclusion of this study while the second provides the recommendations of the research.

CONCLUSION

According to the entitlement approach, men and women who are natives of Msambweni Division have a right to the natural resource systems in the area. This right bestowed on them by birth and through their traditional inheritance systems. However, the instituted sets of legal and political procedures typical of the National Statute of Kenya also authorize the immigrants to the use of these resources. Thus, as a native or an immigrant, an individual is entitled or endowed with the land, sea and mangrove resources which can then enable that individual to access and use these resources. Unfortunately, the current policies of their entitlements and endowments. During the colonial period, natives and immigrants of the coast was placed under the sovereignty of the Sultan of Zanzibar. Thus, all the Mijienda groups in general and the Digo of Msambweni in particular were transformed into Mijienda people have still remained dependence and up until now a majority of Mijienda people have still remained squatters. In fact, the efforts of carrying out the resettlement of personnel have adversely affected the disputes between the natives and the absentee Arab landlords should also actually be considered as one of the major causes of alienation as well as the slow and biased adjudication process have robbed the natives of their own ancestral land, the ever-present threat that they cannot effectively use the land in their daily struggles. Thus, the mangrove poles posed a serious threat to the exploitation of these forests. Although, these poles and a licensing system were introduced to protect the environment, the system has not only denied people access to these forests but also reduced the income of the community members. Thus, few individuals are now able to purchase mangrove poles even though the poles even mean such an individual. Thus, members of the research household repairs and repairs despite the fact that they are not able for a fine or repairs which have not been given any P

the presence of all these forms of exchange mapping declines as being present in Msambweni Division.

The entitlement approach also helps us to understand the concept of deprivation from a general perspective by explaining that deprivation may come about as a consequence of entitlement failure through the loss of endowment and unfavorable exchange mappings. However, the approach fails to pinpoint the exact or actual situations to the entitlement failure for the situation prevailing in Msambweni Division. Also, entitlement failure can occur due to a wide range of factors and causes each of which in their own ways can lead to fundamental deprivation. In fact, factors such as the climate, vegetation and aquatic life have been found to justify widespread deprivation in Msambweni Division.

According to our study, the climatic factor seems to profoundly influence People's command over land as well as conditions are not in favour of crop and food. This is simply because the infertile soils and high temperatures livestock productions. Also, the low rainfall on the other hand, the strong winds on are hostile to these land-based products. Dhows can capsize during the sea sometimes deny people plentiful deprivation regardless of such strong sea turbulence. Thus, the vegetational status of the mangrove whether they own the land and sea. Simi ar of deprivation. This is because forest would still be singled out as a poor and also pointed out by the the south coast of Kenya, it has large-sized mangrove poles. Villagers that it is very difficult to that these poles are very economically This is due to excess human exploitation people own the forests their command viable, which implies that even if the depletion of the mangroves.

over commodities would still collapse if the people conserve the mangrove habitat, and Ho appears that also be motivated ion. In our study area, bad ** responsibly. They would a Msambweni activity which is currently have not on no longer considered to fishing methods, such as beach siting. Therefore, fishermen have opted to search but also destroyed the aquatic reason maindi on the north coast be a lucrative activity as before places as economic activities, for example, for better fishing pastures in other of Kenya or they have decide imbalanced in the four coastal small-scale businesses. pping, d towards the producers such as Trade, as a form of tlc ul * most vulnerable to deprivation. Villages and this imbalance who seem appear to the >rove cutters, fi * ^ " f to this V * * Thus, the economic output is not The i • ps offe^d to potions- men and women such as the low market prices o ^ pr tftte madd ^ ^ a bou r and time expended x How e ^ n ^ Additionally, oportional to the eco s as well enha nced economic stdLu y, villages primarily Ce ncees, fishmongers, ^ B f o ' r i v * " * 1 * " " Privileged term of trade and, ^ ^ n t is a high level of f * - 1

because most of the individuals are not adequately skilled for the formal sector. Also, most of the educated people lack employment opportunities. This predicament mostly affects the youth who constitute a human resource that remains largely untapped in these research villages.

To cope with the decline in exchange mapping, the local people have developed various strategies aimed at curbing deprivation such as ill-health, poverty and starvation. Men and women have multiple production strategies which are well-tailored in accordance with the seasonal variations of the weather and natural conditions as well as the different opportunities at their disposal. It is important to note that the entitlement problem in Msambweni is not able to wisely use their natural resource systems. Perhaps, effective, strategic and logistic planning of the local people's purchasing power together with the mangrove ecosystem would cure the entitlement

RECOMMENDATION

school-going youths to pool together their financial resources as these will improve on their economic status. Feasible income generating and projects should be initiated so that men and women in the four villages adequately cater for their basic needs of the mangrove and the marine ecosystems. Intensive campaigns on the potential through village baraza, men and women and should be carried out for, churches, mosques, youth groups, schools, churches, and groups. These groups will be To substitute co-operative societies with fishing groups. mandated to perform the village committee to participate in the management of the mangrove forests- conservation of the mangrove and marine ecosystem should adopt a participatory approach and constraints of these They should consider the motivation of coastal people, perhaps resource system-

- BIBLIOGRAPHY
- U-Lughod, 1986
1993
Adenni, 1994
Aishalemu, B., 1971
Aji, 1980
dretta, 1980
Astuti, R., 1995
Barbieri, E., 1991
Beck, L., 1975
Bernard, 1988
Bhatty, z., 1987
Boserup, E., 1970
Brown, E. P., 1991
1990
Burgess, R.G., 1991
1986
Chaanon, 1979a
1979b
- veiled Sentiments: Honour and Poetry in a
Chicago: University of California Press.
Writing women's World: Bedouin stories, Chicago
University of California Press.
Gender, Work and Population in Sub-Saharan Africa
London: James Currey.
A Student's Introduction to Islam. London: Macmillan
The Holy Quran. Translation and Commentary. Jeddah*
Qulsom.
E.H.
Symbolic Continuity, Material Discontinuity and Ethnic
Identity among Murle Communities in the Southern Sudan
Ethnicity 28 (1) : 17-32.
People of the Sea: Identity and Descent among the
of Madagascar. Cambridge: Cambridge University
Press.
Environmental Management and Development in the
South: Prerequisites for Sustainable Development. A Paper
Presented for UNCRP: Sustainable Development: From
Action. Discussion Paper 91-07. Institute for Development
University of Nairobi.
Women among Qashgai
Women in the Middle East, Eds Beck and Keddie
Press. PP. 351-
H.R.
Research
Sage.
retribution of women to household budget:
Economic contribution of women in invisible
A case study of home-based industry. In invisible
Home-based industry. Eds A. M. Singh, and A. KelliilviitiHi?
London: Sage.
Women's Role in Economic Development. New York: St
Martin's Press.
Famine in Three Chadian Societies.
Sex and Starvation: A Paper on Famine, R.E. Downs, D.O.
in Journal of Jiji 293-321. Philadelphia: Gordon and
Kerner and
Breach.
OR-nr.e.J''''
Community Forestry: Rapid Reappraisal of Tree and
Land Tenure. Rome: FAO.
Field Research: A sourcebook and Field Manual.
Camiacho, A.S. and E. Camiacho
Mangrove Resource Management Policies. In Symposium
on New Perspectives in Research and Management of
Mangrove Ecosystem, Eds. C.D. Field and M. Vannucci,
pp. 180-192, Nov. 11-14, UNDP/UNESCO, Sri Lanka.
Yanomamo. In
perspectives, Eds. David E. K. Hunter
Doing Anthropology in the Tropics. Boston.
Anthropology:
Fission and Fusion: Perspectives on
Contemporary

Whitten, — . and Co

pp. 161-

Social analysis for i

•prapanzano,
1980

1975 S.S. M s ^ S S ^ j t o ^ . university of

Delaney, c.
1988 forking Women in a Moroccan villas r
^^UZorlnd, Eds. Beck, L and Keddi ^^Ujl_ t h e
London: Harvard University Press

1990 Mortal Flow: Menstruation in Turkish vm
Magic Flow: The AnthroTo7y ^f rfm - Li ge Society. In
Gottlieb, A., pp. 75-94. Buckley T. and
P-ressT

Denzin, N.K.
1989 *Interpretative Biography.* London: Sage

Downs, K.E.,
1991 D.O. Kerner and S.P. Peyna (Eds.;
Introduction. In *The Political Economy* gf
Downs, P.E. pp.1-19., D.O. K e ^ r f B ^ f ^ 2
(Eds.). Philadelphia: Gordon and Breach. Peyna,

Dwyer, D.H.
1915 Women, Sufism and Decision-making in Moroccan
Islam. In *Women in the Muslim World.* Eds. Beck
pp. 585-598. London: Harvard University Press ' N. Keddie,
and P. Petterson

Sklund,
1992 *Mwani is Money: The Development of Seaweed F^rmt'n*
in Zanzibar and its Socio-economic Effects in f^rT^r-
of Pale. Working Paper No. 24, Department of ^ j ^ i T ^ 3 ^
Stockholm University. Anthro^pology/

Ensminger, J. and Putter, A.
1991 *The Political Economy of Changing Property Rights-*
Dismantling a Pastoral Commons: A case Study of 'caJoi
Kenya. *American Ethnologist*,
18 (4) :683-700. XOIe Orma of

Fischer, M.J.M
1975 on Changing the Concept and Position of Persian
Women in the Muslim World. In *Women-in-th^MuslimWorld* Eri "
Beck, L. and N. Keddie, pp. 189-215. London: " y
Press_

Food
1982 LUX di of Mangroves in
^ n ^ p m e n t and
The Pacific. ROME: fao:

Friedl, E.
1915 r. — and sex Roles. In *Anthropology: Contempt*
SOCICittives, Eds. David E. K. Hunter and Philft ^ 1
p~r*pe>ntives, ' -- Little, Brown and Co.. pp. 226-230.
Whitten. Boston:

Fuglesang, M.
19 94 , • , n-. Youth Culture on the ffony^
of Social Anthropology
§§§§kholm University.

Funk, U.
1991 . power and Gender: Coping with Food
Labour, ^conomc Bissau. In *The Political Econo_mL fM*
Shortages in Guinea R E. pp 39-52., D.O. Kerner and Ts.TT SiiiCan
Gordon and Breach. Reyna,

(Eds.) -

Gerlach, L.P.
1959 .. and "i-lease among some East Afn>_an
tojtealm-?^

- libes. Paper Presented to the ** •
 Nairobi^{Research} ^ s i u m * D e ^ r , ^ * " of
- Gingrich, M.
 1993
- Hardin, G
 1968 Cultural Perspective. Eds. B?ettel 162-92. Prentice-Hall, NJ: In Gender C.B. and str^Vtfitast pps.
- Hossain, H.
 1987 Tragedy of Commons. Science. 162:1243.
- Idha, M.
 1997 Capitalist penetration into handicraft mannf, ^, historical review of women's work for the mark ^ Invisible Hands: Women in Home-ba.spH Product=?^" f^ladesh. in and a. Kelles-Vietanen. London: Sage" Eds. Singh, a.m.
- Johan, R.
 1995 The Mangroves of Lamu District: A Report n? a Br. Study on the Management and Sustainable uti iT T ^ f f ^ the Mangroves Swamps in Lamu. A Study iindertxk07^ of the Kenya Gatsby Charitable Organization Mimeograph, National Museums of Kenya. June 1997
- Juma, Scolastica
 1998 The Elusive Agenda: Mainstreaming Among Wom^n in Development. London: Zed Books.
- Jumaini, U.
 1987 Men, Women and Natural Resources in Kwale District Ambio, 21 (8):758-59.
- Kairo, G.J
 1995 The future of home-based productions. In Invisible Hands: Women in Home-based Production. Singh, " A.M. pp ? and A. Kelles-Vietanen, (Eds). London: Sage.
- Kanyinga, K.
 1998 Artificial Regeneration and Sustainable viMH Management of Mangrove Forest at Gazi Bay, Kenya^ Unpubl. M.Sc. Thesis, Nairobi.
- Kenya, Republic^ of piatrull
 1994 Struggles of Access to Land: The "Squatter Questi on" in coastal Kenya. CDRWorking Paper, 98.7
- Kibiti, R-N.
 1996 Kenya, Republic of development Plan 1994-1996. Nairobi: Government Printer.
- King, A. and D. Malleret-Ki"
 1997 Culture and gender. Mila (N.S.), 1:60-73.
- Kiluu, M
 1984 Research in Kwale District, In
- Kiswili, K
 1998 Development activities that may have an impact on Marine^: z\j^end^ prepared on Workshop on the Protection and Development^ of the Marine and Coastal Environment of East African Region, 27 Sept UNEP Regional Seas Report and Studies, No 51 •
- Lindblom, Q
 1975a Effort to save Mangrove Forest. Community, in Joint^ ^ ^
- Lindblom,
 1979b h a r p p o l o q y : Contemporary Marriage as a 65-169 David E. K. Hunter and Phillip Pers2ecj^PP Boston: Little, Brown and Co.. Whitten, (Eaf', lindblom rherry and Charles Lin Anthropology: Contemporary Life Behind the V^^234TDavid E. K. Hunter and Phillip .ectives, pp-

Eastern World. In *Gender in Cross-cm*-* ,

- Nelson, N.
1979
- 1981 university Press. *^eerature*. Pergamon: Oxford
Mobilizing Village Women: Some Oraan^^, '
Management Considerations. In *African W o T*
Development Process, pp. ^ - S S ^ 1 ^ ^ 2 ^ ^
- Nguta, C.M.
1995 Environmental Impact Assessment- fw Sust,, ..
Development of Coastal a n d l ^ T ^ ^ f ^
a UNESCO Regional Seminar on Human Inipact on r ! ^ Presented a
their Response and management Problems s a \ al Ecosystms
114, Nairobi. S, 5 9 A Pnl 1993, pp. 207
- Wjuguna, S.G.
1991 The Tana Delta. In Marine *Environmental Educaf.*
Abungu, L.L. and Abungu, G.H.O. ProceedW-#Th'
in Kanamai, Mombasa, 11-21st. August. *National m*
and the International Centre for Conservation (ICCE) 6111n3 Workshop
Kenya
- Ochiewo, J.
1998 A Socio-economic Profile of the Fisheries anw Ma
Resources of Mida Creek, Kenya. Paper ^entcd ton7~
Regional workshop on Interactive *Methods and Tech ' SIDA/SAREC*
Collection, Analysis and Reporting, 20 - 24 April 1998 e3 f0r>Data
- Olela, Y.M.
1994 Factors Influencing the Expectations of Muslim M~thr
for their Daughters' Level of Educational Att^inrr, Qit~n
Master of Arts (Thesis), Institute of African StudT^* rT?"
of Nairobi. Univ^sity
- Ong, A.
1990 State versus Islam: Malay Families, Women's Bodies and
the Body *Politic in Malaysia. American Ethno.7 orp ct- 17 (2) -258-276*
- Ostberg, W.
1985 Thp Knndoa Transformation: Coming to Grips wi>h
Erosion in Central Tanzania. Uppsala: Scandinavia.
Institute of African Studies.
- Peil, M.
1995 a^r-ixl Science Research Methods: A Handbook fr>_
Africa. Nairobi: Litho.
- Pelto, P.J.
1978 anri G H Pelto
ana ir.n. . The Structure of Enquiry
- Premit, K.
1974 of Development
- Peters, E.L.
1975 Women zn Four ru Middle East Communities. In Women in
and Keddie N
Harvard University Press.
- Qutb, M.
1964 Religion, Cairo: Darul Bayan
Bookshop.
- Rasmussen,
1991 d aver' Ritual Restrictions, Social Experience
^ h e Zthro^logy?of_Menstruation among the Tuaregs. American
Ethnolo^iM
- Reyna, S.P.
1991a ^ net-ruction in a "Garden of Eden". The
Cultural Co"s"tological Acquiescence in an African Development
influence of un lications for Food Security, m A^ Political
Project and a bsm-i-routine, pp. 71-89. Downs, R.E., D.D. o. ^ ^ ip ^
Economy^ ^tgrh Philadelphia: Gordon and Breach.
5-p Reyna, (Easw-

- 1991b What is
- Rippin, A. 1990 ^{uowns/ R.E., D.O} Philadelphia: Gordon and Breach.
- Roberts, S.A. and W.R.Q. Luke 1993 Muslims: Their ^{P"llvf} -Practices Vol 1. The ^{jp^III^JLL^e Period^ RoutledgeT~NewYork^} The Report of the ^{NMK/WWF Coast F.r.c Sun,m/ WW* Project 2156. Kenya Fores? !®?"} Management. Nairobi: WWF Conservation and
- Robinson, N.A. (ed.) 1991 Agenda 21: Earth's Action Pl^n ^{New York- Oceans}
- Russo, S. 1989 Bremmer-Fox, J., Poats, S., and L. Graig ^{Uceania_} The Gender Manual Series: Gender Issues, ^{n Aar,r,, .} and Natural Resources Manaa_{emp}N^ ^{y , DnC_:} N. Robert and Nathan.
- Rutatora, D.F., Mafu, S.T.A. and Lulandala, L.L. 1996 The Importance of Farmer Participation in Rehabilit t• Degraded Uhiguru Mt. Slopes: The Experiences from ^{m^w agadu and} Toweri Villages in Morogoro Region, Tanzania af ^{agadu and} Monographs, 17 (3) : 117-128.
- Ruwa, R.K. 1991 The Kenya Marine Ecosystem: An Introduction. In Marine Environmental Education, Abungu, L L and Abun (Eds.). Proceedings of the 1991 Workshop in Kanamai, MoSbiJ*^?' 21st. August. National Museums of Kenya and the infem -T Centre for Conservation (ICCE). ^{'^ernational}
- 1992 Mangrove Wetlands in Kenya. Proceedings of the KWWG Seminar on Wetlands of Kenya. National Museums of Kenya, 3-5 July 1991.
- Semesi A.K. and K. Howell 1992 The Mangroves of the Eastern African Region. Nairobi: UNEP.
- Sen, A. 1981 Development and Famine: An Essay in Entitlement and Deprivation. New York: Clarendon Press, minfrrr entient. World Institute for Development Economics Research. Tokyo: United Nations University
- 1987
- SIDA 1995b Women, ^{m,n and} and Tivina Aquatic Resources: A Gender ^{fiert} ^{development of coastal Areas. G^nhpr} ^{m g l g ^ ^ ^ T ^ I e s No. 2., Department of Social Anthropology,} Stockholm ^{^ - ^ Or Fron^nric aii} Adjustments: Thpmp, ^{GENE} Issues and Operational Strategies. Gender Discussion Paper Series No. 1., Department of Social Anthropology, Stockholm University.
- 1995 a
- Siganga, E.N. 1987 The Socio-cultural and Structural Constraints facing women group management in Lurambi Division, Kakamega District: The case of Mwirake and Sikuvale Women Groups. Institute of African Studies, University of Nairobi.
- Sow, F. 1997 Gender relations in the African environment. In Engendering African Social Sciences, Eds. Ayesha M. Imam, Amina Mama and Fatou Sow. Chippeham: Anthony Rowe., pp.251-270.
- Spear, T.T. 1974 The Kaya Complex. ^{-jjjrf^T nf the Miiikenda Peoples} of Kenyan Coast to 1900. ph. D History Department, University of Wisconsin.
- Strobel, M.

- Sunderlin 1997 University Press: London: Yale
and M.L. G-Gorospe
- Synder, M.C. and M. Tadesse 1995 *African Women and Development*. London: Zed Books.
- Tanzania, Republic of 1991 *Management Plan for the Mangrove ecosystem of Mainland Tanzania, Vol. 1 Mangrove Management Plan of Tanga and Muheza Districts*. Ministry of Tourism, Natural Resources and Environment, Forest and Beekeeping Division, Dar es Salaam.
- Tessler, M.A. Rogers, J. and Schneider 1975 Women's Emancipation in Tunisia. In *Women's Muslim World*, pp. 141-158. Beck, L. A. T. F. (Eds.). London: Harvard University Press.
- Tobisson, 1992 and Rudgvis, A. *Popular Participation in Natural Man*TM*. Working Paper No. 11., Department of Anthropology, Stockholm University.
- Tolba, M.K. 1983 *Development Without Destruction: Evolving Environmental Perceptions*. Dublin: Tycooly International.
- Tumbo-Masabo, Z. 1985 Palm Production and Fish Trade at Ujiji, Kigoma Region Tanzania. In *Rural Development and Women*, pp. 37-47. S. Muntamba, (Eds.) ., Geneva: International Labour Organization.
- unep 1988 *The Public and Environmental: The state of the Nairobi: UNEP*
- 1989 *A Coast in Common: An Introduction to the Eastern African Action Plan*. Nairobi: UNEP.
- Vaughan, M. 1987 *The Story of an African Famine: Gender and Famine in the 20th. Century Malawi*. Cambridge: Cambridge University Press.
- Ver Eecke, C. 1989 *From Pasture to Purdah: The Transformation of Women's Roles and Identity among the Adamawa Fulbe*. *Ethnology* 28(1):53-74.
- Wariara, M. 1996 *Women's Empowerment: The Post-Beijing* keynote Address - *joint-Conference of the Pan African Association of Anthropology and the Association for Anthropology in Southern Africa, 9-13th September, 1996*. Johannesburg.
- Wass, P. 1995 *Unrest: Status, Management and* Publication.
- Whitehead, A. 1994 *Mothers' Female Farmers in Africa*. In *Gender and Evolution in sub-Saharan Africa*, pp.21-40. *Gender and Evolution in sub-Saharan Africa*. London: James Curry.
- Willis, J. 1993 *The Making of the Miiikendx*. New York: Oxford Press.
- World Bank 1997 *Rural Development, Poverty Reduction and Environmental Growth in Sub-Saharan Africa*. Washington, D.C.: World Bank.

- Youssef, N.H,
1978 The Status and Fertility Patterns of Muslim women. In
Women in the Muslim World, Eds. Beck, L. and Keddie, N., pp. 69-
90. London: Harvard University Press.
- Zamora, P.M.
1986 Management Policies and Political Awareness. A Paper
Presented at a Symposium on New Perspectives in Research and
Management of Mangrove Ecosystem, Nov.11-14 1986, UNDP/UNESCO:
Colombia.

24 d) What diseases do you risk cont-^

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<ii> Which dls^e" P n

25. How are these diseases treated^ff^R^3^6^1^1^ among 1. Adults 2 Chi!H

26 i^3) P «^ a i t h healing) None of the^bo <2>T «<+tional h i a l ^ ^

26. What problems do you face in seeking » medical advise? (specifyf
management of the mangrove ecosysS

(iii) Are there any self-help groups in this area?
Are you a member? Yes No

Uii) Give reasons for your answer above

29 m^w r n y members are there in y^o^u^r group? -Females - Males
(i). Is your group concerned with the management of the m^
ecosystem? Yes No mangrove

"In" ^ yes, w^at are some of your activities?

^ What are the sources of funds for your group?
uj. your group?

(i). In your view, have you succeeded in implementing the actu,^
of your groups? Yes No y 8 actl vities

di) If yes, what has contributed to this success?

(Hi) If no, what are some of the reasons for the failure?

2. What kind of visitors does your group receive? (i) Agricultural
extension officers

(ii) Personnel from forestry department (iii) Personnel from
Fisheries/Marines (iv) Others (specify)

(i). Do you benefit in any way from your group? Yes No
(ii) If yes, in what ways?

(Hi) If no, why?

34. What do you think can be done to solve the problems in your group?
management and SUBSISTENCE PRODUCTIONS

35. How many hectares do you grow the following? (i) Cash crops
(cashewnuts, coconuts, bixa)

(ii) Food crops (cassava, maize, sorghum, rice) (iii) Fodder
(iv) Others (specify)

36 (i). Do most people in this area produce enough food for subsistence?
Yes No

(ii) If no, give reasons

37. What do you think can be done to increase production?

38 (i). What kinds of food do you prepare?

i ^ i f ^ t h " T a s n f t i r 4 e t " o c u e r normal meal pattern is disrupted? yes :

. , ' f 8 = t time' (a) When out to work (b) When there is little
' food ^c, When I have gone vrsiting ,d, Ramadhan (e, others (specify,

(iii) If no, give reasons

40. Do you eat? Miridi Sea foods

(ii) / If yes, / how often?

(iii) If no, why? d in 40 above? (a) Markets (b) Swamps

41. Where do you get the too lives (4) others (specify)

(c) Friends, neighbours, foodstuffs? (a) Firewood

42. (i) What do you use to prep paraffin (e) Gas

(b) Charcoal (c) tree species do you prepare? (a) Mangroves

(ii) If you use f ^ J y p t U 5 (d) Others (specify)

(b) Mahogany (c) Eu c ^ Y ^ n s w e r

(iii) Give reasons for your answ ^ ^ ^ following?

43. what sources of water sou.
Use Tap/pumP River Borehole Others

Drinking
Livestock

Washing

Cooking

others

Hump your domestic wast

44. Where do you dump y Others jnbers to use a latrine? Yes No

(d) Mangrove swamps » j10usehoia

45 (i) Do you encourage y

(ii) Give reasons for your answer

46 What do you do during your leisure time? (a) Visit friends

s o ^ n ^ l T ^ J Z ^ r - " ~ ha,,dicrafts (iv)

48. What do you think can be done to improve the tour trip?

49 (i). Have you ever been to a **kaya** settlement? Yes No

(ii) Give reasons for your answer

50 (i). In your view, do you think these **kaya** settlements should be preserved? Yes No

(ii) Give reasons for your answer

INTERVIEW GUIDE FOR MEDICAL OFFICER

1. Which are some of the most prevalent diseases in this area?

2. Which health programmes have been instituted to deal with these diseases?

3. Which problems do you encounter in your health delivery system?

4. What

are some of the solutions to these problems?

FOCUS GROUP DISCUSSION GUIDE

1(i) Are the people sensitized on the importance of the mangroves?

If yes, through which agencies?

(ii) What is your evaluation of the efforts made by these agencies?

(iii) What measures would you suggest to improve on their results?

2. What are some of the problems facing those who use the mangrove swamps as a source of food and income?

3. How best can these problems be solved?

4. In your opinion what can be done to increase the productivity of the mangrove ecosystem?

5. Is there a problem of community participation which hinders the conservation of the mangrove swamps?

INTERVIEW GUIDE FOR MARINE FISHERIES

1. Do you have any cooperative groups which control the harvest of the aquatic and marine life particularly in the mangrove swamps?

(i) If yes, are they **registered**?

(ii) If no, how else do you get to advise people on sustainable harvest of these organisms?

2. Which kind **of fishing** vessels do you have?

3. What mangrove dependent marine and aquatic species do you recommend for consumption and why?

4. What do you think can be done to have sustainable harvests

5. What do you think are some of the problems people face when they

INFORMAL INTERVIEW GUIDE FOR FOREST RANGERS/FOREST OFFICERS

1 (i). Do you patrol the mangrove forests? Yes

(ii) if yes, how often?

(iii) If no, give reasons? 1. 2.

2. How many **licenses** do you issue out yearly.

3. How mangrove trees are cut monthly?

a Does the cutting go on throughout the year?

V no you advise people to plant **mangrove** trees or other trees (Specify)?

V in your opinion should be done to improve/increase the mangrove trees?

7 DO you advise people to exploit other potentials of the mangroves?