Civil Society Conflict Prevention Network KATU

REPORT OF THE CONFERENCE ON

COOPERATION OR CONFLICT: WAYS OF MANAGING SCARCE NATURAL RESOURCES IN AFRICA

18-23 JUNE 1999 MAPUTO, MOZAMBIQUE

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Foreword

The Citizens' Security Council, KATU (in Finnish Kansalaisten turvallisuusneuvosto) was established in spring 1997 by more than 20 Finnish non-governmental organisations and research institutes in order to create a broad civic forum for conflict prevention and conflict resolution. KATU acts as a network combining the efforts of Finnish NGO's to prevent the outbreak and escalation of violent conflicts.

KATU's first project is dealing with conflict prevention in Africa. KATU organised together with the Finnish Ministry of Foreign Affairs and International Alert an international conference on "The Role of the International Co-operation in Conflict Prevention in Africa" in December 1997 in Helsinki, Finland. As a follow-up for the conference and to deepen the co-operation, KATU organised two conflict prevention workshops in Africa in spring 1999.

The first of these workshops was held in Livingstone, Zambia on 11-16 April 1999 and was dealing with "The Role of Youth in Conflict Prevention in Southern Africa".

This book is the Final Report of the second workshop which was held in Maputo, Mozambique on 18-23 June 1999 and was dealing with "Cooperation or Conflict: Ways of Managing Scarce Natural Resources in Africa".

Altogether there were more than 50 participants from Angola, Kenya, Malawi, Mozambique, Namibia, South Africa, Zimbabwe and Finland. The workshop discussed on various topics related to natural resources and conflicts both on general level in the plenaries and on specific issues in small groups. This report includes all major speeches held in various sessions as well as reports from the working groups of the workshop. We hope that this book is useful for its readers.

KATU wants to thank Ms. Iina Soiri who "built up" the workshop, KEPA-Mozambique, Eduardo C. Mondlane Foundation, Embassy of Finland in Maputo and the Ministry for Foreign Affairs for funding the workshop and the publication of this report.

Helsinki, September 1999

Anne Palm
Secretary General
KATU

INTRODUCTION TO THE THEMES

Ms. Anne Palm, Secretary General, KATU, Finland

Opening remarks

Dear friends,

We presently live in the midst of conflicts. We Europeans faced an extremely serious conflict in Kosovo. A peace treaty has been adopted, but the situation in Kosovo still remains very serious. Kosovo was ravaged by fighting and ethnic cleansing, and a million people had to flee their homes to neighbouring countries. The re-building of Kosovo will take many years. The despair of many people will continue.

We also can say that Africa today is a conflict-ridden continent. In spite of slight reduction in military expenditure of some African governments, there have been 14 major armed conflicts in Sub-Saharan Africa since 1989. The human cost of these conflicts is depressing. It is difficult to estimate the exact number of all deaths in these conflicts, but it has been said that over 2 million people have died.

The nature of conflicts has changed over the time. Most of today's violent conflicts are not the wars between contending states of former years, but take place within existing states. According to Swedish peace research institute, SIPRI, of the 101 armed conflicts during 1989-96, only six were traditional inter-state conflicts. The remaining 95 took place within existing states. Many, if not all, are concerned with complex issues of perceived identity and ethnicity, fuelled by extreme nationalists. The sources of these conflicts are often embedded. History is often used as a weapon of war.

Dr Kumar Rupesinghe, former secretary general of the International Alert, has made a typology in order to examine the nature of contemporary conflicts. He finds four main types of conflicts:

- resource-based conflicts based on competition for economic power and access to natural resources
- conflicts over governance and authority based on competition for political power and participation in political processes
- ideological conflicts based on competition between rival ideologies and value systems
- identity conflicts based on competition between rival ethnic, religious or other communal identity groups for access to political and economic power and social justice.

Most of the victims of conflicts are civilians. In the First World War it was estimated that about 10 % of all the casualties were civilians, in the Second World War the number of civilian victims was about 50%. Now it is estimated that some 90 % of all war casualties are innocent civilians: mainly women and children. Conflicts cause also a lot of other related problems: refugees, famine and other serious long-term effects on people.

But conflicts do not have only these humanitarian costs (the number of dead, wounded, displaced persons, refugees etc.). The costs of the escalating violence of conflicts are enormous, as a well-known Belgian researcher on conflict prevention, Dr Luc Reychler has analysed. According to him, an overall analysis of the costs of armed conflicts contains eight categories.

There are the already mentioned humanitarian costs that usually are the most obvious consequences of the war.

The political costs reflect to i.e. the breakdown of democratic system/process, the disintegration of state, political corruption. The economical costs of conflicts include the cost to operate the machinery of war, impacts of losses in investments and commercial boycotts, collapse of the economic infrastructure and war damages.

The social costs of conflicts include the break-up of families, war orphans and the social exclusion of rape victims. The cultural costs include destruction of historical treasures and living cultures as well as substitution of a culture of peace by a culture of war. Conflicts have also ecological costs. Nature usually suffers a lot from wars and their aftermath: refugee camps etc.

The psychological costs of conflicts include the psychological wounds caused by the violence. The spiritual costs are also very important: the meaning of life and all moral and human values are destroyed by the violence.

In order to avoid all these terrible costs of conflicts, we have to prevent new conflicts from occurring. Recent international co-operation in conflict prevention has been 're-active', only reacting when conflicts have already broken out (for example in Rwanda). There is a need for a 'pro-active' approach, seeking measures to prevent conflicts from breaking out.

This workshop, organised by the Citizens Security Council (KATU) is dealing with natural resources as a potential trigger to conflict. We, of course, cannot address all conflicts. Nevertheless, the focal point is to assess what options are available to minimise, if not to prevent, conflicts emanating from control and use of natural resources. It is meant address issues in the Southern African region.

As we all know, life depends on natural resources that provide energy for survival. Africa is endowed with rich natural resources, vast biological diversity and various climates. As human survival is inextricably linked to natural resources and simply because life

supporting production systems are dependent upon available natural resources, ownership and control over scarce natural resources may lead to conflicts among resource users.

History provides tangible evidences that acquisition of territory directly related to the necessity of providing food and/or control over strategic materials (natural resources) for a nation or a group has often caused wars. Addressing problems emanating from control and use of resources can involve issues related to distribution of resources, governance, human rights questions, development issues, etc. The source of conflicts, when it comes to natural resources, however, is often the control and use of resources, not the resources themselves.

The central role of this workshop is to bring concerned people together in order to seek possible ways and means to achieve increased awareness about the problems. The underlying conviction is that a civic society equipped with enlightened self-and-mutual interest thrives its best to prevent harmful effects of conflicts arising from control and use of natural resources.

NGO's can play an important role in conflict prevention, especially on the grass-root level. Strengthening the structures of civil society, promoting democracy and human rights, empowering youth and women, and practising good governance, are good examples of measures for preventing violent conflicts.

Citizens' Security Council KATU is a conflict prevention network of some 40 Finnish NGO's. We believe that prevention is better than cure. We believe that NGO's have an important role to play on this arena.

You are all warmly welcome to this workshop. I hope that during these four days we can get to know and understand each other better, and hopefully find some common activities and projects on conflict prevention in Africa.

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Dr. Ebenizário Chonguiça, World Conservation Union, Mozambique[1]

NATURAL RESOURCES IN AFRICA: ABSTRACT

Africa is a continent endowed with a rich natural resource base. With its biodiversity richness and habitat quality, the natural resource base, represent the continent most valuable asset. Paradoxically, the current standards of living are rated as one of the lowest

[1] Country Representative of the World Conservation Union (IUCN) in Mozambique and Professor at Eduardo Mondlane University UEM.

in the world. While social and economically very poor, the prevailing high potential of the continent's land, marine and mineral resources provide the unique window of opportunity for socio-economic development. The current levels of poverty, heavy external aid dependency, impose pressures for rapid economic growth. Since ever, large development initiatives have been proposed throughout the continent targeted at maximum exploration of the natural resource base with a wide range of multi-dimensional impacts.

The economic and social dimensions of such impacts, although not easily translated into monetary and tangible terms, are conceivable if one assesses the comprehensive effects on the quality of life, decreasing social returns of growth and the level at which the production potential of the natural resource base have been unrealized and misused. The deteriorating terms of trade and high debt burdens are compounded by a severe and escalating cost of natural resources degradation.

In discussing the role of natural resources into the development process particular assessment is made on whether *"the natural resources are or they become"?* In discussing the new approaches to natural resources management, the question of community collaborative management, the trans-boundary dimensions of the natural system, and resource stewardship are viewed as issues of concern. Paradigms change as related to natural resource management and sustainable use approaches that emphasis the need for local communities involvement are also discussed.

This paper intends, therefore, to provide an analytical perspective behind such factors, while providing some hints on the way forward.

The organisers never received the whole text by Mr. Choncuica.

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Mr. Andries Odendaal, Centre for Conflict Resolution, South Africa

CONFLICT PREVENTION, MEDIATION, RESOLUTION: THE ROLE OF NGO'S

Let me make and substantiate three statements concerning conflict resolution and the role of NGOs:

1. Conflict is a normal aspect of human existence and should be understood as the expression of frustrated basic human needs.

2. Conflict management is a primary responsibility of the state. NGOs have a role to play because of the imperfection of the state system in general and the weakness of particular states.

3. The effectiveness of NGOs in conflict resolution is determined by their close adherence to the basic principles of the discipline, particularly those that prescribe impartiality and the facilitation of inclusive processes.

1 Conflict as the frustration of basic human needs

The discipline of conflict resolution is based on the premise that people find themselves in conflict with others (and with their environment) not because they are "naturally evil" or "naturally aggressive", but because they are "naturally needy"[2]. The ability to understand the nature of basic human needs and the impact that the frustration of such basic needs have on human behaviour lies at the heart of effective conflict management.

Manfred Max-Neef[3] identified ten basic human needs that are universal. All people at all times therefore share these basic needs. They are the needs for subsistence, protection, affection, understanding, participation, idleness, creation, identity, freedom and transcendence.

The continuous frustration of any of these needs creates the drive that results in conflict. Conflict may therefore be understood as the energy created by the drive of individuals and groups of people to fulfil their basic needs in the context of perceived or real scarce resources.

Conflict analysis should therefore not be reduced to a consideration of materialistic factors, but should also include the non-material causes of frustration.

Conflict prevention, mediation and resolution refer to the efforts to channel the energy created by conflict into constructive ways of satisfying the basic needs of all concerned. This implies:

- A proper analysis of the conflict that will uncover the real frustrated needs beyond the more superficially stated positions.
- The facilitation of processes that will help the parties involved understanding the needs and concerns of all concerned.
- The facilitation of problem-solving processes that aim at inclusive and mutually beneficial solutions.
- The mediation of formal agreements that include proper monitoring mechanisms.

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[2] John W. Burton 1988. *Conflict resolution as a political system.* Centre for Conflict Analysis and Resolution, George Mason University, Working Paper 1.
[3] Manfred A. Max-Neef 1991. *Human scale development: conception, application and further reflections.* New York: Apex.

2 The role of the state in conflict resolution

Conflict resolution is a primary responsibility of the state. Governance means the regulation of co-existence and competition for scarce resources through legislation (determining the rules), policy development and implementation; arbitration of disputes (the courts) and ensuring compliance (police and the penal system). In the ideal world a democratic government understands and represents the real needs of all its citizens because it has been elected by them. It is therefore the ideal manager of conflict and arbiter in disputes. In the real world democratic governments find themselves in conflict with sections of their citizenship because:

- democracy itself at times undermines proper conflict resolution. It imposes the will of the majority on minorities and may leave minorities with a sense of permanent exclusion; and

- democratic governments may become alienated from sections of their citizenship because they implement policies that are perceived to be against their interests.

It is, however, the phenomenon of the "weak state" that is very relevant for our consideration. "Weak states" are weak in terms of their institutional capacity to govern effectively and in terms of their level of inner cohesion and legitimacy. The majority of states in Africa qualify as "weak states".

Within the context of a weak state citizens operate on the principle that they have to take care of their own interests because of the absence of confidence in the state's ability to do that. Frustration levels are high, often resulting in violence. Mobilisation often happens on the basis of ethnicity. Competition becomes a zero-sum game. An additional factor is that control of the state is seen as the only way to satisfy a group's needs. The absence of alternative strategies to satisfy basic needs therefore raises the stakes of control over the state.

The role of NGOs in conflict resolution should be seen against this background. The reality is that the state is often one of the parties in a conflict or is seen by some citizen groups as blocking the satisfaction of their basic needs. This situation creates the space for conflict resolution NGOs to position themselves as mediators between a government and the citizen groups that are in conflict with that government. Another scenario is the existence of conflict between citizen groups with the government being unable to intervene because of a lack of capacity or credibility.

NGOs should be aware of and sensitive to the delicate nature of the relationship between themselves and the state. They should understand to what extent their efforts might be seen by the state as intrusive of its own terrain, consequently creating feelings of resentment amongst state actors. This possibility increases when state actors feel insecure or threatened. Furthermore, NGOs should strive towards the empowerment of the state and the promotion of good governance. Interventions that make NGOs look good but that leave weakened and humiliated state actors behind are obviously more

harmful than helpful. A meaningful contribution by NGOs to address conflicts associated with weak governance is surely to enhance the capacity of the state and not to diminish it.

The situation within a weak state is mirrored by the international situation. International governance is not only weak but almost non-existent. The United Nations and its agencies have no power to enforce compliance to their resolutions and the tenets of international law. Its effectiveness is dependent on the goodwill of member states. An example of the inability of the state system to provide adequate solutions to conflict is in the area of environmental protection. Issues relating to the exploitation and protection of the environment are invariables not confined to the sovereignty of one state. The "greenhouse effect", for example, cannot be dealt with effectively by one state on its own. An effective strategy is dependent on the co-operation of all states. In this context environmental NGOs (ENGOs) are playing an important role in facilitating international agreements[4].

3 The effectiveness of NGOs in conflict resolution

Effectiveness in conflict resolution depends on close adherence to basic conflict resolution principles. This is particularly true in the case of interventions by impartial third parties that intervene as mediators or facilitators. The following basic principles are of particular importance[5]:

a) Mediators are non-partisan. Where conflict exists, the relations of disputants are normally characterised by high levels of distrust and enmity. Mediators step into such a situation with the intention to win the trust of all involved and to utilise the common trust that the parties have in the mediator as the basis for restoring adequate communication and trust. It is not possible to be an effective mediator with one of the parties harbouring deep suspicions about the agenda and integrity of the mediator. Conflict resolution NGOs should be beware of the natural inclination to side with aggrieved groups against government. They should rather seek to earn the trust of all concerned.

b) Mediation requires the consent of the disputants. Mediation (and the mediator) cannot be imposed. Mediation relies on the active co-operation of all parties. Coercion has an inevitable negative effect on the outcome of the process. Similarly, mediators cannot impose solutions but have to work with the parties to find solutions they can live with.

c) The functions of mediation and advocacy should be kept separate. Mediation is not the only method for dealing with conflict. There are situations where mediation may in fact be completely inappropriate, especially in situations where the power imbalance is too skewed. Different situations demand different strategies and

[4] See Deborah Shmueli and Ariella Vranesky. "Environmental mediation in international relations" in Jacob Bercovitch (ed.) *Resolving international conflicts. The theory and practice of mediation.*
[5] See Laurie Nathan 1998. "At the core. Six strategic principles of mediation." *Track Two* 7:1.

advocacy or confrontation are strategies that may be applicable in situations of extreme injustice. However, those opting for advocacy cannot at the same time try to play the role of mediator, and vice versa. These two roles are complementary, but cannot be fulfilled by the same persons. NGOs should therefore be clear on the role they need to play within a specific context and act consistently within that role.

As far as advocacy is concerned it should be emphasised that the type of advocacy that demonises one of the parties to a conflict is not helpful. Since a satisfactory solution to a conflict is dependent on the co-operation of all parties involved the demonisation of any one of the parties inevitably makes a solution more difficult to achieve.

d) Conflict resolution processes should be inclusive. It is not possible to arrive at a lasting solution to a conflict as long as individuals or groups who have a direct interest in the outcome are excluded from the process. The design and management of the conflict resolution process should therefore take special care that all relevant persons are included and that the natural inclination to exclude the most troublesome or resented groups be resisted.

e) Mediation is an art and a science. Good mediators normally have a natural inclination towards sensitivity, intuition and empathy. They are not troubled by blown-up egos and have reached a certain level of psychological maturity. In short, good mediators are often naturally equipped for that role. At the same time mediation is a science in the sense that it encompasses a body of theory, models, techniques and skills that can be acquired. Not everyone can be an effective mediator and having some inborn qualities as a mediator is not sufficient. Potential mediators have the responsibility to acknowledge their own capacity in this respect and to seek sufficient preparation for the role.

In summary: as governments find it increasingly difficult to meet the basic needs of its citizens and to balance the various pressures being exerted on them by interest groups, the roles of conflict resolution intermediaries become more important. The effectiveness of such intermediaries depends on various factors, but the ability to empathise with the predicament of all concerned is crucial.

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LAND AND POPULATION

CASE STUDY ON EPUPA DAM IN NAMIBIA: WHEN TRADITIONAL RIGHTS CLASH WITH ENERGY DEMAND

Ms. Mukazona Kuvare, National Society for Human Rights, Namibia

THE PROPOSED EPUPA DAM IN NAMIBIA

I am a Himba youth from the Kunene region, in the northwestern part of Namibia. I represent the National Society for Human Rights, the main human rights and advocacy monitoring NGO in the country. I'm here to make a presentation on the potential consequences of the controversial construction of a huge water catchment dam for the proposed 650-megawatt[1] Epupa hydroelectric scheme on the Kunene river in the northwestern corner of my country. My theme will therefore be "Epupa Dam: When traditional rights clash with energy demand". I would like to start with giving you a short historical background of the Epupa controversy.

Two years after Independence from apartheid South Africa in 1990, the new Namibian Government in the name of "national development" decided to build a dam at Epupa falls on the Kunene River in the Baynes Mountains. A feasibility study for the proposed construction of this huge dam to which Norway[2] is said to have contributed at least NKR 30 million, has already been completed. The construction of the scheme, if allowed to go ahead, would be funded by the World Bank, among other funders.

The proposed site of the dam is in the traditional heartland of the Ovahimba people – a tribal indigenous minority group numbering about 5 000[3] people. Ovahimba are a semi-nomadic and pastoralist community that has seen a lot of hardships during the last two decades: a scorching drought from 1979 and 1982 and a theater of war between SWAPO and South African security forces who planted and left thousands of landmines and unexplored ordnance.

The overwhelming majority of the Himba people are, of course, against the construction of this dam. So are the NSHR and many other national and international human rights and environmentalist organisations. Because the project, if constructed, would lead to catastrophic consequences in terms of the civil, cultural, economic, environmental and social rights for my people, including:

1 Relocation and/or Displacement

About 3,500 people who live along the Kunene River will have to be relocated and this would leave the local population without subsistence, let alone land. The planned construction of the dam threatens the grazing lands of the community that subsists on milk and meat. Since the dam will deprive cattle and goats of grazing areas, how will the Ovahimba people survive?

2 Deprivation of Cultural Rights

The proposed construction of the dam will also threaten the sacred burial sites of the people and this will have additional civil and social consequences for the Ovahimba people, including their cultural identity and even existence. In terms of article 19 of the Namibian Constitutions as well as the Traditional Authorities Act (No 17 of 1995), the Ovahimba people, like any other groups in the country, are entitled to the rights to promote and maintain, protect and enjoy their culture and tradition.

3 Denial of Socio-Economic Rights

3.1 Subsistence Economy

As pointed out in section 1 above, most of the Ovahimba people depend on meat and milk from their cattle and goats. Therefore the construction of the dam will definitely threaten this economic activity. About 90 percent of the area's native palm trees would also be wiped out if the dam is built and the people would be denied the rights to eat edible nuts from these trees.

3.2 The HIV/AIDS Epidemic

The construction of the dam could also mean that people from other cultures will influx the area. Most of these people will, of course, be male manual laborers and/or semi-skilled workers who would be far away from their wives. This influx will undoubtedly expose the "primitive" Ovahimba to the danger of sexually transmitted diseases, including the deadly HIV/AIDS complex. Being uneducated such that they could not learn how to protect themselves from AIDS, the Himba people will be driven towards extinction as a direct consequence of this deadly disease.

4 Environmental Rights

The destruction of the environment posed by the construction of the dam surely will in turn lead to the destruction of the ecosystem, including the natural habitant of various types of tourist attractive birds or plant species. And this will also lead to the destruction of the eco-tourist industry of the people, which currently brings N$5,000 each year into the area.

In accordance with the provisions of its constitution, Namibia has ratified several major international human rights treaties, including the International Covenant on Civil and Political Rights as well as the International Convention on the Elimination of All Forms of Racial Discrimination. International pressure should therefore be brought to bear upon the Namibian Government. All other entities involved in the planned construction, including the World Bank, should not proceed with the project.

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Mr. Andrew Corbett, Legal Assistance Centre, Namibia

THE EPUPA DAM QUESTION: ITS IMPACT ON THE LOCAL HIMBA COMMUNITY AND THE NATURAL ENVIRONMENT

Introduction

The idea of damming the Cunene was suggested as far back as the era of German occupation. The Cunene River lies on the boundary between Namibia and Angola. The governments of South Africa and Portugal entered into water use agreements in 1926 and 1964. In 1969, they entered an agreement on the first phase of development of the water resources of the Cunene River, which made reference to a master plan for river development. This plan proposed a first hydropower project at Ruacana, to be followed by a series of hydropower projects beginning at Epupa and continuing downstream. The 1969 agreement resulted in the construction of the Gove Dam in Angola, the Ruacana hydropower scheme and the unfinished Calueque Water Scheme, which facilitates water supply to northern parts of Namibia.

In the late 1980s, motivated by forecasts about Namibia's increasing need for power Nam Power (then known as SWAWEK) began to advocate the construction of a hydropower scheme in the Epupa area. Namibian independence combined with increasing political stability in Angola made the concept more feasible.

The previous agreements between Portugal and South Africa were ratified in 1990 by the governments of Namibia and Angola. A 1991 agreement between the two nations then gave the official go-ahead for an investigation of a hydropower project in the Epupa area, and detailed technical and environmental studies began in 1992.

The possible construction of a hydropower dam on the Cunene River has engendered much discussion and debate. The Legal Assistance Centre would like to make sure that the voluminous information about this project is accessible to the public, to provide for more informed debate.

The Legal Assistance Centre as an organisation has no view for or against the construction of a dam at any of the potential sites. Our concern is to ensure that the legal

rights of all parties are fully respected. We will endeavour to simplify the Feasibility Study Report as accurately and objectively as possible, and to present comments and opposing viewpoints fairly.

The local Himba Community & impact of the dam on their economy[6]

The reality of Namibia's Himba people has been obscured by inaccurate stereotypes. The tourist industry portrays them as unspoiled remnants of an ancient Africa, while the Namibian Government and various development agencies have presented them as a primitive and under-developed community with a lifestyle that should be upgraded. In fact, the Himba are the most successful and economically independent subsistent farmers in Africa – a relatively healthy and wealthy community with sound strategies for food security which have proven successful even in times of severe drought.

Before 1920, Himba pastoralists were engaged in various forms of economic diversification. They traded with Portuguese and Ovambo communities, fought as mercenaries for the Portuguese colonial army, and entered wage employment with traders, hunters and farmers. It was the restraints imposed by the South African regime, which blocked this trend. Restrictions on the movement of livestock cut off opportunities for trade. Opportunities for wage employment disappeared when the government refused to allow the Himba to cross the river for work in Angola and then ignored them in the official labour recruitment systems for "South West Africa". The economic activities of the Himba on the Angolan side of the river were similarly constrained by the Portuguese government. Thus, the subsistence economy, which characterises Himba communities today, was artificially created and enforced.

Wage employment remains rare among the Himba, but they have excelled in pastoral production. They herd sheep, goats and cattle, a combination, which makes the most of the available resources by utilising different layers of vegetation. This mixture also provides a buffer in times of drought, since grasses are generally more susceptible to decreased rainfall than trees and bushes. So, for example, during the catastrophic drought of 1981, goatherds could be maintained even though cattle herds were reduced by up to 90%.

The Himba have developed a range of techniques which minimise economic risk to individual households while at the same time has been advancing the interests of the entire community.

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[6] The social impact assessments of the Feasibility Study are based on detailed studies by anthropologists and social scientists, which are published in full in the Feasibility Study Report. The information the economic impact on the local Himba people is drawn primarily from the papers of Dr Michael Bollig, who provides a detailed study of Himba pastoral production, and Dr Margaret Jacobsohn, who reports on interviews with more than 1600 people in the area.

Some of these important technique adaptation strategies are:

1. The cattle post system,
2. Livestock exchange and inheritance,
3. Communal management of resources,
4. Gardening, and
5. Drought strategies.

1. The cattle post system

The cattle herd of one household can vary from 3 to 500 cattle. Livestock are used as sources of meat and milk, as well as being bartered for goods such as maize, alcohol, blankets and cloth. Marketing is usually limited to one animal at a time, unless there is a funeral or some other social occasion, which requires food and alcohol for large numbers of guests.

Rich households usually distribute their cattle among several independent cattle camps, which rarely if ever rejoin the main household. Farmers with smaller herds may have one dependent cattle camp, which migrates separately in the dry season, then rejoins the main herd when grazing is more abundant after the rains. The poorest households are unable to split their herd at all. The movements of the cattle camps depend on the availability of grazing and water. This cattle post system provides an avenue for poorer relatives to gain access to the herd of a rich family member.

2. Livestock exchange and inheritance

An important aspect of stock ownership is the practice of stock exchange. All but the richest household rely heavily on borrowed stock. Young men typically begin to establish a household herd at the age of 25 or 30, when they visit scattered matrilineal and patrilineal relatives to ask for livestock loans. The borrowed animals and their offspring remain the property of the lender, but in practice the borrower is seldom asked to return all of the borrowed animals. The fact that cattle are borrowed from numerous owners reduces the risk that they will all be recalled at once.

It is not only the wealthiest stockowners who lend their cattle. Other households utilise the practice, as a form of insurance against a sudden decline in the household herd from a disaster such as a localised outbreak of livestock disease. This intricate network of livestock exchange performs several functions – it offers young households or households which have suffered serious livestock losses an opportunity to build up a herd, it reduces the risks of catastrophe, and it cements kinship relations.

Livestock is also redistributed by means of inheritance through the matrilineal line. Because matrilineal relatives do not usually live together, inheritance usually means that a herd shifts its locality, thus making it possible for different groups of neighbours to benefit from it through the exchange system.

3. Communal management of resources

Land adjacent to settle households has an "owner" (perhaps more accurately described as a "guardian"), while outlying areas are jointly managed by the seniors of the community. The principles on which resource management is based are designed to ensure equitable and efficient utilisation.

Firstly, cattle camps must not be located too close to settled households, to ensure that the lactating cattle, which supply the household with milk, will have adequate grazing during the dry season.

Secondly, cattle camps must migrate to new pastures at the same time in a single front, so that no untouched grass is destroyed by trampling from the feet of an advance herd engaged in patchy grazing.

Thirdly, camps must not move onwards until the grazing in a particular area has been completed depleted, as another mechanism for guarding against wastage from trampling.

Fourthly, some grazing areas are off-limits during most parts of the year, so that they can be held in reserve for times of greatest need. These regulations are enforced by a grazing committee, which can punish violations by imposing stock fines.

4. Gardening

About 75% of Himba households engage in some agricultural activity during the course of the year to produce supplementary food, with the alluvial soils along the Cunene being prime garden spots. Maize is typically inter-cropped with various types of pumpkins and melons. There are no cash crops. These gardens are particularly important for poorer households, which find it difficult to survive off of the resources from their herds.

5. Drought strategies

During times of drought, several survival strategies come into play. Restricted grazing areas are opened up, and many households shift closer to the riverine forests along the Cunene. Grazing may be bad there as well, but the river provides a reliable water supply, which decreases stress on the livestock and reduces their food requirements. The *Faidherbia albida trees* on the riverbanks also provide an abundance of pods, which serve as nutritious fodder for goats. The palm trees along the river, which are not very susceptible to low rainfall, provide a crucial source of "*omarunga nuts"* which are a crucial food resource in lean times. Food sharing also increases in times of scarcity, meaning that many people gather to share in the meal when an animal is slaughtered. These strategies proved to be successful during the 1981 drought. Even though herds were devastated, few families dropped out of pastoralism, there were few famine-related deaths, and herds were slowly restocked without government support or subsidy.

The impact of a dam at Epupa on pastoral production

The inundation of the Cunene basin at Epupa will destroy the riverine forests, which are a crucial source of grazing and browsing in dry seasons and in times of drought. It will result in the loss of an annual crop of hundreds of tonnes of the palm nuts, which are so crucial in drought periods. The dam will bring an end to gardening in the fertile soils along the riverbank.

These losses will produce a ripple effect, which will multiply their impact. Bollig estimates that the cattle displaced by a dam at Epupa on the Namibian side of the river alone will require some 17 500 hectares of grazing elsewhere at all times, and an additional 70 000 hectares of grazing elsewhere in times of scarcity – without even taking into account the needs of the small stock, which also use the river basin. The pressure placed on other grazing areas will be enormous. So, although only about 1000 people will actually be displaced if the river basin is flooded, the dam will affect the drought strategies of about 10 000 Himba (on both sides of the river) and place additional strain on countless others who will be squeezed in the search for alternative grazing. One possible result is an increased dependency on the state for economic and social security.

<u>The impact of the construction phase</u>

Construction of a dam at Epupa site will require about 1000 workers (450 drawn from Namibia, 450 from Angola and 100 expatriates). Their numbers will be increased by family members, traders and an informal sector. A reasonable estimate is a construction town of at least 5000 inhabitants on the Angolan side of the river.

The impact of this sudden and enormous new market for food is likely to be an uneven one. Richer households will be able to profit by selling substantial numbers of cattle. They will then be able to buffer themselves against risk by diversification into other forms of economic activity, such as agriculture or trade. But households with smaller herds will be unable to compete, and the livestock exchange networks, which they rely on, will shrink. Another possible result is that some of the newcomers will want to invest in livestock herds of their own, increasing local pressure by competing for scarce grazing. It is the abruptness of the monetarisation, which will be particularly harmful, as there will no time for the evolution of alternative economic and social strategies to accommodate the change.

Aside from trade in cattle, the benefits of the increased demand for consumer goods will most likely accrue to businesses based in Opuwo rather than to the Himba in the immediate vicinity of the project. And those who do profit may well go from "boom to bust" since the rise in demand is unlikely to be sustained once the dam is complete.
It is unlikely that many of the Himba in the project area will secure formal employment during the construction phase, given their low level of marketable skills and their lack of proficiency in English. But they may be part of the informal settlement which will probably grow up around the construction town, with attendant problems such as crime, alcoholism, prostitution and the spread of AIDS.

It is also possible that the sudden influx of outsiders may threaten budding community-based initiatives for women who harvest plants which are marketable in the international perfume and cosmetic industry, through uncontrolled access and harvesting.

Impact of Epupa dam on the Himba's ancestral graves[7]

A dam at Epupa would flood 160 graves. According to the Feasibility Study, this loss "is highly significant and cannot be valued in monetary terms". However, to the Himba people the graves are so important for a number of reasons.

Himba in the Epupa area frequently name the destruction of ancestral graves as their major objection to the proposed dam. While Himba leaders say that their culture will be at risk if the ancestral graveyards along the Kunene are inundated, advocates of the dam maintain that the graves can be relocated, pointing to the relocation of the remains of Samuel Maharero from Botswana to Okahandja in 1923 as an example. But the Himba assert that relocation will destroy the significance of the graves just as much as flooding them would.

The debate stems from different understandings of what constitutes a grave. For the Himba, a grave is not just the location of the physical remains of a deceased person -- it is a focal point for defining identity, social relationships and relationships with the land, as well as being a centre for important religious rituals.

All places which are permanently used as settlements have at least one graveyard associated with them. People are generally buried in the place where they feel most at home – most often the place where they were settled during their last years, but sometimes the place of their birth, or simply the place they loved most during their lifetimes. Chiefs were formerly buried in the community's graveyard, but have more recently tended to be set somewhat apart. Graveyards are usually located near a watercourse, often under a large bush or tree.

The preference for riverine locations is partly a practical one – alluvial soils are usually deeper and easier to dig. But riverine areas are also heavily loaded with emotion, as the points where communities congregate, the starting points of the annual cattle migrations, the places where people struggled to survive droughts, and the sites of graves of other family members. The river courses and the stories, which are associated with them, are common subjects of Himba praise songs.

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[7] The information is drawn primarily from an article by anthropologist Dr Bollig which appears in Part A3 of the Feasibility Study, with additional information from a subsequent article by Dr Bollig called "Contested Places: Graves and Graveyards in Himba Culture" (Anthropos 92.1997:35-50).

Graves as an expression of social status

Graveyards express a social order, which is dominated by kinship. A son will usually be buried alongside his father, and somewhere near his mother and siblings. There are exceptions, of course, which reflect the society's social flexibility and physical mobility. The selection of graveyards changes over time as settlement patterns change, making their locations a history of the community's history and movements.

The way that Himba graves are decorated has changed over time, even though their religious beliefs and rituals have remained fairly stable. The oldest graves were decorated with ozondongo stones. The graves of rich older men would be marked with two or three large quartz stones together with one or two dark-coloured stones, while young men, poor men and women were likely to have only one small quartz stone among the black ones, or only black stones. A mopane fence, while the graves of poor men would surround the graves of rich men and women were covered with branches.

The most telling symbol of the deceased's wealth would be the number of oxen skulls mounted at the gravesite. It was not unusual for 20 to 30 oxen to be slaughtered to provide skulls for a rich man's grave, while a poor man's grave would have no more than three or four. Women had even fewer skulls, or often none at all. To obtain these skulls, the oxen would be slaughtered in a special ritual manner. The meat of these oxen would not be eaten by any of the Himba, being left for dogs or perhaps bartered to traders. The carefully prepared skulls would be placed on carved poles or mounted in nearby trees.

The graves of the richest and most senior men would also be decorated with a broken trumpet displayed on a pole or in a nearby tree.

The style of grave decoration changed in the 1940s and 50s. Oxen skulls, fences and broken trumpets continued to play symbolic functions, but the individual stones were replaced by rectangular heaps of stones covering the grave. At first the ozondongo stones were incorporated into this arrangement, but they have gradually given way to other signs of status and wealth. For example, expensive gravestones are becoming increasingly popular, carved or painted with symbols and phrases that depict the status of the deceased – such as references to cattle, lion or elephants to indicate wealth and power.

The restrictions placed on the Himba during the colonial era meant that there was little access to other means of expressing wealth, such as clothes and consumer goods. So grave decoration functioned as an important avenue for expressing the deceased's relative influence in Himba society. Aspects of grave decoration changed over time to incorporate more sophisticated ways of depicting social status. The gravesites are thus important emblems of the community's social hierarchy.

Graves, land and political influence

Because graves demonstrate a continuity of settlement, they determine the influence of the "owner" of the land. The "owner" of a particular area is usually the oldest male member of a family, which has been present there for generations. He does not normally have the right to exclude others entirely, but he will usually have the power to prevent outsiders from placing an unreasonable burden on scarce resources, and he will have an important say in communal decisions. The "owner" of the land will found his claim for political power on the numerous graves of generations of ancestors in the area. A family with only two or three generations of graves in a certain place will be "outsiders" who were allowed to use the land but have no right to change patterns of land tenure or to represent the interests of the area to those outside of it. Those who can demonstrate the longest connection with the land will have the strongest say over key land-related matters such as rights of access and control over resources. Because graves are so important in the land tenure system, senior elders can recall the location and identity of even the most ancient graves.

For example, in debates about issues such as naming a chief, permitting a trader into the area, or taking a stand on a development such as the Epupa dam, the Himba will point to the number of their ancestral graves as the major indicator of their right to influence a decision. Speakers will ask rhetorically, "Whose ancestral graves are older, ours or theirs?" The key point is not the physical fact of the graves themselves, but the connection between the graves, the family's history and the community's system of land tenure and decision-making. This nexus cannot possibly be preserved if graves are relocated. When told that the Epupa dam will flood large numbers of gravesites, many Himba have asked, "Who will then know who is owning the land?"

The religious aspect of graves

The most important religious rituals in Himba society involve the ancestral graves. After a deceased person has been buried, relatives and guests who can number in the hundreds will gather for a funeral, which may last up to two months. Many animals will be slaughtered to provide meat for the gathering, and large quantities of maize and alcohol will be furnished. Additional oxen will be ritually slaughtered to provide skulls for the gravesite, after first being displayed at the household's holy fire. Relatives adopt special hairstyles, clothing and ornaments to show that they are in mourning, and they will continue in this mourning style for the next year.

After a year has passed, the relatives and guests will return to the grave for the first commemoration ritual. Again, the gathering will include a large number of people, entailing the slaughter of many oxen to provide meat for them. The entire herd of the deceased is gather from even the most distant cattle camps. The central actors in the ritual are introduced to the ancestors at the holy fire, and then the party visits the graves with a large portion of the herd. Each person in the party passes slowly around the grave, touching the stones. Senior male relatives put mopane leaves on the grave, smear the stones with butterfat, and then smear the stones and the sons of the deceased with curdled milk from sacred cattle. Holy cattle may be consecrated to the deceased during the ceremony.

At the end of the ceremony a fire is kindled at the foot of the grave, and ashes from this fire together with some of the mopane leaves from the grave are taken back to the homestead to the holy fire. Inheritance will be settled a few days later, as wives, children and herds are formally given into the care of the heir who is introduced to the holy fire as the successor of the deceased. The connection between the grave and the holy fire signifies the harmonious relationship between the ancestors and their living descendants, a relationship, which is considered crucial to the wealth and health of the remaining members of the household.

The grave will be visited again at subsequent commemoration rituals, which take place at irregular intervals. These commemorations decline in frequency as the years go by, but even very old graves are still the site of rituals.

Funerals and commemoration rituals are the only occasions which bring large groups of Himba together, drawing in people who are normally scattered over hundreds of kilometres. Their significance is underscored by the fact that years are named after them. Naturally, other issues are discussed at such momentous gatherings – cases are judged, marriages are arranged and migration routes are planned. In this way, the gravesites become the focus of intense and important social activity.

Dr Margaret Jacobsohn comments, "Such cultural customs should not be viewed as quaint, 'traditional' rites which are irrelevant to the present and the future. They serve as a robust and practical mechanism for the living to share and disseminate local knowledge and values, and as a forum to plan and co-ordinate socio-economic activities… Elders are thus able to pass on their knowledge and experience to younger generations. This includes the social and environmental information which underpins the communal management of natural resources".

The grave is also the focus for the expression of grief (oruhoze), which is a more complex feeling that the English term denotes. Oruhoze entails respect for the deceased and also for the heirs and descendants. It also involves the desire to comfort those who are suffering most from the shock of losing a loved one. Oruhoze is further expressed through a number of specific behaviours. The widow of the deceased is secluded. Songs sung to honour the deceased are interspersed with periods of loud wailing. The mourning attire serves as another outward sign of grief. The Himba consider oruhoze to be the essence of human feeling.

The significance of graves

The multiplicity of meanings and functions centred around ancestral graves explains their great significance in Himba society. As Dr Bollig puts it, to the Himba "graves are not simply an accumulation of stones under which some bones rest, they are places laden with emotion and memories". The bones and stones could be relocated, but the meaning of the graves within the Himba worldview would inevitably be left behind and destroyed.

The Epupa dam and its impact on the natural environment[8]

The total volume of the dam at Epupa would be about 11,5 billion cubic meters. As a point of comparison Namibia's largest existing dam is Hardap Dam, which contains just under 300 million cubic meters of water when full. So the Epupa dam could hold more than 38 times as much water as Hardap.

The Epupa site would flood 380 square kilometres at the high water level. Land at the Epupa site is being currently utilised for homes, gardens, seasonal grazing and access to water as well as being the location of culturally important gravesites.

Large expanses of barren land -–some 22000 hectares-- will be exposed at the dam site when the water level is low. This land, which is called the "draw-down zone", will not be attractive or useful, but according to the Feasibility Study it is not considered to be environmentally critical.

Dam construction

The dam walls would be made of roller-compacted concrete (which is why they it is referred to as "RCC" dams). This type of construction is cheaper than conventional concrete dams and has been used in a number of dams in South Africa.
The appropriate structure for the dam walls is determined primarily by the shape of the river valley. The dam at Epupa would be a gravity dam. In this type of construction, the weight of the dam wall as it presses downward resists the pressure of the water behind it. The main dam walls at the Epupa site would be massive, 163 meters high, 590 meters long.

Water and evaporation

It would probably take 29 months to fill a dam at the Epupa site to a level that is 70% of the dam's capacity. There is a possibility that it would take four rainy seasons to reach this level.

Water loss through evaporation will be very high. In fact, the amount of water lost annually through evaporation at Epupa would be equivalent to the amount of water, which could supply the needs of the entire city of Windhoek for 42 years. No cost is assigned to this immense water loss, however. Since no irrigation schemes or major water diversions are likely to be planned in the remote reaches of the Cunene River, the Feasibility Study counts the water loss as being of no economic value.

[8] Basic information is drawn from the first volume of the Feasibility Study, which is a "Strategic Summary."

Aquatic ecology[9]

The construction of a dam would unavoidably alter sediment patterns and river temperature downstream, as well as the nutrient content of the water. The potential consequences of these dramatic changes are not fully acknowledged by the study. Water flow downstream from the reservoir can be regulated, but the impact of flow variations and the minimum flow needed to sustain the existing river ecology have not been properly investigated. What is needed is an "instream flow requirements study" which provides complete data about the river's biology, water chemistry and seasonal flow variations which can be crucial to river life. But the Feasibility Study contains no such data, basing its recommendations only on assumptions. A reduced river flow may also allow salty sea water to push its way up into the river month, which could have serious consequences for riverine plants and animals.

The aquatic ecology of the Cunene River has not been previously described, but the Feasibility Study does not provide any detail on invertebrates, which live in the river and how they will be affected by the dam. For example, the freshwater prawn depends on seasonal flow variations for reproduction and so may be adversely affected by flow regulation, which does not take this fact into account. Attention should also be given to the "*black-fly"*, an insect which often proliferates below dam structures and can cause stock deaths. This pest could have a devastating effect on Himba herds, but it has not been considered in the study. Another issue, which is inadequately addressed, is the possibility that algae could thrive in the reservoir, releasing toxic chemicals which will give the water an unpleasant odour and taste, and prevent the establishment of fisheries in the reservoir.

The study also underplays the impact of the loss of the spray-zone and "riffle" habitats surrounding Epupa Falls, which could result in an irreversible loss of biodiversity if the Epupa site is chosen.

In general, although the Feasibility Study contains some detailed specialist reports on certain flora and fauna of the Cunene River, other aspects of the aquatic ecology lack the detail that is necessary for a proper assessment of the dam options -- or a decision on whether any dam should be built.

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[9] "Many riverine invertebrates are dependent on flow cues for reproduction and on the supply of organics and nutrients from upstream for their survival. Therefore, it can be stated that these species will be affected by both the Epupa and Baynes dams. The lack of detail on these very important riverine inhabitants in the report is of great concern." (Kate Snaddon, Freshwater Ecologist)

Hydrology[10]

The Feasibility Study had to deal with the problem of limited hydrological data. There is no historical record of the flow of the Cunene River at either of the proposed dam sites. There is a short flow record from Ruacana, which is 200 km upstream, and a longer flow record from the Okavango River at Rundu. So the Feasibility Study created a hydrological model based on the 12-year period for which the Ruacana and Rundu records overlap. The validity of this approach depends on the assumption that the two river basins are similar in hydrological terms, but there is no evidence to back up this assumption. This means that the hydrological projections cannot be confidently relied upon. This point is crucial, because the simulation in question is the core of all the predictions about the economics of both of the proposed hydropower schemes.

Another flaw in the study's analysis is its assumption that future river behaviour will be the same as in the past. But the Cunene's average flow has decreased over the past twenty years, reaching an all-time low in 1997. There is evidence that drought periods are increasing in duration and severity in many parts of the world, and global warming trends must be considered. It is risky to rely on the theory that future streamflow will continue as before. If flow conditions worsen, the performance of a hydropower plant will be below predicted levels, meaning that a dam might not be economically viable. Lower natural flow could be exacerbated by the extraction of water upstream by Angola for irrigation purposes, which makes viability even more questionable.

The Feasibility Study generously assumes that there will not be more than one dry year in a row – a conclusion that flies in the face of the findings of other scientists and contradicts emerging understandings of the El Nino phenomenon. If future years do in fact occur back to back, the economic performance of the proposed dams would be considerably worse than the study estimates.

The role of Gove Dam

The Gove Dam is located inside Angola, upstream of Ruacana. It was built by the Portuguese government with South African finances. It was virtually finished in 1975 when the outbreak of hostilities prevented it from being completed in accordance with its original design. The dam complex suffered some war damage in 1988. A sabotage attempt in 1990 resulted in some cracking, while other flaws can be traced to faulty construction. As a result of these problems, the water level had to be lowered and the dam can now operate safely at only 40% of its full storage capacity.

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[10] "From a hydrologist's point of view, the Feasibility Study of proposed hydroelectric power dams on the Cunene River has some serious deficiencies… The conclusion is that the Feasibility Study is not a sound basis for evaluating either the costs or the benefits of the project, nor for proceeding with major financial or other irreversible commitments to the project." (Dr Peter Willing, hydrologist)

The primary purpose of the Gove dam is to regulate the flow of the Cunene for more effective hydropower generation at sites downstream, including Ruacana. A hydropower plant at the Epupa site would not be reliant on water regulation at Gove Dam because of the large size of its reservoir.

Epupa Falls

Epupa Falls will be lost forever if a dam is built at the Epupa site. The loss of such an imposing natural feature is immeasurable, though it is valued at zero by the feasibility study.

Flora

Flooding the Epupa site will result in a loss of living plant material ("biomass"). Decaying plant material releases carbon into the atmosphere, contributing to the world-wide "greenhouse effect" that leads to global warming. The amount of carbon gases which would be emitted at Epupa would exceed international standards for such emissions, but would still be relatively low in comparison to other sources of carbon. No cost is assigned to this negative environmental impact.

If the Epupa site is chosen, the destruction of Epupa Falls will also lead to the loss of plants associated with the "spray zone" – the area around the waterfall which is affected by the spray from the falling water. Since the Ruacana Falls now remains dry for long periods, the loss of Epupa Falls will destroy the last significant remaining habitat of this type in Namibia. Such habitats are fairly rare world-wide, and limited knowledge of their ecology makes it difficult to assess this potential loss.

Another important aspect of the potential plant loss at the Epupa site would be the destruction of about 6000 palm trees, which are a source of "omarunga nuts". These nuts are a key food resource for the local Himba in times of drought.

Fauna

The most profound impact on the animal kingdom will be in respect of fish. Two endangered species of fish have been found in this region. In addition, at the Epupa site, a new species of fish has been found which is endemic to the area – meaning that it is not known to occur anywhere else in the world. The cost comparison of the two proposed sites includes the cost of a breeding programme for all three kinds of fish – although this begs the question in the case of the newly-discovered species, as there may be no other natural habitat in the world where the fish can survive even if they are successfully reproduced in an artificial environment.

Analysing the potential benefits

Construction of the dam will result in the upgrading of existing gravel roads on the Namibian side of the river, along with 5-21 kilometres of new gravel roads, although no

new tarred roads are contemplated on the Namibian side. Improved road access could have positive spin-offs for the local Himba in the form of increased livestock marketing opportunities and better access to social services. But improved transportation alone will not bring improved services. For example, many of those interviewed cited a need for better veterinary support services to combat stock disease, but problems experienced in the past reportedly stemmed from shortages of vehicles and medicine rather than from road conditions.

Easier access to the region may increase the number of tourists - depending on whether or not Epupa Falls is destroyed – but this will not necessarily benefit the local people, as most tour operations are run from Windhoek. An increased influx of visitors could also lead to environmental degradation, which then reduces the attractiveness of the area for tourism.

The introduction of more schools and clinics has been often cited as a local benefit of the project, but this is more complex than it seems on the surface. For example, the existing school and clinic at Okongwati are under-staffed and ill-equipped. While about 29% of those interviewed would like an additional school closer by, 12% were opposed to all schooling. One perception is that a low level of schooling may lead to dissatisfaction with the Himba way of life while not equipping youth with marketable skills – with the result that a school-leaver ends up as a low-paid wage labourer rather than a self-employed and relatively wealthy herder.

There is also an inherent conflict between a nomadic lifestyle and a sedentary model of education. For example, English language skills are more likely to be acquired by means of mobile English teachers who travel with a group of households for several months than through English courses in a fixed place.

Some local people fear that improved hospitals, schools and shops would simply attract outsiders who would then compete for local resources. Furthermore, there is a strong feeling in the area that the provision of services such as hospitals and schools should not be conditioned on the acceptance of a dam.

The electricity which will result from a hydroelectric project is locally perceived as something that may be beneficial for others, but not of much use to a pastoral lifestyle. However, electrification may improve the efficiency of local schools and clinics, as well as stimulating business in the region. The same is true of improved telephone services.

Local attitudes to change

Himba opposition to the dam does not stem from a blind rejection of all forms of change, or from a lack of understanding of the project. Himba people living in the vicinity of the proposed dams engage in detailed discussions about various prospects for development, and have shrewd opinions about the costs and benefits of a dam as far as they are concerned. There is intense local resentment to the allegation that local opposition to the dam is something, which has been engineered by outside groups.

The opposing viewpoints about the dam within the Cunene Region are understandable. Those who are for the dam tend to be business people, merchants, regional government officials and politicians – those who have nothing to lose if a dam is built, but see it as an entree into a western-style market economy. On the other hand, the Himba pastoralists in the project area see no prospect of tangible benefit from the dam, but only the loss of resources, the loss of control over their land and the erosion of socio-economic structures, which have sustained them in a successful and independent existence for decades.

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THE ROLE OF TRADITIONAL AUTHORITY IN CONFLICT RESOLUTION IN MOZAMBIQUE

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THE ROLE OF TRADITIONAL AUTHORITY IN CONFLICT RESOLUTION IN MOZAMBIQUE: A CASE STUDY FROM SERRA-CHÔA, BÁRUE DISTRICT

1 Introduction

In Mozambique the period since the 1992 peace accord between the Frelimo government and the Renamo guerrilla movement has been characterised by dramatic socio-political changes towards 'democratisation, decentralisation and privatisation'. The peace process culminated in Mozambique's first multiparty elections in 1994, where the ruling party gained the presidency and a majority in the parliament, while Renamo established itself as a credible political party, with nearly two fifths of the votes. (Brito 1995, 499.) In the same year a new law on municipalities (Lei 3/94) was approved, thus creating a legal basis for a decentralised and representative local administration.

However, the decentralisation process has turned out to be rather controversial. The new law became subject to strong criticism in the new parliament, which resulted in the drafting of a new law (Lei 2/97). But even so the first municipal elections in June 1998 were boycotted by the opposition, and only 15 per cent of those registered turned up to

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vote. (Africa Research Bulletin 1998, 13178.) A third major component of the process is privatisation, which this far has not met the expectations of the majority of population. A good example of the problems encountered is the practice of granting land concessions: different levels and sectors of state administration grant concessions without consulting each other, while the needs of smallholders and many existing private sector farmers are most often neglected. (Alexander 1994, 19-25; Myers 1994, 611-615.)

In Southern Africa customary authorities have in recent years been promoted by some actors (including political parties, parts of state administration, donor organisations, NGOs, academics) as a solution to the problem of finding locally legitimate community institutions, as the post-independence experience from state imposed development committees and/or party organs at different levels (district, ward, village) have been rather disappointing. However, the political climate was less receptive to such ideas some 20 years back. At independence in 1975 the Frelimo government sought to replace the traditional authorities ('régulos' or chiefs and 'chefes de grupo' or sabhukus, who had collaborated closely with the colonial state) with party secretaries who were integral members of the new party-state bureaucracy. But this policy was challenged in the late 1970's by the Renamo rebel movement, and upon gaining control over territory the guerrillas re-instituted the customary authorities there. After the 1994 elections Renamo party has continued to champion them as the only true representatives of community interests while Frelimo continues to question their legitimacy, even though it has relented somewhat by suggesting that the government can grant them some authority in areas where they enjoy widespread support among the local population. (Alexander 1994, 34-67; Kloeck-Jenson 1998, 7-9.) In this political context the question of the future role of customary authorities has also become a subject of vivid academic debate in Mozambique.

In this paper we seek to locate the traditional authorities in the emerging politico-legal framework for local level natural resources management and conflict resolution in Mozambique. After a brief discussion of the relevant legislation and the relationship between existing formal and informal institutions, we present a case study of tenure conflicts from the Administrative Post of Serra-Chôa in Bárue District, Manica Province. We conclude the presentation by discussing the relevance of this experience in more general terms. The paper is based on a study of relevant research literature and official documents and a subsequent field study during which the district capital (Catandica) and the following communities in Serra-Chôa were visited: Barauro, Nhacapanga, Nhaterere, Tewetewe and Chôa-Sede. During these visits semi-structured interviews were carried out with peasants, chiefs, sabhukus, and representatives of the state administration.

2 The Study Area

The case study material for this paper was collected at the Administrative Post of Serra-Chôa, which consists of a highland area located on the eastern side of Bárue District facing the Zimbabwean border. Administratively the district is part of Manica Province, and it is bordered by the districts of Guro in the north, Macossa in the west, Gondola and Manica in the south, and by the Republic of Zimbabwe in the west. (See Map 1.)

The population of Serra-Chôa is mainly of Shona origin, and the people who inhabit both sides of the border area are closely related both linguistically and culturally. The present population pattern is an outcome of a system of chieftaincies, which developed in the Bárue area after the decline of the Mwenemutapa State, which probably took place in early seventeenth century. One faction of the chiefly family emigrated to the east with its subject population: this was the Makombe dynasty, which created the historical kingdom of Bárue. (Artur 1996.) The common origin of the population is indicated by various factors. For example, in terms of lineage and totemic affiliation a majority of the population in Serra-Chôa identifies itself with the Hwesa, a group with a mythological place of origin at Katerere in the present Republic of Zimbabwe. Another example, to which we shall return later, is provided by numerous cases where families are divided to both sides of the frontier or where subsistence activities are separated from residence by the border. In other words, the study population's way of life is only marginally structured by the official borderline, which becomes meaningful only in terms of state administration.

But even if in normal times the frontier was not a source of major problems, both minor and major conflicts related to land and other natural resources manifested themselves during the years of civil war, also known as the '16 years war'. This caused considerable instability in the country and forced many to seek refuge in other areas less disturbed by the war, or to cross the border to the neighbouring Zimbabwe. The latter was the more typical scenario in Bárue District in general, and in the communities studied here in particular. The period with major intensity of tenure conflicts took place immediately after the war, when the peace in Mozambique permitted many citizens to return to their lands of origin. Various factors served as causes for conflicts and favoured their deterioration:

- during the post-independence period customary authorities were disbarred due to their collaboration with the colonial regime;
- during the '16 years war' Renamo supported the customary authorities in areas under its control in order to extend its social base: later they were used as a 'war-horse' by some political parties during the pre-election campaign of the 1994 elections;
- the absence of specific and clear legislation on the role and competence of customary authorities;
- the absence of updated and specific legislation with respect to land and forest tenure, which only became available during 1997-1999.

3 The Politico-Legal Framework in Mozambique

When Frelimo took over the government of Mozambique at independence in 1975 it sought to establish a totally new politico-administrative system in line with its radical modernisation policy. Customary authorities, which were labelled obscurantist remnants of the feudal past and lackeys of the colonial regime were excluded from office by law, along with others whom the new rulers took to be collaborators or exploiters. (Lei 1/77, Art. 14.) This policy seems to have had its supporters among those who had been excluded from political authority in the past, but at the same time the legitimacy of the

new party/state institutions was subject to dispute. While some rural dwellers accepted them with little hesitation, others viewed them as wholly undemocratic and arbitrarily imposed from above. (Alexander 1994, 43-46.) In practice the political theory was not always reflected by reality on the ground: the new 'revolutionary' legal apparatus never became wholly operational, and by 1994 less than one third of the envisaged 438 government tribunes existed, and only 16 of them functioned under a trained lawyer (Garvey 1995, 3). At the same time the banned customary institutions continued to function clandestinely, and according to some estimates (Myers 1992, 10) they were still 'de facto' managing over three quarters of the agricultural land resource in the early 1990s.

It must also be noted that despite the official party line relations between local level officials and chiefs were often characterised by flexibility, and for example traditional ceremonies were reintroduced in many areas with mutual consent a few years after independence. After President Chissano's accession to power in 1986 this kind of locally negotiated alliances were replaced by a more overt official recognition, although the policy has remained unclear and open to different interpretations by local officials. At the same time Renamo has continued to promote the re-instatement of chiefs, claiming that they are not the 'reactionary obscurantists' of the Frelimo doctrine, but an important source of social cohesion and cultural identity. Thus they are seen as a crucial factor in legitimating authority and regulating rural people's relations amongst themselves and to the environment. (Alexander 1994, 47-67.)

Since the late 1980s customary institutions have gradually gained some limited recognition within the legal framework. Thus the 1992 law establishing community tribunals for the resolution of small conflicts within the communities states as its objective the promotion of different traditional social and cultural values and creation of a synthesis of existing rules, norms, customs and practices. (Lei 4/92, Preamble.) Also the 1994 Law on Municipalities recognised a role for traditional authorities in local government, even though in a very unspecified and vague manner. (Lei 3/94.)

After the 1994 multiparty elections the definition of local community and its legitimate representation has been the source of lively debate when new law proposals have been appraised by the Parliament. Arguably the most important new document in this respect is the Reform Land Law of 1997, which defines 'local community' as a "group of families and individuals living within a geographical area at the territorial level of a locality or subdivision thereof, which seeks to safeguard its common interests through the protection of areas for habitation or agriculture, including both fallow and cultivated areas, forests, areas of cultural importance, pasture land, water sources and areas for expansion". (Lei 19/97, Art. 1.) It provides some mechanisms for securing the use rights of local communities to natural resources according to customary norms and rights, as well as by proven occupancy or inheritance. (Art. 10, 12, 15, 16.) Accountability has also improved as the local communities are now entitled to participate in the management of natural resources and resolution of conflicts over them, and they must be consulted in the process of giving land titles, and in defining the area which they occupy. (Art. 24.) In a similar vein the new Environmental Framework Law states as a fundamental principle

that the customs and knowledge of local communities must be taken into account when planning the rational use and management of natural resources. (Lei 20/97, Art. 4.)

However, the concept of community and the role of customary institutions remains vague in practice. While it is stated in the new Land Law that the mechanisms for representation of local communities and implementation of land use rights by them are fixed by law (Lei 19/97, Art. 30), such law does not yet exist. Also the Environmental Law makes the government responsible for creating mechanisms to involve civil society and local communities in environmental protection and sustainable management of natural resources, and in developing the policy and legislation for the same. (Lei 20/97, Art. 7, 8.) Yet the regulations for establishing these mechanisms remain to be elaborated. Even the revised law on municipal authorities (Lei 2/97) remains vague on the role of customary institutions: it gives them a potential consultative role 'when recognised by the local communities', but leaves it to the respective ministry to formulate and co-ordinate the modalities of their incorporation into the local administrative system. (Art. 28.)

This lack of clarity in official policy is reflected in the different positions taken by various authorities. While some government officials are still reluctant to grant customary authorities any formal recognition others have arranged formal meetings with them, for example in Catandica in January 1999. In the meeting, which was convened by the District Administrator, customary authorities were allocated various tasks, and their role as local representatives of the government was emphasised. The tasks included land use management, prevention of uncontrolled bush-fires and poaching, and conflict resolution. (Catandica 30/01/1999.) In this transitional situation two main models have been proposed. On the one hand the proposed technical annex to the new land tenure regulations supports a solution whereby customary authorities are recognised 'de facto' in most rural areas, even though this would be conditional to their approval by local population.[12] At least implicitly this would mean official recognition of the customary institutions' role in resource management and conflict resolution. Another suggestion for solving the representation problem is to vest power over resource management and resolution of conflicts in a local council. This would be composed of representatives from the main local interest groups, and thus it would facilitate the participation and articulation of views of a larger cross-section of the population than a chief or headman alone - or even a council of elders. Such councils have been promoted for example by representatives of the national Land Campaign.[13]

4 Land Tenure Conflicts and Mechanisms for their Resolution

When we study the role of customary authorities in the prevention and mediation of conflicts, we must also consider some aspects of vulnerability peculiar to this system.

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[12] This issue was discussed extensively during the 'Course on community land delimitation' held in Chimoio, 16-19 February, 1999, conducted by FAO consultants Christopher Tanner and Paul De Wit. See also Tanner & al. 1998, 12-15, 19-21.

[13] Integrated councils on district and/or locality level were promoted by Dr. José Negrão in his presentation at the provincial Land Campaign workshop in Chimoio, 15-16 March, 1999. See also Negrão & al. 1999, 16, 28-29.

They are linked to the historical changes which have taken place since 1975 when, as already noted, the customary authorities were discredited (if not disgraced) by the new rulers. During this period it became detrimental to present oneself as mambo (chief), and subsequently is some leading lineage's no successors were selected to defunct chiefs. When some years had passed and attempts to re-establish the system were made, the nomination of new representatives was made on essentially political and often rather arbitrary criteria.

If in some cases the new chiefs were merely contested by the respective communities, in others they failed to perform their essential responsibilities. One such case was reported to us in relation to a local chieftaincy: a son who had succeeded his father as chief Macufa was deposed in 1997 by the population which had manifested its discontent with him and requested the nomination of his elder brother (the present chief) instead. Another episode has to do with the sabhuku of Doro. During the civil war the old sabhuku was captured and never returned to his village. His son assumed the post but did not manage to convince the population about his ability to resolve their problems. Consequently he was expulsed and presently there is only a secretary[14] in that village. (Nhaterere12/05/99; Chôa Sede 12-13/05/99.)

Still, the succession disputes and related problems of legitimacy, which are reflected in reluctance to discuss some crucial periods of change, often go back to the colonial or even earlier interventions like the Makombe conquest or the Ngungunhane led nguni invasion. For example the present chief Macufa claims no knowledge of chiefs Samanhanga and Bango, which are mentioned as those ruling in Serra-Chôa in the official colonial documents concerning the establishment of the Administrative Post (Boletim de República 1957, 267). However, from other sources we learned that while the Samanhanga lineage rules lands immediately to the north of the Chôa highlands, chief Bango was actually the first of the Macufa lineage and was installed in the place of the Sahatziro lineage by the colonial administration after the World War II. This incident of colonial manipulation remains a source of bitterness even today, as some sections of the population still consider a representative of the Sahatziro lineage the legitimate mambo. (Nhaterere 12/05/99; Barauro 20-21/05/99; Tewetewe 19/04/99.)

It was broadly acknowledged by our informants that the intermingling of different people and cultures in the situation of war and other calamities weakened the previously effective systems of socialisation and social control. One pertinent example is provided by the sacred forests, which are protected by the cultural-religious norms and continue to serve as sanctuaries for the local communities. Even so the representatives of customary institutions expressed repeatedly their concern over lack of respect for these rules, as testified by uncontrolled bushfires and illegal cutting of trees which nowadays enter these areas. A solution for this problem is expected from environmental education, which should be based on local traditions, knowledge, and experience. (Chôa Sede 18-19/11/98; Barauro 17/03/99.) Another open question is the role of new, emerging institutions like

[14] The gradual 'de facto' recognition of customary authority in recent years has created a need for semi-official reporting towards state authorities, and as some of the present chiefs and sabhukus are not literate a new position of secretary has emerged to fulfil this function.

the syncretist church of Johane Maranke (va Postori) which is each day becoming more influential in the Nhacapanga area. What will happen when old customs like polygamy reinforced with these kind of 'new' religious institutions are faced with the rules and institutions of modern economy? .

Like we implied previously, most tenure conflicts in Serra-Chôa are based on the fact that during the civil war a large part of the population abandoned its homesteads for more secure areas in Zimbabwe or Catandica, the district capital, from where they started to return in 1992-3. However, those who preferred to stay as well as a few newcomers who considered Chôa safer than their places of origin, continued to live in the area throughout the war and cultivate the fields then available. When the repatriation process started the customary authorities were eagerly requested to intervene in the emerging land disputes between the old and new occupants. For the resolution of these cases some customary norms based on traditional consensus principle already exist, and were applied by the customary institutions.

Two principle models to resolve such disputes were discussed during the study:

- In case the present occupants have stayed in the place for a number of years and have made considerable investments the previous occupants can be advised to open new fields in new areas. In such cases it would be difficult for the previous occupants to pay compensation for those who developed (constructed and planted) the site in their absence. For those who regressed after less than four years it is generally left open to decide if they wanted to reclaim their lands. (Nhaterere 12/05/99; Nhacapanga 14/05/99.)
- Another alternative was explained by sabhuku Joel Nhacapanga. Some people have occupied temporarily the lands of those who had left as refugees to Zimbabwe with the permission of the sabhuku. Initially this was intended for a short period of time, but as the war continued the 'temporary' occupants ended up investing a lot in these formally alien lands. In such cases they can not be simply evicted despite the initial agreement, and usually a consensus will be sought over division of the land between disputants if the land is sufficiently large. (Nhacapanga 13/05/99.)

All the conflicts are first taken to sabhuku, who passes them further to the chief in case an acceptable solution is not found. In case the chief can not solve the case either it is taken to the local state administration (represented by the chief of the administrative post) for his consideration. However, recourse to state authorities includes some disadvantages. In addition to the distance, which separates most of the population from the administrative post, the punishment passed (typically a prison sentence) is not meaningful in the local context as the injured party has no control over it and it does not guarantee any compensation for the offended party. (Often the compensation is set in money - as against the traditional compensation in kind, e.g. in cattle or cereals - which is seldom put into effect.) A recent case of cattle rustlers was mentioned as an example of these problems. Anyway, cases that needed the intervention of state administration or police were extremely few as testified also by the chief of administration who recalled only two during the last few years. (Nhacapanga 13/05/99; Chôa Sede 25/5/99.)

Resurgence of commercially oriented farming in the area may also lead to a conflict of interests. The fertile river valleys of the border area have attracted a few relatively well-educated people who have experience in agriculture. There are also people on both sides of the border who are interested in moving to the interior of the highlands in search of more land and pastures. Due to historical links with Zimbabwe which were intensified by the refugees during the war, such migrants are generally accepted by the local population. This process is also patronised by the customary authorities who authorise the land allocations, but the interesting question is how long can this practice continue? (Chôa Sede 19/05/99; Nhacapanga 19/11/98, 22/05/99.)

Today, as Zimbabwe has become attractive due to its relative richness and diversity of social and economic infrastructures, land has become more and more difficult to acquire on that side. Some people attempt to combine the benefits of both societies by dividing their lives between the two sides of the border. (Chôa Sede 25/05/99.) As an example we can mention one Mozambican who works as a primary school teacher on the Zimbabwean side of the valley (where he has a house at the school compound) but who prefers to live in his own house on the Mozambican side where he has his fields. His family is originally from Nhacapanga from where they left for Zimbabwe during the war. He does not intend to return permanently to Mozambique (at least in the near future) because it would be difficult to find comparable work, as he does not speak Portuguese. But he wants to retain the link to Mozambique as there is plenty of land, even though there are no roads or markets and few means of transport. (Nhacapanga 22/05/99.) Some cases where people actually residing on Zimbabwean side have sought to keep occupying fields on Mozambican side have already led to conflicts. (Chôa Sede 25/05/99.) In near future rehabilitation of the road connection between the valley and Catandica shall reduce the present dependence on Zimbabwe, and probably also re-activate commercial production on the Mozambican side. It could also lead to new conflicts over natural resources.

Taking into account the fact that modern state administration is not present in all the remote villages, it is important to acknowledge the role local customary institutions play in prevention and mediation of resource conflicts. The project of community tribunals (Lei 4/92) seems to have been conceived for this purpose. However, implementation of the project was not comprehensive enough. While the tribunals and the modern state are afraid to recognise the consensus oriented conflict resolution mechanisms of the customary authority; the network of modern tribunals is still not able to serve all regions of the country. Furthermore, if on the one side the procedures of the traditional system are considered inadequate or outdated, our study indicates that many of the sentences served by the modern tribunals merely lead to new conflicts within communities.

In this context the management council created recently at the Administrative Post of Serra-Chôa can, or rather could, be a valuable initiative to reinforce the traditional resource management system in a complementary way. However, the composition of the present council is rather problematic. It has the following members: chief of administration, assistant to the chief, a senior teacher, a police officer, a medical assistant,

president of the locality of Nhauroa (also a party secretary), and two local (relatively well-off) peasants. In other words most of the members are officials of the state or ruling party who (in addition to the evident political connotation) are subject to frequent transfers. Consequently it is pertinent to ask what interest groups among the population the council represents? From our point of view a structure, which is as much as possible free from any government or party affiliation (a legacy from the one-party regime) and gives preference to participation of intended beneficiaries of the council would be more appropriate for the task.

Many conflicts are derived from cultural diversity, phenomenon which as we see, is the result of the natural mobility of populations, which gained great quickness during the civil war. This refers to the problem of socialisation of some, and tolerance from the part of others, taking into account that socialisation is a slow process and rarely encountered, in the case of rural communities. It is important that both institutions and individuals adapt to new realities.

5 Discussion

This far the customary authorities in Mozambique have turned out to be a relatively efficient, and in many remote areas the only existing local institution to deal with conflicts over natural resources. This is true despite the post-independence Frelimo policy to demolish these institutions and to create an alternative form of 'popular justice'. Especially peasant-peasant type of conflicts are handled almost exclusively by these authorities in many rural areas, even though the recent civil war and related population movements have weakened the basis of this authority to some extent. With respect to peasant vs. commercial farmer type of conflicts the customary authorities seems to be less effective on their own, even though their participation in collaboration with state authorities is still crucial. In conflicts between commercial farmers or those and the state, customary institutions have only a marginal role if any.

Our study also shows that locally based customary institutions are quite flexible, and there are some signs that they are presently finding new ways to adapt to the changing socio-political situation. There is also some proof that some accountability mechanisms like the right of the population to dismiss an unpopular or incompetent office holder are still functioning. However, while the role of customary authorities in the prevention and management of local level resource conflicts should be recognised by state authorities, we do not recommend a restoration of the colonial regedoria system. The historical developments have been quite dissimilar in different parts of the country, and consequently also the local legitimacy of these institutions at present varies from place to place. Customary authorities can also have a role in modern local institutions like management councils, which should not become the privilege of locally unrepresentative state and party officials. All those supposed to represent the local interests must be subject to explicit approval of the intended beneficiaries, that is the local population.

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LAND AND RURAL DEVELOPMENT IN MOZAMBIQUE

Summary

With the end of the war and the introduction of the economic restructuring program, the search for land from the private sector and speculators increased. This jeopardised the access to land for rural families. A land law that responded to the new political, social and economic realities began to be drafted.

This article is about this process, the debates and the positions that have been taken and the involvement of the civil society and its many implications. It is argued that the land question cannot be separated from the current rural development paradigm and that the latter should take into consideration two determining variants: work and capital. The adoption of a sustainable rural development paradigm implies the implementation of an interactive model among private sector, state and rural families in the use of physical area.

It is argued that only this model will allow for a growth in the average savings rate, an indispensable condition for development to take place.

Introduction

Since the times of the actual occupation of the land, Mozambican rural families have been driven away from the alluvial fertile lands to marginal ones. The economic pattern of the rural communities has been adapting itself to the land low productivity and to the conditions posed by the compulsory crops introduced during the 1930's by the Portuguese administration.

After the independence of Mozambique, the land was nationalised and became the property of the State. Nationalisation did not mean redistribution of land but merely the transformation of privately held farms into State farms. Rural families kept working the same lands as before.

In 1979, the State approved the first land law that recognised State ownership and socialist oriented companies. Rural families were restricted to certain areas in order to participate in agricultural co-operatives or the labour force for the State companies. The State gave to individuals the right of use and benefit of land through title deed.

With the introduction of the economic restructuring program in the 1980's, and during the second half of the 1980's, the process of privatisation of the State companies and the opportunities that were opening up for foreign investment, led to the publication of the Regulations of the Land Law that recognised the title deed as the only legal proof of the transmission of land rights from the State to foreign citizens. In 1990, with the end of the war in sight, the search for land plots with the highest economic potential began. In less than 5 years, conflicts exploded throughout the country between the owners of title deeds given by the State and the rural families that were returning to their land plots to cultivate them.

Given the scarcity of food provoked by the war, the lack of secure access to land for rural families began to be a general concern among the civil society, the government and the international community. A new land law responding to the new political, social and economic realities began to be drafted: The article is about this process, the debates and the positions that have been held as well as the involvement of the civil society and its many implications.

It is argued that the land question cannot be separated from the current rural development paradigm and that the latter should take into consideration two determining variants: work and capital. The need for a new rural development paradigm is evident, and an alternative model for the use of natural resources, of land in particular, is introduced.

1 Demand for Land and the New Law

Increase in the demand for land

During the past few years, a significant increase in the demand for land has been observed in Mozambique. Both structural and conjuncture reasons caused this increased in demand. The two structural reasons for demand are:

- the introduction of the economic restructuring program at the end of the 1980's which favours the productive investment by the private sector, and
- the negotiation process between Renamo and the Government which culminated in the signing of the peace agreement in 1992, and gave viability to the investment interests of both nationals and foreigners.

The conjuncture reasons have to do with the fall of the apartheid system in South Africa and the worsening of the tensions between white farmers and the Government of Zimbabwe. Both instances indicated a strong possibility that land capital of the neighbouring countries might be extended and even transferred to Mozambique where free access to land is a result of nationalisation in 1975, and because the Government had adopted an attractive package aimed at foreign investment.

Characteristics of the Demand for Land

The demand for land is characterised by

(i) the diversity of the purposes,

(ii) the diversity of the types of property and exploitation of the land resource

(iii) the concentration near infrastructures and/with access to facilities in the regional market,

(iv) the strong tendency to hoard for speculative purposes and

(v) the weak entrepreneur dynamic when it comes to the use of already attributed resources.

The diversity can be observed in relation to its purposes: there are land applications for agriculture, cattle breeding, silviculture and both, beach tourism and hunting tourism. Also the types of resource exploitation are different. There is exclusive exploitation, which requires a title deed and a concession of exploitation rights, which does not need a title deed. For example, the title deed for the use and benefit of land is requested in the cases of the irrigation system in Sabie and for the land of the Mozagrius Program in the Niassa province.[15]

The concession of exploration *(exploitation)* rights without the need for a title deed would be the case in: (i) a crop produced by the family sector, e.g. cotton and tobacco, (ii) a concession for the exploration of a natural resource, e.g. native forests, (iii) in partnership with the State, e.g. as mixed capital societies or (iv) with the resident rural families in the area, for example, the case of the Mozambique Blanchard Company in the

[15] The irrigation system was constructed in the 1980's in the Sabie River with Italian co-operation. It is being used by private interests and by the signed program between Presidents Joaquim Chissano of Mozambique and Nelson Mandela of South Africa in May 1996 that awards a concession of approximately 250,000 hectares for private exploration.

Matutuine district and of a recently established development company in the Niassa province.[16]

Land, which is located near roads, in irrigated areas or close to South Africa and Zimbabwe, was registered earlier than other land. The weak network of roads, little existing warehouse capacity and the deficient network of drinking water and electricity supplies, led to a concentration of requests for title deeds in regions where rural families lived. With few exceptions, as for example the cotton exploration of LOMACO in Montepuez[17], no investments were orientated to marginal areas by the State or by the operators.

The demand for land by capital from South Africa and Zimbabwe quickly led to a hoarding of land by Mozambicans. To conduct business with nationalised land became a vision for many more than for whom it became a reality. To use the land as capital in relation with foreigners was a vision for many who requested thousands of hectares of land, which was not marginal [Quan, 1998]. As happened in the beginning of the 1970's, when only 15% of the approximately 3.000.000 granted hectares were developed, Mozambique once again was moving towards the dangerous path of hoarding land.

There was a strong aversion to risks, which meant little investment both financially and in the land. This was due to the low level of development *of* business associations, the de-capitalisation of the majority of businessmen, the interest rates charged by the banks for the concession of credits, the conviction of many that one can manage an enterprise from a distance which were linked to the lack of incentives, from the State and from international financial assistance agencies, to find new markets, new products and new ways to increase the value of what was being produced.

There are a number of common principles held by land owners: to own a maximum of resources in the name of the enterprise, to invest a minimum only in order to justify the concession in the presence of third party claims, to immediately recuperate the invested capital, and to maximise the profit rates to the market limits.

Practically all over the country, this set of characteristics of the demand for land was endangering the safe access to and possession of land by the productive family unit, which as a whole employs 63% of the men and 92% of the women in the labour force, represents more than 80% of the agricultural production value, and contributes approximately 25% to the gross national product (PIB). This situation became a growing preoccupation for civil society, the international community and the Government.

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[16] James Blanchard III is a North American citizen living in the USA with business interests in Mozambique who was given the rights to tourism development in an area of 236,000 hectares including the Elephant Reserve of Maputo and a part of the Marine Reserve in Inhaca Island. The Company for the Management and Development of Niassa Reserve was given the exploration rights in an area of approximately 3,900,000 hectares including the reserve (440,000 has) and the so-called buffer zone (3,460,000 has). The proposed investment will come from the Madal Group whose principal shareholder is Halvaar Alstrup, a Norwegian shipowner.

[17] LOMACO, a company affiliated with the British Lonrho, with exploration rights for cotton production in conjunction with the family sector in various districts in Cabo Delgado and Nampula.

The two sides of the new land bill

The Ministry of Agriculture prepared the national land policy and drafted a new Land Bill which recognises the security of land possession for the family sector by demarcating and passing title deeds for the land occupied by the family. In other words, like the neighbouring countries, a solution for the physical division of the territorial space between the family and the commercial sectors was proposed and the dualist economy should have been applied to the dualist physical area. reflecting the dualistic tenure systems inherited from colonial times and a dualistic development strategy [MAP,1995;MAP,1996]. Several voices, which did not agree with the proposals, emerged, which demonstrated different visions about what to do with the land in Mozambique. For instance:

- the management of land has to be implemented at the local level and thus a national policy does not make sense;
- title deeds should immediately be issued to everybody
- communities are the landowners and can negotiate land ownership with the investors;
- that land in the family sector should be demarcated in order to protect it;
- what is most important is to establish a free market in land
- land should be privatised but private hoarding and speculation controlled

From the beginning, there was broad participation of civil society in the land debate and non-governmental organisations, churches and associations all discussed how best to guarantee the access to and the possession of land by the family sector. The spectre of war preoccupied everyone, either because of the resettlement, which was underway, or because of land grabbing, which threatened the climate of peace, which had been achieved. While the positions never became extreme, it is why the debate was characterised by a clear view about what one did not want, but also by a lack of definition about what one wanted. Between the Government and the parties represented in Parliament, different positions are being defended, and between the donors there is no uniform position about what has to be done. The civil society is assembled around the principles which are defined by the negative: "we do not want anybody without land, we do not want access to land which is restricted by income and we do not want a family sector confined to marginal areas".

Thus the new Land Bill[18] was more a platform for understanding between the different actors, their preoccupations and interests rather than a basis for a development strategy concerning the use of the natural resources. The new bill does not privatise the land but gives total security to the investment; does not demarcate the family sector but provides for the so-called community land; does not restrict the family sector from its right of access but gives the state exclusive, central authority to allocate land for commercial

[18] Bill No. 19/97 of October 1st, 1997 that was in force as of January 1998.

exploitation; does not allow the sale but gives sufficient space for the integration into the regional market through joint ventures. In short, the new law was designed to be fair while reflecting the complexity of power.

However, the Land Bill is clear about the basic rights and duties, which have to be respected by all including the State. The right to access and benefit from the land is directly associated to the duty to use and benefit: These are two faces of the same coin, which the Law does not dissociate and it is the role of the State to enforce it. The person who was granted the right of land use with the presentation of a development plan, has to implement it after two years, if a foreigner, and after five years, if a national. The obligation of implementation of the development plans is the major legal guarantee that land hoarding will diminish, provided that state inspection of compliance can become effective, and corruption is reduced as a result.

For the rural families, two methods to guarantee the access to and the possession of land were established: the recognition of actual occupation based on oral testimony and the demarcation of community land. The oral testimony of occupation and use are as strong as the written proof, the title deed, which was one of the main innovations of the new bill. On the other hand, the demarcation of community land can be both, an increased guarantee of security of access and a method of community development, as well as a form of confinement of the family sector which tends to perpetuate the dualist economy inherited from the colonialist times. During the last century, the land history in the region showed that land demarcation does not bring about development, but that development looks for demarcation [Bhalla, 1996].

2 Land as the tip of the iceberg

Land Tenure Systems

There is a difference between land use and land tenure systems use systems. While use is an action, a form or a right of use, the tenure system is a conjuncture of interrelated legal norms and arrangements, which define the access, possession and transmission of land plots and the rules for the preservation of these areas.

The land tenure system proposed by the new law is a reflection of the rural development strategy adopted.

A tenure system needs to consider the rights to land under the following four headings:

- land as an economic production factor,
- land as a set of natural resources occupying a given physical space
- land as social or territorial space
- land as an income source.

The establishment of the right of access can be something as simple as a right of way and as complex as the possibility of having the land as collateral for the social security of Mozambican rural families. The definition of possession implicitly brings with it the

economic role given to land use as a source of primary material, agricultural area, habitation space, pasture zone and relaxing environment. The system can allow, or disallow the transmission of the ownership rights through concession, alienation, and inheritance, as collateral or leasing.

The land plot, the field or the area is thus a production factor on which the land tenure system is built. The definition of a system is a political function practised by a State through its written legislation. This function also can be exercised, and usually is by the traditional authorities (régulos, mwenes, inhacuauas, secretaries, priests, xehes and so on) through the traditional, customary rights, which are recognised by the citizens and "tolerated" by the State. On the other hand, these are local institutions which are expressing themselves through a conjuncture of rules, norms and customs, and which serve themselves as proper instruments to mould the interaction rights and obligations of the people which recognise them [Gunnarsson, 1992].

- As the definition of the system is a political function, it incorporates social relations, which develop between groups, nationalities, entities, stratums, families, classes or races. According to how much the state increases its jurisdiction in practice over the national territory, the tenure systems tend to unify themselves under a common roof, which reflects the social relations of the country.

Development Theories and Land Tenure Systems

During the last few decades the African land use systems have systematically reflected the various rural development theories which were applied in Africa.

In the 1950's and 1960's the rural development model was that of ***modernisation***. For this paradigm the development was the result of economic growth which the agricultural sector achieved through mechanisation, and a measure of agriculture and intensive exploration of the resource land. For traditional farmers marginal land was reserved while the objective was their reproduction as a labour force for the industry, the proletarisation of the small farmers. The paradigm of the modernisation had no political colour, as it was adopted by both, capitalist and socialist countries [Bundy, 1979; Amin, 1973].

The consequence of adopting this model was growth, which was separate from development. The growth of the big agricultural properties was accompanied by the impoverishment of the rural families. Although the family producers had security of access and of possession of the land which was reserved for them, it is a fact that the production did not increase and that there was a decline in the quantity of products supplied per capita due to the exhaustion of soils and rapid population growth. Savings did not take place and consequently there was no investment. Moreover, the discrimination of women in the decision making process in the families tended to increase with male migration in search of employment to the urban centres as agriculture lost more and more weight in the family economy [Moyo, 1995].

During the 1960's and 1970's, the Green Revolution led to the emergence of the "productive" model. The strategy for the family sector areas was the maximisation of

income in a short period of time, independent of the nutritional quality, the education rates, the diminution of infant mortality, medical assistance and sanitary infrastructures. It assumed that traditional agriculture was "poor, but efficient", and that there was only a need to promote the technological transfer through the distribution of technological packages through rural extension [Todaro, 1989].

But the poor[19] had no money to buy the technological packages and, where the Green Revolution took place, the high costs of the technology rapidly obliged them to sell their land to the *latifundia* (large landowners). The land sales contract gave the *latifundia* the obligation to supply the technological packages and it gave the expropriated the obligation to pay land rents from the sale of produce. This effectively led to a situation of growth without development in separate territories, and to the maintenance of poverty. In Africa, the application of this model turned out to be more difficult as the possibility of buying the technological packages was practically non-existent and the land, due to its abundance, had no market value which would have justified its sale [Roberts, 1989].

During the 1970's and 1980's, two theoretical parallel schools of thought for rural development appeared: the integrated rural development school and that of basic needs.

The *integrated rural development* school defended the complementary between agriculture and agro-industry and the utilisation of intensive work forms on the big state or privately owned fields. This was an attempt to incorporate the structural dualism in rural development.

By this the division of land would be justified, the security of possession of land would definitely be secured for food production and access to cash income would come through employment in huge agro-pastoral enterprises. However, the growth rate of employment opportunities happened to be smaller than the growth rate of demand, because the efficiency of the enterprise increased exponentially with the adoption of mechanisation. Thus the need to incorporate types of intensive work in the agricultural operations of the enterprise could not be justified. On the other hand, the medium agricultural salary was so low that it did not serve as a viable substitute for the necessity to increase the income on the family field.

The State was faced with the dilemma to put pressure on the enterprises in order to adopt types of intensive work with higher salaries, which would resolve a social problem but raise production costs per unit; or rather take the income from the production increase and later apply it in community development. Practice showed that the harmonious complementary between sectors functions only in very special conditions and with strong external intervention. Once again there was no development but a perpetuation of the status quo of sectoral dualism [UNIDO, 1978].

It was a defensive and passive position in relation to the poorer and more marginalised layers of the family sector. Defensive because it proposed itself as protectionist of the interests of the State as well as the private sector in the mega-projects like the 400,000

[19] The poor are considered to be all those who's annual working units (AWU) does not allow savings. In aggregate terms, they are all those whose income levels are below the poverty line. [Sen, 1983].

has and others in the Prospective Plan[20]. Passive because it did not bring about investment in the family sector but only preservation of the productive status quo, or in other words preservation of the low production levels, the dependency of the conventional consumer and exportation goods as well as the perpetuation of the low average savings rate.

The theory of *basic needs* had as a primary objective the alleviation of poverty through special programs, which were orientated toward small farmers, and other vulnerable groups of rural communities. It was a model orientated toward internally resolving the needs in terms of food consumption independent of the integration in the market. The "uncaptured small farmer", not captured by the market, which is satisfied with self-sufficiency and which at the beginning of this century was studied in Russia by Chayanov, has nothing to do with the African small farmers, which, at least since the 10th century, participated in complex long-distance commercial networks that today are evident in the prevailing role of the informal market in the domestic economy [Chayanov, 1966;Hill, 1979;Streeten, 1982].

The search for small farmers in remote areas, even marginal in relation to the market, started to be a preoccupation of academics at the end of the 1970's and the beginning of the 1980's. The land, specially its relative location, was not a problem because the objective was the pure and simple production in order to satisfy alimentary needs. This was the time of Niassa province in Mozambique, of the Operation Production and of other initiatives by the State, which led to survival without population growth in the marginal areas[21] [Vieira, 1980].

During the past 2 decades, the 1980's and the 1990's, the *induced development* school emerged. The neo-liberal concepts of the World Bank such as “get prices right”, were oriented towards the application of structural readjustment programs of uniform shape all over Africa. The international parity of national currencies asked for an increase in the exportation of national primary materials and an increase in competition on the international market. In order to achieve this objective it was important to develop types of private land property, so that the land could serve as collateral for credits, constitute a very good incentive as well as serve as an income source through hire (McNamara, 1990].

But in the majority of countries the rural producers of primary materials were the poor, which neither had access to the inputs nor responded to the demand of the market when the prices tended to fall. Instead of re-orienting the production to crops with a higher market value, they increased the cultivated areas at the cost of female child labour, or migrated to the urban centres. The increase in criminality reached unbearable levels and social displeasure quickly supplied countless conflicts based on cultural identities of

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[20] This is the macro development plan for Mozambique for the decade 1980-1990 with the characteristics of a centrally planned economy. One of the principal aberrations was the creation of a state company for the management of 400,000 has of cotton in Northern Mozambique.

[21] The "Operação Produção" sent criminals, prisoners for common crimes, unemployed and those who were discontented with the regime to isolated areas of Niassa for the purpose of increasing national wealth through agricultural production.

ethnic, regional and religious character. The old World Bank system of training and visiting the producer were no longer applied in Africa for the simple reason that the marginal income was much smaller than the income reached on the informal market. The deficiencies of the markets were much more complex than the model has as a presupposition, and the State once again had to direct the market with the "invisible hand"[Mwanza, 1992].

3 The New Development Paradigm

New Paradigm

To assume in this context that the rural development of Mozambique would result by producing actors which act in separate physical areas, the family sector on the occupied land and the commercial sector on the land which is being reserved for the intervention of potential investors, demonstrates a historical contradiction and a certain lack of ingenuity about what constitutes market forces and dynamics. [Serageldim, 1994; Apter, 1987; Rahnema, 1997; Daly, 1996].

But which type of development is desired? The modernisation paradigm confuses growth with development, which seeks faster enrichment of some urban peoples and the impoverishment to formerly unknown levels of the remaining citizens. Today there is a consensus that the increase in the gross national product, only is development when equitably distributed. To have first growth and then development through the distribution of wealth is a long, sometimes painful process and it must always show financial stability. It is better to have equitable growth from the very beginning or, in other words, *equitably distributed development*.

But it is not sufficient to be equitably distributed to the families. The equitable distribution has to be more profound, has to penetrate the family: Female autonomy with respect to decision making in the family is necessary in order to create balanced and equal gender relations. All this without being culturally uprooted, but incorporating the right of freedom of choice. In short, the development is only effective when *gender balanced.*

"Development also requires inter-regional balances, and the asymmetries of the remote and underprivileged regions cannot and should not be underestimated. The processes of accelerated urbanisation, which took place in the Third World, and similar to what occurred in the North, are responsible for the increase in criminality, for the anti-social isolation of the individual and for the degrading of the quality of life. However distant and insignificant regional production volume is, development cannot be ignored. Neither the region nor human rights can be objects of discrimination in a development process. The increase in consciousness about human rights and about respect for the rights of the others in any condition, is essential in order that development can rely on the participation of all in their personal decision making process. Dag Hammerskold called it *human scale development*, a development that takes the individual as the starting point and the ending point, without abuse of his rights, without the ends justifying the means [Cepaur, 1986].

And the right to be different is the basis of human rights and the essence of social groupings based on habits, ideas, beliefs, preferences and affinities. It is in diversity where one finds the reason for the often-cited decentralisation. Decentralisation, which after all is more than the affirmation of the local institutional scene, where the management culture is getting lost in the mixture of external impositions of the central government. It is necessary that development reflects the rhythms of change, the dynamics of the incorporation of the unknown and the creativity of production, once again according to the cultural identities of the people and the communities, in a manner that they decide. To summarise, it is important that the development is *culturally decentralised*.

Another feature of the merging new development paradigm, is the emphasis on the need for participation in planning the use of the natural, financial and human resources. Without stakeholder participation, purely market-based, "efficient" resource allocation generates significant externalities. Phenomena such as downstream pollution, over-exploitation of natural resources and the loss of clean water supplies, tend to arise from both private resource use and from centralised public ownership and planning of resource exploitation. In short, it is desirable that development emerges from local initiative and participation in decision making - development *planning with a participatory approach.*

The conclusion is to re-affirm that development has to use resources without causing a decline in utility per capita across generations. In other words development should be sustainable. This recent post-modernism paradigm of *sustainable development* requires a holistic approach concerning the use of the resources, where the conjuncture of the economic (productivity and growth), environmental (eco-system and bio-diversity) and social (identities, power, access, etc.) aspects are more than a simple sectoral summary of the parts of the national accountancy.

In my interpretation 7 characteristics are required for effective development: Development should be (i) equitably distributed, (ii) gender balanced, (iii) regionally sensitive, (iv) on a human scale (v) culturally decentralised, (vi) planned in a participatory way approach, and (vii) environmentally sustainable.

Application of the new development paradigm to Mozambique

In simple terms, under our specific conditions in Mozambique the objectives of development are:

- to increase the quantity and quality of production both for consumption and for the market guaranteeing the sustainability of resource utilisation;
- to improve the quality of life of citizens; and
- to allow for a growing and conscious participation in the decision making process of their own development.

There are many presuppositions on which the new rural development paradigm in Mozambique can be applied:

- In the short term, the population growth rate tends to remain stable and will eventually, in the medium term, experience a slight diminution. In other words, there will continue to exist an increase in the number of citizens who require land.
- The growth in the national economy does not presume in the short and medium terms to offer jobs in the industrial and service sectors to meet demand. In other words, there will be a larger labour force than jobs available.
- In medium term, the national average income structure tends to remain unaltered. In other words, the salary will not cover all expenses of the family. It will only cover a part of all cash expenses. The agricultural production of the rural women continues to be the main guarantee of food security for the family unit.
- The security of access and possession of land has to be guaranteed for the family sector, especially for the rural women, and for the investor.

Implications for the Land

As pointed out before, the Land Campaign had a third objective, which has to do with what will be a land use system in Mozambique. The combined reflection about the growing conflict situation that existed in the neighbouring countries between the family and the commercial sectors, as well as the concentration of land in the hands of a few led to the development of the third objective of the Land Campaign: *To promote the integration between the commercial and the family sectors pertaining to utilisation of the same physical area*.

The theme, *Together in Partnership*, was created with the objective of promoting the integration of mutual economic interests between the family and commercial sectors, when they occupy the same physical area. The message gives some examples of alternative forms of increasing both, individual and collective wealth, without the necessity of a divided physical area between the family and commercial sectors.

With this objective, the Land Campaign tries to defend three characteristics which a new land use system should have in Mozambique: it should be eclectic, integrating and transformational. An *eclectic system* is a system, which is not exclusive, which does not focus only on the family or commercial sectors. It is a system, which tends to ensure the production of food, surpluses and industrial crops, both by the family and by the commercial sectors. It is a system, which also tends to increase the offer of employment, not as a substitute but in order to complement the other types of cash income of the rural family.

The *integrational system* is one, which defines development as dependent on the mutual dependency of the two sectors. The joint use of the resources based on mutual advantages, is the essence of the message related to partnerships.

> *" The demarcation of the family sector land as such is not the solution: on one hand because in a few years the families will multiply themselves and the*

demarcated land will be insufficient, and on the other hand because there will be the possibility of a rush for the not yet demarcated land for the purpose of speculation. It is urgent that an integrating mechanism between the family and the business sectors will be identified which will promote the development, stimulate technological improvements and create change in living conditions of Mozambican rural families." (In: project text of the Land Campaign, p.3, 1997, mimeo, Maputo).

Lastly, one wants it to be *transformational*, which is a system, which allows an increase in the average savings rate of the rural families and aims at the transformation of the family sector into rural business. The Land Campaign assumed that the demarcation of the community land, which is also contemplated in the new Land Bill, was no objective as such but instead only an instrument in reaching the final objective which is rural development. This objective is only attainable through the linking of the variables, land, labour, and capital.[22]

Implications for Labour

While in developed countries the division of labour in agriculture, industry and services is undertaken by families as social groups, the labour division in Sub-Saharan Africa as in many other parts of the Third World is based as individuals who are members of the same family, whether it is the nucleus or extended figure. The African family is characterised by the labour distribution of its members to all economical sectors where income is derived. This implies, that the closer the land of rural families to the non-agricultural work places and the commercial centres, the smaller the time spent away from home and the greater the possibilities to of increasing income with agricultural activities.

A second characteristic is that the rural family uses the available work time as a function of income, be it in kind or in cash, and according to the gender and age of each member. This means, that when adjudicating work time from each of its members, they take into consideration: (i) the production in kind and (ii) the generation of cash. However, there is a negative correlation between the adjudication of work time for obtaining income in kind and in cash, in other words, when more work time is used for the search of cash the family has less time available for the production of income in kind. Moreover, due to the low income earned by the nuclear family, the security of social reproduction is provided by the establishment of complex family alliances and networks through marriage, mutual obligations and other mechanisms, which create interdependencies between families. For that reason, the security of possession of and access to land is much more dependent on

[22] The donor community has consistently defended the necessity of guaranteeing access to land for rural families, arguing that only the demarcation of community land will lead to the security of ownership which is indispensable for development to occur. This position based in various studies on the dynamics of African traditional and customary rights Bruce, 1993;Platteau, 1996; Sjaastad&Bromley, 1997], is incorrect in making land the determinant variable for rural development in Africa, ignoring the necessity of investment in natural resources. Even if the security of ownership was a fact in South African indigenous lands, development did not occur.

family relations, which are expressed by the traditional, customary rights than from the formal possession types which are represented by title deeds.

This distribution pattern of work time has important social consequences, which can range from the perpetuation of the woman in the role of food producer to the abusive use of child labour. If the opportunity cost to use the work time in searching for cash income sources does not cancel the income production in kind, this pattern tends to perpetuate itself. This means, it is cheaper to produce food than to "produce" money in order to buy food, or in other words, under the present condition women as self-sufficient producers are necessarily guaranteed food security. The same happens in relation to the collection of resources such as firewood, straw, poles, wild fruits and medical plants, as the quantity of work time used for their collection is less than the quantity of work time necessary to earn money for their acquisition. Thus the first implication for the work is to *assure the production of income in kind*.

When it comes to cash income sources one has to distinguish between those which derive from agricultural exploitation done at home and those which involve a temporary absence from home. The women in reproductive age have only access to the first source of income while the men can opt for either one according to the level of anticipated income and the opportunities, which emerge.

The exploration of cash income sources close to home is the speciality of women. Generally, the money they can earn by this is intended for the acquisition of goods for domestic consumption, (and) can also be applied in small saving schemes but the return must be fast and does not have investment as its final purpose. The women organise their available time, after agricultural production and domestic tasks, in the production of surpluses, in the sale of products collected from the forests, in informal market activities and in the service to others, activities, which occupy a few hours per day. Thus the second implication for work is to *guarantee the cash income production close to home and with little time consumption.*

Men have the possibility to be absent from home and, as such, they are supposed to procure income on a regular basis. The regular characteristic gives them the responsibility for the acquisition of durable goods all year long and for the savings and investment for the reproduction and growth of the family. Due to the deterioration of the terms of international exchange between conventional African agricultural products and industrial products in the North, one witnesses a growing tendency towards the search for alternative income in the urban areas. The increasing absences of the husbands contribute to the increase in the workload of women and to a growing social instability. Thus, a third implication for work is to *create increased cash income sources near the homes*.

Implications for the capital - community / private sector partnerships

As capital is also a social relation, its growth is dependent on the linkage established between the producer and the holder of the production means, or in other words, dependent on the stability and effectiveness of the institutions at all levels. The secure possession of land and the availability of labour alone are not sufficient for development

to take place. Also necessary are investments in public capital (infrastructures and investigation), physical capital (equipment and organisation of production), technical capital (technology, innovation and applied investigation) and human capital (qualification, schooling and health).

Only investment, both public and private, can make available the necessary capital in order to increase the savings rate of rural families and ensure that development takes place. For this reason the Land Campaign developed the message of partnership between the private sector and the family sector:

> *"Mozambique already has a long tradition of linkage between the business and the family sector which needs to be systematised, opinions on its operational functioning should be collected and concrete proposals should be formulated so that the mistakes of the past will not be repeated and that the positive aspects will be developed. The planning of the land use is imperative in order to develop forms of articulation such as happens in the cases of cotton, cashew, tobacco and can be anticipated in the cases of sugar and coffee. Forms of intelligent partnership which should be extended to the exploration of forestry and wildlife resources, such as happens already in Tchuma-Tchato, in the Licuáti forest and which is being planned for the Niassa reserve, for the Gorongosa National Park and for the Maputo reserve. Even in the sector of exploration of mineral resources, such as gold, the hypothesis of the small and medium producers being partners of the business investments is being discussed." In: project text of the Land Campaign, p.3, 1997, mimeo, Maputo.*

Three "partnership models" are possible in Mozambique:

- production partnership,
- income-sharing partnership, and
- profit-sharing partnership.

There are partnerships, which act through the production, as is the case of cotton, and tobacco production, which is done by the family sector with promotion from the commercial sector. There are partnerships, which act through the revenue of the undertakings as happens in Tchuma-Tchato and on Bazaruto island, where for each visiting tourist a percentage is at distributed to the community for its use in previously defined priorities. Other partnerships are being designed which will act through the profits in the form of development societies, where the family sector is a shareholder. This is the case regarding 5% of the capital in the Blanchard Mozambique Enterprise and 15% in the Development Society of the Niassa Reserve (Sociedade de Desenvolvimento da Reserva de Niassa).

But for transformation to take place it is necessary that the producers increasingly assume decision making roles, which implies a change in the role of the State from simply defining partnerships to promoting and introducing incentives for community / private sector partnerships. This is one of the motivators of participation on the free market and

in just competition. The civil society organisations should also assume their role as facilitator of the growth and consolidation of local institutions. It is because of this that the message above mentions the necessity of establishing direct contracts between the producer and the investor responsible for the promotion, where the producer can choose with whom, in which conditions and in which activities he wants to establish a working relationship. However, this was not the practice of the State. On the contrary, the practice of the State determined an agreement with the investors without listening to the producers or making them responsible with respect to area of influence and products.

Then Land Campaign also mentions the diversification of agreements by products, thus fighting against the tendency towards a mono-culture/product inferred from present partnerships. The case of cotton is a clear example of the need to reverse this tendency. The present price for cotton on the world market is approximately a quarter of its value after the Second World War; today the country has doubled production but receives half of what it received previously. On the other hand, the population had tripled: In other words, the income per capita arising from cotton today is six times less than it was fifty years ago.

However, the transformation of the family sector into rural enterprises is not only dependent on the international market or on the reformulation of the role of the State in establishing partnerships, but also on the alteration of the agricultural systems, which the producers have adopted. Transformation will only be possible when the producer has returns, which gives him an equal role with the investor, who through him promotes a specific crop. Only then can the producer choose an economic option: to reorient the production as a function of the market, or to invest in equipment, which allows him to achieve higher income with the same quantity of labour.

Several studies and surveys done in Mozambique[23] indicate that the average income per rural family amounts to US$ 300 per year, approximately US$ 65 to US$ 75 per capita, from the work spent annually in agriculture, formal and seasonal employment and from the sale of products of so-called family micro-enterprises.

For example, in outgrower schemes for cotton production in Mozambique, the annual returns to labour are approximately US$100 per family, but the inputs from the cotton company are equivalent to around 50% of this in value. Returns would have to rise considerably in order to increase family incomes. Even if it were possible to increase the productivity of cotton from 400 kg/ha to 1,200 kg/ha, as is the case in Western Africa, incomes from cotton under the present production pattern, even in favourable market conditions would not allow for household savings. Under present systems of production levels, outgrower cotton schemes will not lead to the transformation of the productive family unit into a business enterprise.

The only solution would appear to be to diminish the transaction costs and diversify the cash income sources, on the basis of secure land rights. Transaction costs are higher when the security of land possession is lower, as they are where rights to occupancy depend upon participation in commercial cotton growing. Tenure security, and curbs on

[23] These are various studies and surveys that have been completed for projects and consultancies. The more systematised sources are found in the Department of Agro-Economy of the Ministry of Agriculture and Fisheries and in the Food Security Project of Michigan State University.

land accumulation and speculation, as provided for under the new land law are the essential conditions for the transaction costs in making and defending land claims to tend towards zero.

The diversification of cash income sources can be achieved through the interaction of the family and the private sectors in the same physical area by three approaches: production, income sharing and profit sharing. The *production approach* has two forms: the valuing of the available natural resources and the exploration of the indigenous plant species. To give value to the medical plants such as the beijo de mulata (V*inca rosea*) and the *Tabernaemontana elegans*, the native fruits such as the canhoeiro (S*lerocarya birrea*), the massaleira (O*ncoba spinosa*) and the tinziva (D*ialium schlechteri harms*), as well as to the aromatic plants, are methods which give value to the forest through already existing markets. The exploration in partnership of the native forests, the treatment and exportation of the balakate tea (L*emon grass cymbopogon*) and of marihuana (*Cannabis sativa*), the production of peri-peri and other spices are additional income sources which only require a business plan.

The *income approach* is already being used in Mozambique in the Tchuma-Tchato and the Bazaruto projects, where a fee is collected per tourist entering and per game killed in the parks. The income stays with the community for distribution between families to be utilised for collective purposes. However it is important to stress that this model is limited and dependent on demand, thus it is advisable to link its application to other additional income sources to enhance the offer. In Zimbabwe, where 25 of the 50 districts of the communal areas applied this model through the *Campfire* scheme, the average annual income of approximately 50% of the families involved in the project did not reach more than US$ 10 and the maximum income was only US$ 150, despite an investment by USAID totalling US$ 7.6 million [WWF, 1996; Telecky&Lyn, 1995].

The third, *profit-sharing approach* involves community participation in enterprise profits, which exist in a common physical area. Although the model has been designed with the aim to maximise the mutual advantages and to minimise the investment risks by losses and social conflicts, as of today its application has not occurred. There exist two mega-projects, which have adopted this model: the Blanchard Mozambique Enterprise in the Maputo Elephant Reserve and another in Niassa with the Madal company. The participation of rural families in the social capital was evaluated at 5% based on the value of annual land use in USD per hectare. In Niassa, the participation was evaluated at 15% based on anticipated necessities of the rural families in order to get them to collaborate in the preservation of the reserve and to make hunting, especially of elephants, illegal.

Conclusion

The application of the interactive model of community / private sector partnerships within the same overall land areas is directly related to the adoption of a new rural development paradigm, which implies an increase in the rural families economic returns as a result of private sector investments in land, with the security of land tenure to both rural households and private investors.

The adoption of this paradigm has implications for the land tenure system because such an approach incorporates both the family and the private sector. The tenure system should lead to their closer integration and the transformation of the rural families into business enterprises or at least, promote the productive interaction of the two sectors within the same geographical area. It should be an interactive model of land use in the same physical area[24]. Only the adoption of an interactive model will allow for growth in household savings and investment, combining household food production with the creation of additional cash income sources that are less time consuming and provide higher returns.

However, the application of the interactive model of land use in the same physical area depends on the creation of forms of partnership between the two parties which allow for investment in production, the sharing of the returns and the maintaining part of them for the community. Private sector profits could, for instance, be reinvested in local credit targeted at increasing and diversifying smallholder production. Such an approach requires a tenure system, which permits interaction between family and commercial sectors and promotes both private and public investment in lands within the same physical areas. The development of these partnerships would not be possible in a tenure system based on a dualistic segregation of commercial and communal sectors.

The rights and responsibilities created by the new land law in Mozambique provide the opportunity for testing this model, given a genuine political interest and available finances in developing suitable institutional arrangements to implement the law.

APPENDIX to Land *And Rural Development In Mozambique* by Jose Negrao

The Land Campaign in Mozambique

How it emerged and how it was organised

There existed a consensus between members of civil society that the new Bill [Law No.19/97] represented an advance in relation to the former law [Law No.6/79] and that it was urgent to pass the information about what had been achieved by it to small farmers all over the country. A group of national and foreign non-governmental organisations (NGO) associates and academics founded a National Committee in order to join forces in the dissemination of information aimed, in particular, at rural families[25]. Thus, the Land Campaign emerged.

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[24] See the "open frontier" model presented by Tanner in the National Seminar on the Demarcation of Community Lands that was held in Beira, Mozambique in August 1998 [Tanner, 1998].

[25] The group was comprised of UNAC, the National Peasant Union, ORAM, the Association of Mutual Assistance, AMRU, the Rural Women's Union, CEA, the Centre for African Studies, CEP, the Centre for Population Studies, NET, the Nucleo for Studies in Land and Development, Action Aid, KEPA, the Centre of Co-operation Services for Development, MS, the Danish Association of International Co-operation, OXFAM UK/Ireland, Oxfam's Joint Advocacy Program.

Everybody had a presupposition about the law. On the one hand, the new Land Bill represented advancement regarding the security of, access to and possession of land, through the recognition of the land occupation by oral testimony. On the other hand, the effective application of the Land Bill would depend to a large extend on the knowledge rural families had, about which of their preoccupations would be considered under the law.

Thus, the dissemination of the new land bill amongst producers became the common platform which was combined with approximately two hundred non-governmental organisations, churches, associations, co-operatives and other entities representing civil society which had similar preoccupations at the provincial level.

The central office announced through various media that it would launch a campaign for the dissemination of the Land Bill. A campaign representative was sent to all the provincial capitals in order to hear about their interests and about what type of reference materials they thought should be produced. In less than a month, the provincial nucleus were formed including organisational committees to support the campaign. Very early, a group dynamic developed between organisations which previously did not even know each other and which were situated over a large geographical area. The combination of each organisation's individual actions was better and more effective than the simple addition of the parts.

The National Committee decided that the campaign should be decentralised and that the responsibility of each organisation would be to articulate the campaign at provincial and district levels. It was decided that the Land Campaign would not be a substitute for the ongoing activities and would not constitute an organ, which defined land policies for civil society organisations. Thus organisations with varied and sometimes opposed political tendencies joined together to run the campaign.

The Land Campaign did not aim to substitute for the voice of the small farmers, but to inform the producers, as well as the operators and businessmen, about the rights and duties of each according to the new Bill. In other words, the Land Campaign disseminated information, but it remained up to the individuals themselves to defend themselves in case of eventual transgressions of the Law and to define future interventionist strategies. The Campaign neither considered itself as a new NGO nor as a forum for organisations, but only as an activity limited in time to between six and nine months, and with clear objectives and transparent purposes.

Thus, it was necessary that the organisational and administrative machinery should be as light and as cheap as possible. In addition to the National Co-ordinator, an Executive Secretary was contracted. The two were the only full time staff at the central office comprising the National Committee. The organisations, which took the initiative to start the Land Campaign, had already managed to raise donor funds in order to disseminate the Law. The collective activities of the campaign, its scheduling as well as its budget were determined by the lack of dependence on only one donor, the financing from national organisations, the production of all materials in Mozambique as well as the need for trying to reduce costs without compromising its quality.

Objectives of the Campaign

Three objectives have been defined: to disseminate the new Land Law, to promote justice by enforcing the application of the new Law and to stimulate discussion between the family and the commercial sectors that occupy the same area. The Land Campaign sought to inform about land rights and duties and to stimulate group dynamics at the community level and in civil society.

A team of specialists in communications, land legislation, advocacy, media, pictures and traditional, customary rights were contracted in January 1998. In addition to their individual functions, the first collective activity was the identification of a set of precise messages, which could be clearly transmitted and would meet the expectations of the people. On the other hand, it was decided that all messages should be positive, that they should suggest alternative methods of problem solving and the defence of land rights, but should not create more conflicts than the ones that already existed. These messages would be the essence of the Land Campaign.

Messages of the Campaign

1. Land Rights
2. Demarcation of Land
3. Women and Land
4. Land: Together in Partnership
5. Urban Land Rights
6. Conflict Resolution

The first preoccupation was to provide information about land rights. One of the acquired rights was the oral testimony of the communities and individuals in good faith.

The right of women to land, particularly women who are discriminated against at the community level were reinforced by the new Land Bill. The Bill clearly recognises the right of the women to land by stating that both, men and women can be subject to the right of use and benefit of land. However, the traditional, customary practices only allow the access to land through the father, the husband or the maternal uncle, which impedes access to land in cases of widowhood, divorce or extra-conjugal maternity. That is why the message was oriented specifically to those women whose rights had already been violated, advising them to apply for an individual title deed or to unite with other women in identical situations in order to obtain a collective title deed. Due to the cultural diversity of the country, an anthropologist specialising in traditional, customary rights regarding land prepared a supporting text on the theme of women and land according to traditional and customary laws, for use by the provincial committees.

The right to participate in decision making was included in the message on urban land. The suggestion was made to the Municipal City Councils that citizens organise street

demonstrations in order to demand a transparency in the adjudication of urban and semi-urban plots.

The Campaign also intended to inform about the duties. It was clear it was the duty of the State to consult the local population in order to confirm if an area of land was free when an individual or a business wanted to occupy it. Thus, it was a duty and an obligation to demonstrate land use in order to have the occupation rights recognised. The law provided that duties applied equally to rural families and to investors.

The group dynamics, particularly those at community and organisation levels, were stimulated by the message concerning conflict resolution. This message detailed the various types and levels of conflict resolution available before appealing to the judiciary, including mutual agreement, mediation, other alternative solutions or petitions. Suggestions also included the completion of a form by members of the organisations so that the information about particular conflicts was made public and collective pressure could be used for conflict resolution.

At the beginning the National Committee thought that it would be ideal to create a legal assistance office for citizens whose rights were not being recognised. During the national seminar of the campaign, it was concluded that it was not only economically and technically unfeasible to have a network of lawyers assisting in the emerging land problems but it was also not desirable. It was not considered desirable because the dependency of the communities on the technicians and their expectations regarding the judiciary would be increased, to the detriment of the development of endogenous organisational forms at the community level so that they could fight for their own interests and define their own priorities.

Material produced

The Campaign produced: 120.000 copies of a total of six 8-page comic books; three thousand audio cassettes with the dramatisation of the comic book scripts one side in Portuguese and the other in one of the local languages; a manual to accompany the reading of the new Land Bill with a printing of 20.000 copies; 15.000 copies of an aerogram like form for registering land conflicts, six guide-books for theatre in Portuguese and 20 national languages; 500 posters with the symbol of the Land Campaign; one supporting text about traditional, customary rights and access of women to land. All of this material was distributed to the provincial capitals using road and air transport.

A national seminar and ten provincial seminars were organised, more than a thousand letters and faxes were distributed, members of the National Committee travelled to the provincial capitals and the launching ceremony of the Land Campaign took place in Marracuene village which included countless invitees and local population. Total campaign costs amounted to 181.500 American dollars.

Several forms of dissemination of messages were identified: the comic book, the radio-theatre and the cinema. The first draft of the six comic books was presented to the National Committee and analysed jointly during the national seminar. Several alterations were incorporated, including the improvement of the drawings sequence, types of

personalities and the change of two messages: the message concerning legal assistance was altered to a message on conflict resolution and the message regarding pressure on candidates in the municipal elections[26] was changed to the demand of transparency in the adjudication of land plots by municipal city councils. During the provincial seminars local organisations were requested to suggest changes or provide additional messages to reflect realities in their provinces.

The use of a comic book instead of a written text for the rural communities was due to the fact that approximately 70% of the citizens are illiterate. The text of the comic book is in Portuguese, given that those who can read, read in Portuguese, as cases of literate citizens who only know national languages are quite rare. It is for this reason that the comic books were accompanied by the audio dramatisation (radio-theatre) of the scripts, which were done in 20 national languages in addition to Portuguese. The translation of the scripts was sent to all provincial committees.

In addition, there is the "*Manual to Better Understanding of the New Land Law*" whose target group were the literate population at the district level: professionals, civil servants and workers from the organisations which joined the Land Campaign. It will be the task of the latter groups to take the Land Campaign to the village level, where they will act as facilitators of the individual and collective understanding of the messages and of the resolution of eventual land conflicts through the completion of land conflict forms and accompanying future development. The role of the campaign "activist" was defined as one of facilitator of group dynamics and as a vehicle for the return of information to the communities

Finally a video was prepared representing the six comic books as a comic film to be transmitted without fee by the video cinemas, which exist in a few locations all over the country, by the national television stations and by organisations with the ability to do so.

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[26] The Land Campaign was launched officially on the same day as the beginning of election campaigns in 33 cities and villages throughout the country on June 13, 1998.

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WATER, SEA AND RIVERS

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CASE STUDY ON KENYA RIVER WATERSHED MANAGEMENT AND ARISING CONFLICTS

Introduction

Water is a resource to be used by mankind. Water is valued by humans according to varying perceptions of its worth (usefulness) (GOE 1995). Perceptions of water as a resource differ greatly, depending on the society and the prevailing environment. Where water is scarce, its necessity for sustaining basic life processes is more obvious, and hence its value is perceived to be very high: The quality of drinking water available for humans and animals takes top priority. Where water is abundant, supplies of drinking water are often taken for granted, and water is additionally used as a resource for energy, transport systems fish production, irrigation and recreation. For some uses, such as energy generation, water can be assigned a direct economic value, while the economic significance of other functions, such as the aesthetic or conservation value of water is less obvious.

The term water use encompasses both the different roles and the value water has for humans. This includes not only obvious uses such as domestic, industrial and agricultural but also the use of water for conservation of natural habitats, for transportation, for flood mitigation and recreation. Human intervention in natural process – in this case, the utilisation of water – often implies a potential misuse. In view of the close link between water and ecosystems as in the hydrological circle, it is likely that the other resources (soil, vegetation, and fauna) will also be affected by man's need for water.

Water resources conservation here means the planning and management of water resources in a way that ensures their wise use and sustainable supply in terms of quantity and quality (Allaby, 1985).

The report gives the source of all waters (as illustrated in the water cycle), water resources use, the human activities, water resources degradation, and strategies for improvements and enhancement of water resources.

Sources of Water

Hydrological Cycle

Water on earth exists in a space called the hydrosphere, which extends approximately 15km upward into the atmosphere and about 1km downward into the lithosphere, the crust of the earth. Water circulates naturally in a continuous and complicated process in the hydrosphere to constitute the water cycle, also known as the hydrological cycle. (Figure 1). Many complex process of water movement occur in the endless, circulation of water between the earth and the atmosphere. While man's need for water to sustain life has had considerable impacts on this process, here the water cycle will initially be considered under natural conditions.

As shown in Figure 1, the water cycle is a continuous process, having no beginning or end. However, the explanation of the cycle can begin with the process of evaporation, whereby water is transformed from the liquid phase, on land and in the oceans, to the gaseous phase, becoming water vapour in the atmosphere. Through the process of condensation, water vapour in the atmosphere is converted into the liquid phase, from which it may fall as rain or snow (together termed precipitation (ppt.)) on the land or oceans. On reaching the ocean, precipitation may be re-evaporated again, while ppt. arriving on the land interacts with the surface in many ways, thus taking different onward paths in the water cycle. Water may be intercepted by vegetative surfaces (i.e. prevented from reaching the ground surface) and re-evaporated back into the atmosphere. On reaching the ground surface, water may infiltrate through the surface layer into the soil, or it may flow over the ground surface as overland flow. Water which has entered the soil layers may be evaporated directly or may be used by plants through the process of transpiration (in practice evaporation and transpiration are difficult to distinguish, and the two are considered together under the process termed evapotranspiration (E_T)). Water not used in the E_T process may be stored in the soil as soil moisture, or it may flow laterally (in a pattern known as interflow) eventually reappearing at the surface, or it may percolate downwards under gravity to join the groundwater store, known as an aquifer. Groundwater itself also flows (albeit at slow rates), and thus can contribute to river flow (as baseflow) some time after ppt. has occurred.

Water flowing overland, laterally through the soil and from aquifers, collects in rivers and streams, which flow under gravity towards the sea. On the such channel flow may evaporate, percolate or entered storage in lakes, swamps and floodplains. Despite the very many process present, water within the cycle can be categorised into three broad types: atmospheric water (precipitation, interception and evapotranspiration). Surface water (overland flow and channel flow), and subsurface flow (soil moisture, interflow and groundwater. All this movement of water in various forms requires energy. The main forces driving the hydrological cycle are radiation and gravity. Although simplified, the concept of the water cycle helps to describe a very complex set process.

The total volume of water in the global water cycle is constant, but distribution and movement through the cycle are erratic, both in time and space.

The movement of water in any part of the hydrological cycle can be quantified in terms of simple mass balance, such that any change in storage (s) in the system must equal the difference between the inputs (I) and the outputs (O). This is known as the water balance equation. The concept of the water balance is applicable at any scale – continental, regional, field, plot, or laboratory. Commonly the water balance is considered in the hydrological unit of the water basin (also called catchment or watershed). A water basin is defined as the area, which drains to a single outlet.

The amount and the flow rate of water as described above, henceforth called the water quantity, are of importance, not only with regard to the availability of water, but also in view of the role the force of water has in shaping the earth's surface, through erosion and deposition. Equally important, however, is the water quality. Water quality is assessed by physical, chemical and biological parameters such as temperature, dissolved oxygen, suspended solids, trace minerals, nutrients, salinity, alkalinity and micro-organisms (FAO 1986 c: 25). Describing the chemical properties of water in detail is beyond the scope of this report; for this information my counterpart who will present a paper on water quality standards which, I believe will give more light on the subject. (See Freeze - 1979). However, despite a deceptively simple formula (H_20), water contains many soluble chemicals (inorganic, organic and gaseous), and biological organisms (bacteria, algae, fungi, yeast and protozoan).

Although water quality is often (negatively) perceived as a result of man's impact on the water cycle, natural fluctuations also occur when water comes in contact with the atmosphere and the lithosphere. All constituents that are added to the purest form of evaporated water through contact with the natural environment are called natural contaminants.

One of the major variations in water quality within the hydrological cycle is the distinction between fresh water and saline water. Saline water is found in lakes without outlets, or in seas, where there is continuous accumulation of salts, minerals and sediments left behind in the evaporative process. The term brackish is applied to the water in the boundary zone where fresh water and saline water mix.

In addition to the driving forces providing the energy for movement, the water cycle is influenced by other natural factors – climate, vegetation, soils, geology and landforms. Vegetation and soils play a role in determining the different pathways rainfall may take on reaching the ground surface. The cycle is also influenced by changes in groundwater quality, depending on the geology of the aquifer, and by the influence of catchment slope on the velocities of surface flow. These influences are interactive; however, as the hydrological cycle itself affects vegetation (e.g. growth

rates) and soils, as well as geology and landforms (through weathering, erosion and deposition processes).

Water's key role in the full natural cycle of all ecosystems is further affirmed by its life-giving properties. Life began in water. All living things are mainly composed of water and need additional supplies to sustain life. This life-giving role cannot be overemphasised. Water, through its interaction with the physical environment and with life itself, thus a connecting element of ecosystems on the earth – regardless of scale. Any changes in water flow, storage or chemical properties at one scale may have an impact on the water cycle at other scales, owing to linkages between these factors within and between ecosystems at all scales.

Description of Water Resources in Kenya

1 General

The Republic of Kenya covers an area of 592,000 sq. km and lies between latitudes 50 20'N and 40 40'S and longitudes 33 50'E and 41 45'E. It is bisected by both the Equator and Longitude 380 E. The land configuration varies widely, ranging from the sea level to over 5,000 m in elevation. Of the territorial areas of 592,000 sq. km, the lakes occupy about 11,200 sq. km (2%) while Arid and Semi-Arid lands occupy about 490,000km2 (83%). This implies only 15% of the country's surface area constitute the high potential lands.

2 Drainage System of Kenya

For the administration of water resources, the country is divided into five catchment regions, namely, the Lake Victoria Basin, Rift Valley Basin, Athi River Basin, Tana River Basin and Ewaso Ngiro River Basin (Table 1). Lake Victoria Basin contributes nearly 50% of the available water resources from 8.4% of the total area of the country. The Kenyan lakes, for example, hold 315 million M^3 of water that is currently under-utilised and the riparian areas are also the least developed agriculturally

Drainage Area 1: (Lake Victoria Area- 46,229Km2) comprises the whole of the area west of the Rift Valley draining into Lake Victoria. The basin receives good amounts of rainfall, well distributed over the area. It is the only area where rainfall is consistent from the watershed of the catchment to the outfall of the river system. Its water resources, consisting of many perennial rivers and the Lake itself, are better than in most parts of the country. The basin has 65 sub-basins.

Drainage Area 2: (Rift Valley - Area -130,452Km2) is an area of internal drainage discharging into Turkana in the north and Lake Natron in the south. Within this area there are several sub-basins discharging into a number of smaller lakes. The waters of these lakes are somewhat saline and the only fresh water lakes of importance are

Lake Naivasha and Lake Baringo. The dry season flow of this drainage area is very small. The drainage area has a total of 32 sub-basins.

Drainage Area 3: (Athi/Sabaki River - Area 66,837Km^2) comprises the southern part of the country east of Rift Valley, draining the southern slopes of the Aberdare Range and the flanks of the Rift Valley to the south to form the Athi River, which in its lower reaches is known as the Sabaki (or Galana), and discharges into the Indian Ocean. The Tsavo River provides an important contribution to the flow in the lower reaches. The basin has a total of 30 sub-basins.

Drainage Area 4: (Tana River - Area 126,026Km2) drains the eastern slopes of the Aberdare Range, the southern slopes of mount Kenya and the Nyambeni Range, and discharges into the Indian Ocean. This is the largest river in Kenya. The basin has a total of 39 sub-basins.

Drainage Area 5: (Ewaso Ngiro North River -Area 210,226Km2) comprises the northern part of Kenya, and drains the northern slopes of the Aberdare range and Mt. Kenya. Even during flood season the river flow of Ewaso Ngiro North is absorbed in Lorian swamp, though for some years the flow continues to the Juba river in Somalia where flooding occurs. The basin has a total of 26 sub-basins.

The three main systems east of the Rift Valley have some similar characteristics. Their headwaters occur in high rainfall areas of volcanic rocks, in which are the groundwater reservoirs, which provide their dry weather flow. On leaving the volcanic system all the three rivers flow through the country bedrock's, the area being mostly semi-arid and subject to long drought periods. These periods are sometimes followed by heavy storms resulting in high and rapid runoff carrying a heavy load of silt from wash loads of the topsoil cover of their catchment areas. The tributaries therefore contribute largely to flood and silt conditions in the downstream reach of the rivers traversing sedimentary formations, in which they meander, overflow their banks, and occasionally change their course. This is typical of Tana River. These sedimentary formations are generally permeable and the rivers lose water gradually by percolation from their beds as well as by evaporation.

3 Water Resources Quantity and Quality

The mean annual rainfall over Kenya is estimated 621 mm equivalent to a mean annual volume of 360,000 million m^3. However, not all of this rainwater contributes to the surface and groundwater resources due to losses through evapotranspiration. According to the National Water Master Plan Report of 1992, the overall national annual water volume potential is estimated at 20,000 million m^3 consisting of surface and groundwater with projected annual water demand for the years 2000 and 2010 at 3,874 and 5,817 million m^3 respectively. This implies that the demand by the year 2010 will still be less than 30% of the total water resources potential. However, poor distribution and unreliability of rainfall results in water shortages.

The surface water potential from the perennial rivers has been estimated at 19,500 million m^3, representing 5.6% of the national annual rainfall. Its quantitative distribution in space and time and its quality primarily influence the availability of this resource for the socio-economic and ecological demands. The distribution countrywide is influenced by the mean annual rainfall, which varies from one drainage basin to the other. The surface run-off and groundwater recharge rate is influenced by variation in rainfall intensity and the land condition.

The quality of river water in Kenya is generally good. However, this is under threat due to local pollution, particularly where there are intensive industrial, agricultural and human settlement activities. River water is generally neutral to slightly alkaline with some rivers having slightly acidic headwaters. Concentration of metal ions in most rivers is low.

The groundwater potential is estimated to be 619 million m^3 comprising of deep aquifers exploitable through boreholes and shallow aquifers exploitable through shallow wells.

The groundwater in Kenya is extremely variable in quantity as well as its chemical composition. The variation occurs both spatially and seasonally. The quality is essentially influenced by the geological formation in which the aquifer occurs. In Central and Western Kenya, the water is generally soft with moderate alkalinity. Chemically, this water is satisfactory for domestic purposes. In most parts of the coast, Eastern and NorthEastern regions, the water is however saline and of poor quality, In general, the major problem with groundwater exploitation is salinity and fluoride levels. In the case of fluoride, its concentration generally exceeds the W.H.O. drinking water guidelines of 1.5mg/l in many areas. This represents one of the major factors limiting groundwater utilisation in Kenya for drinking purposes. However, the trend now is that groundwater is being used extensively for irrigation/livestock and industrial purposes.

All water which is abstracted by means of digging wells, (mostly hand dug) or machine-drilled borehole in referred to as groundwater. The source of this water in general is precipitation, and in Kenya where snow or ice is not a significant contributor, the main source of groundwater is rain.

Rainwater infiltrates into the ground through the top soils, sand formations, fissured and fractured rocks or other unconsolidated rock formations and gets stored in aquifers zones at varying depths from the earth surface. The economical depths at which boreholes draw water in Kenya are found to be about 200 to 300 meters.

Only a small fraction of the rainwater gets stored as groundwater in a given period. In the Arid and Semi Arid climatic zones, the groundwater recharge is generally of the order of 3% of the annual rainfall while in the humid/sub-humid zones, the recharge is generally of the order of 10%. However, in the sandy aquifers or in

unconsolidated basaltic rocks, recharge is much higher, in the order of 30% of the annual rainfall.

Groundwater is usually found to be free from organic pollutants in area where the catchments are not polluted. However groundwater can have high amounts of inorganic chemicals in solution, or in other words, can be highly mineralised. Generally, it is found in potable condition, and is used directly for domestic and livestock purposes without further requirement for treatment. It is however necessary to have the water analysed by a competent laboratory to certify the water as usable for the intended use.

Rainwater harvesting from roof and ground catchments have been developed by various actors in various districts, especially in semiarid and arid lands where perennial rivers are non-existent. However progress is hampered by lack of tested design parameters and absence of appropriate water policy. It was not until the 1994-96 Development Plan that the GOK proposed to act by streamlining water conservation measures. But these proposals have not been developed into an action plan (1997).

Water is a renewable resource although the annual amount available remains finite. The potential annual renewable water resources in Kenya is about 20.0 billion m^3 (Author, 1988). The main factor responsible for water availability is climate of which rainfall is the most important element. The fact that the water resources originate in one part of the country while consumption occurs elsewhere has a lot of governance implications. One, the catchment must be conserved by those who are not dependent on its preservation/conservation. Two, there are benefits foregone in the choice of catchment management practices/conservation. Third, at what level it is possible to monitor catchment vitality and degradation is policy as well as governance issue not only in water resources development but also in all resource management. For example the Mzima Springs that supply Mombasa and the Coastal region with water has its source more than 290 km. away in Chyullu Hills, is an example of the kind of management issues that must be resolved.

Water resources in Kenya are marked by both gross spatial and temporal variability. Both surface water sources and groundwater recharge are replenished by rainfall through the hydrological cycle. Groundwater is unevenly distributed in that in drier areas, the water quality is poor and yields are low, usually less than 80 liters/min.10 In high rainfall areas, there is high recharge, high water yields, up to 117 litres/min. and of good quality. Some areas are devoid of groundwater while others have water of unsuitable quality. Assuming a limit for chronic water scarcity is 1,000 M^3 per capita per annum then Kenya is already experiencing acute water scarcity at its 1998 population has reached 26 million people. By 2010 several districts within Rift Valley Province, Coastal strip, and Western Kenya will experience water deficits. Eight urban centres including Nairobi, Mombasa, Nakuru, Kisumu and Eldoret are currently experiencing chronic water shortages. The situation has been aggravated by the persistent and continuing droughts in Eastern Africa. Whether water scarcity

is examined in terms of river basins, provinces or districts, the future role of water resources in the social and economic development of the country will be crucial.

4 Ownership of water

Water is a resource for which ownership is a tricky issue. The Government of Kenya is empowered by Water Act (Cap. 372 Laws of Kenya) to act as the custodian of the water resources in the country. All ownership and control of water is vested in the Government, subject to any use rights that may be granted or vested under common law.

The Government regulates the utilisation and development of water resources and maintains overall responsibility for advising on all aspects of project development. The Water Act is explicit on the need to conserve, control and apportion water. Land may even be acquired to protect this goal either through purchase or other means. The present Water Act Cap. 372 talks of adequate compensation being paid for land compulsorily acquired for the construction of water works, when this is in the public interest.

The right to water under English common law was derived from land ownership in two ways. First, by ownership of the land under or over which water flowed and secondly by ownership of land adjoining surface waters, called riparian rights. While English common law provided the conceptual foundation for water rights in Kenya, important aspects were fundamentally changed.

Kenya has a diverse land tenure system with individual private property, group private property, state-owned land and land held in trust by the state. Customary tenure is practised in various forms within most of these categories. Ownership of water resources is vested in the state. However, the practice of water management cannot be separated from questions of land management since access to water in most cases derives from access to land.

Control of access to water in dry land, for example, is often a tenure-building mechanism, affecting land settlement pattern, disenfranchising the less powerful from access to water, in the process creating conflict.

5 Uses of water

Water resources are basic for sustaining human life and for the production of goods and services. Therefore, it is not surprising that there is competition for its access. Water development programmers form a significant part of the national and district development plans. However, the natural limits of water resources contain their utilisation for all development purposes unless priority setting and vigorous efforts to sustain and develop the resources are taken. Important uses include public water supply, which contributes to public health and irrigation and provision of water for livestock under the agricultural development program. Hydropower provides the bulk of Kenya's electricity supply but mainly river water quality and flow is important for wildlife, fisheries and rural domestic water supply.

Flood mitigation is important to the social well being of people living in flood-prone areas. The utilisation of water resources thus involves balancing these competing needs and interest. A clean and adequate public water supply provides the foundation for the economic and social development of countries, particularly due to its importance on health. The current National Development Plant (1997-2001) aims to ensure the availability of potable water within a walking distance of every household by the year 2000. Meeting this goal would require considerable expansion and improvement of municipal water supplies and distribution systems, and a major increase in rural supplies. Many different approaches to rural water supply are currently in use, including river abstraction, capped and piped springs, boreholes, and river bed wells, and rooftop catchment systems mainly put in place by community groups and NGOs.

6 Security of water

The water Act Cap 372 provides for protection and conservation of Water Resources. It is therefore, illegal to impound, obstruct, abstract or divert a watercourse by works without authorisation or permit from Water Apportionment Board. This Board works in conjunction with District Water Boards, Catchment Boards and the Director of Water Development as the chief technical advisor to these boards.

The Ministry of Land Reclamation, Regional and Water Development has put in place qualified officers such as, Water Protection Officers, Water Bailiffs and Water Guards in various Catchment areas with view to ensuring that Water Resources is protected in terms of quality and quantity.

7 Conflict resolution mechanisms

Water resources are basic for sustaining human life and for the production of goods and services. Therefore, it is not surprising that; there is competition of its access. Water development programmers form a significant part of the national and district development plans. However, the natural limits of water resources constrain their utilisation for all development purposes unless priority-setting and vigorous efforts to sustain and develop the resources are taken. Important uses include public water supply, which contributes to public health, and irrigation and provision of water for livestock under the agricultural development program. Hydropower provides the bulk of Kenya's electricity supply but maintaining river water quality and flow is important for wildlife, fisheries and rural domestic water supply. Flood mitigation is important to the social well being of people living in flood prone areas such as Kano Plains, Yala swamp, lower reaches of Nzoia river etc. Thus, within Lake Victoria Basin, utilisation of water resources involves balancing these competing needs and interests.

Many conflicts arising over land originate in competing demands for water. These may be between individuals wishing to use water for the same purpose, say among farmers over access to irrigation water, or between different uses and interests, such as urban water supply or hydropower project against the interest of rural land users.

Another rural land-use conflict is over the use of riverbanks. The law provides for a two-meter buffer along river and stream banks to protect the watercourse form erosion and pollution. However, riparian landowners or land users frequently cultivate right up to the river edge. Land shortage, uneven or general lack of enforcement, and lack of understanding on the part of the farmers as to the purpose of this restriction contribute to the conflicts which result when enforcement is attempted.

Other conflicts arise when local communities are not involved in the decision-making process in matters directly affecting them. Around the world, construction of large dams tends to cause conflict, and Kenya is no exception. Whether for water supply, hydropower, irrigation or other purposes, the areas to be flooded have little to gain and much to lose. Lack of participation in decision making also creates conflicts between upstream and downstream users of river water. Where a river passes through an urban area, urban and industrial effluent may make the water unusable downstream. Overlapping interests of industries or neighbouring countries over a water body is another source of conflicts.

This synopsis of types of water conflict raises a number of important points. First, introduction of change without understanding the prevailing land use and governance systems of the local population generally undermines the systems, which were put in place. However, the new resource management system is unlikely to work as expected if it conflicts with the pre-existing systems or norms, or fails to take advantage of local knowledge. This suggests that, change should emerge through consultation and shared knowledge of both the local circumstances and external imperatives. Secondly, the ownership of land confers certain rights to water, which also entail responsibilities in relation to their members of society, both nearby and distant. These rights and responsibilities are complete and yet complementary. Unless the dual character is recognised in systems of reciprocal relations, many types of conflicts may arise.

Kenya Case Study

1 Background

The study area covers Tana and Athi River drainage Basins, which are described above. The parties involved in the conflict about the use of water in the Tana River Basins are as follows:

i) *The Tana and Athi River Basin Development Authority*

The Regional Development Authorities were formed in 1973 when GOK initiated regional development strategy based on Regional Development Authorities based on river or lake catchments. This line of thinking was based on the concept of the Tennessee Valley Authority, which was established in USA in order to curb excessive exploitation of natural resources thus causing soil erosion and flooding. The idea was to establish an institution or institutions that could be cross-sectoral and also be above district or provincial national good. Since Tana and Athi Rivers development Authority was established, six other RDAs have been formed. The RDAs receive their policy directive from the Board of Director originating from the minister of the parent ministry.

Although the RDAs have been successful, especially in mobilising local resources and increasing employment opportunities, their functions have not always been clear. For example, the advisory and co-ordination roles are difficult to achieve because it is assumed that the other actors in the development process are willing to be co-ordinated. In any case, the RDAs have poor links with the District Development Committees, the main development implementing institution in the country. RDAs have weak links with co-ordinating ministries such as the Ministry of Planning and of National Development, of Health, Education and the Ministry of water Resources.

The Tana and the Athi River Development Authority have there developed multipurpose dams within the middle reaches of the Tana River mainly for Hydropower generations and hence would like to control water usage upstream of the five dams.

ii) *The Nairobi City Council*

The Nairobi City Council is the water undertaker for Nairobi City, the Capital of Kenya with approximate population of over 3 million people. The area of supply falls in the Athi River Drainage Basin. Therefore, this calls for inter basin water transfer. The Nairobi City Council, to be sure of the reliability of the water resources from the Tana Basin has constructed the Ndakaini Dam on the Thika River one of major tributaries of the Tana River upstream of the RDAs Dams.

iii) *DelMonte Kenya Ltd.*

DelMonte Kenya Ltd. is a foreign Investment Company with whom the Kenya Government is alone in having some shares. The giant

Pineapple Plantation abstract over 1.1 M^3 /s from Thika River downstream of the Nairobi City Council Dam.

iv) *The Yatta Canal*

The Yatta canal is a 60 Km long canal built during the colonial times to transfer 1.0m^3/s from the Thika River downstream of the DelMonte to the Semi Arid lands of the Machakos district in the Athi River Basin.

v) *The Thika Town Council and the local community*

The Thika Town Council is the water undertaker for Thika Town. The town falls between the Ndakaini dam and the DelMonte intake.

2 The basic reasons behind the disputes

That DelMonte accuses Nairobi City Council (NCC) of impounding more water than they require from the Thika River in their Ndakaini dam, and leaving very little for downstream users, and also that water in the Ndakaini dam is used by all downstream riparian of the Thika river.

That DelMonte accuses the Nairobi City Council of wastage of water in their distribution network, as it looses more than 50 percent of the water.

That the Thika Town Council and the local community reason that since the Thika River originates from their land, the NCC should compensate or pay the local council for the use water from the Thika River.

That the flow level be set at the DelMonte intake must be realised from the release of water from the Ndakaini dam.

That the NCC maintains that the conditions mainly set by DelMonte in iv above are not possible since they have no control over the water released from the Ndakaini dam, as there are other illegal users in between.

3 The mechanism and methods applied to solve the existing conflict

i) Under the present Water Acts Cap 372 Laws of Kenya, as stated above the Government is the owner and custodian of all water resources in Kenya and hence controls its use and apportionment through the Water Apportionment Board. The Registrar of Water Rights who is also the Secretary to the Water Apportionment Board has chaired the arbitration between the involved parties.

ii) Involving other parties than the Zambia Water Board, who were on a Water Study Tour to Kenya early this year.

iii) Involving Private Water Consultants to assess the water resource potential within the basin and how it can be shared equitably.

iv) Development of a new Water policy that introduces the River Basin Board Management system followed by the revision of the Water Act Cap 372 which is to introduce User Pays principle and Community involvement in the conservation of water catchment areas.

v) Involving Stakeholders in the development of the new Water Policy and the revision of the Water Act.

vi) Application of water saving methods in irrigation and water distribution networks.

vii) The government is to curb illegal water abstractions and register all users through the River Basin Board Management system.

viii) Introduction of a 90-day storage facility for large water users, harvesting flood flows to be used during dry seasons.

4 <u>The outcome of the process</u>

i) The new Water Policy approved by the Government and enacted by the Parliament through Sessional Paper number one of 1999.

ii) The review of the Water Act Cap 372 is in its final stages.

iii) The conflicts have presumably gone down while waiting for the outcome of the application of the new policy and of the revised water Act.

5 <u>The lessons learnt</u>

i) Poor policies and continued use of outdated colonial Acts is one of the causes of conflict in water use.

ii) The introduction of changes without involvement of local people is another cause of conflict.

iii) Water should not only be considered as a social good but also an economic good, hence the introduction of user payment principle.

6 Discussions

i) Who should be involved in the conservation of Water Catchment areas.

ii) Should the downstream riparian compensate the upstream riparian who conserve catchments.

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Mr. Mateus Muthemba, Project Officer, Helvetas Moçambique[27]

POPULATION, FENCING, ELEPHANTS AND INVESTORS. HOW TO LIVE TOGETHER IN THE SAME PHYSICAL SPACE?

The Madjadjane Case. Near the Maputo Special Reserve, in the Matutuíne District

Background

The Matutuíne district, to the south of the Maputo province, is known for its high biological value. Recently the area was classified as an endemicity centre of world-wide importance. The area is characterised by a vast variety of landscapes and habitats, including an almost virgin coast which possesses, undoubtedly, potential for the development of high quality tourism in the region. As a matter of fact, the Mozambican Government has already defined tourism as being a core activity for the development of the region.

As an indicator of the high tourism potential, after the signing of the General Peace Agreement in 1992, many requests were submitted to the provincial and district authorities for the realisation of tourist projects. Most of the requests were made by potential South African investors. In 1995, the whole coastal area had been divided into concession areas (to be applied mainly for tourism-related projects). In 1996, through resolution no. 239/96 of the Cabinet of Ministers of the Republic of Mozambique, the government granted the Company Blanchard SODETUR (ECCo)[28] exclusive exploitation rights for a period of 50 years, renewable, of an area of 235.200 hectares in the Matutuíne district for tourism development activities. In September 1996, the Government authorised the implementation of the Transfrontier Conservation Areas Project (TFCA) in

[27] Helvetas Moçambique is a Swiss NGO. The case study is taken from its project „Environmntal insecurity and conflict resolution“, carried out with the aid of a grant from the International Development Research Centre, Ottawa, Canada.

[28] Blanchard SODETUR is trading as The Elephant Coast Company herewith referred to as ECCo.

the Matutuíne district. The area granted to the ECCo almost completely covers the Maputo-Tembe Transfrontier Conservation Area.

It is within this concession area that the Maputo Special Reserve, also known as the Maputo Elephant Reserve, is located. The Reserve was created by Legislative Diploma no. 343, on the 23rd of April 1932, and covers the whole of the eastern area of the Maputo River and to the North, up to the South African border. The initial objective in the creation of this reserve was protection of the elephant population existing in the area. (TELLO 1973, quoted by Oglethorpe, 1996, p.01)

Between 5 and 6 communities live either in the proximity, or within, the boundaries of the Reserve itself. Amongst these communities is the community of MADJADJANE, which is to be the focus of this case study.

Madjadjane lies at a distance of approximately 25 kms from the district capital, Bela Vista. On the eastern side, part of the Madjadjane community is located within the Reserve, where the population, in addition to visiting their ancestral graves, also carry out agricultural activities, extract building materials for the construction of their houses, honey, wild fruits, water and medicinal plants. Still on the eastern side, the community is traversed by the Fúti River, which springs in South Africa and discharges into the Changos Plain.

This work is going to cover the conflict between the community and the Reserve. This conflict has been due to various different reasons and characteristics throughout the years. If from the 1950's and 1960's it was due to the destruction of the population's crops by elephants, hippopotami and boars, as well as to the population's hunting activities, from 1996, with the ECCo concession and the beginning of the erection of an electric fence along the perimeters of the Reserve, the number of players in this conflict increased, involving the local population, the ECCo and the District Government, and sometimes also even Helvetas, which operates in the area.

Basic reasons behind the conflicts

<u>Invasion and destruction of the local population's crops by the animals, mainly elephants, and the problems involved with the respective indemnification.</u>

The conflict between the population of the settlements outside the Reserve and the wild animals dates from the 1950's/60's, more or less, when elephants, hippopotami and boars used to damage the cultivated areas. **Madjadjane** is located in the elephants' food preference (sugar cane, maize and peanuts) and migration area. These facts have implications on the reduction of the families' agricultural yield. This situation was more severe during the last drought which ravaged the district.

In addition to the above-mentioned reasons, the elephants' constant moving around is related to disturbances occurring within the reserve by the population living there: fires

and noise to keep them away from the crops. (*Maputo Special Reserve Management Plan, 1997-2000*, volume 2, Chapters 2 and 6, pages 07-08)

Expansion (the reserve's new boundaries)

Government concession to Blanchard Sodetur

i) Insecurity with regards to the ownership of the land created by not explaining to the population about the concession's implications on their rights to the land and to the natural resources;

ii) The expectations which were created amongst the local population (lacking in much) by the entry into the area of a big investor;

iii) The populations still do not see a balance in the cost-benefit relation by their commitment to conservation. There lacks the feeling of "ownership" in relation to the Reserve and its natural resources. The population considers that the Agriculture and Fisheries District Administration or the ECCo are the "owners" of the Reserve and of the elephants.

The erection of new electric fencing, which does not follow the path of the previous existing fence

i) The ECCo's attempt to take into account the different feelings of the community did not have the expected results due to various reasons:
a) the existence of different interests amongst the different neighbouring communities as well as the weak organisation amongst the community members to carry out discussions with the investor;
b) the ECCo's lack of experience in participative approaches.

ii) The hiring of workers not residing in the area, contrary to that which had been agreed; workers hired without contracts and fired without following the labour norms in force in the Republic of Mozambique.

iii) Part of the population's area near the Fúti River was lost and the indemnification discussions were drawn out over a long period of time.

iv) The fence resulted in limited access to the Fúti River's resources - agriculture, construction materials, water, medicinal plants - even though, theoretically, the Reserve's administrative body defends that the usufruct of the natural resources by the populations is not interfered with. The bridge constructed over the fence is not safe and makes the residents unwilling to use it to gain access to the natural resources near the Fúti River. This situation increases the population's dissatisfaction because of their socio-economic situation, which is worsened by the fact that the exploitation of the different natural resources is a tradition. In some cases, hunting (clandestine) contributes to the deterioration of relations

between the local communities and the inspection authorities, who sometimes do not differentiate between hunting for non-profit purposes by the residents and other kinds of hunting.

Mechanisms and methods applied to resolve the existing conflicts

- Field visits by the Helvetas team;
- Promotion of discussions between the parties involved (population, Reserve, District Administration and the ECCo): participation by the Reserve in meetings with the neighbouring communities;
- Reporting of the facts established in the field (reports, interpersonal contacts) to the other parties involved and at different levels:

i) District – Administration and Reserve and the Human Rights Leagues' paralegal centre

ii) Central – DNFFB / TFCA, Blanchard SODETUR, Regional Steering Committee, World Bank, amongst other institutions.

- Introduction of the eco-tourism concept in the communities and the organisation of training visits for community and district leaders to community participation tourism projects South Africa. (improve the population / reserve relation)
- Putting pressure on the Regional Steering Committee so that the discussion of the problem is brought down to base level (district), in order that the district government be involved in the implementation of the ECCo project.
- Demarcation of the boundaries of the Madjadjane community lands, with DINAGECA (Direcção Nacional de Geografia e Cadastre).

Process results

- Establishment (in course) of a District Development Forum where the Government, NGOs, the private sector and community representatives discuss the district's problems and development plans;
- Joint campaigns between communities, ECCo, and Reserve to bring elephants outside of the Reserve back to it. Collaborative

participation (inspection) by the communities, with information given on the elephants' movements;

- Gradual improvement of the relations between the different intervening parties, through a greater circulation of information and contacts, as well as the clarification of the roles of each intervening party;

- Beginning of the discussions on the ways of compensating the populations who were prejudiced by the fence's new path, involving the ECCo, the populations affected and the District Government.;

- Participation by the ECCo and the District Government in participative seminars promoted by Helvetas in different areas of the district;

- The ECCo has already begun discussions with the populations on its proposal for the continuation of the erection of the electric fencing;

- Beginning of the discussions for the inclusion of the communities in the reserve management triangle (communities, Government and ECCo);

- Some sectors of the community are worn out by the situation and it no longer matters to them what kind of indemnification they receive;

- There is great expectation on behalf of the population with regard to the improvement of the access conditions to the reserve; gates instead of the presently existing bridge.

Suggestions for future actions

- Despite the efforts already made by the partners most directly involved (ECCo, communities and government), we believe that first steps are being taken, some progress has been made, but we maintain the expectation as to the outcome of the discussion on the main issues: access to the reserve and indemnification.

- It is necessary to inform and continue to hold discussions with the communities on the tourism concept proposed by the ECCo and the manner in which their integration in the management of

the reserve and in all other activities relating to tourist projects for the area may take place.

- Carry out tourism development actions which offer tangible benefits for the community in order to establish a balance in the Cost-Benefit relation for the communities.

- Proceed with community capacitation activities so that they may face the investor as business partners.

Lessons learned

- There is need for a greater transparency in Helvetas' role as facilitators at community level. Because of the non fulfilment of the communities expectations due to the non materialisation of the investors' promises or even to the non resolution by the government of the main problems created by the investor's entry into the area, the populations no longer trust or believe in anybody and sometimes even accuse Helvetas of „having being bought" in order to fulfil the interests of the private sector (ECCo). As an alternative, and in order to overcome this issue, we shall now proceed in the following manner:

i) Include the community representatives wherever more conflicts may exist, in key meetings with investors or government institutions for the resolution of land-specific problems.

ii) At the end of each meeting with the community, write up an agreement, including in it the activities to be carried out by each of the parties, to be appraised at the following meeting.

- The management of conflicts is a key issue to be studied in greater detail. Our role, even to us, was not always very clear. We need to build up internal capacity as well as at different partner levels in order to deal with the conflicts in a more open manner, which means that we have to be capable in this area.

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SHARED SCARCE WATERCOURSE SYSTEMS: ZAMBEZI RIVER - POSSIBLE SOURCE OF CONFLICT IN THE SADC REGION

Abstract

This paper presents some highlights on issues on the Zambezi river water as shared scarce resource watercourse system, and how possible conflicts might arise if those resources are not utilised and managed coherently. The paper further describes the water yield capacities of perennial and seasonal or intermittent rivers in the region river basins, also a short outline of the SADC overview of climatic conditions and physiography.

The main objective of the paper is to give some indications of isolated interests by individual riparian countries over the Zambezi River water. The isolated water demands from the Zambezi river by some countries that are likely to destroy the natural flow pattern of the river, thereby impacting negatively on the already existing development projects dependent on the river's water, i.e. hydro-power station, tourism etc. Other issues being highlighted include the possibility of some countries with sound economies influencing unjustified water abstraction from the Zambezi River by exercising their economic and military muscles. To some extent projects being muted are just for political appeasement where politicians have not done much for their electorate since being elected to office.

An outline of examples of the likely separate individual country projects largely dependent on the Zambezi River. If such projects are allowed to go ahead without proper planning and regional consensus, the weaker nations economically and militarily will be deprived of the much-needed scarce water resources.

With most governments in the region pursuing free market economic policies, there is very little attention being paid to sustainable utilisation and management of scarce shared water resources, in the name of a blind economic development that is mainly short term.

Reference is also made to the Helsinki Rules on the uses of international rivers, adopted by the International Law Association of the 52nd Conference in August 1996. The Agenda 21 adopted during the United Nations Conference on Environment and

Development in Rio de Janeiro 1992, includes the global policy and strategies that promote equitable development and utilisation of natural resources and environmental management in a sustainable manner.

The SADC Protocol on shared watercourse systems has been developed as a tool for sound environmental management of the Zambezi river through the Zambezi River Action Plan (ZACPLAN) at a Conference organised by the United Nations Environmental Program (UNEP). The responsibility over the implementation of ZACPLAN has been entrusted to the SADC Environment and Land Management Sector (ELMS). The protocol has a number of principles on the management and utilisation of the shared watercourse system.

Apart from the Zambezi river water basin there are other river basins shared by two or more riparian countries and have developed their own river basin agreements on the utilisation and management of those shared watercourse systems.

SADC member states have a vision of a future with adequate water supplies despite the region's recurrent droughts. The vision involves stronger co-operation and co-ordination in the management of the scarce shared water resources, placing water at the centre of human life. The SADC region's population hopes that such close co-operation will help to avoid some possible conflicts over water both at national and regional levels.

Introduction

The SADC region is endowed with vast water resources through the Southern African River system network or its river basins. Over about 50% of the SADC region the evapotranspiration is high as the precipitation. These areas generate no perennial rivers and experiences limited groundwater recharge. Only the highland areas in Angola, Lesotho Mozambique, Tanzania, South Africa, Zambia and Zimbabwe yield sufficient flow to source perennial rivers. Rivers sourced elsewhere are seasonal or intermittent.

There are seven major other internationally shared rivers in the region; namely the Zambezi being the major one, the Orange, the Gunene, the Okovango, the Limpopo, the Ruvuma and the Save. Other relatively small shared rivers are the Pungwe River, shared by Mozambique and Zimbabwe, the Inkomati and Maputo Rivers, shared by Malawi and Mozambique. Angola, Tanzania and Zimbabwe have other smaller rivers, which are shared with other countries.

The Congo (formerly Zaire) river, having a catchment area of 3,690 Sq. km, which is just more than the total area of seven main international rivers in the SADC region, has an average annual runoff of 1,300 mm, more than four times the runoff in the SADC region basins. Its average flow is 40,000 m/ (with a historic minima and maxima of 21,4000 and 73,600 m3 respectively) exceeding 26,000 m3 for 98 percent of the time. Most of its flow originates in the equatorial rain forests. It mainly falls and rapids have a hydropower potential of over 100,000 MW of which only 2.5 percent have been developed.

Eight countries are riparian to the Zambezi river basin, which is the largest shared river system in the SADC region. In the Zambezi River fluctuations in mean annual runoff of 40 percent (in 1994/95) to more than 200 percent have been recorded. In addition, seasonal rainfall fluctuations cause flash floods and distinct low flows. At Victoria Falls the maximum recorded monthly flow reached 8720 m/s in March 1958, while lowest recorded flow of 161 m/s occurred in September 1995. The ratio of maximum to minimum flow of about 40:1 is in stark comparison to 3-1 for Congo River at Inga. This ratio would be higher were it not for the extensive swamps and the Zambezi's Headwaters, which considerably attenuate the peaks.

In general, large parts of Southern Africa have an extensive potential for sustainable water resource development and management.

SADC Overview of Climate and Physiography

The SADC's main landscape and topographical feature is a plateau with an average elevation of 1200m. The climatic condition of the region vary from tropical rainfall giving rise to two rainy seasons, whereas the cooler Southern Cape lies on a succession of cold fronts. The Eastern regions, experience rainfall due to the warm Agulhas Sea current of the Indian Ocean, where as the Cold Bengela current in the Atlantic Ocean supports desert conditions along the West Coast, South of the tropics. The mountains escarpments that extend from North to South encourage but also distort rainfall systems, whereas the western seaboard consists of desert beyond the tropics.

About seven percent of the area covered by the SADC countries is desert receiving less than 100m of precipitation per year, fifteen percent (15%) is arid with 100 - 400mm per year, sixteen percent (16%) is semi-arid with 400 - 600mm, nineteen percent (19%) is dry sub-humid with 1200 - 1500mm and three (3%) humid with more than 1500mm.

The Southern tip of Africa is semi-arid, water availability increases gradually towards the equator. The Zambezi River water fields over ten times, and the Zaire (Congo) River over a hundred times as much as water as the Orange in the South.

The SADC region is usually subject to unpredictable droughts of which those in the 1980's and 1990's have been particularly severe, pointing to the need for sound drought management strategies and environmentally sustainable shared water course resources utilisation.

SADC region rainfall is progressively and increasing becoming erratic, hence the region is becoming drier. Consequently, water scarcity is responsible for most SADC countries disasters (excluding those which are man-made, such as environmental degradation and civil wars).

In the last two decades significant and notably severe droughts have been experienced therefore drought preparedness is very important. This calls for all SADC member countries to take an initiative in consulting each other on their own intentions of using

shared watercourse systems. This, in order to avoid unnecessary negative environmental impacts, suspicion, conflicts and misunderstanding on such initiatives.

Interest over Zambezi River water

The turn of events in the SADC region over the interest of the Zambezi river water by individual riparian countries is worrying and it appears that countries in the region may start having conflicts over the use of the Zambezi river due to selfish interests and lack of consultation in the implementation of individual country programmes using the shared water resource.

Several attempts are being made by individual Zambezi River riparian countries on developing programmes on water use in isolation. The SADC, Gaborone meeting to establish the possibility of implementation of the SADC shared water course system was a clear indication of the lack coherent approaches as it observed that the SADC water protocol had not been signed by all member countries at the time. This meant that the intended closer co-operation among countries in the region which share watercourse system is still a pipe dream.

The Gaborone meeting observes that the SADC shared watercourse systems protocol managing the water scarcity will be the greatest challenge for SADC member countries in the near future. At the Gaborone meeting, delegates noted that Zimbabwe was going ahead with the plans to extract water from the Zambezi river through the intended Z$7billion Matabeleland Bulawayo Zambezi water project (MZWP). Other member states viewed the project as a disrespectful model for other riparian countries, on how future water transfers from the shared rivers will be operated.

Further, the plans by South Africa to draw water from the Zambezi are being viewed as adventurism and exercising the strength of its economy. This coupled with its military muscle which may be activated should protocols fail to facilitate in bringing enough water for its ever growing population and ever expending industrial activities. South Africa might not need the Zambezi River water immediately but it will in future.

It should however, be noted that discussions in most SADC members states on " Water and Environment' should avoid the risk of marginalising countries that are weaker economically and militarily. But help build a model to enable all SADC countries to project growth and impact realistically, individually and in relation to each other.

The implementation of the SADC shared watercourse systems protocol seems to be more complex than generally expected. Therefore SADC member countries should show consideration to interests of other states in the use of shared watercourse systems; especially as water scarcity is getting worse. Some countries may simply set up extraction points and then prepare to go to war if the protocol does not work.

It has also been observed over time that projects being muted by some SADC member states, have been aimed at gaining political support from within these respective

countries, where politicians feel they have done little for their electorate after being elected to office. This, without serious considerations to the possibility of negative and disastrous effects.

As a matter of emphasis water demand should be managed, meaning that people (countries) should not just use water because it would be made available whenever they want it. For instance, many housing and development projects in the region were and are being implemented without water demand considerations, hence the water scarcity problems being experienced in most countries in the region.

For example, Zimbabwe is believed to some extent have caused siltation in the Sabi River which it shares with Mozambique by a poorly isolated planned Land Management Programme in the Sabi river basin whose catchment is partly in Zimbabwe.

To give an indication of the possible Zambezi River water interest:

- South Africa likely to draw water over Zimbabwe or via Botswana
- Zambia likely to develop some projects within the basin
- Zimbabwe likely tapping of water for Bulawayo
- Zimbabwe Batoka hydro-power station
- Namibia likely tapping of water for commercial sugar cane plantations
- Mozambique shrimp industry
- Mozambique new hydropower station.

All the above-intended projects if not well thought of, planned and consensus reached, the Zambezi river will be free for all, thereby the weaker nations end up being deprived of the much needed water resource. It should be however, be borne in mind that eight Southern African countries are entitled the region's longest river, the Zambezi, which flows 3,000 kilometres from the source Kalene Hills to the Africa's eastern coast of the Indian ocean. The Zambezi River forms the most important river basin development because the region's economies - from agriculture, energy, industry, mining and tourism to fisheries - depend on water.

It is further interesting to note that most governments in the region are now pursuing free market economies whose implementation require serious considerations of possible side effects from such so called economic development ventures. If no serious pre-planning and impact assessments are put in place, the projects will eventually yield very short-term economic benefits for any particular nation but put the rest of the region into serious environmental and economic turmoil.

Helsinki Rules on Waters of International Rivers

The Helsinki Rules on the uses of the waters of international rivers, adopted by the International Law Association of the 52nd conference held in Helsinki, August 1996 (Report of the Committee on the Uses of Waters of International Rivers, published by the International Law Association; 3 paper building, the Temple, London, 1967).

Agenda 21 adopted under the United Nations Conference on Environment and Development (UNCED), held in Rio De Janeiro, Brazil in 1992, consolidates the various concerns and opportunities on the environment and sustainable development. This includes global policy and strategies that promote equitable development, utilisation of natural resources and environmental management, including those that deal with water resources development and management in a sustainable and equitable manner.

SADC Protocol on Shared Water Course Systems

The SADC Protocol on shared watercourses systems is a result of a meeting in May 1987, were an agreement was reached on an action plan for the environmentally sound management of the Zambezi River Action Plan (ZACPLAN) at a conference convened by the United Nations Environment Program (UNEP).

ZACPLAN, which is the foundation on which the Protocol on shared water course systems in the SADC region is built, was initiated in 1985 by UNEP, SADC, and the seven Zambezi basin states, except Namibia, which was still under the South African apartheid regime occupation. The over implementation of ZACPLAN was entrusted to the Environment and Land Management Sector (ELMS) in Maseru, Lesotho.

The following are some of the major principles of the SADC Protocol on Shared Watercourse Systems signed by representatives of Botswana, Swaziland, Tanzania and Zimbabwe at the Heads of State Summit in Johannesburg in August 1995.

- The utilisation of the shares watercourse system within the SADC region shall be open to each riparian or basin state, in respect of the watercourse systems within its territory and without prejudice to its sovereign rights in accordance with the principles contained in this protocol. The utilisation of the resources of the watercourse systems shall include agriculture, domestic, industrial and navigational uses.
- Member states lying within the basin of a shared water course system shall maintain a proper balance between resource development for a higher standard of living for their peoples and conservation, and enhancement of the environment to promote sustainable development.
- Members states within a shared watercourse system shall exchange available information and data regarding the hydrological, hydro-ecological, water quality, meteorological and ecological condition of such watercourse system.
- Member states shall utilise a shared watercourse system in an equitable manner. In particular, a shared watercourse system shall be used and developed by member states with a view to attaining optimum utilisation there of and obtaining benefits therefrom consistent with adequate protection of the watercourse system.
- Member states shall take all measures necessary to prevent the introduction of alien aquatic species into a shared watercourse system, which may have detrimental effects on the ecosystem.

- Members states shall maintain and protect shared watercourse system and related installations facilities and other works in order to prevent pollution or environmental degradation.
- Shared watercourse systems and related installations, facilities and other works shall be used exclusively for peaceful purposes consonant with the principles enshrined in the SADC Treaty and in the Charter of the United Nations and shall be inviolable in time of international as well as internal conflicts.

River Basin Agreement in SADC

SADC Countries are expected to create mechanisms for co-ordination and co-operation, going beyond the protection and management of water resources and the environment. The integration of water related, socio-economic development and investments among member states are expected to be included. A number of agreements have been made to establish better mechanisms for planning, development and management of water resources in the region, particularly those of shared water systems. These arrangements have resulted in forging regional agreements, negotiations or ratification. The agreements among riparian states on the management of shared watercourse systems have been developed outside the SADC framework of co-operation, but are essential ingredients in the advancement and promotion of the SADC objectives and goals.

There are 11 shares watercourses systems in the SADC region. The Zambezi river is the biggest and is shared by eight countries: Angola, Botswana, Malawi, Mozambique, Namibia, Tanzania, Zambia and Zimbabwe. The other sizeable shared watercourse systems are:

- the Orange River, shared by Botswana, Lesotho, Namibia and South Africa;
- the Limpopo, shared by Botswana, Mozambique, South Africa and Zimbabwe;
- the Okavango inland drainage systems, shared by Angola, Botswana and Namibia;
- the Cunene, shared by Angola and Namibia;
- the Rovuma, shared by Mozambique, South Africa and Swaziland; and
- the Songwe, shared by Malawi and Tanzania.

The relatively small shared watercourses systems are:

- the Save and Pungwe Rivers, which are shared by Malawi, Zimbabwe and Mozambique; and
- Lake Chilwa basin, which is shared by Malawi and Mozambique.

Angola, Tanzania and Zambia have other watercourse systems that they share with other countries, which are not members of SADC. Seven of those shared watercourse systems in the SADC region have some form of agreements and institutional arrangements for co-operation, development and management of their water courses.

The Zambezi River Basin

Within the Zambezi River basin, there are the Zambezi River Authority (ZRA) and the Songwe River Boundary Stabilisation agreements. The ZRA was established under an agreement between Zambia and Zimbabwe for the joint development and management of watercourse common to both countries. The agreement was ratified in 1987.

ZRA replaced and took over the properties of the old Central African Power Co-operation which operated during the then Federation of Rhodesia and Nyassaland, and later in independent Zambia and Zimbabwe. Both countries set up a Council of Ministers and Board of Directors and ZRA itself, to implement the objectives and goals of the agreement. Under the Zambezi River Authority of both Zambia and Zimbabwe, ZRA serves as secretariat and executing agency for the:

- operation, monitoring and maintenance of the Kariba Dam complex,
- investigations of new dam projects;
- collection and processing of hydrological and environmental data;
- liaison with utilities of the water and related resources of the Zambezi river common to both countries; and
- various administrative functions required for the implementation of the above activities.

However, ZRA has mainly devoted itself to the operation and maintenance of the Kariba Dam complex. In the late 1980's and early 1990's, it was also involved in investigating new dam projects, especially for the Batoka Gorge Hydropower Scheme, upstream of Kariba Dam. Extensive environmental impact assessments were carried out on the project. However, by 1996, the implementation of the project had not been initiated.

ZRA had also intensified hydrological and environmental data collection and processing. The regulations and management of fisheries and other aquatic life in the Zambezi riverline ecosystem or agricultural and industrial activities in the catchment common to the two states, which influence quality of water resources in the Zambezi, are outside the mandate of ZRA.

In recent years, there has been growing concern of high levels of DDT and heavy metals found in Lake Kariba's waters, and of the interference with fish breeding, movement and management, due to the damming and regulation of the lake.

There is also an agreement between Southern Africa, Mozambique and Portugal related to the Cahora Bassa project. It includes the provision and sale of electricity to South Africa from Cahora Bassa hydropower station on the Zambezi River in Mozambique. The agreement worked temporarily during the early days before the power line was sabotaged in the early 1980s during the war in Mozambique in which apartheid-era South Africa was heavily involved. The line was being repaired in the mid 1990's after peace returned to Mozambique.

A Zambezi basin co-operation agreement among all riparian countries has been proposed but progress seems slow. The work on this started with ZACPRO 2, a ZACPLAN

project, but was then revised to prepare the protocol on Shared Watercourse Systems in SADC, instead. However, the Water Resources Subcommittee of SADC ELMS initiated the work again in 1994 to develop the agreement. This agreement is expected to consolidate all the existing agreements on the utilisation and management of water resources and related development in the basin.

The Songwe River Basin

Land inundated during this period. The agreement was negotiated under an existing joint permanent Commission, which is an inter-governmental /ministerial arrangement between the two countries.

The Songwe River agreement was held by one Co-Chairperson from each country during Ministerial and officials committee meeting, which were held alternatively between Malawi and Tanzania. The agreement has already led to positive results. A project proposal was developed of flood-control mechanisms, stability of the river channels, as part of the hydropower, irrigation, tourism and fisheries, as part of mitigating floods and flood damages thereby improving the environment and the lives of the people of the flood plain area.

Cunene River Basin

The Cunene River basin management is based on a 1969 arrangement between Angola and Namibia regarding the development and utilisation of the water resources potential of the river through the establishment of:

- a joint operation authority to ensure the maximum benefit of the regulation of the water flow at Gove, which is required for power generation at Ruacana, and to control the abstraction of water along the middle Cunene and continuous operation and adequate maintenance of the water pumping works at Calueque and the diversion weir at Ruacana; and
- a permanent joint technical commission to evaluate the development of further schemes on the Cunana river to accommodate the present and future needs for electricity in both countries.

The agreement of 1969 replaced the 1964 for one mutual interest and sharing of the resource of Cunana, and were both negotiated between and signed by Portugal and South Africa before Namibia became independent.

It is still honoured and has been supplemented by the agreement of Lubango in September 1990.lt binds the two countries to adopt the best joint-utilisation schemes planning, execution and operation of project for water Cunana, Okavango, Cuando and Zambezi. This has led to further agreements, including that dealing with the Epupa Hydropower scheme on the Cunana River. In 1995 the investigations for the development of this hydropower scheme were at an advanced stage.

Vision of Co-operation

The SADC Regional River water system needs to be managed, utilised coherently and sustainable by all member states taking into account equitable utilisation of the shared watercourse systems in the region. The Helsinki rules on user of the Waters of International Rivers, and the work of the International Law Commission on the non-navigational uses of international watercourses have to be borne in mind. The relevant provisions of Agenda 21 of the United Nations Conference on Environment and Development must also be borne in mind, as well as the concepts of environmentally sound management, and of sustainable development. The current and emerging socio-economic development initiatives in the SADC region must also be borne in mind, as well as their possible positive and, most critically important, their negative impacts on the environment. Therefore there is great desire of developing close co-operation for judicious and co-ordinated utilisation of the natural resources like the shared watercourse systems in the SADC region.

Southern African states have a vision of a future with adequate water supplies despite the region's recurrent droughts. The vision involves stronger regional co-operation and co-ordination in the management of water resources, placing water at the centre of human life.

The SADC member states populations hope that such close co-operation will help avoid possible conflict over water both at national and regional levels. SADC ministers responsible for water resources management have held meetings to map out strategies aimed at better managing the scarce resource and ensuring that the region has enough water even in times of droughts.

The headlines in one of the print media, on a SADC water conference file handed out to participants in Pretoria in November, 1995 had a graphic representation of a suspended water drop and the words, "A Vision for the Future". However, the vision of water management in the region is more than just a drop of water suspended in time. It is about life itself, the environment, food production, hygiene, industry, and power generation. It should not be a victim of crisis-management. It should be a well co-ordinated and executed program, involving all stakeholders at national and regional levels. It is about not giving war over water a chance.

South Africa's Water Affairs and Forestry Minister Kader Asmal, said , "We have a potential long-term water crisis in the region which could cripple sustainability of our development if not handled with great foresight". Conflict, both internally and between nations, could arise unless the challenge is dealt with in a progressive and transparent manner.

A World Bank official forecast that inter-state and international conflict might in future increase as populations and demand for limited supplies of water increase worldwide. "Demands for water resources from competing uses will grow rapidly, placing an

increase stress on water resources (in Southern Africa)" warned Mr. Andrew Steer, Director of the World Bank's Environment Department.

* Due to unfortunate reasons, Mr. Simwanda couldn't attend the workshop in Maputo. This paper was, however, prepared for the workshop with the intention to present it in Maputo on 22 June 1999, and this is why it has been included in the final report.

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FORESTS AND WILDLIFE

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CO-OPERATION OR CONFLICT? MANAGING SCARCE RESOURCES OF AFRICA. A CASE OF COMMUNITY WILDLIFE CONSERVATION IN KENYA

Introduction

Before the establishment of the first protected area in Kenya by the colonial government, local communities co-existed freely on the same lands with wildlife. This co-operation was largely due to cultural attitudes, values and perception the people had towards wild animals. Communities used to obtain wildlife products such as meat, skins, hides, feathers, etc. without restrictions other than those pertaining to culture.

Although the establishment of protected areas (parks and reserves) had noble intentions, especially protecting the endangered large mammals, this act literally kept communities away from land and resources they culturally considered as theirs. Conservation laws and policies constituted by the colonial government largely overlooked the role of local communities in wildlife conservation, thus leading to human-wildlife conflicts.

The problem was aggravated by the use and continuation of most of the colonial wildlife conservation policies after independence. By 1990, human-wildlife conflicts in Kenya had
assumed alarming proportions. This was not a surprise under the prevailing policies and given the fact that over 75% of Kenya's wildlife population occur outside protected areas (KWS 1994).

Human-wildlife conflicts are acutely real in practically all districts of Kenya. These conflicts are most intense when agriculture is involved, particularly where cropland boarders forested parks and reserves (e.g. Imenti, Nyeri, Trans-Maraand Kwale) and in pockets of "agricultural islands" surrounded by rangelands (e.g. Kimana, Leroghu, parts Taita etc.)

Crops and livestock losses, destruction of property e.g. fences and killings or injuring of humans are some primary sources of conflict. The loss of income as a result of deaths or injuries. Equally, property damage is usually devastating to families and often cause unbearable sufferings more so, when agricultural land is involved. In some Kwale district farmers have been known to abandon good cropland because of the sheer futility of trying to raise crops to maturity in the presence of uncontrolled elephants. Baboons and monkeys are among the most frequent agile and notorious wildlife intruders but elephants are the most problematic animals because they are most persuasive veracious, powerful and cause most stressing damage.

In the period between January 1989 and June 1994, wild animals killed 290 people and injured 218 i.e. an of average 42 deaths and 40 injuries per year. Elephants caused 173 of these attacks.

The recorded cases of elephants human deaths during this period have been represented in the table below.

Year	*People killed by elephants*	*Elephants short and control*
1989	*0*	*0*
1990	*0*	*10*
1991	*0*	*15*
1992	*6*	*42*
1993	*8*	*57*
1994	*11*	*66*

Source: KWS Elephant Programme (1995)

Living side by side with elephants also affect community in more subtle ways including a reduction in working or schooling hours.

Human-conflicts are mainly of two types:

1 Real human-wildlife conflicts based on direct interaction between wildlife and people, and

2 Interpersonal conflicts (clashes of interest) between stakeholders with polarized group or self interests. These disputes arise from competition between groups for resources and the dislike of new polices that may affect the power balance or direct benefits away from or towards certain groups (KWS 1994).

Broadly, human-wildlife conflicts in Kenya are as a result of the following:

1 *Human population and land encroachment*

Rapid human population growth especially in areas of high agricultural potential have resulted in the movement of people into drier and marginal areas. These are ecosystems in which most wildlife is to be found. Settlement and subsequent developmental and economic activities such as livestock keeping and farming in such areas become a sure receipt for conflict.

2 *Wildlife policies and laws*

In the past, wildlife polices and laws tended to favour wildlife over people. Local communities in turn developed anti-wildlife attitudes. One important

aspect worth noting is that the policies lacked incentives for conservation by local communities. KWS policy framework and development programme 1990 report on local hostility around Amboseli National Park reports that: "There have been no economic incentive to make members think twice before eliminating wildlife". This has led to serious incidents:

- The poaching of elephants in Selenke & Lemomo areas in Mid 1970's was done with tacit agreement of the local Maasai.

- The almost total elimination of the black Rhino in the National Park in 1976, was done by Maasai warriors.

- The almost total elimination of lions in and around the park in the last five years was done by members of the group ranches.

The report further says: "And it is known that people in olgulului poisoned an entire flock of lions in the public camp site area in 1989" (KWS policy framework report 1990).

This means that these people in the Amboseli Biosphere reserve had not been properly made to benefit or made to understand that they could benefit from wildlife resources and therefore should take care of them as they cared for their own livestock. Failure to provide returns form wildlife only serve to highlight tension between the formal conservation authorities and local people. In the Maasai Mara game reserve, as an example, this resulted in excision of an area totalling 162 sq Km in the area around of the Talek River in 1984 following pressure for this excision form Local Maasai groups (Hamilton, 1988).

Policies lacking appropriate conservation incentives largely make local communities to view Wildlife as property of government. This view has its roots in the activities of the colonial government, for in its attempts at regulating game management, it made traditional hunting for food and ceremonial trophies illegal, without making similar attempts at educating the general public on the implications of the move, hence intensifying the negative attitude towards wildlife (Kimani 1973).

This kind of Indifference towards wildlife is especially evident in densely populated areas where concern is mostly for domesticated animal's cattle, sheep, and goats and for cultivated crops, to the total exclusion of game. In pastoral areas cattlemen have an active but negative interest in wildlife and some demand total extermination of game in order to avoid competition between cattle and game for forage, water holes and cover.

Plain game such as wildebeest (Connochaetes taurimus), zebra, equines, burchelli bohmi and kongoni (Alcephalus buselaphus) are known to

compete with cattle for available foods during both dry and wet seasons (Casebeer, and Koiss, 1970) and are important conflict animals in pastoral areas.

3 *Landuse changes*

Major areas with abundant wildlife in Kenya such as Laikipia, Transmara, Narok, Kajiado, Taita, Kwale, Samburu etc. are undergoing major land tenure changes. These changes include adjudication of state and trust land, sub-division of group and individual ranches, and even demarcation of small scale farm holdings. These changes and developments tend to ignore the fact that wildlife has always been existing in the area, and has nowhere else to go. Yet when these animals are seen around, they are considered a nuisance.

4 *Loss of land and displacements of settled communities to create wildlife protection areas (parks and reserves)*

Presently, there is major conflict in the Tana River Delta, where local communities are not willing to move out of their traditional area, in order to create a reserve for protecting the endangered Tana River Primates.

A review commissioned by the Kenya government in 1994 to look into the issue human-wildlife conflicts found the following as specific causes of conflicts:

- Human beings killed or injured by wild animals.
- Loss of livestock killed by wild animals.
- Competition with livestock for pasture leading to overgrazing.
- Competition for land (protected and trusted areas) with communities.
- Hosting an transmitting major livestock diseases.
- Lack of wildlife utility in terms of products tourism etc. by the local communities (denial in revenue sharing).
- Compensation for losses or injured is either not there or is too little or comes too late.
- Negative environmental and social impacts of tourism.
- Uncontrolled animal movements and migration and ineffective techniques for counselling problem animals.
- Anti social attitudes of rangers towards local communities.
- Failure to compensate for loss of human life injury or loss of property. In case of compensating, this may be too little and come too late.

(KWS, Report of the Five-Person Review 1994).

Some actions taken to solve human-wildlife conflicts in Kenya

In Kenya, the Kenya Wildlife Service (KWS) was established in 1990 and was mandated to conserve wildlife and preserve its economic education scientific and cultural benefits (for the country and its citizens).

To achieve this goal, KWS in 1994 formed the Community Wildlife Services (CWS) department, whose main objective was to preserve biodiversity by recognising the rights of local communities and the impact wildlife has on their livelihood. It was to come up with modalities of community partnership in aspects of wildlife management.

According to KWS, large numbers of wildlife living outside parks and reserves presented two major difficulties:

1 *Persuading communities to accept "wildlife reality" and*
2 *to protect this wildlife when it which according to people occupied their land, utilised their land in addition to endangering them.*

The efforts of CWS department of KWS, and other co-operating organisations to achieve community co-operation towards this end are exemplified by the two cases below, both involving the Maasai Mara Game Reserve and Amboseli National Park wildlife dispersal areas which are occupied by the Maasai community.

<u>Maasai group ranches of Siana, Koiyaki and Lemek</u>

All these Maasai group ranches neighbour the Maasai Mara game reserve. Subdivision of these group ranches, with some landowners fencing their plots, have been the single most major threat to wildlife resources in the area as wildlife, especially elephants and plain game require large
areas for dispersal.

Human-wildlife conflicts can be categorised as involving:
1 Wildlife versus Maasai pastoralists
2 Wildlife versus agriculturists.

Interventions by CWS has involve:

- Establishing buffer zones, where no farming activities should be carried out.
- Encouraging formation of associations within the subdivided group ranches. This helps to retain the continuity of the rangelands and corridors.
- Allowing limited wildlife utilisation through eco-tourism activities and revenue sharing with the local communities.
- Provision of social amenities such as schools, clinics and water.
- Support for further education of students selected by local Maasai elders and training local people as game scouts. (Thomson 1998).

<u>Kuku and Rombo</u>

These Conservation units (COSU) group ranches are in loitokitok area of Kenya and to the south of Aamboseli National and cover areas of about 96,000Ha, and 38,365 ha respectively. The local Maasai community are pastoralists although limited agricultural activities take place in Rombo. Wildlife in the area include, elephants, buffaloes and plain game such as giraffe, eland, gorilla, gerenuk, oryx ostrich, wildebeast, zebra, warthog etc.

Water, grazing, education and revenue generation were identified as areas of collaboration which can enhance Maasai wildlife relations CWS acts to reduce conflict by in the area:

- Creating clear revenue sharing agreements
- Creating common resource development plans.
- Establishing extension conservation education programme to ensure sustainability.

Efforts are also taken to assist the local Maasai people in sustainable livestock development. Such efforts include:

- Extending education.
- Improving livestock marketing and restocking.
- Improving livestock breeds.
- Provision of water.
- Conservation activities are being strengthened through aesthetic improvement of wildlife by encouraging community participation through conserving utilisation of wildlife including improved tourism revenue and facilities.
- Compensation for predation and crop damage is also undertaken.

Other potential projects

Camping activities has great potential for tourism and wildlife utilisation. Currently there are two campsites in Litilal and Esoit pusi in Kuku. Establishment of Bird shoot blocks are now considered in Kuku and Rombo.

Camel horse and walling safaris have not been exploited.

Cultural Centres - far community self help groups to exploit tourism. Kuku and Rambo have three cultural centres. Cultural display, sale of Maasai artefacts, handicrafts, curios, photographs are the train activities.

Consumptive utilisation which includes free ranging intensive ostrich farming of great potential in this area and also safari hunting. (Kuku and Rombo group ranch management plan (ASAL) KWS - community wildlife programme).

Some important outcomes of the interventions

Due to intervention by CWS, in Maasailand, there has been:

- Minimisation of spearing and poisoning of wildlife.
- Taking care of wildlife animals.
- Reporting of poachers.
- Willingness to report weak and stray animals.
- Allowing wild animals into the ranches.
- Avoidance of grazing in the park unless permitted to do so.
- Willingness to attend meetings when called to do so.
- Participation in development projects and making voluntary contributions to development projects by the Maasai.

Lessons to be learned

Conservation of wildlife resources in Africa will only succeed if partnership between government, conservation agencies and local communities is strengthened incentives for conservation, which include utility, revenue sharing, social development etc.

Areas with large wildlife herds outside the protected zones should be fully developed as ecotonism zones and game activities that bring revenue e.g. game sport hunting, game b and bird watching; continuous monitoring of the welfare status of both wildlife and communities should be continuous so as to guide the management of wildlife resources in areas outside parks and reserved.

Conservation must consider cultural and economic needs of communities. There is need to empower communities to make decisions that affect their own lives and have control of wildlife resources and at most, usage. Therefore, wildlife should be viewed as a sustainable resource appropriate for rural development.

Lastly, wildlife problems can be reduced but cannot be fully eliminated. People must be prepared to live with a certain inconvenience from wildlife (KWS 1994).

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CONFLICTS OVER FORESTS AS A SHARED NATURAL RESOURCE: THE CASE OF MAU FOREST

Summary

The latest global figures on forest cover indicate that in 1995 there were 3 454 million hectares of forest (including natural forests and forest plantations) worldwide. Between 1990 and 1995, the total area of forests decreased by 56.3 million hectares - the result of a loss of 65.1 million hectares in developing countries and an increase of 8.8 million hectares in developed countries. Major causes of forest cover change include conversion of forests to agricultural land and large infrastructural development in developing countries. About 55 % of the world's forests are located in developing countries, with the remaining 45% in developed countries (SOFO, 1999).

Globally, sustainable management of natural resources has been equated to community participation, and for this to happen, there is need for awareness creation on their rights and responsibilities in the resource management. The use and management of forests in Kenya are governed by the forestry legislation that comes in the form of Forest Act and Forest Policy. The legislation is updated from time to time, yet the majority of those who depend on the forest directly for their livelihood lack such information. Outsiders exploit the ignorance of the forest communities by using the forest unsustainably, with impunity. The local community views the forest as a government property, hence rarely bother even when they witness destruction.

The history of forest management in Kenya has been a dynamic one as management regimes change. During the pre-colonial era, the natural resources were managed by the

communities on communal basis. The colonial government introduced a central government regime to manage the resources with an aim of alienating the local communities from these resources. These regimes were inherited by the postcolonial government without much adjustment. Although the post colonial government recognises the socio-economic, political and interest realities of the people and the natural resources, the policy and legal regimes have not changed as fast to accommodate the aspired relationships of the people, state and the natural resources.

The paper looks at forest resources in Kenya and some of the conflicts as a result of many users and uses of a limited resource. A summary of Kenya as a country indicating the natural resources found there and how sharing is likely to end up in conflicts. The paper goes on to mention some of the general causes of natural resources management conflicts in Kenya. This is done through the mentioning of some major forests, stakeholders and resultant conflicts as a result of population pressure, undefined tenure issues, lack of awareness on rules and regulations, historical and political factors, among others.

The paper uses Mau Forest as a case study to show how a shared natural resource such as a forest can lead to conflicts among different stakeholders. Information on the location of the Mau forest, the flora and fauna found there, the forest dwellers and forest adjacent communities who have different needs from the forest, and how the undefined tenure issues have given rise to conflicts over the use of the resource.

There are some attempts made to manage the conflicts. The outcome of some of the above attempts is shown. The paper concludes by looking at some of the issues that arise from the above discussions and need to be addressed for peaceful and sustainable management of natural resources, especially forests. These are issues on natural resource tenure, institutional arrangements, dwindling resources, population growth, and law enforcement, among others.

Introduction

Kenya's economic growth depends to a large extent on agricultural output. Most agricultural activities in Kenya can still be classified as subsistence and support mainly the rural population. Population growth implies the need for more land for settlement and food production. This has continued to exert pressure on forestland and its products, hence encroachment on forestland.

The annual population growth rate of over 3.6 % in the country means that pressure to convert from forest to agricultural land use will continue. This will lead to a progressive reduction of forest cover, thus leading to a negative impact on the forests' stabilising influence on the water catchment, loss of plant and animal diversity, to loss of tourism and as a result loss of the revenue from tourism.

The current situation in Kenya is that there is insufficient local control over the management of natural resources, and influence over policy, administration and legislation pertaining to natural resources. That, coupled with the existing insufficient

capacity at the local level and lack of timely and relevant information, makes people's participation in the management of natural resources difficult.

The above situation is elaborated on using the case of Mau forest.

The case study area is found in the Rift Valley Province about 200 kilometres south west of Nairobi in Kenya. Mau forest reserve is an indigenous gazetted forest and it covers a total area of 900 square kilometres or 320, 000 ha. The Mau Forest Complex contains the largest remaining block of moist indigenous forest in Eastern Africa. The forest reserve is made up of closed canopy forest, wood vegetation and plantations. It forms the upper catchment of the Sondu, Mara and Ewaso Ngiro Rivers that drain into lakes Victoria, Baringo, Nakuru, Naivasha, Natron and Bogoria. It is this catchment protection value that provides the clearest indications of environmental services. The protective role of the forest can be best envisaged by the assessment of likely changes that would result as a loss of forest cover to alternative land uses, in particular uncontrolled agriculture.

Mau forest reserve straddles four districts namely - Kericho, Bomet, Nakuru and Narok districts. In all these districts, the largest part of the forest is still indigenous except in Nakuru District where it has been largely converted into a plantation forest. In Bomet District, the forest is threatened by the expansion of the tea estates that have extended beyond the Nyayo Tea Strip. This strip was established to mark the boundary between the forest and the farms and to create a buffer zone that would protect the farmers from wild animals.

The forest is rich in biodiversity and host to several indigenous tree and animal species. The forest comprises of Afromontane Forest and Afromontane Bamboo at the higher altitude.

The forest is host to the Ogiek (Dorobo) community who has lived inside the forest, depending on its resources for subsistence and shelter since time immemorial. The forest was gazetted during the pre-colonial time (1932); hence both the colonial and postcolonial governments have continued to harass the community out of the forest.

Apart from the forest dwellers, there has been a negative environmental impact on the forest since the clear felling started. Land that is on a slope of more than 50 % gradient has been allocated to farmers with no measures to check the soil erosion. River- banks have been allocated and people cultivate beyond two meters from the river - bank, hence affecting river flows. This has resulted in siltation from the hilly areas to the surrounding lakes threatening their existence. The rivers and the lakes are also drying up due to destruction of the catchment area.

The survival of Mau forest is threatened as an important catchment area for many rivers and lakes; source of food and other forest products for forest communities and forest adjacent communities; and a habitat for biodiversity. As important as it is, the forest is threatened and needs to be protected.

Kenya

Kenya covers an area of 592,000 sq. of which 571,416 sq. km is dry land and 11,230 sq. km is open waters. The country exhibits considerable climatic variation from the humid coastlands to the cool highlands. Of the territorial area, the lakes occupy about 11,200 sq. km (2%) while the Arid and Semi-Arid Lands (ASAL) occupy about 490,000km sq. Hence, only 15 % of the country's surface area constitutes the agriculturally high potential lands which support two thirds of the country's population. Most often arable land is used for agriculture. Of the remaining land area, 36,300 sq. km have been set aside for wildlife conservation while only 2,008 sq. km are left to natural and exotic plantation forests.

In Kenya, 80% of the land is classified as arid and semi-arid. Kenya like many African countries suffers from rural development problems such as land degradation accelerated by human activities such as overgrazing, over-cultivation, inappropriate farming practices, increasing human population, increase in livestock numbers, soil erosion by water and wind, shortage of fuelwood, salinity and alkalinity. Only 20% of Kenya's surface land is arable. This arable land carries the highest population density and supports more than 70% of the Kenyan human population providing food security and human settlement - now standing at between 25 and 30 million people.

The annual population growth rate of over 3.6 % in the country means that pressure to convert from forest to agricultural land use will continue. This will lead to a progressive reduction of forest cover, thus leading to a negative impact on the forests' stabilising influence on the water catchment, loss of plant and animal diversity, to loss of tourism and as a result loss of the revenue from tourism.

The drainage system in Kenya is classified into five principal drainage areas:

1 Lake Victoria Basin – Nzoia, Yala, Nyando, Sondu, Gucha, Mara, Malaba, and Sio rivers
2 Athi River Basin and Coast - Athi River
3 Tana River Basin - Tana River.
4 Rift Valley Basin – Turkwel, Kerio, Ewaso Ngiro, Suguta and Milewa rivers.
5 Ewaso Ngiro and North – Ewaso Ngiro River.

The rivers to the various lakes/basins originate from some forests, some of which are already threatened from agriculture and human settlement expansions, hence experiencing conflicts between the different stakeholders.

<u>State of Natural Resource Management in Kenya</u>

The current situation in Kenya is that there is insufficient local control over the management of natural resources, and influence over policy, administration and legislation pertaining to natural resources. That, coupled with the existing insufficient capacity at the local level and lack of timely and relevant information, makes people's participation in the management of natural resources difficult.

Rural production systems and culture are predominant in Kenya. There are still relatively strong indigenous cultures and institutions. The country is also unique in its ecological and cultural diversity, manifested for example, by climate, topography and vegetation.

Kenya is also viewed as a rapidly developing country. However, development assumes the presence of a natural resource base and the capacity to manage it on a sustainable basis. In Kenya, forests constitute an important but diminishing natural resource. There are several reasons for the disappearance of forests in this country. For example:

1 The decisions regarding the management of forests are made centrally irrespective of the prevailing traditional resource tenure systems or ecological zones.
2 Communities living in or around forests have inadequate incentives to protect the forests.
3 Laxity in the implementation of identified solutions to existing problems.

However, the situation is changing. An enabling environment is emerging in terms of more constitutional and political space for voluntary associations. The state is also disengaging itself from many inefficiently managed activities and institutions, and the media is ready to support and highlight activities of associations advancing peoples' causes. In addition, the country has just gone through its second multi-party elections and some communities are now aware of their rights including those on natural resource management. These circumstances offer the local communities and other stakeholders an opportunity to influence decisions on natural resource management.

One of the major recommendations of the Kenya Forestry Master Plan (KFMP) is that the management responsibility of the Kenyan forests should be shared between the forest department and the communities living around and depending on the forest products. The benefits accrued from the forests should also be shared between the involved parties. The communities and other stakeholders should therefore develop the capacity to make decisions regarding the use, management and benefit sharing. This can only happen if they have access to timely and relevant information on their role and responsibility in the management of natural resources, forests included. This can help them solve/manage some of the conflicts that they face.

Role of forests

To show the important role played by some of the natural resources in our lives, we will briefly look at the important role played by forests and water.

Forests perform a number of provisionary and regulatory duties/activities that are rarely thought of especially while exploiting natural resources. Some of these functions are:

1 Moderating the effects of temperatures and wind

2 Changes in the humidity regime

3 Decrease in temperature fluctuations

4 Increased humidity and lower wind speeds

5 Decrease in the total rainfall reaching the ground. I.e. rainfall is intercepted by leaf surfaces from which it evaporates

6 In cooler forests, subject to mist and low clouds, the total rainfall is supplemented by 'occult' precipitation i.e. a process of condensation on leaf and trunk surfaces that can add as much as 18% total effective rainfall.

7 Provides a wide range of environments

8 Supports a wide range of animal and plant species some of which play a vital role in the provision of food security.

On top of the obvious disappearance of a forest rich in bio-diversity, major forest reduction would trigger the most significance changes on downstream systems reliant on regular stream flow as follows:

Downstream river flow would increase in total, but with a less regulated flow: both flooding and low dry season stream flow periods would become more common; water table replenishment would decrease. Water supplies would be less dependable. Pastoralist systems relying on dry season river flow would be at increased risk. Irrigation based on stream extraction would become less viable. Storage reservoirs would become less effective; decreasing hydropower and irrigation potential, future reservoirs would need greater storage capacity. Bio-diversity would be decreased in protected areas, through loss of habitat.

The protection of catchment areas by forests has been recognised as a significant component under the management proposals for gazetted forests. At the same time, forests have an effect on the climate of particular areas and prevailing climatic conditions dictate the type of forests that can exist in a particular area.

The effect of land use on hydrological characteristics of water catchment areas has been studied in a number of countries. Findings show that the change of land use from forestry to clear felled land has resulted in increased run-off of between 15 and 30%. This has led to uncontrolled loss of forest cover, thus increases forest surface flow, with an associated increase in flashiness of stream flow and a decrease in dry season stream flow loss.

<u>Causes of forest related conflicts in Kenya</u>

Most of the causes of conflicts are as a result of constraints between local communities and the state over resource ownership and access Vs protection i.e. policing to ensure

compliance respectively. Other stakeholders take advantage of such situations and end u causing more conflicts. Some of the resultant conflicts are so serious that they have turned/been termed political.

The following are some of the major common conflicts found within various forests in Kenya:

Institutional conflicts

Between the following institutions that are charged with the responsibility of managing various natural resources in Kenya: Forest Department (FD); Kenya Wildlife Services (KWS); Local County Councils, Group Ranches; Private Ranches; Kenya Forestry Research Institute (KEFRI); National Museums of Kenya (NMK); and Moi University. Undefined institutional arrangements end up confusing resource dependent communities.

Tenure issues

Undefined tenure issues leading common resources for exploitation under no rules i.e. in the case of forests previously defined under communal ownership, later on gazetted and allocated to individuals without public knowledge. Good example is events at Mau forest.

Population pressure

Estimates show that 2.9 million people in Kenya (almost 10% of the population) live in the areas adjacent to indigenous forests and directly depend on forest resources for their livelihoods and survival.

Population increase implies that the number of users and uses has grown competing over the available scarce natural resources. Available research reports show that deforestation is a big threat to Kenya's economic development i.e. the forest cover is now at 3 per cent in Kenya due to agricultural expansion. More people will always demand more land for cultivation and settlements that can easily be found by clearing forests.

Policy and legal frameworks

Policy and legal frameworks that are not in line with the changing demands of various stakeholders. For example experience/research has shown that people's participation/involvement is vital in sustainable resource management. Yet, most of the policy and legal frameworks for many decades have been anti-people's involvement i.e. in the form of forest guards to ensure no access or use of products from gazetted forests. These lead to uncontrolled exploitation of the resource by forest adjacent communities whose livelihood depends on the forest.

Lack of awareness

Lack of awareness among resource users on the existing policy and legal frameworks and rules and regulations for the management of natural resources. This mainly exists among forest adjacent communities on what the law provides for them on access and use of some products such as non-timber forest products.

Market forces

Outside Vs internal demands as a result of the "globalisation" process exposing local resources to international markets - implied competition over limited resources ending up on market forces where the highest offer takes the product. Local communities who cannot afford to compete in a liberalised market, yet depend on natural resources for basic needs, have no alternative but to over-exploit the little available and accessible to them. The who, who controls resources in the market place goes hand in hand with who holds and controls political power, hence makes decisions on ownership and access to natural resources.

Some of the major forests in Kenya faced with conflicts

Mt. Kenya Forest - is located about 180 km north of Nairobi on the eastern side of the Rift Valley. It covers an area of nearly 200,000 hectares, 20% of which is the most extended natural forest block in the country. The forest is a source of timber, fuel-wood and other NTFP for surrounding communities and a large catchment system providing water to a large percentage of Kenya's population. The forest is also important for its role in soil erosion protection and has been designated as a biosphere reserve.

"800 hectares of indigenous trees in Mt. Kenya Forest are said to have been set on fires by illegal settlers from Meru and Nyambene districts in collusion with Forestry Department officials" (Daily Nation, 1999). This is aimed at paving way for cultivation. Burning of the forest displaces wild animals such as elephants from their habitats; hence pushing them to peoples' cultivated lands and homes.

Nandi forest - is situated in Naindi District in Rift Valley Province. It borders Kakamega to the West, Kericho and Kisumu to the South and Uasin Gishu to the North. The forest covers an area of about 56,456 hectares, of which 90% is indigenous. The Nandi forest block is made up of north and south Nandi, the former is a mountain forest while the latter is a Guinea Congolian forest. The forest is mainly valuable for its diverse flora and helps to ensure ecological stability through water maintenance, all critical to agricultural productivity and rural welfare. In addition, the Naindi forest is the source of the river Yala.

Arabuko Sokoke - is the largest block of indigenous forest in Coastal Kenya measuring 41,765 ha located near the Indian Ocean about 110 Km. north of Mombasa in the districts of Kilifi and Malindi. The population of the local people around the forest is about 84,000 people whose livelihood is highly dependent on the forest resources which have led to depletion and modification of the forest cover, thus there is an urgent need to curb the situation.

The Forest is considered as a centre of endemism, as it is home to a variety of endemic and rare flora and fauna. The forest in terms of birds is recognised as the second most important birds area in Africa as it is home to 20% of Kenya's birds species and also houses 30% of Kenya's butterflies. A small herd of Elephants numbering about 80-120 also cherishes the habitat.

Conflicts between the donor whose interest is to save the bird population. KWS is out for total protection of the forest without any kind of exploitation. NMK out to protect butterflies, KEFRI to protect for research purposes only, while FD wishes to conserve with some level of exploitation, while local communities want access to forest products and forest degazetment, for cultivation land. In such a conflicting scenario, the activities and goals to be achieved might not be guaranteed at the end of the day. The different institutions that make up the Arabuko Sokoke Forest Management Committee have a Memorandum of Understanding to co-manage the forest, yet they still adhere to their Management Acts that differ greatly. Some of the institutions are KWS, FD, Kenya Forestry Research Institute (KEFRI), National Museums of Kenya (NMK).

Elephants go into the farms to eat crops and at times even kill people.

The restriction of the management team on the communities' utilisation of the resources, as they have to be licensed even for the collection of medicinal herbs since it's a gazzetted forest reserve. They have demanded for excision of a section of the forest for farmland. Most of these demands are made through the local politicians and other local leaders.

Mt. Elgon Forest - is a mountain rain forest and comprises of an area of over 73,089 hectares, which includes 4,500 of plantation forest. The forest situated in Mt. Elgon District lies between an altitude of 1800m and 3500m above sea level. It extends from the highlands of Eastern Uganda into Kenya and is therefore known as "the forest with no border" in East Africa. The forest is home to Kenya's Mt. Elgon National Park famous for its rich variety of animal species, which includes the Brazz'a monkey. The Park houses the largest number of Elgon Teak (Olea welwitschii), a tree species that is protected by presidential decree. The forest serves as an important water catchment area and is vital for its role in watershed management.

Kakamega forest - covers an area of 17,838 hectares and is found 150 km west of the Rift Valley. The forest is unique in Kenya, as it is the only tropical rainforest in the country. Its flora and fauna are very diverse and are still being studied. The forest is situated in a densely populated part of the country and faces extremely high pressure from the demand for farming land coupled with increased commercial exploitation for forest products, i.e. Kakamega forest alone provides a living to an estimated population of over 130,000 people (Wass 1992, 1995). The forest has been gazetted as a National Reserve to preserve its unique heritage.

CASE STUDY ON MAU FOREST

Background of the situation

Over the past few years, the Mau forest has decreased both in quality and quantity. Through several boundary alteration processes, the size of the forest has declined and continues to do so as more people invade it for agricultural purposes. As the resources on the surrounding farms depreciate in utility due to improper use and care, communities are invading the forest as the only land still rich in bio-diversity. In most of these cases, sustainability is not taken into consideration. One reason for this is that ownership of the forest is in dispute with Forest Department holding the mandate to manage it as state property, and communities claiming ownership resulting from unprocedural allocations. This has led to the decline in the quality of the forest in terms of bio-diversity and environmental protection value.

Location

Mau forest reserve is an indigenous gazetted forest located about 180 kilometres to the south west of Nairobi. The Mau Forest Complex contains the largest remaining block of moist indigenous forest in Eastern Africa. The Mau forest reserve is made up of closed canopy forest, wood vegetation and plantations. It covers a total area of 900 square kilometres or 320, 000 ha. It forms the upper catchment of the Sondu, Mara and Ewaso Ngiro Rivers that drain into lakes Victoria, Baringo, Nakuru, Naivasha, Natron and Bogoria. It is this catchment protection value that provides the clearest indications of environmental services. The protective role of the forest can be best envisaged by the assessment of likely changes that would result as a loss of forest cover to alternative land uses, in particular uncontrolled agriculture.

The Kenya Forestry Master plan (Ministry of Environment and Natural Resources, 1994) put the Mau forest catchment protection value at Ksh. 806 million per year - being the highest of all the watersheds/catchment forests in the country.

Mau forest reserve straddles four districts namely: Kericho, Bomet, Nakuru and Narok districts. In all these districts, the largest part of the forest is still indigenous except in Nakuru District where it has been largely converted into a plantation forest. In Bomet District, the forest is threatened by the expansion of the tea estates that have extended beyond the Nyayo Tea Strip. This strip was established to mark the boundary between the forest and the farms and to create a buffer zone that would protect the farmers from wild animals.

Forest Communities

Since time immemorial, the Ogiek people have lived inside the East Mau forest, depending on the forest for subsistence and shelter. They divided the forest among their clans using natural features like rivers, valleys or hills as boundaries. In the 1920s, the colonial government tried to evict the community from the forest, but without success.

The forest was gazetted in 1932 while these people were still inside. Once again the colonial government tried unsuccessfully to evict them after gazettement but this only drove them further inside the forest because there was no communication between them and the government. They did not know what was expected of them. It was unheard of for the government to consult with the community and it is said that one government officer who tried it in 1935 was rebuked and sacked by his senior. (KIFCON 1994).

The postcolonial government did not change its attitude towards the Ogieks. It tried to evict the people in 1975 and 1985/6. In 1975, the government succeeded in evicting the people but they moved back into the forest after only six months. During the 1985/6 evictions, the government instructed the people to congregate around the forest stations in order to be resettled elsewhere later on. A small percentage (25%) did this while others went deeper into the forest.

In 1992 the government forcefully evicted all the forest dwellers who were still inside the forest and concentrated them at the forest stations and promised to allocate them land. And yet the forest was still gazetted and under the custody of the forest department. The forest department was not involved in the clear felling of the forest and the allocation of the land. The local administration then alienated that part of the forest that had been converted into plantation forest, sub-divided it into five-acre plots and allocated it to individuals.

Apart from the forest dwellers, there has been a negative environmental impact on the forest since the clear felling started. Land that is on a slope of more than 50 % gradient has been allocated to farmers with no measures to check the soil erosion. Riverbanks have been allocated and people cultivate beyond two metres from the riverbank, hence affecting river flows. This has caused siltation from the hilly areas to the surrounding lakes threatening their existence. The rivers and the lakes are also drying up due to destruction of the catchment area.

Flora and Fauna

The forest is rich in biodiversity and host to several indigenous tree species such as Olea african, Dombea goetzenii, Acacia spp, and Bamboo spp. among others. The forest comprises of Afromontane Forest and Afromontane Bamboo at the higher altitude.

The local community depends on the forest for the following products. When their access is denied and ownership not spelled out clearly, the resource is open to outsiders. The local people are denied their primary source of livelihood, dissatisfied, hence conflicts.

Honey is mostly harvested by the forest dwellers from the forest. It can be in hollow tree trunks; holes in the ground or in hives specifically set up on trees for the bees by the communities. It is readily available during the dry weather. The forest dwellers (Ogieks) harvest and sell the honey to neighbours.

Game meat, although hunting is illegal, the communities hunt the animals for meat. This is more common with the forest dwellers.

Forest farming was common especially between independence and 1985 when the Shamba System was popular. The government stopped the system after the farmers laid claim of ownership to the forestland that they had been allocated to re-forest while farming. The farming was used to subsidise the family income.

Forest Grazing. At least there is a third of the community grazing in the forest at any particular time. The community graze in the forest only when there is a scarcity of fodder on their farms. This is more common in the plantation where there is grass under growth than in the indigenous forest where the canopy is thick for grazing. Charges for grazing range from as high as Ksh. 30 in some areas while in some other areas it is free. Forest grazing is reducing drastically due to prevalence of animal diseases transmitted from the wild animals.

Fuel wood collection in the forest is licensed by the Forest Department. The value depends on the amount expected to be collected per day and it could be head load or donkey load. Preferred species are becoming scarce and the local people are resulting to inferior species and even crop residues for cooking.

Charcoal. At least 60% of the local community use at least 1 bag of charcoal per month. Although they prefer species that produce hard charcoal that burn slowly, mostly indigenous trees, they are now resorting to charcoal from exotic softwood due to scarcity of the hard wood.

Artisanal wood is used to make cooking sticks, walking stakes, ropes, etc. This is mostly obtained from the forest free of charge. There are specialised people who shape them and then sell them to the communities.

Medicinal herbs extracted from the forest are used both for domestic and commercial purposes. There are specialists within the community who identify the herbs suitable for particular ailments for both human and livestock. Due to over-extraction without due consideration for sustainability, the herbs are dwindling in the forest making the costs to go up while more and more people are preferring the modern medicine from hospitals.

Forest employment. Activities in the forest which provide employment for the local people are like charcoal burning, weaving, saw-milling and carving.

Religious, recreational and customary activities within the forest. The indigenous forest is used by communities especially the forest dwellers for customary activities like circumcision.

Environmental benefits. Continued destruction of the forest has caused a change in the weather trend. Before, farmers could effectively predict the weather and plant their crops

just before the onset of the rains unlike today when they cannot predict if it will rain or not.

The following are some of the animals found in the area:

- The Bongo, yellow-backed and the Duiker (ungulates)
- Golden cat, leopard (carnivores) and elephant
- Giant forest hog

The survival of Mau forest is threatened as an important catchment area for many rivers and lakes; source of food and other forest products for forest communities and forest adjacent communities; and a habitat for bio-diversity. As important as it is, the forest is threatened by a number of factors.

Causes of the conflict

In recent years, due to a variety of factors, forest resources in the area have come under severe pressure. This has led to an increase in natural resource management conflicts attributed to the following factors:

There are a number of factors that have contributed to the natural resources based/initiated conflicts at Mau forest. Some of the causes are eviction of forest dwellers, allocation of land to outsiders, clear felling of forests and yet the forest community needs it, and ethnic violence. Changing social and economic needs, lack of community awareness, breakdown of traditional institutions that governed resource conservation and use, political interference, and the growing population Vs dwindling resources.

Population pressure

With an increase in the population, the need for agricultural land continues to increase. More forestland is converted to agricultural land for food production. Forest adjacent communities use the forestland for subsistence food production but sometimes commercial users also get access to this land for the purpose of supplying forest products to the urban markets.

The area around the East Mau forest has had a good share of tribal conflict eruptions since the onset of multi-party era. Although the different tribes in the area have lived in harmony since after independence, it is claimed that the conflicts are caused by ethnic diversity common in the area. A deeper analysis of the issues arising in the area show that conflicts are fuelled by scramble for land in the newly, politically created settlement schemes, political influence, unequal distribution of resources, and lack of political will to stop them. This has affected the land use and investment on land as insecurity ranges.

Political interference

Political interference with the forest has also led to irregular forest excisions and land allocations with sustainability of the resulting settlements not guaranteed. This is not

backed by any impact assessment or legislation resulting in conflict and irregularities in the implementation of laws governing the use of forests.

Irregular allocation followed by degazzettement of forestland

There is irregularity in the process of change of forest status whereby instead of degazzetting the forest before putting it to a different use, the process goes in reverse and the forest is allocated to individuals and degazzetted later on. The Forest Department under whose custody the forest falls was not involved in the clear felling and allocation of the forestland.

Legal degazzetment follow a certain procedure i.e. a notice of intention to degazzet a forest is given by the Minister and published in the Kenya Gazette at least 28 days before the forest is degazzeted. People are allowed to raise issues or objections to the intention within this time.

However, there is no law that binds the Minister to take the issues into consideration before taking action. Compensation for lost values are not addressed and the Minister is not limited to the amount of forestland he can degazzet at any one time/period.

Allocation of gazetted forestland

Forestland is being allocated to individuals who end up putting it to different use that may have a negative impact on the environment. In most cases, the land is developed for agriculture or commercial use that beats the purpose of gazettement.

Influx of cultivators from neighbouring districts has led to an increase crop production and thus clearing of forests. Reduced wildlife habitat, and forest habitat fragmentation has exacerbated the human-wildlife conflict situation. Mechanisms that ensure that local people benefit from forest and wildlife conservation are yet to be developed.

In 1992 the government forcefully evicted all the forest dwellers who were still inside the forest and concentrated them at the forest stations and promised to allocate them land. And yet the forest was still gazetted and under the custody of the forest department. The forest department was not involved in the clear felling of the forest and the allocation of the land. The local administration then alienated that part of the forest that had been converted into plantation forest, sub-divided it into five-acre plots and allocated it to individuals.

Unclear tenure issues

Individuals have been allocated part of the gazetted forestland. Forest department however still claims ownership of the trees since the forest has not been degazetted yet. Conflicts over land ownership as one plot of land on the ground could be allocated to as many as three different people, lack of access roads; people block the roads next to their farms and sometimes cultivate on them. There is also overexploitation of the resources

without due consideration for sustainability, and improper land tillage on the farms which has led to soil degradation.

Lack of community awareness

Most of the people living next to or inside the forests do not know the provision of the laws as to their rights and responsibilities to forest conservation. When forests are being degazetted or put to a different use, the community is never consulted yet they are the first ones to immediately feel the impact. Sometimes they even participate in the destruction for example by labour provision. They also know very little about their rights of access to forests and forest products. They are in most cases denied access by the forest guards even when it is permissible to collect firewood and grass. Sometimes the communities living next to the forest do not understand the need to conserve the forests since they do not obtain any benefits from them. They therefore strive to use the forest illegally and do not take sustainability into account.

- They lack knowledge of the provision of the laws on their rights and responsibilities to forest conservation
- Are not informed/consulted when forest changes its status, yet they are the first to feel the impact.
- They have little knowledge on their rights of access to forests and forest products such as firewood, grass, herbs
- Communities living adjacent to the forest don't understand the need to conserve the forest, as they don't have access to products, hence spend their time getting products illegally.

Manifestation and attempts to manage the conflict

The conflicts have been realised in many and different forms. At the same time, attempts have been made both by the involved parties and outsiders to manage some of the conflicts as follows:

<u>Court case</u>

The people were evicted from Tinet settlement scheme in 1994. In 1997, the Ogiek Community went to court to protect their traditional rights to land. They sued the state and asked the court to restrain forest officers and the provincial administration from allocating the disputed land to anyone.

In May 1999, the Nakuru District commissioner issued a 14 days eviction notice to the Ogiek Community at Tinet scheme to vacate the area and pave way for reforestation. Other sources say that industrialists want the forest for its timber resources and commercial flower production.

The high court siting in Nakuru issued an injunction on May 20th barring the Attorney General, the Rift Valley Provincial Commissioner, the Provincial Chief Forester and

Nakuru Commissioner from effecting the eviction order, hence averting the crisis for a while.

The notice continued to say that failure to vacate the area, force would be used. The community took the case to the high court and got an injunction restraining the District Commissioner from evicting them until the case is heard on 4th of June. The Ogiek elders warned that unless the government protects them and their property from aggressors, they "will take up arms and fight back'. The case is still in court.

Exchange visits

Exchange visits for the communities in the Mau forest area to other parts of the country where communities have in the past faced similar problems and been able to tackle them. The community from east Mau identified Kakamega forest to learn from the forest adjacent communities on how they have managed to view the forest positively. At Kakamega forest, the Forest Department has allowed forest adjacent communities access to the forest for products.

Land allocation

In 1991, the government legally allocated five acres of the Tinet forest per family to around 5000 members of the Ogiek Community. They began farming, construction of schools, hospitals, etc. They continued using the forest as a source of food such as honey.

Lobbying

Done at the local and international level. At the international level, survival international issued statements every time the community is threatened. For example on 28th of May, 1999, they circulated a message e.g. via e-mail asking people to write/fax to the Nakuru District commissioner who had issued a 14 days eviction notice to the Ogiek Community at Tinet scheme to vacate the area and pave way for reforestation. Other sources say that industrialists want the forest for its timber resources and commercial flower production.

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The World Rainforest Movement in Uruguay - a global network of citizens' groups working to defend the world's rainforests has shown concern over events at Mau forest which is part of the world rainforests.

Revised Forest Policy/ KFMP

Revision of forest policy in line with the KFMP that advocates for community participation in the form of providing employment, etc in natural resource management unlike the old ones that discouraged people through the use of forest guards.

New Institutional Arrangements

This has been done in the form of Memorandum of understandings/partnerships.

Decentralisation of Decision Making

Initiation of the District focus for rural development, i.e. integrated projects and decision making taking place at the district level where people understand issues as they affect local people and the factors determining some of the factors. The process understands and takes into consideration local people's social cultural aspects, has the potential of addressing natural resource based conflicts at the local level.

Enforcement of policy and other legal frameworks - becoming more realistic with the emerging democratisation process, transparency and accountability.

Advocacy work

As a result of the setbacks to conservation at the Mau forest, it became necessary for consultations with the Ogieks (who make up 15% of indigenous, and 85% non-Ogieks of the current population in the Mau forest) (KIFCON '94). The consultations were based on what the Ogieks see as the major problem in the sustainable utilisation of the forest resources - that they have dependent on for many years, and to inform them of their rights and responsibilities.

Mau forest project is part of an awareness campaign among local communities against unreasonable excision of forests. This came up after the Kenya Forests Working Group (KFWG) established that the main problem is that most stakeholders are not aware (to a large extent) of the existing legislation on forestry issues and on the role they can play in enforcing these laws, hence advocacy work.

KFWG is a loose network of NGOs, donors, government agencies, individuals, etc. KFWG participants agreed on the above situation and set out to raise funds and work on the above issues in various forests i.e. FAN at Mau forest, EAWLS at Ololua forest in Kajiado, and Resource Projects in Lorroki Plateau in Samburu.

The Mau forest status is going through a number of large changes in the political, environmental, social and institutional spheres that have an impact on development efforts. These changes need to be taken into consideration before embarking on activities aimed at uplifting their livelihoods (of forest dwellers and forest adjacent communities).

- There is insufficient local control over the management of natural resources, and influence over policy, administration and legislation pertaining to natural resources.

- Local people lack awareness of their rights vis a vis the management of natural resources.
- Local communities are not allowed to participate in the debate about their own future.
- Local people are not given the opportunity to contribute to discussions on development matters.

FAN worked on a pilot project at the East Mau forest on 'community awareness on the value of indigenous forests'. The main objective was to avoid conflicts over the forest resources in future and ensure proper conservation, create mutual participation in the conservation process among major stakeholders.

Activities were implemented through community workshops, recording and airing of radio programmes and production and distribution of 3000 calendars.

Production and broadcast of radio programmes to share information with a large audience on traditional forest use by communities in Mau forest; how they ensured sustainability, current situation of the forests, and what the forest and FD and policy experts see as the way forward.

Radio programmes aired on KBC in Kiswahili - Ogiek and other communities learnt on sustainable forest use, role and rights of FD, policy experts, in gazettment/degazettment procedures as provided in the forest legislation. 8 radio programmes were produced based on information from community members, policy experts and FAN project officer.

Production of calendars to inform and exchange information on current forest Act. Use of cartoon based on clauses from the current Forest Act, simplified text to enlighten both literate and illiterate members on their rights/roles in the sustainable use of gazetted forests.

Workshops to bring the community members, policy experts, Forest Department and other stakeholders together to share information and come to a mutual understanding on conservation of the forest. During the workshops, information was collected on traditional forest use; value of forests to local communities; enlightened the community on the provision of the law on their role and rights to forest use and conservation.

Two workshops were held for communities living around the Mau forest, researchers, government departments in-charge of Mau forest, policy experts in the field of forestry.

Lessons learnt from the first phase defined the second phase of the project on advocacy for sustainable natural resource management. The pilot project identified lack of awareness on legal and policy issues regarding natural resources management among communities, hence mainstreaming civil education into on-going development initiatives as one way of ensuring that policy and legal capacity with the rural communities is achieved.

The main objective of phase two is empowering communities on the legal and policy issues that would enable them to manage natural resources sustainably.

Objectives:

- Create awareness among local communities on legal and policy issues that will promote sustainable management of natural resources.

- Document the major issues affecting the natural resources in the project areas.

- Support local communities and build their capacities on sustainable use and management of their natural resources.

- Document and development of natural resources database and the creation of opportunities for rural poor to express their needs and feelings on how natural resources within their areas should be managed in a manner acceptable to them.

To achieve the above objectives, the following activities are being implemented:

- Case studies on the community dependence on the natural resources, effects of the community activities on the natural resources, legal and policy issues as regards use and management of the natural resources and the Chief's Act as it relates to the use and management of the natural resources.

- Two community workshops in the east and Southwest Mau forest where the case study findings were presented.

- A stakeholders meeting where it is hoped that a consensus will be reached on how the resources should be used sustainably to meet the individual needs without compromising the needs of another or of the future generations.

- Community training on negotiation techniques for conflict management. This is aimed at avoiding some of the past scenes where there has been physical fighting and lives lost.

- Radio programmes resulting from interviews with the various stakeholders i.e. communities, experts carrying out case studies, the Project Officer, saw millers, hotel owners, and other institutions.

- Exchange visits to learn from others facing similar conflicts and how they have tried to manage them.

Results from some of the attempts made to manage/solve some of the above conflicts have been successful and need to be shared. Those attempts that failed showed some good reasons as to why. These too can be shared as a learning process on what needs to

be changed for sustainable natural resource management to be achieved, especially at the local level.

Recommendations and lessons learnt

Based on all the above information contained in the paper, the following can be alluded to:

1 Local people have a wide knowledge of use and management of the natural resources in their area. However the socio-political changes during and after the colonial era have alienated the people from the natural resources. The communities now regard the resources as government property and although they depend on them on a daily basis, they do not take any pre-cautions for their sustainability.

2 There is need for clear resource tenure issues. The communities living in and around the forest depend on the forest at different levels. Some of the forest uses are licensed for example fuelwood collection, tree harvesting for saw milling, while other are illegal for example charcoal burning.

3 The need for local communities to strive to domesticate the tree species that they use from the forest, on their farms to reduce their dependence on the forest.

4 There is need to document traditional conflict management mechanisms and employ them where the modern methods have failed.

5 There is need for where forestland has been allocated; the new settlers should strive to retain some of the trees on the farms to avoid the effects of drastic and total deforestation.

6 Landowners have a moral responsibility to protect nearby riverbanks from destruction through cultivation to beyond the recommended 12 meters reserve.

7 The power of forming community based organisation i.e. both resource use based and shared resource based. The groups will help in discussing and coming to a common understanding on resource use and resource based conflict management.

8 The power of exchange visits as a learning tool especially for rural based communities.

The following issues need to be debated further and at all levels as one way of coming to a common understanding on natural resource conservation and use, hence avoid some to the conflicts.

Decentralisation - even though most African countries, Kenya included, have embraced democratic governments, the ideals have not been put into practice. Sustainable

development has for a long time now been considered achievable through central control, and consequently through the nationalisation of natural resources. Policies and policy making has taken little account of local needs and interests as well as the local specific knowledge which could enrich such policies. In the natural resource sector, this has too often been reflected in an approach to management that excludes local people, and by the utilisation of natural resources for commercial purposes only. This calls for the decentralisation of the decision making process to allow the participation of local communities and other stakeholders.

In Kenya, forests constitute an important but diminishing natural resource. There are several reasons for the disappearance of forests in this country i.e. the decisions regarding the management of forests are made centrally irrespective of the prevailing traditional resource tenure systems or ecological zones. Communities living in or around forests have inadequate incentives to protect the forests; and laxity in the implementation of identified solutions to existing problems. These issues need to be dealt with at various levels.

There is an urgent need for decision-makers to participate in debates and contribute to issues on how to counter conflicts by doing away with shortcomings in some of the following issues pertaining to natural resource management:

- institutional arrangements
- resource tenure issues
- population pressure
- existing policy and legal frameworks
- awareness creation
- market forces.

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THE CAMPFIRE PROGRAMME AS A MODEL OF NATURAL RESOURCES-BASED CONFLICT RESOLUTION IN ZIMBABWE

Background

Colonial policies and practices relocated peasants without compensating them. In the process, their lands were apportioned to various public and private uses. The colonial governments also outlawed game hunting by the Africans.

Thereafter, the white minority became the game-keepers whilst the Africans who had for many centuries hunted game for vital food and trade became poachers and illegal occupants.

To alienate people further, the colonial government forcibly relocated several communities to make way for national parks. All this diminished the value of wildlife as an economic resource, prejudicing the indigenous human population and conservation.

Alienation of resources from one race was to engender a political culture of resistance to the colonial state and an anti-conservation legacy among the local people - Terrance Ranger, 1985

This oppressive way of governance encouraged rebellion. As a consequence, there was indiscriminate poaching and clearing of land for uses other than wildlife management. This period has been termed the era of wildlife management against the people.

Mechanisms and methods applied to solve the existing conflict

In the early 1960s, the ruling white government began devolving jurisdiction over wildlife to commercial farmers and ranchers. This phase of devolution allowed the

predominantly white commercial farming sector to diversify its farming activities by incorporating wildlife management. Besides ensuring the survival of wildlife because of its new-found economic value, this decision culminated in the reformation of the laws governing wildlife resources.

By 1975, pressure was mounting on the government from its white electorate and wildlife managers in the government's Parks and Wildlife Service to amend the Parks and Wildlife Act so that it would legal grant commercial farmers the authority to "own" wildlife.

The eventual amendment of the act conferred custodianship of wildlife to the "owners or occupiers of alienated land".

From a technical point of view, there are three main arguments for the statutory devolution in 1975 of wildlife management :

1 Wildlife is a competitive form of land use in some parts of Zimbabwe.

2 The state does not have the resources to manage wildlife in every corner of the country.

3 Assumptions based on the successes in wildlife management in the country after the partial devolution of 1961:

   a That with the right incentives, people who live with wildlife are the most effective managers of the wildlife.

   b That people can only manage wildlife effectively and sustainably when there is an economic motivation or incentive to do so and when they have secure rights to manage and reap the benefits.

Peasant farmers who had earlier lost their land and the right to hunt and most of whom lived on the underdeveloped but wildlife rich periphery of the country did not receive the privileges and benefits of the new act.

This was based on racial discrimination and also on the fact that these peasants did not own the land on which they lived.

In 1980, Zimbabwe attained political independence and this opened up opportunities for the deconstruction of old governance systems in the country and the emergence of new ones.

Two years after the attainment of independence in 1982, the new government, recognising that the majority of its population was directly dependent on natural resources for its survival began a process of evolving policies, governance systems and

strategies which enabled the disadvantaged to both utilise and conserve resources and their environment rather than just preserving them.

They had to map out management systems which both enhance livelihoods and sustainability. A sure way with regards to the wildlife resource was to investigate the possibility of further amending the 1975 Parks and Wildlife Act so that the disadvantaged peasants could also have the authority to manage wildlife resources and benefit from them in the same way commercial farmers were.

The 1982 amendment established that the responsible minister can gazette Appropriate Authority (AA) status to any RDC which demonstrates commitment to the local level management of wildlife. This opened the way for the Communal Areas Management Programme for Indigenous Resources (CAMPFIRE).

The DNPWLM would set the criteria for acquisition of this status by any of the 57 RDCs in the country.

The requirements to attain this status:

1 communities represented by the respective councils should demonstrate their capacity to manage wildlife.

2 communities are fully involved in the decision making and management process.

3 the distribution of the benefits from wildlife would have to be biased towards the communities that produce wildlife.

CAMPFIRE, through its institution building processes and the evolving governance systems initiated a methodical reversal of colonial and post colonial patterns of environmental governance, a process which would confine the conflict over natural resources utilisation between races to the pre-independence era.

Principles of CAMPFIRE

CAMPFIRE is an attempt to rectify years of unfair practices on the indigenous Zimbabwean population by successive colonial governments from the period of the scramble for Africa.

The objective of the CAMPFIRE programme as outlined by Rowan Martin, a researcher with the government's Department of National Parks and Wildlife Management is:

> *To initiate a programme for the long-term development, management and sustainable utilisation of natural resources in the communal areas ... involving forestry, grazing, water and wildlife.* (Martin, 1986)

The most important principles behind CAMPFIRE, among a number which this paper shall explore later are:

a the re-empowerment of local communities through providing them with access to, control over and responsibility for their natural resources.

b grassroots level benefits to the locals from the utilisation of natural the resources.

CAMPFIRE is guided by several principles. Although those involved with the programme are encouraged to stick to them, these are not cast in stone.

There is a realisation that each community has its set of values and objectives and that communities differ in resource endowment, cultural traits and general orientation, thus the flexibility.

Below are the general principles guiding the programme. The initial guiding principles were put in place at the programme's official inception in 1986 by the Department of National Parks and Wildlife Management which pioneered the programme.

Subsequently and over the years, the CAMPFIRE Association which is now the implementing agency has added a few more guidelines in the best traditions of an adaptive management process.

These guidelines have also been in use in all areas involved with the programme:

- Communities must be given the responsibility of management of their resources and government agencies, non-governmental organisations and other outsiders must step back into a facilitative and regulatory role.

- Effective management of natural resources is best achieved by giving them focused value for those who live with them.

- Differential inputs should result in differential benefits: Natural resources are distributed unevenly, management is therefore equally uneven and as a result, those who input the most into management must benefit the most from the result of their effort.

- Benefits should be returned to producer communities. In the case of revenue, it should be in direct relation to the value of the natural resources which has been marketed.

- Within the ecological, social and economic constraints, the unit of proprietorship/ownership should be as small as practicable.

- Communities should have the full choice of expenditure. The people should make their own choice without any external pressures. They can make a choice between infrastructural projects and cash payments.

- The local authority managing the process should be accountable to the communities. It should fully involve communities in all transactions and should give them all the information essential for their participation.

- Resource problems must be tackled as a whole. There should be no isolation of one resource from the others. For instance, wildlife cannot be successfully and sustainably managed unless natural vegetation and water supplies can be guaranteed.

- CAMPFIRE must adaptable, i.e. have the flexibility to suit different situations in different areas and maximise benefits according to locational factors in each target area.

- There should be open and competitive marketing of resources.

Soon after inception, the programme rapidly spread. Today, 11% of Zimbabwe's biological diversity is protected by communities involved with CAMPFIRE.

CAMPFIRE Activities

At activity level, the programme of action to meet the objectives set out for CAMPFIRE are:

- *Problem Animal Control* (PAC) to manage the potential conflict between wild animals and agriculture. This activity is expensive and therefore not possible for every wildlife problem area.

- *Game Fencing* to keep dangerous animal out of settlements and arable lands

- *Wildlife Population Management* to set out hunting quotas for safari Operations. This is done by communities with technical assistance from the DNP and the World Wide Fund for Nature.

- *Game Cropping* which provides game meat in addition to shared revenues for individual and community use

- *Non Consumptive Tourism* as joint local authority-private sector tour operators engage in non-hunting safaris

- *Training Game Guards* to enable locals to participate in anti poaching activities

- *Compensation* for crop and human lives lost to wildlife.

- *Local Institutions* are formed at RDC, ward and village levels.

- *Dividends* are paid at ward level as an economic incentive for popular participation in community natural resources management.

- *Game translocation* to enhance reproduction and to ease pressure on resources

The CAMPFIRE stakeholders

As a way of reducing, even eliminating institutional conflicts in the field, the CAMPFIRE programme is implemented by an implementing agency (CA) which has brought together a unique consortium of government departments and non governmental organisations which input into the programme.

These are known as CAMPFIRE Service Providers (CSPs) and they are supervised by the CAMPFIRE Association which is the implementing agency. The role of the CSPs is to assist the Association in managing the programme.

The CSPs are active at both national, district and community levels.

The members of the CSPs and their functions:

- *CAMPFIRE Association* represents RDCs participating in CAMPFIRE

- *Department of National Parks and Wildlife Management* was formerly the implementing agency until it handed over to the CAMPFIRE Association in 1993. It is now a technical adviser to communities on wildlife management.

- *Ministry of Local Government and National Housing* administers RDCs and advises on institutional set ups.

- *ACTION* provides environmental education, training and materials to schools. Through ACTION's programme, teachers are being co-opted into Village CAMPFIRE Committees, bringing in badly needed skills for the development of community management.

- *Africa Resources Trust* monitors external policies and regulations affecting CAMPFIRE.

- *Centre for Applied Social Sciences* (CASS) for socio-economic research monitoring and advisory services to CAMPFIRE, training assistance.

- *Zimbabwe Trust* provides training, institution building and development of skills among community members and representatives.

Other organisations which have recently joined the consortium include *the Forestry Commission*, *the Southern Alliance for Indigenous Resources (SAFIRE)* and *the Department of Natural Resources (DNR*).

At the national level, CAMPFIRE engages individuals and organisations at several distinct levels; political structures, the ruling ZANU PF party, the President's Office and Cabinet, Parliament, ministries, governors of provinces, district administrators, wards, villages, kraalheads, the principal implementing agencies, donors, embassies etc.

CAMPFIRE brings together a variety of professional and disciplinary interests housed in the various agencies it engages:

- Wildlife managers
- Conservationists
- Environmentalists
- Development workers
- Social Workers
- Aid Workers
- Academic Researchers
- Economists
- Politicians and technocrats

<u>The outcomes</u> (in the areas where the programme has been introduced)

Attitudes towards wildlife have changed. In Zimbabwe only two species of wildlife, the black rhino and the wild dog can be genuinely classified as endangered. Populations of most other large mammal species are either stable or increasing. Unlike in the past, veld fires are the enemy of whole villages. When a bush fire is noticed, the whole village rushes to extinguish it because villagers now understand the importance of grass and other small animals to the whole ecosystem. Some communities in fire prone areas now have fire-fighting equipment mostly for use against veld fires.

Proper institutions for natural resources management have been built. Random tree cutting has been drastically reduced. Newly empowered villagers cut trees only for a good reason after consultation with their local Conservation Committees. Game scouts have also been appointed by the Wards and they get allowances from the CAMPFIRE account.

Efforts are underway to limit human in-migration into such districts as Hurungwe, Binga, Guruve and others. Communities have seen the dangers posed by indiscriminate settlement on the ecosystem

By laws for the management of natural resources in different villages have been developed in many communities. There is a strict, almost religious adherence to the safari hunting quota approved by the Department of National Parks.

Wildland areas have been defined in many RDCs e.g. Chipinge's Mahenye Wilderness Area and Mavhuradonha Wilderness Area in Muzarabani. There are now cattle and electric fences, which have been installed.

Finally and most important for the beneficiaries, *CAMPFIRE has availed development to communities which were previously neglected*. Schools, clinics, grinding mills, boreholes and many other developments have taken place. For many communities, having access to this infrastructure would otherwise have taken decades.

Overall, the incomes generated by CAMPFIRE have increased from just under Z$5 million to almost Z$40 million in 1998.

Few countries in the world, developed or developing can make claims of this kind. They can only be made in Zimbabwe because of the willingness to break away from traditional conservation concepts and to re-assess conservation policies in accordance with realities rather than wishful thinking.

Discussion

CAMPFIRE has become the beacon of hope that it is sorely because of the following factors:

- multi-agency approaches to development. Each of the agencies involved has brought in specialised sets of skills, knowledge, goals, priorities and methods into the implementation process.

- the encouragement of indigenous technical knowledge systems and capacities.

- the use of local NGOs which possess extensive local knowledge and experience (e.g. ZimTrust had worked in Zimbabwe's communal lands for years before it got involved in CAMPFIRE).

- inclusion of a social science research unit among the active implementers and the integration of sociological knowledge into all stages of the project - from design to evaluation.

- charismatic leadership and effective structures and processes for communicating ideas

- a cohesive set of implementers

- a multi-disciplinary, adaptive and phased approach

- appropriate monitoring systems

Because of its success, CAMPFIRE provided a model for other programmes in other SADC states namely in Botswana, Namibia, Mozambique, Malawi, Zambia and South Africa. Of course there are variations in these programmes

Threats

Animal Welfare Groups

Animal rights groups have targeted CAMPFIRE because its philosophy allows the killing of individual animals by sport hunters. The animal welfare groups argue that it is a cruel practice. For this, the programme has become a target for smear campaigns.

The species at the centre of this controversy is the elephant. The animal welfarists feel the elephants should not be killed. The argument that culling of wildlife is a management technique does not convince them.

This has ushered in a new level of global conflict over natural resources and our programme has done all it can to sensitize the communities about this new threat.

Zimbabwe has over 70 000 elephants any yet its ecosystem can only carry 35 000. The elephant herd has been increasing at the rate of 5% per annum, the human population at over 2,3% and yet land area is not.

This increase in the elephant population increases the intensity of the human/wildlife conflict. Therefore, taking a few each time through sport hunting, which the preservationists detest eases the pressure on the villagers and on the ecosystem.

If elephant numbers continue to grow unchecked, the very elephants, along with other species of flora and fauna will die from starvation as the impact of a significant elephant population on ecology can be devastating.

International treaties

Due to pressures from the animal welfare lobby groups, some well-meaning international treaties now pose a threat to consumptive use programmes like CAMPFIRE. During the period when the ban in the trade in elephant products was in force, CAMPFIRE communities lost over US$100.000 due to this freeze.

Bans of this nature are an ever-present threat and the animal welfare groups are determined to reverse the ban on the trade at forthcoming CITES meetings.

The main problem with the last ban was that it deferred expectations of economic betterment of the communities for a long time.

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MINERALS AND ENERGY

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CONFLICT AND COOPERATION IN DURBAN'S PETROCHEMICAL BASIN

Abstract

South Africa's apartheid history has been encouraged by development practises that were based on environmental racism through which people of colour bore the external pollution cost of poor industrial practices. This has resulted in conflict around natural resources, such as the air.

Article 24 of the new Constitution of South Africa protects every person's right not to be injured by their environment. A new civic environmental movement is emerging under the new democratic conditions. In South Durban's petrochemical basin, black communities were pressed into overcrowded housing immediately adjacent to refineries and chemical industries, resulting in an increased incidence of respiratory disease and a degraded quality of life.

This workshop paper reviews the relationship between the South Durban residential community in South Africa and the ENGEN Oil refinery, which was developed adjacent to it in 1954. It was the first multinational refinery that was developed in South Africa.

The paper seeks to understand the conflict around Engen's use of the natural resource; the air; from a historical perspective which focuses on the apartheid practices that facilitated environmental racist policies. The paper will then focus on the negotiations between ENGEN and the South Durban community in a democratic South Africa when residents sought to interpret their newfound freedom in a practical manner by attaining air pollution reduction from ENGEN. By focusing on these negotiations the paper seeks to understand the mechanisms the South Durban community used to interpret their problems and to seek solutions to the problem of air pollution from the ENGEN refinery.

The mechanisms used to attain a more sustainable and less conflictual use of natural resource, the air, included building negotiating and campaigning capacity and through networking, attaining technical, scientific and legal capability within the South Durban community. Through these endeavours the community of South Durban, is not only attaining a more sustainable use of the common resource, the air, but also providing a service to a poorly capacitated government environmental monitoring department.

Workshop Paper

This workshop paper is a case study of interaction among community-based organisations (CBO), corporate managers, local, provincial and national government officials, and non-government organisations (NGOs) on environmental issues in South Durban.[ii] South Durban is the largest industrial hub of Durban where Black residential communities[iii] were placed immediately adjacent to industry through apartheid urban planning. South Africa's Trade and Industry Minister Alec Erwin's Strategic Development Initiative (SDI) has earmarked South Durban as the biggest industrial centre in the Southern Hemisphere.[iv]

The Political Context of the Study

The transition to democracy in South Africa, of course, provides the crucial political context within which the specific cases of consultation on environmental issues in South Durban occurred. The call for "participation" and "consultation" is at the core of this transitional period.

"Transparency" is another watchword of the new South African government. Open government enhances the possibility of effective democracy. Setting an ideal of openness in the conduct of government business - and in relations with industry - is a dramatically different ethos from the secrecy of the apartheid government and its relations with industry in the fight against the liberation movement and the efforts to circumvent international sanctions.

The National Context

In 1994-95, there was in South Africa a very significant expansion of local participation on a host of issues, including environmental issues, and this was based on the lessons attained through the struggle against apartheid.

However, this more recent period saw an explosion of new forums, consultative committees, environmental impact assessment committees, and other negotiations particularly to obtain input from civic society - both community-based organisations (CBOs) and non-governmental organisations (NGOs). In addition, various levels of government were included in the interactions, including municipal, provincial, and national authorities, all of which were being reorganised and some of which were undergoing changes of political leadership.

In addition to the overarching initiative of the RDP, each department of national government undertook various consultative processes, with elements of civic society that had particular interests in its policy domain to prepare first a ”Green Paper”. They spelt out overall policy choices, and then a ”White Paper” espousing an overall policy approach for the new government, in that department’s area of responsibility. The Consultative National Environmental Policy Process, was the most comprehensive consultative process of any policy.

The political character of the national government in this period of transition and of particular departments and ministers within it has a significant bearing on the varying conduct of local
negotiations on different issues.

The Provincial and Municipal Context

Before and after the local government elections of 1996, the Environmental Manager of the City of Durban, located within the Physical Environment Unit, has systematically lobbied and pushed for more political power within the Durban Metro. In the last four years, the Department has undertaken significant programmes, the most noted of which being the Local Agenda 21 process. This was ”a campaign to develop a municipal environmental strategy and action plan for incorporating the principles of sustainable development, integrated environmental management and community participation”[v]; an Environment Policy process for the Durban Metro. It was also a Strategic Environmental Assessment to seek mitigating measures against the poor planning in South Durban. The Local Agenda 21 initiative was another expression of the political discourse of local participation by local government, consistent with the RDP at the national level.

The Problem: Pollution in South Durban and Inadequate Government Regulation

South Durban is the largest industrial centre of Durban and is home to one of the country’s two largest concentrations of petroleum and chemical industries, which are major sources of air pollution. Two refineries refine about 60% of the nation’s petroleum.

About 120 other industries, including many petrochemical firms, are located in the South Durban basin.

South Durban's topography is characterised by a long basin extending south from the main Durban harbour. The basin is created on the seaward side by the main beachside sand dune. A few kilometres inland, the basin is completed by the first ridge of hills, which are approximately 100-150 metres high, beginning the stepwise rise to the Drakensberg Mountains. Originally, most of the resulting basin was swampy land at or near sea level. In the 1950s, these valuable flat lands were drained for construction of the airport and industrial development.[vi] This unique topography of the South Durban basin inhibits the vertical dispersion of pollutants.[vii]

South Durban has one of the highest ambient levels of sulphur dioxide (SO_2) in the country. In a comparison of sulphur dioxide monitoring stations nation-wide for the five-year period 1990-94, five of the six stations that recorded the highest levels of average winter ambient SO_2 concentrations were in South Durban.[viii]

According to the CSIR State of the Environment Report of KwaZulu-Natal:

> *The assimilative capacity of the environment in some industrial development areas may be close to being exceeded. Bearing the limitations of the smoke and SO_2 monitoring data, indications are that such air pollution concentrations may exceed health guidelines under some circumstances, particularly in the South Durban area*.[ix]

Although there has not been substantial research about the public health affects of this pollution on the people living near these industries, a study released in 1994 by Dr. Barry Kistnasamy found elevated levels of respiratory disease. Students at the primary school in Merebank (an Indian residential community located in South Durban, immediately adjacent to an oil refinery, paper mill, and numerous small and medium-sized chemical plants) were found to have about three times more chronic coughs, chest congestion and persistent wheezing, compared with similar pupils at a primary school in Chatsworth (a socio-economically similar Indian community located far from industry).[x]

Government regulation of air quality has been wholly inadequate. Policy and regulation of industrial pollution are defined in the Atmospheric Pollution Prevention Act 45 of 1965, administered by DEAT, which is widely regarded as inadequate and outdated.

South Africa's standards for SO_2 have not kept pace with international norms. For example, the DEAT standard for SO_2 ambient concentration is approximately two times higher than the level recommended by the World Health Organisation (WHO). The Legal Resources Centre in Cape Town, which represents several community organisations in negotiations on refineries' air pollution, has pointed out that "over the past 10 to 15 years the knowledge of the health and environmental impacts of these pollutants has increased dramatically" and that the standards for their emissions need to be tightened considerably.[xi]

Neil MacLeod, Executive Director of Durban Waste and Water (which is responsible for monitoring SO_2 pollution but has no authority over its regulation) believed that ”The process of reviewing air pollution control and related legislation has been stifled at the national level for many years . . .”[xii]

J.G. Petrie et al’s chapter on air pollution in Fuggle and Rabie’s, states that air pollution control is not sufficiently transparent, jurisdiction is fragmented, staffing is completely inadequate, and "it is relatively easy for any industrial concern to deviate from the conditions of its registration certificate with impunity, simply because the existing system of inspection cannot cope."[xiii]

The Engen Case

In the Engen case, reviewed here, we have a case of an initial effort to confer with the community, which was subsequently developed into a negotiating forum at the community’s initiative. This with the aim by the community to start ”taking back the power” to protect their environment and thereby calling for reductions in pollution, rather than mere consultation processes.

Background to the Engen Community Consultation

The ENGEN refinery is a focal point of concern about industrial pollution in South Durban. Because it is one of the two largest sources of SO_2 pollution in South Durban and is immediately adjacent to two residential communities - Merebank and Wentworth - the ENGEN oil refinery epitomises for many the problems of industry's impact on public health and the problems of quality of life of Black communities.

It is a complex case study not only because of the conflicting interests of the parties directly involved but also because multiple local and national government agencies have authority for the air and water emissions of the refinery. These agencies that have pollution standards, regulations, and authority for intervening to control pollution affect the interactions within the negotiating forum of industry and the communities, which are dealing with the same pollution issues.

The ENGEN facility in South Durban was constructed in 1954 as South Africa’s first full-scale refinery. The two companies involved in this refinery merged to form Mobil Oil of South Africa in the 1960s. In 1989, Mobil Oil sold the company because of public pressures in the United States for divestment. Mobil rejected a higher offer from a consortium of Indian and African businessmen and sold its assets instead to Gencor, the giant South African holding company, which named the company ENGEN. According to a corporate manager, Gencor "had a tough Afrikaner culture" that also was not responsive to the communities. The Chief Executive and Managing Director of this new Gencor asset was Rob Angel, who had spent his career with Mobil at facilities around the world.

At the time of South Africa's political transition, ENGEN built a new identity as the only national oil refining company. Overtly supporting the GNU and the RDP, one of its advertising mottoes was, "We're South African - We Care." President Mandela accepted ENGEN's invitation to come to the Durban refinery in March 1995 to help celebrate ENGEN's plant expansion and its export efforts into Southern and East Africa - one of Mandela's rare appearances at a private firm during this period.

However, ENGEN's claim to fame, as the sole nationally owned oil refinery was short-lived. Restructuring and downsizing resulted in a poor economic performance at the refinery in 1995 and a major cash infusion was needed. In mid-1996, Petronas, the Malaysian state-owned Oil Company, purchased a 30% and controlling interest in ENGEN. Now ENGEN could claim to have clinched the deal for the largest foreign investment in South Africa in this decade, in the amount of US $436 million. As of 1999, Petronas is the sole owner of Engen.

ENGEN's current efforts to communicate with its neighbouring communities stand in contrast to the situation of the previous 35 years. Under apartheid, the refinery was designated as a highly secret strategic "National Key Point," encircled by razor wire and guard-towers. According to the refinery management, it was "covered by the Official Secrets Act, which prevented us from dealing at any level with the public about the business."[xiv] With approximately 80% of South Africa's petroleum flowing into the country through the pipelines of South Durban, the entire zone had a fortress mentality. Indeed, the refinery did come under serious bazooka grenade fire from ANC insurgents at one time.

When Mobil operated the South Durban refinery in the late 1980s, the Merebank Ratepayers Association (MRA) complained of the management's unresponsiveness to pollution issues. In April 1990, the MRA presented a memorandum to the new refinery management describing "problem areas" about the refinery. According to several people inside and outside Genref, the officers usually were unresponsive and noted that the pollution was wind-blown from other factories, "shutdown problems," power failures outside their control, or flaring for safety reasons. There was considerable continuity between Mobil and Gencor in their explanations of pollution offered to the community, which is hardly surprising given the continuity of management leadership over the refinery.

In the early 1990s (at the time when Mandela had been released from prison and national negotiations were beginning between the ANC and the National Party government), ENGEN announced its intention to achieve "the esteem of the community in which we operate" and the "trust and respect of the environment and health control authorities."

<u>Period 1: Engen forms the Community Awareness and Emergency Response Committee - Visits, Conversations, and Cheese and Tomato Sandwiches</u>

In late 1994, consonant with the national discourse favouring consultation with locally affected communities; ENGEN made its first serious attempt after apartheid to step from behind its fortress isolation.

Engen initiated a Community Awareness and Emergency Response (CAER) Committee, patterned after community liaison committees that had been formed by large refineries and chemical producers in North American and Western Europe in the late 1980s and early 1990s.

ENGEN viewed this CAER Committee "as a genuine initiative to be more open and transparent with the Communities in which we operate, and to walk the path of sustainable coexistence."[xv] The communities' representatives on the ENGEN CAER Committee sought an agreement that, unlike that of AECI, included release of extensive information and remediation of pollution.

Various factors explain the greater demands put forward by communities to ENGEN. These factors include the history of relationships between ENGEN and nearby communities, the rapid change in the political climate of the country, the impending visit to the ENGEN plant by President Mandela, and the community representatives' fast learning curve about models of chemical industry agreements with communities in other cities and countries.

From the communities' perspective, the ENGEN CAER Committee was beset with difficulties from the beginning. One problem stemmed from the company's choosing to select individuals from the community rather than inviting civic organisations to send representatives. This created suspicions amongst community representatives who began to call into question the sincerity of the exercise.

ENGEN's consultants sought a rapid agreement to a committee that would provide only a framework for discussion. Even though some community members were demanding that ENGEN relocate away from the basin, the majority chose to remain in the Committee and to negotiate with ENGEN. After an initial period of guidance and chairing by the company's consultants, the communities asserted their right to set the agenda, to determine their own representatives, and to elect a chairperson of the CAER Committee instead of the consultants chairing and taking minutes.

<u>Period 2: The Communities Present an Alternative - A Legally Binding Agreement to Reduce Pollution</u>

Soon after the CAER Committee discussions began, the communities began to press ENGEN to release information on various issues, especially about their emissions. Within six months, the community representatives asked ENGEN to agree to a plan for reducing emissions starting with, but not limited to, sulphur dioxide. Release of information and emission reduction was to become the two key priorities of the community organisations.

ENGEN then explained that, before President Mandela visited the plant in March, it wished to release a statement to the press announcing the formation of this new CAER forum for communication between company and communities.

The community representatives, however, viewed President Mandela's impending visit to dedicate ENGEN's expansion as a unique point of leverage to press for an agreement to actually reduce pollution.

In March, the community representatives drafted a Good Neighbour Agreement based on a model agreement between petroleum and chemical companies and the surrounding communities in the United States, which a resident of the Bluff had obtained some time earlier. Community representatives of the Bluff, Merebank, and Wentworth met several times to discuss a draft agreement, had the document reviewed by a lawyer, and submitted the draft to ENGEN as a basis for negotiation.

The proposed agreement was lengthy and detailed. It called for:

1 releasing a broad list of information (while assuring confidentiality of proprietary information),
2 workplace monitoring, energy conservation, and environmental planning,
3 a pledge with specific plans to reduce emissions of sulphur and carbon oxides, noxious odours, and production of toxic chemicals,
4 increasing emergency planning and reporting, conducting safety audits, reducing flare pollution, noise and traffic, and the use of Happy Valley Vlei groundwater, and
5 implementing affirmative action to address racial, ethnic, and gender discrimination.

Sections of the draft agreement were written to be legally binding. Also, the title of the committee was proposed to be changed from ENGEN's "Community Awareness and Emergency Response" (CAER) to the communities' "Citizens for Accountability and Environmental Responsibility at ENGEN" (CAERE).

Period 3: Engen in the National Spotlight: The Intervention of President Mandela

Community representatives offered ENGEN a draft press release and indicated that they would be willing to publicly praise the company if ENGEN would sign their Good Neighbour Agreement before President Mandela's visit. The company declined and negotiations were not continued at the time of Mandela's visit. The President's impending visit led to a split in community responses: Wentworth residents demonstrated at the gates of the refinery, while the MRA decided against a public protest. The MRA and the Wentworth ANC used their personal and fax machine access to the ANC and Mandela's office to lobby the President directly before his arrival.

Although President Mandela was surprised by the demonstration, he suddenly stopped and met with the demonstrators in front of the refinery. On the 28 March, after having

met privately with the community, the President met with various responsible Ministers, Engen Management and representatives of the community at a joint meeting.

At the meeting, ENGEN CEO Angel pledged that the company had the will, the resources, and the intent to deal with the communities' problems and that it consented to a transparent process. At the same time, ENGEN noted that it was not violating any South African laws on pollution.

In May 1995, ENGEN agreed to negotiate for a Good Neighbourly Agreement just before then-Deputy Minister Bantu Holomisa, on behalf of President Mandela, convened a "South Durban Multi-Stakeholder Environmental Management Meeting" (often referred to as "the Indaba").

After visiting ENGEN and eight other South Durban corporations, Holomisa, speaking at the May 1995 Indaba, called for:

> *"A conscious and deliberate effort . . . from all parties to operate in a way that will minimise environmental damage. The management of the environment . . . will demand a partnership between the State and the people of South Africa."*

Period 4: Negotiations and Fundamental Disagreements - ENGEN Proposes a New Good Neighbourly Framework Agreement

In the months following the Indaba, discussions between ENGEN and the communities continued intermittently. In the negotiations that ensued, ENGEN questioned if the representatives on the CAER Committee were bona fide representatives of the Wentworth and Bluff communities. Indeed, ENGEN personnel had actually gone into the community knocking on doors to question if residents knew of the CAER Committee, who was representing the community there, and what the representatives were doing. This challenge of the legitimacy of the representatives increased the distrust between the representatives and ENGEN; however, it eventually resulted in each of the communities reaffirming their CAER representatives.

The refinery management drafted an alternative "Good Neighbourly Agreement" (GNA). ENGEN's draft was very different from that proposed by the communities. The communities' proposal contained a series of specific, legally binding agreements to release information, reduce pollution, and safeguard the community. ENGEN's proposal eliminated many of the specific and binding proposals of the communities' draft.

ENGEN and the community representatives had quite different perceptions of the negotiations over the GNA and subsequent community demands. A CAER Committee GNA Task Force was constituted to seek a try to draft a mutually acceptable Good Neighbourly Agreement. Apparently, some agreements were reached early in the Task Force process and ENGEN hoped for agreement on a GNA by the end of the year.

However, the community representatives were quite dissatisfied with the company's version of the GNA and still did not want to sign any agreement that did not promise real improvements in their communities' environment. Therefore, the communities brought to the GNA Task Force six key points that clarified and prioritised their demands, and said that ENGEN must agree to these points before they would sign a framework-type GNA. These points included that any agreement must be legally binding, it must contain enforceable time frames for plans of action, ENGEN must provide all previously requested information about its refinery operations, ENGEN must commit to reducing emissions of sulphur compounds by an agreed upon percentage within a fixed time frame, and any agreement must cover all aspects of refinery operations.

ENGEN responded that it could agree to five of the six points, but that disagreement continued about reducing SO_2 emissions. ENGEN said that, with regard to the six points as well as the draft GNA, they and the communities had made considerable progress toward agreement.
Once again, the communities' perspective was quite different. From their viewpoint, the reduction of SO_2 emissions was the key issue, and the other points were essentially means to ensure that there was sufficient information and a binding agreement to achieve this goal.

ENGEN did agree to release a number of documents, although not all the documents the community had requested. They were released on the condition that they would be kept within the CAER Committee and not shown to anyone else without ENGEN's specific permission. The communities accepted these conditions and then requested that they be allowed to show the documents to their own expert; ENGEN reluctantly agreed. The community organisations had begun to consult with refinery activists, a chemical engineer, and lawyers at the Legal Resources Centre (LRC) in Cape Town. A lawyer at the LRC was selected to analyse ENGEN's documents. A community representative also brought this lawyer to meetings of the CAER Committee, to which ENGEN first strenuously objected but later acquiesced.

The communities' expert consultants determined from the ENGEN documents that its emissions were approximately 10 times higher than would be allowable in similar refineries in the United States. The WDF, MRA, and Bluff Ridge Conservancy renewed their argument that ENGEN should reduce its emissions. Furthermore, the community representatives complained that ENGEN had known its emissions were a problem in the basin, that its recent expansion would increase SO_2 emissions, that important de-sulphurising equipment planned for the expansion had not been installed in order to cut costs, and that the company did not continuously monitor its emissions.

In November, the community representatives once again restated the consistent focus of their demands: to obtain a binding agreement to reduce SO_2 emissions before signing any non-binding framework document. They said to ENGEN that they would not proceed with further negotiations on the Good Neighbourly Agreement unless the refinery would immediately take three actions on SO_2: reduce its SO_2 emissions to pre-expansion levels, immediately install continuous SO_2 emission monitors, and, over the medium term

(thought to be five years), reduce SO_2 emissions to comply with international standards (particularly U.S. standards, which would require approximately an 80% reduction).

ENGEN has reacted strongly to the communities' negotiating methods. The External Environment Manager of the refinery said that,

> *...the negotiations were not based on good faith bargaining. The Communities (Wentworth in particular) had made unreasonable demands as a precondition to negotiating a Good Neighbourly Agreement. The discussions became characterised by entrenched viewpoints and threatening demands for action from the Community side. This is not how partnerships are formed, and sadly what was started has actually led to a distancing of the parties who should be coming closer together.*[xvi]

Throughout the discussions, ENGEN insisted that it would not consider unilateral reduction of its SO_2 emissions as called for by the communities because it was committed to a different approach - the Bluff Valley Model.

The approach taken by the Bluff Valley Model was substantially different from that proposed by the community organisations. The Model called on companies to reduce their SO_2 emissions only during certain short-term weather conditions (especially winter inversions) that might cause excessive ambient SO_2 concentrations (most likely by switching to lower-sulphur fuel) rather than investing in cleaner technology to reduce their SO_2 emissions on a continuing basis.

In November, ENGEN reiterated its commitment to using the Bluff Valley Model for any reductions of SO_2, stating that "we are committed to reduce our emissions when the agreed guidelines at ground level are predicted to be exceeded." ENGEN believed strongly that SO_2 was not the health hazard that the communities claimed and that the issue of health risks due to SO_2 pollution was largely one of the "community perceptions." ENGEN also argued that other industries and motor vehicles were the source of much of the SO_2 emissions in the basin.

Period 5: Tensions Grow to a Deadlock

In early December, the Bluff and Wentworth communities discovered that a meeting was being held between senior ENGEN management and representatives of the City Medical Officer of Health and DEAT. Although the Durban Water and Waste representative later said there "was certainly no intention to specifically exclude the community from the meeting," the community believed that they had been deliberately excluded. As a result, they blockaded the entrance to the refinery for those attending the meeting and wrote to the various government departments (copied to President Mandela and other Ministers) to demand that the community be included in all matters that " . . . relate to negative environmental impacts on our community, e.g., pollution." During the demonstration, the community representatives were invited to join the meeting, but they chose not to accept because they had not been invited originally with other stakeholders.

Late in December, community organisations were frustrated that ENGEN had not responded to their demands for monitoring and reducing SO_2 emissions. An oil spray from the refinery in mid-October that had affected about 70 residences (the second accidental oil spray in less than a year) and the December meeting from which community representatives had been excluded also affected the relations between the communities and ENGEN at this time. Community representatives wrote to President Mandela and Deputy Minister Holomisa to say that, nine months after the meeting with the State President, no progress was being made with ENGEN on community grievances.

ENGEN believed that the communities were misrepresenting the status of negotiations and ENGEN's position. In a letter to Holomisa of 23 February 1996, an ENGEN manager wrote that the community's portrayal of ENGEN as "being negative in terms of our willingness to negotiate issues of environmental concern" was "most certainly not true." ENGEN argued that they had agreed to all of the community's demands except on reducing SO_2 .

On 15 February, ENGEN invited the CAER Committee to receive the refinery's response to the demands for the three actions on SO_2. They apologised for their lengthy delay in responding, and explained that it was caused by their appointing environmental experts to review the First World literature on methods of governmental regulation of SO_2. The refinery Manager told the assembled representatives that: (1) the post-expansion SO_2 emissions had been below the pre-expansion levels (i.e., below the 1993-94 averages and about the same as 1992), (2) the current estimations of emissions were sufficiently accurate and did not justify investing R1 million per stack, to monitor actual emissions of SO_2 more accurately, and (3) only the USA, European Union, and UK apply restrictions on actual emissions instead of measuring ambient air quality, unlike most Asian and Scandinavian countries and New Zealand. Therefore, ENGEN stated, it remained committed to the Bluff Valley Model.

To demonstrate that the refinery was not emitting excessive amounts of SO_2, ENGEN produced a graph of ambient SO_2 levels at the Wentworth monitoring station during January (summer) 1996 that showed very low concentrations.

One CAER Committee local resident said they were insulted by ENGEN's trying "to pull the wool over our eyes" by using ambient SO_2 levels from January, "when we all know that they had gas coming out of their ears that month and were not burning as much bunker oil [which is higher sulphur fuel] as usual." In January, winds are normally relatively favourable for dispersion of SO_2 and other emissions, so community representatives said that January data was not relevant to the upcoming winter season "when we'll all be overdosed once again under these winter inversions."

The communities' evaluation and response to ENGEN's graph demonstrated the extent to which community representatives had educated themselves on the complexities of refinery pollution.

Period 6: An Appeal to National Patrons

In response to the letter to President Mandela from the WDF in December, Holomisa requested a meeting of ENGEN management with government and the communities.

On 27 February 1996, then-Deputy Minister Holomisa and the Chief Air Pollution Officer at DEAT, Martin Lloyd, met with the Refinery Manager Peter Dent and Dr. Trevor Chorn, the Director General of Transport and Energy, and 12 community representatives and their two consultants from Cape Town. At the meeting, the two principal parties held fast to their previous positions - the communities wanting a significant reduction of SO_2 with ENGEN insisting on reductions only according to the Bluff Valley Model.

The refinery Manager argued that ENGEN was not violating the law since its emissions of perhaps 40 tons per day were considerably below the 72 tons per day permitted by DEAT. He reiterated his statement in many CAER meetings that ENGEN would only control its SO_2 emissions in accordance with the Bluff Valley Model.

On their side, the community representatives maintained that they wanted a specific commitment to reduce SO_2 from 40 tons to eight tons per day, that there was a history of exceeding of the emissions guidelines levels in each winter season, that ENGEN could increase gas burning to voluntarily reduce its SO_2 levels immediately, and that the communities were bearing the health costs for ENGEN and all petrol buyers by continuing to be dosed with SO_2 each year. Regarding government policy, the communities argued that government had a constitutional responsibility to protect the people, that a national task force was needed to set lower refinery pollution standards that would place all refiners on a level playing field, and that DEAT should lower its allowed emissions permits for SO_2. To buttress its concerns, the community noted that there had been almost 700 complaints to the City about ENGEN's pollution in 1995 and that the rate of complaints in early 1996 had almost doubled. (This reflects the number of community complaints, not the number of incidents that occurred.)

Holomisa seemed surprised that ENGEN had spent nothing on SO_2 reduction excepting the Bluff Valley Model, and reminded ENGEN that its CEO had committed himself and the resources to "attend to these problems." Holomisa voiced his concern that, "It worries me that we could have a breakdown" in communication between the parties. He also called on his own department (DEAT) to establish an independent team to re-visit the issue of emissions standards. Holomisa wrote to ENGEN CEO Rob Angel, requesting a follow-up meeting in mid-March and said, "In the spirit of the Responsible Care process, we hope that ENGEN will respond positively to the communities' plea to reduce SO_2 emissions and that negotiations can resume."

In May, Holomisa convened a follow-up meeting at ENGEN including the CAER Committee community representatives, ENGEN CEO Angel, and the refinery managers. Angel noted that his original statement that ENGEN had the resources available to deal with the communities complaints about pollution did not mean "financial resources" and

asserted that almost one-third of the company's 1993-5 expansion had been for "environmental measures." He repeated ENGEN's position that their SO_2 emissions were well under the 72 tons per day permitted by DEAT (Holomisa's own department), that ENGEN would comply if DEAT's standards changed, and that the communities could be protected adequately using ambient pollution monitoring by the Bluff Valley Model.

Period 7: Proposal for an Expert Panel to Resolve the Dispute

ENGEN then called for an independent expert panel to assess both the emissions of other companies and the health effects of emissions because, in ENGEN's view, the community and company were "talking past each other. The way forward is to put a group of experts together." Holomisa concurred with the idea of a "technical committee," and offered that DEAT would finance one representative or expert for the community on that committee. Community representatives agreed to the idea of a technical committee, but did so reluctantly. The communities remained uncertain about such a strategy because the academic technical consultants sometimes employed by ENGEN, the Chief Air Pollution Control Officer, and other experts servicing the Bluff Valley Model all supported a priori the intermittent management approach. As one community leader said, the communities concluded from this meeting that it was now evident that even in the midst of the bad period of winter inversion pollution in 1996, ENGEN was not prepared to publicly commit in the meeting to reduce emissions, and that the solution now was going to be to refer the matter to "another committee of White consultants."

The panel was never constituted, although all the parties agreed to it. Some observers believed that bringing in technical experts from the two sides was unlikely to resolve their differences. Furthermore, in July 1996 Holomisa was replaced in the position of DEAT Deputy Minister (and was later expelled from the ANC), which created uncertainty about the future of this panel and DEAT's broader role in the negotiations between ENGEN and the communities.

Period 8: Unity within the community and change in attitude

By spring of 1996, it was clear that Engen, despite all political pressure, was not going to move from their entrenched position. By then the community has negotiated with Engen at various CBO bodies within the area. If anything, this posed a weakness, for Engen repeatedly attempted to divide the community debate at various levels. This they undertook not only at the negotiations but also within the various communities themselves. The fact that Engen sponsored community activities in the area was also viewed in a negative light. Various community representatives who were negotiating with Engen considered this an outright manipulation because of Engen's financial strength.

Noting the possible further divisions within the community ranks, the WDF called a broad meeting with all CBOs who were party to the negotiations around Engen on the 16 November 1996. At this meeting all representatives agreed that a broad community environmental alliance should be developed to show a united stand on the various

environmental struggles in South Durban. On the 8 February 1997, another meeting was called where the South Durban Community Environmental Alliance (SDCEA) was formed. For the first time in the Engen case, the various differing community based representatives in South Durban liaised under a common agreed-upon mandate. There are 8 CBO's and 2 NGO's under the banner of the SDCEA.

From this unified position the community started pressurising all the major industries in the valley through the South Durban SO_2 Steering Committee that monitors SO_2 pollution from all industries in South Durban. This pressure and proposal was welcomed by some industries, which placed reduction commitments on the table. Engen however, by the end of 1997, was still adamant that they would not reduce their SO_2 pollution at source.

By autumn of 1998, this mounting pressure from other industries and the communities and the SDCEA stand-off in refusing to negotiate further, bore fruit. On the 25 March 1998, Engen announced that it would reduce its pollution permit levels by 65% over five years starting from 1999. Coupled with this agreement was the fact that the community could access their own technical people to monitor the reductions, with Engen accepting the financial costing for this. Although this was a breakthrough for the community, it took more than 8 months for the DEAT to sign a new permit for Engen. The reason for the delay was never clear, however, confusion of how it could impact on other oil refineries in SA were of concern to the national air pollution office.

With the above came a change of attitude by Engen with the community. Instead of using outside consultants to manage the negotiations, Engen management and staff started negotiating themselves with the community. Although the community was not satisfied with many of the staff members that attempted to come to the table from Engen's side; the relationship did improve with the result that negotiations were improved.

Lessons to reduce conflict around resources

The many hours spent on negotiations, networking and the education have finally paid dividends for the South Durban community. The struggle, since the visit by Mandela, in March 1995, took exactly three years of intense work by the community before Engen agreed to come forward with reductions.

We need to review the process and understand the lessons that can be attained from this process to improve the use of our natural resource, the air.

1 *Consultation by authorities must be more qualitative orientated and more direct with the community*.

Communities often feel that consultants have no direct responsibility to any party except the payee and therefore operate with a biased agenda. It is felt that concerns raised in consultations are often watered down by consultants. The SDCEA is concerned that consultation is being managed for specific outcomes (SDCEA, Presentation to Durban Mayor, November 1998). Engen staff

eventually started consulting with the communities themselves, rather than through consultants.

2 *Consultations need to be non-ambiguous and the objectives of role players must be transparent.*

In the CAER process Engen wanted to develop a framework for further negotiations. The community, however, wanted to discuss pollution reduction targets, and thus the community CAER agreement. With these differing agendas the negotiations did not succeed. It was only when Engen placed concrete reductions on the table that negotiations improved.

3 *Consultation will not be a success without the necessary technical, scientific and legal assistance*.

The fact that the community in South Durban managed to attain technical and legal assistance was important. With this capacity, they managed to understand the complex issues for debate, and thus could negotiate with confidence. More importantly, the technical and legal assistance attained by the community also assisted a poorly resourced national DEAT to attain a different perspective on the refinery. The result of this was that a new permit was issued on 14 May 1999 by the DEAT, taking into consideration the negotiations between Engen and the SDCEA.

In order to tackle the inadequacy of legal standards, the communities needed to learn about the South Africa regulations and how they compared to other standards. This was done with the assistance of the LRC.

Without any funding for capacity building, community representatives learned a great deal about South African and other international standards and were able to bring these issues into their negotiations. Consultation provided free-of-charge by persons associated with non-government organisations was crucial to this process. In this highly technical field of standards and means of emissions controls, input from people with prior training in the field was invaluable. Indeed, the community organisations' statement that ENGEN's emissions were 10 times those allowable at similar refineries in the U.S. - ascertained by an expert working for an NGO - was significant to the negotiations. ENGEN stopped meeting for a few months to hire its own consultants to research international standards, looking for other "First World" countries that had less stringent standards than the U.S. which would compare favourably to South African standards.

4 *Consultation must be multi-faceted. It cannot be expected that the community should consult only with the government officials and the industry*.

Although Engen management and the government officials were not happy that the community confronted the politicians with their problem, the reality is that

this is not a show of bad faith negotiations. The community has not got access to skills and resources like industry and going to the political leaders is often used to balance the negotiations.

5 *Government officials and government decisions must be clear and unambiguous*.

The DEAT national air pollution officer was unsure as to how the agreement between Engen and the SDCEA would impact on the other refineries. The failure to understand this process resulted in the signing of the permit being delayed by more than half a year. This lack of clear direction also gives support for industry to pollute further.

As the ENGEN manager said rather bluntly at the February 1996 meeting with community representatives and DEAT officials:

"... if there is a health effect detected here with monitoring, we will spend whatever money is needed based on your department's (DEAT) recommendation. The community says it is worth it to go ahead, but we say it is not. And your department (DEAT) agrees with us."[xvii]

Therefore, ENGEN repeatedly countered the communities' demand for decreasing its SO2 emissions with a commitment to the intermittent control system of the Bluff Valley Model that is sanctioned by national government.

6 *Information provision must be guaranteed and open to all parties*.

There is still a general practice by industry and government to not make information available or to withhold information. Information must be accurate and mechanisms of making information available and accessible is important.

A prerequisite to analysing and critiquing ENGEN documents and policy standards is obtaining access to this information. The CBOs succeeded in obtaining numerous documents from ENGEN (though not all they had demanded) after repeated efforts. Obtaining emissions data from government officials was no more successful, and was sometimes met with the assertion that historical data on company emissions would be released only with the permission of the companies in question. Community participation in the ENGEN CAER Committee was crucial to their success in obtaining this information, even though it was not ENGEN's original intent to release emissions data to this Committee. The community participants in the committee made it necessary for ENGEN to do so, as the cost of keeping the community in discussions and potentially obtaining a company-community agreement that ENGEN could use for its public relations and political interests.

The new Constitution also gives CBOs and NGOs a new tool and increased leverage in their demands against polluting industries.

Conclusions

What have community organisations and non-governmental organisations achieved in this case of locally based civic democracy? In the myriad arenas of consultation with industry, involvement by government in these consultations, and independent protest and publicity actions, what results were achieved?

Community participation in voluntary forums such as the CAER Committee gained the release of some important information that had hitherto remained secret. It also afforded the community representatives valuable experience in formulating demands and negotiating with corporate executives and government officials. Further, they achieved recognition as a legitimate "stakeholder" with an interest in air quality control, who should be consulted on these issues.

With this experience and legitimacy, and unity under the SDCEA, CBO representatives were able to intervene in a more direct and politically strengthened manner. Also, they gained an entry into national consultations about revising petroleum refinery air pollution standards.

These achievements would not have been reached if community representatives had only participated in meetings of these voluntary committees, however. Maintaining freedom of action to engage in protests (at the ENGEN event with President Mandela in 1995 and at an SO2 Steering Committee meeting attended by participants in the National Air Pollution Advisory Committee in 1996) was crucial to CBOs being able to raise the political stakes for the company and to draw the attention of national political leaders. Maintaining the right to communicate with the media was also an important tool for the CBOs - one which ENGEN wished to deny them as a condition for negotiations in the CAER Committee.

The ENGEN case demonstrates that through a combination of participation in local consultations, independent action, access to political leaders and the media, and holding out the possibility of legal action, community organisations can have the best hope of affecting corporate environmental practice and government environmental policy, with the aim of improving the use of Africa's natural resources.

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CLOSING SESSION

Ms. Janet Mondlane, President, Eduardo C. Mondlane Foundation, Mozambique

COOPERATION OR CONFLICT: WAYS OF MANAGING SCARCE NATURAL RESOURCES IN AFRICA:CLOSING REMARKS

When I received the program of this workshop and along with it the invitation to speak to you today I struggled with myself to decide what I should talk about.

I tried to remember, or review, what knew or had in my files about natural resources and conflict prevention. A few minutes before I came here, I realised that I knew almost nothing about this subject matter. I understood that the only thing that I was familiar with was what other people knew, it was just a common knowledge, a "common sense".

If we want to be more productive and constructive in developing strategies for conflict prevention and peacebuilding, knowledge based on common sense is not enough and it will not take us far. The issues concerning the allocation, management, and use of natural resources are complex and difficult, especially in African countries. Most of the intrastate and interstate conflicts have natural resources as one of the major causes and accelerators.

In many African countries, political power means power over resources. It means that if one wants access to available resources one must have to have political and/or economic power. This connection between political power and resources is something that needs to be well analysed and understood in order to design and implement adequate mechanism of preventing and transforming conflicts that are destroying the African continent. We need more than common sense or willingness to prevent and manage conflicts. We need to be educated to understand that what we want to do is not only an art it; it is a science.

To be successful in this task, we need to join our efforts. We need to co-operate and establish partnerships. Partnerships are critical factors in the development of strategies and frameworks for conflict prevention and peacebuilding in Africa. African NGOs, interested individuals, and conflict resolution practitioners have to establish networks to share information and resources needed for the development of a sound peacebuilding program in Africa.

Co-operation with other organisations and institutions coming from abroad, such as KATU, are important for shaping strong South-North coalitions for sustainable development.

To close, I would like to thank KATU for the initiative of organising this workshop. I think that Africa needs to have more opportunities like this, where people coming from

different backgrounds can sit together and talk about issues that you have been dealing with during these fours days.

The Eduardo Chivambo Mondlane Foundation will be always available to give support and establish necessary mechanisms to strengthen the co-operation and partnership that we just begun. It is important to remember that education and co-operation are very important and urgent tasks that we need to embrace as we move from despair to hope, from war to peace, and from anarchy to sustainable economic and social development.

I wish you all success in your tasks.

* * * * * * * * * *

Mr. Webster Whande, Zimbabwe

Stay with Us

(This poem was inspired by Sandile Dikeni, the Guava Juice Poet and Fransico Tunga's presentation at the KATU workshop)

Stay with us,
People of Angola,
Stay with us

Stay that part of Africa
Be a spine for Africa
The liver of Africa
The heart for Africa
Stay with us

Be a spine of Hope
Peace
A spine of love and eternity
Be a source of life,
Nurture that life Angola

When we ran in the bushes,
We hoped,
Hoped for one day to be peaceful
For one day to be a continent
A continent of peace
So, today, we say
Stay with us Angola

Let Angola have peace
Let the continent have peace
Let the people smile
Stay with us

Let the continent have peace
A continent of nuances, love
A continent of spiritual inspirations
So stay with us Angola

Join the fold,
Become part of the fold
And stay with us
Join and stay with us

Restore solidarity,
Solidarity to move forward
Give us courage,
Courage to pick you up
To pick you up when you fall
To pick you up and say we are together
Stay with us

Give us courage Angola,
Courage to pick you up
Give your children courage
Courage to pick you up,
To pick you up from the doldrums,
Doldrums of war,
Poverty,
Famine
Stay with us

Let your people be your resources
Let them enjoy your riches
Stay with your people,
Stay with them Angola

Let your beautiful children smile
Let mothers sing,
Let them sing songs of Joy
So stay with us Angola
Stay with your people
Nurture your people Angola

Let your children smile
Smile in morning golden sunrises
Smile in evening golden sunsets
Let them live
Let them live full lives
So stay with us Angola

Light up the nights,
Light them with lights of hope
Not with missiles of death and destruction
Light them with lights of peace, love, eternity
So stay with us Angola

Stay with the continent
Defy the world pessimists
Stay with us,
Stay with us Angola

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Reports from the Working Groups

The working group themes included:

A Different stakeholders and their interests in the conflict
B Different conflict resolution mechanisms
C Building NGO's capacities in identifying, preventing and solving conflicts
D Developing networks and partnership between NGOs in Africa and Africa-Finland.

Group A: Different Stakeholders and their Interests in the Conflict

This group is meant to identify the various stakeholders involved in the case studies presented during the plenary sessions. There were four case studies presented, however, as the time was limited, and discussion became quite interesting, only two case studies were covered in depth. One was the Epupa Dam case and the other was about The Role of Traditional Authority in Conflict Resolution in Mozambique: A case study from Barue, Manica Province.

The group found it necessary to begin by defining "stakeholders". The way it was understood by the group, there are two kinds of stakeholders: **direct benefactors** and **indirect benefactors**. Direct benefactors are those who derive their sustenance directly from the natural resources in question. Indirect, or involved, stakeholders are those, who

have something to gain from the situation. They may be human rights activists, businessmen, or politicians etc. learning from the Case Study on Epupa Dam in Namibia: When Traditional Rights Clash with Energy Demand

Who are the stakeholders in this case?

- The Community- the Himba people
- State representative- the Ministry of Energy
- Legal Assistant Centre
- National Society for Human Rights
- Private sector- businesses
- Media, etc.

How do their Positions Differ?

- Pro-dam/ Anti-dam
- Collective interest- energy development, economic development
- Ancestral Heritage/ sustenance

Was there room for negotiation?

There is room for negotiation, but the situation has been made very difficult for negotiation because:

- it has been internationalised - the Himba are trying to get the international public interested
- inflexibility on both sides: "Read my lips" - Minister of Energy
  "Can't give a tail of a cow or you'll end up giving up the whole cow." Such kind of arguments and rigid attitudes seem to have made negotiation very difficult.

Are some stakeholders more informed than others?

On this issue we first had some debate about what " informed" means. How does one judge if traditional knowledge is any less valuable than modern scientific/technical knowledge?
Even considering these points, it was agreed that since the government has made a feasibility study and secured EIA documents they should be aware of the consequences that the dam may cause on the environment. The Himba people have a common inherited knowledge and perhaps a weaker technical knowledge, but tend to be aware of their constitutional right.

What kind of resources did the different parties posses?

Government	Himba
Legal tools	Media
Collective interest (referendum, as Himba are a minority)	International interest/activists

How can they reach a more balanced position in terms of power?

- Open direct negotiation

Learning from the case study from Barue, Manica Province: The Role of Traditional Authority in Conflict Resolution in Mozambique

Who are the stakeholders in this case?

- Local government
- Traditional leaders
- Community

How do their positions differ?

Traditional structures	Local Government Institutions
Inherited knowledge – Environmentally friendly	Modern – Environmentally destructive
Based on cultural knowledge of people	Foreign - Destructive to heritage

Was there room for negotiation?

Yes, there is room for negotiation if the government starts taking into consideration the traditional culture of the people when making decisions. But situations which are "top-down" are always difficult.

Are some stakeholders more informed than others?

This question deals with government vs. traditional society.

- the government seems to be more informed of the processes
- decisions tend to be from top downward, thus the communities and traditional leaders were not consulted.

What kind of resources did the different parties posses?

Government	Local
Power	Traditional knowledge and leaders
Legal instruments	Adaptability to the environment
Theoretical knowledge	Long established survival strategy

How can they reach a more balanced position in terms of power?

- Open and direct negotiation
- Flexibility
- Publicity

Group B: Different Conflict Resolution Mechanisms

- Education: will increase understanding between both parties (government vs. community)
- Consultation: will build trust and understanding, good faith
- Advocacy
- Research: gives background to the problem, good tool for lobbying
- Democratic process: sustainable, good for national building
- Policy development: will involve the stakeholders
- International community legislation: moral authority
- The role of NGO's: neutral, non-partisan, knowledge of the grass-root, must have their freedom and role recognized
- Independent judiciary

Group C: Building NGO's Capacities in Identifying, Preventing and Solving Conflicts

The aim of the group work was to find the lessons learnt from the case studies presented in the workshop plenary sessions. The group found out that the following points interlay in building NGO's capacities:

- It is important to clearly distinguish between the concepts of NGO (a non-governmental organisation) and CBO (a community-based organisation).
- A crisis is usually born between a community and another entity, national or international. If an NGO wishes to act as a mediator in conflict prevention or conflict resolution it is imperative that they act in the correct capacity and understand, in depth, the roots of the local conflict. It is also wise to take the time to fully study the situation, because hurry seems to create distrust. (Why are they pushing this agenda?)
- To be successful the NGO should negotiate with a CBO rather than a loose community, bearing in mind that the interest of the community must dictate the agenda. The NGO must also be open about their interest in the matter. Transparency, mutual understanding and equal partnership are the prerequisites of a functioning relationship between the community and the NGO.
- An NGO may act as a mediator, e.g., by making sure that the voices of all the different parties are heard, by interpreting the aims of the community (or government) to the people, or by advocating and lobbying for the cause. The NGO is often also in a position to gather vital information straight from the different parties. The most important challenge for the NGO is to transfer this information into a capacity to understand the situation.
- An international or national NGO often has the expertise that the local community or the local NGO don't have, which can be used to reach a positive result. However, they should not take the matter to international forums without careful deliberation, as this

may generate further stubbornness in decision-makers (the example of EPUPA dam is cited in this regard).

- National NGOs have an important role as watchdogs especially in countries with weak governments, thus also helping the government by helping a community in a common goal. International organisations, on the other hand, who come with the money, may create further problems between the government, the national organisations, communities and/or NGOs. The main reason for failure in intervening being that they don't understand the local needs.
- Networking was considered an important tool in capacity-building both between the different NGOs in the south and the south-north relationships.

Group D: Developing networks and partnership between NGOs in Africa and Africa-Finland

After discussions, the group came up with the following ideas:

1 The group came to an understanding that the most important thing is for the NGOs to know each other better. For that to happen, the group pointed out two modalities:
   a) meetings/ seminars
   b) e-mail connections

2 As part of the process of knowing each other better, networks should be created at the national and regional levels. The objectives of the networks should be:
   a) sharing of information
      - information about each organisation in terms of its objectives and activities
      - establishment of database of NGOs and their activities and of case studies which illustrate successful and unsuccessful interventions in different areas
   b) co-operation between organisations in the implementation of their activities.

3 Structuring the network: The group discussed two ways of structuring the network organisations:
   - Informal network - where all member organisations have the responsibility to share whatever information they may find important to share, but with no co-ordinating body.
   - Formal network: Where the member organisations should create an operative structure, which will have the responsibility of doing whatever necessary to fulfil the objectives of the network.

   In this regard, the group came up with the following points:

a) At this point, we should encourage informal ways of networking at the regional level - sharing information about activities and calling for support and ideas.

b) Each participant in this seminar should take the responsibility of sharing the outcomes of the seminar with other individuals and NGOs in his or her own country. He/she should encourage those individuals and organisations to start thinking about networking at the national level.
Each country will decide about the best way of structuring the network as well as to decide about the areas to be addressed.

4 Suggestions to KATU

a) KATU should identify a partner organisation in each country or at the regional level, which would continue to pursue KATU's objectives and vision in regard to conflict prevention in Africa.
The selected organisation would continue to facilitate the implementation of the seminars and workshops at the regional level or in each country. The organisation would also be to focal point for the dissemination of information and co-ordination of the partnership between Africa and Finland.

b) Another alternative would be to identify an organisation which would be focal point for the dissemination of information and which would take the responsibility of the network until it is formally created by the organisations in the region or within each country.

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PROGRAMME

Workshop on "Cooperation or Conflict: Ways of Managing Scarce Natural Resources in Africa"

Date	18-23 June 1999
Venue	Hotel Kaya Kwanga, Maputo, Mozambique
Participants	Representatives from various NGO's and institutions from Angola, Finland, Kenya, Malawi, Mozambique, Namibia, South Africa and Zimbabwe

Programme

Friday 18 June 1999

Afternoon	Arrival of the participants
19.00	Dinner

Saturday 19 June 1999

8.00	Excursion to Bilene
19.00	Dinner

Sunday 20 June 1999

8.30	Registration

Session 1

9.00 **Opening of the Conference**

- Ms. Anne Palm, Secretary General, KATU
- Dr Bernardo Ferraz, Minister of Environment, Mozambique
- Mr Tapani Brotherus, Ambassador of Finland

9.30 Introduction to the Workshop Theme

- Moderator Ms Iina Soiri

1. ***Key Note Speaker: Natural Resources in Africa***
Dr Ebenizário Chonguica, Country Representative, IUCN, Mozambique
Discussion

11.00-11.30 Coffee/Tea Break

2. ***Key Note Speaker: Conflict Prevention, Mediation, Resolution: the role of NGOs***
Mr Andries Odendaal, Centre for Conflict Resolution, South Africa
Discussion

13.00-14.30 Lunch

Session 2 I THEMATIC AREA: LAND & POPULATION

14.30 ***Case Study on Epupa Dam in Namibia: When traditional rights clash with energy demand***
Ms Mukazona Kuvare, National Society for Human Rights, Namibia
Mr Andrew Corbett, Legal Assistance Centre, Namibia
Discussion

16.00-16.30 Coffee/Tea Break

16.30 ***The role of traditional authority in conflict resolution in Mozambique: a case study from Barue, Manica Province***
Mr Domingos Artur, ARPAC, Mozambique
Discussion

18.00 ***Introduction to Working Group themes***
A Different stakeholders and their interests in the conflict situations
B Different conflict resolution mechanisms
C Building NGOs' capacities in identifying, preventing and solving conflicts
D Developing networks and partnership between NGOs in Africa and Africa-Finland

18.30 **Reception hosted by KEPA in Kaya Kwanga**

19.30 Dinner

Monday 21 June 1999

Session 3 II THEMATIC AREA: WATER & SEA & RIVERS

8.30 ***Case Study on Kenyan River watershed management and arising conflicts***
Mr John Rao Nyaoro, Registrar of Water Rights, Ministry of Water Resources, Kenya
Discussion

10.00 - 10.30 Coffee/Tea Break

10.30 ***Case Study on Campanha de Terra, Mozambique***
Mr Jose Negrao, Campanha de Terra

11.30 ***Case Study on Sea/Beach Resource Management & Tourism***
Mr Mateus Muthemba, Helvetas
Mr Marcus Buzberger, Helvetas
Discussion

13.00 - 14.30 Lunch

14.30 ***Work in Groups***
A Different stakeholders and their interests in the conflict situations
B Different conflict resolution mechanisms
C Building NGOs' capacities in identifying, preventing and solving conflicts
D Developing networks and partnership between NGOs in Africa and Africa-Finland

16.00-16.30 Coffee/Tea Break

16.30 ***Reports from Working Groups***

18.00 Video/Slide Show/Cultural Programme

19.00 Dinner

Tuesday 22 June 1999

Session 4: III THEMATIC AREA: FORESTS & WILDLIFE

8.30 ***Case Study from Community-based wildlife management***
Mr John Njaji Muriuki, Kenyatta University, Kenya
Discussion

9.30-10.00 Coffee/Tea Break

10.00 ***Case study from Sustainable forest management***
Ms Eileen Omosa, Forest Action Network, Kenya
Discussion

11.00 ***Case study from Campfire/Zimbabwe***
Mr Jerry Gotora, Campfire, Zimbabwe
Discussion

12.00-13.30 Lunch
Video/Slide Show/Cultural Programme

Session 5: IV THEMATIC AREA: MINERALS AND ENERGY

13.30 ***Case Study on Mineral concessions and conflicts***
Mr Francisco Tunga Alberto, FONGA, Angola
Discussion

14.30 ***Case study on Energy and pollution***
Mr Bobby Peek, GroundWork, South Africa
Discussion

16.00-16.30 Coffee/Tea Break

16.30 ***PANEL DISCUSSION: the way forward ?***
Mr Andrew Corbett, Namibia
Mr John Muriuki, Kenya
Ms Hanna Matinpuro, Finland
Mr Marcos Wiriamo, Mozambique

18.30-20.00 Reception hosted by Mr Juhani Toivanen, Chargé d'Affaires, Embassy of Finland

20.00 *UMA FESTA MOÇAMBICANA*

Wednesday 23 June 1999

CLOSING SESSION

9.30 ***Key Note Speaker: Towards peaceful natural resource management***
Ms Janet Mondlane, President, Eduardo C. Mondlane Foundation, Mozambique
Discussion

11.00-11.30 Coffee/Tea

Departures

[1] see "The Ovahimba Group", *The State of National, Ethnic and Linguistic Minorities in Namibia,* National Society for Human Rights, October 13, 1995, p.4
[2] see "The Ovahimba Group", p.5
[3] see "Himba", *World Directory of Minorities*, Minority Rights Group International, 1997, p.504

[i]. With David Wiley, Christine Root and Seyathie Ramurath.

[ii]. This case study follows intensive between December of 1994 and mid 1996, which is continuously updated.

3. Racial groups are not fixed social categories but are labels and symbolic categories. Nevertheless, the racial typology of the old South Africa endures in the social structure of the country. Although residential segregation is no longer the law of the land, the residential communities in South Durban are still very largely characterised by the racial restrictions imposed by the apartheid-era Group Areas Act.

[iv]. Minister Erwin's speech at a fund raising dinner of the local chapter of the ANC, in Isipingo, South Durban, on 17 March 1999.

5. International Council for Local Environmental Initiatives and the Durban Local Agenda 21 Working Team, "Case Studies on the Local Agenda 21 Process: Durban," Revised October 1995. At <http://www.iclei.org/csdcases>.

6. Scott, Dianne, 1994, "Communal Space Construction: The Rise and Fall of Clairwood and District," Ph.D. dissertation in Department of Geographical and Environmental Sciences, University of Natal, Durban.

7. Diab, R. and R. Preston-Whyte, 1996, "Air" chapter, Report on the State of the Environment and Development of the Durban Metropolitan Area, Volume 2.

8. Diab, R. and R. Preston-Whyte.

9. O'Beirne, S., 1995, "Preliminary Strategic Environmental Assessment (SEA) for KwaZulu-Natal: Phase 2 - State of Environment Report," CSIR.

10. Kistnasamy, M.B., 1994, "The Relationship Between Location of Residency and Respiratory Symptoms of Primary School Pupils."

11. Legal Resources Centre, "Proposal for Reductions in Atmospheric Pollution for the Oil Refining Industry," 20 June 1996

12. Lombard & Associates, 1995, "Group Reports and Proceedings of the South Durban Multi-Stakeholder Environmental Management Meeting Held in the Durban City Jubilee Hall on May 4, 1995."

13. Petrie, J.G., Y.M. Burns, and W. Bray, 1992, "Air Pollution," in Fuggle, R.F. and M.A. Rabie (eds.) Environmental Management in South Africa, Cape Town: Juta & Co, Ltd.

14. Letter from T. Chorn, External Environment Manager, Engen Refinery, 17 May 1996.

15 Letter from T. Chorn, 17 May 1996

16. Letter from T. Chorn, 17 May 1996

17. Transcript of the 27 February 1996 meeting, from tape recording.