## Chapter 8

# Understanding and Managing Eco-Conflicts and Environmental Insecurity

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## 8.1 Introduction

The word conflict is commonly used in everyday speech to label various human experiences, ranging from indecision, disagreement and stress. A conflict situation thus contains the following four elements; a condition of interdependence between the concerned stakeholders, feeling of anger, a situation where one party views the other as being at fault and actions that cause "business" problems. A Conflict can also be defined as the competition between interdependent parties, who perceive themselves as having incompatible needs, goals, desires or ideas (Robbins and Colter, 1996). It is a situation in which people cannot agree or create harmony with one another.

There are different kinds of conflicts: social, economic, industrial, political, and occur at different levels (community, regional, country, continental and international). Understanding their nature (structure) is important in designing appropriate resolutions for them. The focus of this chapter is ecological conflicts also referred to as resource use or eco-conflicts. Ecological conflicts stem from the need to access, control, own, use and benefit from natural resources (Nature's "free" goods and services), such as land, water, climate, minerals, fauna and flora. In an ideal situation, all people should have equal access to them. In practice, prevailing economic and political systems have not allowed this to happen. Instead, these resources have been reduced to commodities for generating profits in total disregard of social justice and equity. The result of this scenario particularly in capitalist nations is extremes of those who have and those who have not, and hence conflicts with subsequent negative impacts to the total environment and human well-being. Some common effects of conflicts and security concerns include among others:

- Loss of human life in the event of clashes or war
- Loss of livelihood when economic and social systems are disrupted
- Political instability
- Proliferation of refuges and internally displaced persons
- Destruction of infrastructure and hence loss of economic opportunities
- Increased human trauma and consequent disorders

- Poverty and under-development
- Environmental degradation as more pressure is exerted on scarce resources
- Global environmental change especially from an economic and social perspective.

All of these effects, whether singly or in combination constitute security concerns because lives and livelihoods are threatened. Conflict spirals and insecurity are not uncommon in places where competition for environmental resources exists. The term environmental security can be defined as "the freedom from environmental destruction and resource scarcity" *(Gleditsch 2001)*. It is broader than the classical definition of security, which usually centres around military security aspects. Similarly, environmental insecurity can be defined as the loss of environmental resources in quantitative and qualitative terms to the point of triggering conflict among competing users. Improving environmental security aims at preventing erosion of the world's carrying capacity, and at preventing war and armed conflict resulting from resource scarcity and environmental degradation. It is widely acknowledged that there is "the very real possibility of increasing tensions over environmental resources e.g. land use, particularly where there are competing demands or environmental degradation" *(Prime Minister's Strategy Unit 2005:14)*.

Despite the pervasive threat of international terrorism and the terrifying prospect of nuclear war in the 21st century, the reality is that security in this new millennium is not just about protection from aggression, but also from disease, economic shocks and environmental degradation and resource scarcity. For most of the world, security tensions centres less on boundaries and external might, but more on internal conflict that stems from poverty, social exclusion, dispossession and marginalisation, as well as economic instability and competition over shared resources (common resources), such as water and arable land. As such while the possible presence of weapons of mass destruction is a source of acute concern, so should the absence of human rights and institutions and processes necessary for economic and social development, as well as environmental protection. Sadly, most of the world's most powerful leaders continue to be blind to the fact that the growing environmental, economic and cultural stresses are just as critical as the political and military factors in the maintenance of international peace and security. Indeed one can argue that the root causes of most conflicts and wars are differential access and benefits from environmental resources. Some important quotes in this regard include:

*"Few threats to peace and survival of the human community are greater than those posed by the prospects of cumulative and irreversible degradation of the biosphere on which human life depends. True security cannot be achieved by mounting buildup of weapons (defence in a narrow sense), but only by providing basic conditions for solving non-military problems, which threaten them. Our survival depends not only on military*

*balance, but on global cooperation to ensure a sustainable environment."* (**Brundtland Commission Report, 1987**).

*"Many wars are fought over natural resources, which are becoming increasingly scarce across the earth. If we did a better job of managing our resources sustainably, conflicts over them would be reduced. Protecting the global environment is directly related to securing peace."* (**Prof. Wangari Maathai, Winner of the Nobel Peace Prize 2004**).

As a component of human well-being in the millennium ecosystem assessment framework (Alcamo et al, 2003), security means:

♦ Being able to secure access to natural and other resources
♦ Safety of the person and his/her possessions
♦ Living in a predictable and controllable environment with security from natural and anthropogenic driven-disasters.
♦ Ability to live in an environmentally clean and safe shelter.

As such security is affected by the extent to which one can access and enjoy ecosystem services: provisioning, which influence crime, regulating, which influence the frequency and magnitude of disasters like floods, droughts etc; cultural e.g. impacts of degrading the Kayas etc.

## 8.2 Emerging Resource Use Conflicts in the Globalising Economy

### Land

This is a major conflict hot spot in Africa (Waswa et al., 2002). In Kenya, conflicts on land can be directly linked to land tenure systems in place, colonial legacy, and bad governance. Past effects of such conflicts include land grabbing and creation or artificial land shortages and hence landlessness, tribal clashes, and political tensions. The sensitivity of Ndungu Land report released in 2005 attests to this.

### Water Resources

It is widely acknowledged that water is life and a popular scenario for the future is that the third world war may be fought on water. The importance of water can be seen from the following international water dispute areas among others:

♦ Lake Victoria and Nile waters (Egypt, East Africa, Ethiopia, Sudan),
♦ Euphrates, Tigris, Iraq, Syria, Turkey,
♦ Jordan and sea of Galilee (Israel, Jordan, Lebanon, Syria)

- Indus and Sutlei (India and Pakistan) issue irrigation water control
- Locally, the infamous land clashes and the recent Mai Mahiu, conflict are pointers to potentially serious consequences of not timely addressing water supply and demand dynamics. Drought events have potential exacerbate water conflicts particularly among pastoral communities.

## Forests and Genetic Resources

Africa forest reserves are being plundered for hard wood and threatened by encroachment from agriculture and settlement, which inevitably trigger conflicts as people compete for the scarce land to be reclaimed. Genetic Resources derive their importance in their contribution to biodiversity conservation and the products and services they generate such as the medicinal value inherent in some plants.

## Unique habitats /Ecosystems

These derive their importance from being home to unique biodiversity and their role in ecosystem stability and resilience. Examples include Coral reefs, Mangrove swamps, Kaya forests shrines and rift valley lakes that are habitats for various bird species.

## Wildlife Resources

Although important in tourism and eco-tourism, human-wildlife conflicts are challenges that must be faced in Kenya. This is particularly important between pastoral communities and Kenya Wildlife Services (KWS). Also profits from this industry traditionally do not trickle to the communities in whose area these resources belong, hence the notion of "paradise of fools". In here is potential for conflict and insecurity when the "fools" will realise their folly and seek for fairness in benefiting from this industry.

## Energy Resources

The importance of fossil fuels, natural gas, and coal in global energy requirements cannot be overemphasized. However, access and control of petroleum is a key source of conflicts between many nations and between communities and multi-nationals that control the extraction. In Africa, the situations in the Niger Delta in Nigeria and to some extent the conflict in southern Sudan are typical examples of the potential implications. Nuclear energy is on the other hand a serious conflict hotspot with international ramifications. The current stand off between the United Nations and Iran attests to this.

## Mineral Resources

"Blood Diamonds" are a good example of what mineral wealth can cause as is widely acknowledged in West Africa. The Titanium mining project in Kwale District, Kenya and global concerns in trading in Uranuim further attest to the unique role of mineral wealth in global and regional conflicts and insecurity.

## People and Cultures

People and culture make up human and social capital respectively. People are important ecological resources because they are the main decision-makers on use of all other natural resources. Misuse of human resources and cultures can trigger conflicts such as the phenomenon of brain drain in Africa, North-South relationships on AID and development policies, and various forms of intellectual property rights and copyrights.

Suffice is to say that differential endowment and utilization of these resources by multiple stakeholders, having divergent priorities is the major source of conflicts in many regions of the world (Odhiambo, 1998; Desloges, 1998). The challenge however is how to try and ensure that conflicts become constructive rather than destructive factors in planning and making decisions about the environment and natural resources management.

# 8.3 Analytical Approaches in Natural Resource Use Conflicts

Analysis of natural resource use conflict is the essential first stage in the process of its management and resolution. A primary goal of such analysis is for all concerned parties to gain a deeper understanding of the dynamics inherent in their relationships. The analysis maps the conflict to determine whether or not there is a reasonable possibility for initiating an intervention to manage or resolve it (Susskind and Thomas-Larmer, 2000; Carpenter and Kennedy, 1988). There are various approaches to analyse natural resource use conflict. Further, natural resource use conflicts are diverse in terms of their effects and causes. As such no single framework can claim to fully explain them. With this in perspective, a multiple analytical framework is envisaged as a necessity in understanding the conflicts for their sustainable management. Four frameworks, namely stakeholder analysis, actor-oriented analysis, policy instrument analysis and, 'root causes' analysis are the focus of this section.

## 8.3.1 Stakeholder Analysis

This approach is based on the ideology of privatisation and decentralization of power in society. The term 'stakeholder' has been common in business

management since the beginning of the 1990s, though previously present under other terminology such as 'parties' and, 'interest groups' (Muiruri, 2002). The term implies that there are many parties with different interest in any particular resource, and that all these interests are legitimate and need to be considered. Although the term has implicit connotation of egalitarianisation and democratisation, it is in fact not usually promoted for reason of equity, but for efficient management. This analysis is a mean of increasing the decision-makers knowledge of the environment in which the planned intervention is to be made, so as to increase its chances of success (Khadka and Sharma, 1996). It does not necessarily imply 'participation' of various groups in the decision-making itself, but it does imply that some accommodation has to be made at least to interests that would otherwise be threatening to the project's success, and it could be used to ensure that the opinions of all especially the weaker groups are at least put on the agenda (Susskind and Thomas-Larmer, 2000). This approach can be applied in managing conflicts in a multiple users' resource such as a protected conservation area with variety of natural resources.

### 8.3.2 'Root Causes' or Structural Analysis

This approach is of the view that conflict can only be understood as being the outcome of deep-rooted historical and political causes. Odhiambo (1996) shows that today's conflicts particularly in Africa are largely part the legacy of the colonial era. During that time customary law was overtaken by foreign law and people were divided into administrative units to suit the colonial governments. New uses of land were introduced largely for the benefit of colonial powers, and market penetration meant new kinds of competition for land and natural resources. The recent restructuring of economies and the encouragement of free market is simply making this competition more intense (Castro, 1995).

Many, if not all, local conflicts may be as a result of much wider influences/ factors. The question, thus, is not whether, but, how to integrate an appreciation of these factors into a local conflict analysis. While people may certainly acknowledge that for example, colonial history and exploitation may have had bad effects on a given country's development, finding the linkages between this and the much localized problems of environmental disputes may seem difficult (Blaikie and Brookfield, 1987)

Another problem is that there is no one handy model or framework that would allow the systematic scanning of the evidence and categorize the findings. Most commonly, structural analyses of natural resource conflict situations are done in the sectoral way: a number of headings are made ('historico-political', 'economic', 'social-cultural', 'legal', among others), and the analyst uses these categories in explaining the origins of the conflict under consideration and in-depth knowledge of the subject area.

### 8.3.3 Actor-Oriented Analysis

This approach is of a more academic perspective than stakeholder analysis. Its purpose is to better understand resource use conflicts around planned interventions (projects), for the sake of increasing knowledge about the conflict. It is used to enhance the understanding of the dynamics of a situation in which a project is introduced, and for a more systematic understanding of the nature of conflict in general. The difference between this and the stakeholder approach is minimal, apart from the fact that the researcher sees himself/herself as being removed from the action and independent. In addition, it is mostly used after the fact to explain conflicts that have occurred, while stakeholders' analysis is primarily used before the fact as a mean for dealing with potential conflicts. This approach recognizes that even in authoritarian resource use setting, diversity is present and complex power structures operate formally/informally within it. The main aim of actor-oriented analysis is to identify and characterize differing actors' strategies and rationales, the conditions under which they arise, their viability or effectiveness for solving specific problems, and their structural outcomes (Shmueli and Gal, 2004).

### 8.3.4 Policy Instrument Analysis

The purpose of the Policy Instrument Analysis is to provide resource use policy-makers with a prediction of what the likely outcomes of a proposed policy are going to be, from analysis of how the various actors involved will react to it. If the analysis, thus, predict a poor run for the policy in terms of achieving what the policy-makers had intended, they have the opportunity to revise their draft before actually implementing it (Porto, 2002). Policy Instrument Analysis recognises that there are always multiple actors operating in an interactive process within a resource use system. These actors have various objectives, and each has powers of different types, which may be used to achieve these objectives (Salem, 1995). Its model, aims explaining or predicting both the implementation ability and the probable effectiveness of the policy to be promulgated, based on an understanding of the central circumstances, which are combinations of a particular objectives, knowledge and power of the actor involved. Once information on resource use has been assembled, the situation of the different actors can be compared and some judgment made about the likely outcome around the planned intervention.

The above four approaches should not be seen as alternatives but as complementary to each other, providing a particular way of looking at or understanding resource use conflicts. Doubtless there are other methodologies that could also be useful to the case of natural resource use conflict.

## 8.4 Causes of Natural Resource Use Conflicts

Natural resources use is susceptible to conflict because of a number of reasons; they are embedded in an environment of inter-connected space where actions by one individual or group may generate off-site effects. In a shared social space complex and unequal relations are established among a wide range of social actors (government agencies, ethnic minorities, large scale and small scale farmers, among others). Usually actors with the greatest access to power are able to control and influence natural resource decisions in their favour (Peet and Watts, 1996).

Population dynamics, considering not only population increase at the global and national levels but also its distribution, and population migration or displacement, has a determining influence on the nature of conflicts. Warfare and the displacement of populations, also, have an enormous impact on natural resource management and their use. These resources are, further, subjects to increasing scarcity due to rapid environmental change, increasing demand and their unequal distribution. The effect of resource scarcity can, either singly or in combination, produce or exacerbate conflict among groups. The historical causes include the separation of large homogeneous ethnic and linguistic groups, and the replacement of (or superposition to) indigenous resource management systems by colonial driven centralizing administrative rules and institution, foreign to the land and cultures (Chevalier and Buckles, 1999).

Further, policy, management and legal institutions are often developed without the participation of natural resource-dependent communities and without due consideration of their needs and aspirations. A good example is globalisation and liberalization of economies. These have brought about misunderstandings or confusion regarding rights to natural resources and management responsibilities, which can escalate into more intense conflicts as the number of people involved and the problems multiply. In addition, people use natural resources in ways that are defined symbolically. For instance, land, forests, and waterways are not just material resources people compete over, but are also part of a particular way of life. Cultural assumptions and values about nature, particularly about land and other natural resources, are among the firmest and the most strongly defended beliefs that people hold. In many societies, the relationship of the community with the land is at the core of its very identity. This explains for instance the prevalence of such notions like Kikuyu land, Maasai land or Kamba land in Kenya. It is also through the connection with nature that the sense of continuity and unity of present generations with ancestors and those yet to be born is maintained.

Changes in the environment, or proposals to organize, use and exploit it in different ways, often threaten the integrity of a group and its way of life. According to Ross (1995), conflicts that directly challenge a group's belief about

nature, and pit groups with contradictory core values against each other are likely to be particularly difficult to address constructively. Land resources are rarely regarded as simple resources to be put on the bargaining table. They are often imbued with sacred significance or are regarded as resources that do not come under human control and cannot be parcelled or traded. In other societies, they gain such overwhelming economic or strategic importance as to render land-use negotiations equally intractable. These symbolic dimensions of natural resources lend themselves to ideological, social, and political struggles that have enormous practical significance for the management of natural resources and the process of conflict management (Chevalier and Buckles, 1999).

A particularly insidious and destructive aspect of conflicts occurs when they remain hidden or latent, either because of cultural values or because of the unequal distribution of power and its use to repress and silence less powerful parties in the conflict situation. As noted by Sarin (1996), conflicts are embedded in the nature of communities themselves. Communities are not homogenous but differentiated by caste, class, tribe, religion, ethnicity and gender with each group often having a specific pattern of interaction with the local resource endowment. The extent to which conflicts become manifest or remain hidden or latent tends to be a function of the relative access the parties have to available institutional mechanisms for conflict management and for making their voices heard. The structure and functioning of community institutions are however often a microcosm of the existing hierarchy of power and authority, with cultural norms determining which groups are included or excluded. Also, considered in this factor, are those latent conflicts over natural resources control and use that endure through time, with only periodic eruption into public disputes. Such enduring conflicts are dynamic and often involve a range of actors who appear and disappear through time as the conflict process unfolds. Members of local communities are often keenly aware of such legacies.

Under its various forms, power, which may be political, economic or social, also including the power of information and organization, plays a crucial role not only in keeping conflict hidden or latent, but also in the emergence and evolution of conflict situations. The distribution of power among conflicting parties and the relative access each party has to it is a key factor to consider in all conflicts. It should also be noted that distribution of power is not static. On the contrary, it can evolve considerably, as the conflict situation develops, in various ways that include information gathering, networking and alliance making (Castro, 1995; Ribot, 1997; Nagothu, 1997).

Marginalisation of certain people groups also contributes to conflict. In most cases it is the women in patriarchal societies in all regions of the world, who are most disadvantaged. Due to the relative voicelessness of the marginalized, and due to

the women's subordinate position, determined by patriarchal gender relations, resource conflicts related to both groups often remain latent or hidden (Sarin, 1996).

Efforts to natural resources conflict management acknowledge the human factors that are at the origin of conflicts. Yet attitudes, perceptions, fear and the reactions they generate, including polarization and projection, are fundamental elements in the emergence of conflicts. When fear, prejudice, myths, stereotypes and reductionist/simplified versions of the others are prevailing, it is not possible to find a viable way of dealing with the conflict. Merculieff (1995) states, "fears, coupled with a lack of connectedness to (or separation) the so sacred in all creation, form the fundamental basis of all human conflicts. Understanding what this means is the first critical step towards understanding what to do to resolve conflicts". Dimensions of natural resources management are wide. Thus specific natural resources conflicts usually have multiple causes – some approximate, and others underlying or contributory.

Perhaps the most important cause of resource use conflicts is the inevitable competition for the increasingly scarce resource base. As pressure on natural resources increases, the balance between acceptable and unacceptable competition is more easily upset. The conflict that develops could range from a scuffle in a village to tank battles as has been witnessed in places like the Horn of Africa. It is important, however, to be able to analyse the interrelationships between environmental scarcity and other variables, which contribute to conflicts and disputes such as decrease in quality and quantity of renewable resources, migration or expulsion, decreased economic productivity, coups d'etat and inequitable access to basic resources.

Some authors consider conflict and competition to be basically interchangeable or treat conflict as representing an extreme form of competition. For instance, Boulding (1962) defines conflict as "a situation of competition in which the parties are aware of the incompatibility of potential future positions and in which each party wishes to occupy a position that is incompatible with the wishes of the other". Other authors seem to imply in their definitions that competition is a basic feature of conflict. Although in many instances conflict will involve competition for scarce and/ or valued resources, the ideas of "conflict" and "competition" need to be distinct, because there are other factors as well, which may lead to conflicts.

When many beneficiaries use the same resource, it usually becomes a common property. Tapping a common property resource will tend to deplete it too rapidly; users lose the incentive to conserve. Resource degradation and conflict in resource use especially in developing countries while incorrectly attributed to common

property systems intrinsically, actually originate from the dissolution of local level institutional arrangements whose very purpose is to give rise to resource use patterns that are deemed sustainable when local level institutional arrangements are undermined or destroyed.

What were common property regimes gradually convert into "open access", in which the rule of capture drives each group to get as much as possible before others do leading to the tragedy of the commons (Hardin and Baden, 1977). Important to note is that common property ironically represents private property (since all others are excluded from use and decision making), and that individuals have rights and duties in a common property regime.

The actual or perceived causes of conflict obviously may impact upon its subsequent course, though undoubtedly in complex ways. Rarely of course, do we expect members of even an aggressive party to blame themselves for the initiation of a conflict. Instead, they are likely to cite "historic" grievances such as the occupancy of territory rightfully belonging to their own peoples or, even perhaps, continue exploitation by the other party (Blalock, 1989). Even so, the initiation or onset of conflict may be much more crisp in some situations than in others, making it more plausible to place the blame squarely on the shoulders of the opposing party.

## 8.5 Responses to Natural Resource Use Conflict Management

A wide range of approaches and tools to deal with natural resource use conflicts exist. They include the mechanisms developed by communities themselves and also a range of approaches and tools developed or adapted by professionals in natural resources management and conflict resolution specialists. Some of these approaches are presented under the label of conflict management and others under dispute resolution. Some aim at preventing conflicts, others at resolving open disputes, while still others inventory and classify conflict occurring in the communities.

### 8.6.1 Indigenous Approaches

According to Castro and Estenger (1996), communities have not only developed ways of dealing with conflict, but continue to adapt these mechanisms as new situations arise. The mechanisms may be formal or informal, violent or peaceful, equitable or not. While specific mechanisms vary, communities rely to varying extents on the same basic procedural modes to handle disputes: avoidance, coercion, negotiation, mediation, arbitration and adjudication.

While various approaches and tools are fully recognized as part of the array of techniques of conflict management, indigenous knowledge and traditional skills

are not specifically acknowledged and as such are rarely applied by conflict management specialists. It is crucial for people engaged in natural resource management to understand and to formally recognize the role that local institutions play and the mechanisms used to deal with conflicts within and between communities. Besides being rooted in traditions, such traditional institutions and mechanisms are also flexible, readily accessible and locally recognized. It is also essential, however to recognize the limits of the applications of such mechanisms, particularly when they exclude or prejudice some segments of local populations, when they ignore or avoid dealing with certain types of conflicts (such as those which are interest- or identity- based) and when they contribute to create latent conflicts (such as a situation where people know they are being oppressed but they cannot voice their concern due to fear of punished or victimised).

There is still much to be learned from indigenous knowledge. Many indigenous skills arising from traditional wisdom are used daily to deal with conflicts but are not known outside their immediate area of implementation, simply because they are efficient in preventing conflicts or addressing them before they reach crisis proportion as a result, they are drawn attention to. Contemporary pressures induced through population movement, globalisation, liberalization and market economy have considerably eroded the authority of local institutions and the efficiency of traditional conflict management mechanisms. As new actors enter the scene, the issues at stake become broader in scope, and different kinds of conflicts emerge.

### 8.6.2 Conventional Approaches to Resource Use Conflict Management

According to Priscoli (1996), the main resource use conflict resolution techniques can be placed on a continuum comprising six main categories: Informal procedures, cooperative decision making, third party assistance with negotiation or cooperative problem solving, third party decision making, non-violent coercion and war. Most of these have some elements of relationship building, procedural assistance, substantive assistance or advice giving as a means of facilitating resolution, but they differ significantly in degree and emphasis. As the conflicting parties increases, the power and authority to settle the conflict is gradually handed out to outside parties. With assisted procedures, the facilitator and/or mediator seeks to encourage a primary and direct communication pattern between the parties and the arbitrator, panel or judge.

The 'alternative conflict management' approaches described by Pendzich *and* Wohigenant (1994), belong to this first group. They refer to a variety of collaborative approaches that seek to reach a mutually acceptable resolution of the issues in a conflict over resource use through a voluntary process. In this way, the parties in resource use system can jointly analyse problems, create alternatives and own

agreements. The voluntary problem solving and decision-making methods most often employed in alternative conflict management are conciliation, negotiation and mediation.

In many developing countries, such as Kenya, legal approaches and processes to resource use conflict management were inherited from the colonial governments. These had been superimposed on or replaced (or tried to replace) traditional mechanisms. Carbale and Lynah (1996) noted that resource use management systems and mechanisms tended to favour the rights of political and economic elites over those of the local communities. This has continued to intensify resource use conflict between and among the local communities.

Legal systems and policies on natural resource management that recognise and reinforce community-based rights and management systems contribute towards reduction in the frequency and intensity of conflicts. They also create a more favourable environment in which to pursue sustainable management of natural resources. In most developing countries local communities are not major players in the legal arena, as a result, their interests are still largely marginalized in national laws and judicial decisions pertaining to natural resources management.

# 8.7 Critical Conflict Structures

To effectively manage resource use conflicts and indeed all other kinds of conflicts, an understanding of their structures is inevitable. Some critical elements on conflict structures, their analysis and how they influence conflict resolution are outlined below.

### i. Interdependence
Conflicts occur only between parties who need each other. The stronger the parties are interdependent, the higher the costs of not resolving the conflict and vice versa.

### ii. Number of interested parties
Complexity of conflict resolution increases with the number of interested parties. Note the multiplicity and divergent interests and priorities. e.g. current looming conflict on the Nile waters.

### iii. Constituent representation
Dealing with people directly affected and involved in conflicts is easier than dealing with intermediaries. For instance any negotiations on lake Victoria and Nile River waters must include all East Africa countries, Egypt, the Sudan and Ethiopia.

## iv. Negotiator authority
If the negotiators authority is low, the process of resolving conflicts will take longer and will be more difficult. All negotiations must have authority to make binding commitments.

## v. Critical urgency
Critical urgency occurs when any delay in resolving the conflict would pose immediate negative repercussions. The greater the critical urgency the less likely a consensual solution will work.

## vi. Communication Channels
Same-time, same place dialogue nearly always produces far better solutions than lesser communication channels like use of letters, email, telephone etc. (Especially in relationship related conflicts).

*Possible Conflict Analysis Worksheet*
This approach entails circling the number that best describes the conflict in question along the conflict structure elements indicated.

## A. Interdependency
1. = low (parties need to interact occasionally to get their jobs done)
2. = medium (parties interact frequently to exchange information or resources)
3. = high (parties interact daily and have a high need for voluntary cooperation to do jobs satisfactorily).

## B. Number of Interested Parties
1 = two parties
2 = three parties
3 = five or more parties

## C. Constituent Representation
1. = none (each party is an individual who is not negotiating on behalf of others)
2 = one or two conflicting people are being represented by third parties
3 = several other people constitute an identifiable team or group that is being represented by individuals who are directly involved in negotiations
7 = a large disorganised group is being represented.

## D. Negotiator Authority
1 = absolute (parties do not need to get prior approval from constituents to make compromises with other parties)
3 = high (parties may make compromises with confidence that constituents will agree)

5 = low (parties may offer compromises but need to check with constituents for approval).

7 = none (parties can only deliver messages from constituents)

### E. Critical Urgency

1 = none (current situation although not desirable can continue indefinitely without causing great harm)

2 = urgent (a solution must be reached in the next few days)

6 = crisis (a solution must be reached immediately, in the next few minutes or hours)

### F. Communication Channels

1 = parties can meet face to face (same time, same place)

3 = parties can meet only by telephone (same time, different place)

5 = parties can only write asynchronous messages (different time, different place).

Analysis of results involves the summation of all encircled numbers. The lower the sum total, the more likely it is that the conflict could be resolved by people directly involved by using the mediation tools available. Similarly, the higher the sum total, the more likely it is that one may need a professional mediator to resolve the conflict satisfactorily. As such large total represent complex situations that would naturally demand a lot of skill in their resolution.

## 8.8 Role of the Mutual Gains Approach to Negotiations in Eco-Conflict and Environmental Security Management

Some methods (Tools) of Conflict Resolution that have been used in various parts of the include military action (occupation, pre-emptive strikes, direct involvement to stop conflict); mutually Guaranteed Destruction (MGD) has prevented nuclear powers from engaging each other in war such as was the case during the cold war period; facilitating democratisation processes; human rights monitoring and activism; using development aid as a tool to enhance peace; use of legislation; and use of negotiations. The advantage of negotiations lies in inherent objective of pursuing and building positive relationships between conflicting parties. This fits in quite well in the African social system where relationships are still culturally strongly valued.

As such the Mutual Gains Approach to Negotiations (MGAN) would be very appropriate. In this approach, all conflicting parties are expected to appreciate their inter-dependence on the resource in question and pursue the "common good" in negotiation on a win-win approach. The hypothetical point of convergence (common good) designated S in figure 8.1, also represents the hypothetical point of sustainability.

The location of the point of sustainability within the pyramid (or the length of the arrow) is indicative of the degree of flexibility in negotiations on the part of the concerned stakeholders. The nearer (S) is to any apex of the pyramid, the more rigid the stakeholders represented by that apex. For instance the potential conflict on use of lake Victoria water would require Egypt, Ethiopia, East Africa, and the Sudan to agree to negotiate and reach a win-win scenario on how to use this natural resource. A negotiated agreement (Table 8.1) could be signed under the watch of the international community as mediator and guarantor. In this way, war and hence the tragedy of the "tragedy of the commons" could be avoided, as the "blessings of commons" is enhanced. The stages and key elements in MGAN are summarized below.
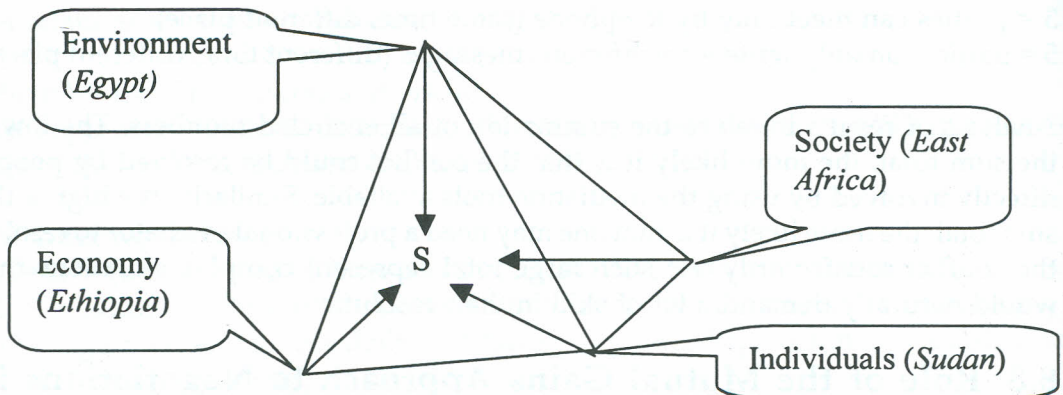


Figure 8.1. Illustration of the sustainability pyramid

## 1    Preparation

Before any negotiations commence, all stakeholders must adequately and independently prepare themselves. Each category of stakeholders must among others:

- Clarify their mandate and define their negotiation team
- Estimate their Best Alternative to Negotiated Agreement (BATNA)
- Be prepared to improve their BATNA if possible.
- Know their interests and think about other stakeholders' interests
- Prepare to suggest mutually beneficial options

## 2    Creative Value

At this stage it is assumed that all prepared stakeholders meet on the negotiating table to openly and freely hammer out an agreement. At this stage attempts are made to:

- Explore interests on both sides and suspend criticism
- Invent options without committing
- Generate options and packages that make the Pie larger (the Pie represents the resource in question such as the example of lake Victoria in this section (Table 8.1). Note the increased number of benefits from irrigation water to tourism.
- Use neutrals to improve communication

## 3   Distribution of Value

Assuming that stage two has been finalized, what follows is how to share (distribute) "cake", which could be a natural resource, political power, jobs etc. This process must involve among others:

- Discussion of the standards/criteria for dividing the "cake"
- Behaving in ways that built trust and use neutrals to suggest possible distributions
- Designing self-enforcing agreements
- A legally binding Memorandum of Understanding (MOU) to reinforce commitment may be necessary.

## 4   Follow-through

After agreeing on the distributions, monitoring of the agreement is necessary to encourage sustained commitment. To do this the stakeholders must:

- Agree on monitoring arrangements and make it easy to live up to the commitments
- Align organizational incentives and controls to enhance commitment
- Keep working to improve relationships (lubricant for partnerships, collaborations etc.)
- Agree to use neutrals to resolve disagreements

**Table 8.1. Hypothetical sharing agreement of lake Victoria water resource (%)**

| Country | Irrigation water | Energy | Fishing | Tourism |
|---------|------------------|--------|---------|---------|
| Kenya | 15 | 15 | 30 | 20 |
| Uganda | 10 | 50 | 30 | 20 |
| Tanzania | 15 | 10 | 40 | 20 |
| Ethiopia | 10 | 10 | - | 20 |
| Egypt | 30 | - | - | - |
| *Sudan | 20 | 15 | - | 20 |
| Total | 100 | 100 | 100 | 100 |

* Egypt would for example commit itself to compensate drought prone countries like Kenya for the huge amounts of water allocated to it by helping such countries to explore and develop other water resources such as underground water.

Other cases where he mutual gains approach to negotiations could be instrumental in peace building include among others:

♦ Current constitution review impasse in Kenya
♦ Recurrent human-wildlife conflicts in Kenya
♦ Frequent industrial actions by employees in various firms
♦ International conventions, treaties, pacts etc. towards environmental sustainability
♦ Political settlements such as is the case today in the Sudan and Somalia crises
♦ Africa's debt burden and international trade

Since eco-conflicts are worldwide problems that stem from differential endowment with natural resources, states should manage their natural resources in the best interest of its people as priority. Current conceptualisation of national and territorial sovereignty includes ownership and control of national natural resources.

## 8.9 Conclusion

There exists, thus, a wide range of approaches and tools to address natural resource use conflicts. It is important, however, to stress that there is no single recipe or magic formula applicable to all conflicts. Each conflict is a unique situation, involving real people with their real interests, needs, aspirations and feelings. It is an element of social dynamic that cannot be reduced to a mere problem in need of a technical solution. Conflict management, therefore, cannot be restricted to the blind implementation of ready-made programmes/tools by an external agent. Similarly, although interventions are inevitable in conflict

management, they too can become obstacles to conflict management when used without genuine commitment to communication, participation, change and equity.

## 8.10 Sample Questions

i. Critically examine the cause and consequences of resource-use conflicts in Africa.

ii Explain your understanding of "Africa's Resource Curse Concept" and its implications on sustainable development.

iii Using practical examples, explain the relationships between the environment and national security

iii. Explain how the Mutual Gains Approach to Negotiations could be employed to solve a selected resource use conflict and environmental insecurity in Kenya.

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