
Climate Change, Regionalism and Development: Perspectives from East Africa

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FORWARD

When thinking of a topic to write, and compile the theme into a book, much of the complexities happening around Kenya were an intriguing point of analysis. A look at the political instability of East Africa as a bloc (at the time of this writing) makes one develop speculative responses on self perplexing questions of development, degradation and sustainability. Many are left out of this simple realm of thought, and they cannot understand the happenstance that has stolen their integrity as a people, they cannot understand their input to the on going process, they find themselves irresponsible a right, a good practice and that the government should be responsible to them and the demands that they live to develop. The state centric attitude and attitudinal blame challenges autonomy, creativity and innovation. The citizens remain dogmatic, traditional and their ethical concepts (if at all they have any) are not changing with time. They are there to be served, are in a mix-up of surprises and are developing trends that are not critical enough to understand their own livelihood.

This book is a response to the dilemmas of the ordinary individual, who, though educated, lacks the elementary coordination of his own thoughts to be able to manage his own environment, he is highly superstitious to the extent that he becomes afraid of his own actions. He cannot accept responsibility and has resorted to the blame game.

As you read through the chapters, you will discover that the opinion natured structure of this book is not only informative, but also a call for involvement. The author has tried to address key issues in life and has based his analysis on East Africa as a case study region with hopes that the concepts so developed, the problems identified will steer up an approach towards having a workable thesis on not only ecological ethics, but also economic ethics.

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Ad Hoc Working Group on Long-term Cooperative Action under the Convention (AWGLCA), Closing Plenary in Bangkok, April 2008.

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Introduction to EEIU Nabuur Book 1

When the EEIU Nabuur board approached me to edit the book that has since been seen as more secular but ethical in all odds. I accepted the challenge. And to my surprise, there was little to change, having read the EEIU Brochure several times, I was swallowed into the slogan, “Everything goes, everything changes and only traditional ethics is not open for criticism”. Very well related in the chapters of this book (as you will discover in your own reading) Adhengo has attempted to bring an interactive stance where he unites politics as a way of life to the challenges that are in need of ethical indulgence.

EEIU Nabuur is more of a secular organisation that serves as a regional office for EEIU Initiatives within East Africa. This arrangement has been possible through continuous consultation with chapter members in Tanzania (Morogoro) and Kenya (Nabuur) from where we found it cheaper to progress as a bloc, have similar projects and develop common business policies. As such, we will be involved in continuous publications

Eco Ethics is a necessary and key activity of an effective preservation program, whether economical or environmental. **Climate Change, Regionalism and Development: Perspectives from East Africa** has been written to provide background on standard ethical practices, give guidelines for selecting appropriate ventures for good eco ethical projects, debate climate change, and introduce EEIU members (Nabuur in particular) to the elements of regional eco ethics. Not included is an in text bibliography of sources used in preparing this manual due to introductive measures put in place to see the material develop. We thus hope that later editions will have proper referencing for your consideration. However, we presume that the language is suitable for East African understanding, and a rich source of information to those who wish to support EEIU Nabuur endeavours of uniting Kenya/Tanzania to an endless discovery of ecological issues.

I have purposely ignored a chapter to chapter introduction, just to keep you in suspense. But would like to let you know that great efforts have been involved to see this book available to you, our audience and esteem supporters, as a reference point on how innovative reading, perplexing development and stable unity can result into information. I would like to take this opportunity to encourage all other chapters within Eco Ethics International Union to develop books.

Others will wonder how a book written by Boaz becomes edited by Ruth. Could we say fate or could we say history has more to offer. We are not biblically fulfilling any prophecies or maintaining any uniformity, but it so happens that we are chairs and colleagues in the same company, that is, the EEIU Nabuur/Morogoro, best understood as the Project Nabuur Initiatives or in short, the COMPANY.

Ruth Kithei♥

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1. THE ART OF ECO ETHICS

When debating issues of ethics, it is important to keep in mind the need for a concert of ideas, that no traditionally accepted norms or values can stand the test of time, and as Kinne (2002) puts it, everything goes, and everything flows within an ecosystem. Change is inevitable.

The nature of man makes it impossible to predict a collective behavior without considerations on agreement, or the individual consent to be organized. Man by himself is egoistic, self-centered. But also, man by himself cannot achieve a stable solution to his problems. It becomes impossible not to interact with others of his kind, and it becomes a practice that interdependence must be put as a virtue. Development is the ultimate goal, and a collective approach to this initiative, is, if I may say, the force that unites men and women in concert for livelihood and better understanding of themselves.

As men and women agree to organize themselves into a society, they create channels of interdependence and this is maintained by agreed rules that constitute symbolic elements of culture, transcendentalism and virtue. They agree on definitions of good acts and strangely strife for mutuality on what is really wrong. Those individual perceptions of good and bad are concerted with the aim of developing a collective understanding of right and wrong.

Morality is therefore the practice of individual good for the benefit of self, protection of dignity and projection of self image. On this view, everyone has some moral perspective; the judgment is usually pillared on the nature of the society itself. This is why it is continuously becoming a problem for the individual to understand the consequences of his actions to others. He feels discriminated when resistance is put to his similar actions and he feels frustrated when his morality is not respected. But, what therefore becomes right and who decides on this task.

Fundamentals of Morals

The existing self interest as a specific nature of man makes interactions between men chaotic, as everyone believes that his view is the best understanding of reality. Survival becomes a tactful act, as protectionism develops to be the ultimate goal of interacting. The isolative practices results to dogmatism, weakness and ultimately extinction. The only way to survive remains a concert of interests, where individuals represent themselves as elements of the environment, they strife to be defining actors of the ecology, to describe the systemic mechanisms that makes them a unique environment. This, they do without intention; it is a natural way of livelihood. Life becomes short because everyone is for himself, dependence is a suspicious practice, life becomes chaotic because there is no mutual agreement on the methods of living and the environment is brutish, there is a mixed understanding of right, there is no wrong acts, everyone is developing according to his appetites. Terms like greed have no meaning and so is ethics. Everything goes and everything flows. There is no common tradition of ethics, the only tradition is survival.

Apart from being self centered, the other quality of man is innovation. There comes a time that better ways of survival needs to be developed, as the society grows naturally (through multiplication) so does the complexity of its problems. The appetites of man remain constant but the resources are no longer diverse. Sexual needs could be satisfied in the same way the animals

behave, no clear – cut on partnership. But as more boys than girls are born, it becomes obvious that competition for sexual satisfaction will be inevitable. As others satisfy their sexual appetites, others are left in misery.

The same goes to a society that develops to have more women than men. The woman becomes the dominant figure in the household, responsible for making decisions, bringing new borns and even feeding the society. The man becomes so precious that ways of containing his desires must be a daily agenda or else, some other woman might do it better.

All in all, innovation is a general quality of mankind, that his tactics of survival permits him to have originality. And with this, he gets to be organized on how to proceed with his practices that in time turn to be personal duties. However, it is important to understand that innovation and self centeredness as independent qualities of man continuously define his nature to be extremely suspicious of others. It comes a time when brutality of the society meets its match that the complexity of our suspicion results in creating defense systems as an addition to our tactics of survival. Just as satisfying sexual desires becomes need – based (no consent) depending on the might (of either woman or man), so is the trend with other practices of life. There becomes a more need for private property, and this becomes a genesis of organized behavior. What is right is measured by its consequences on property. Politics becomes a way of life and protectionism takes a collective approach.

Thus, innovation, self centeredness' and private properties are the practices we live with. Just as the environment was chaotic when everyone was for himself, organized societies replicate in the same basics. Rewards and punishments become tactics of maintaining cohesion in a society, dictatorship becomes the norm and suppression of appetites becomes the end result.

I say that suppression of appetites becomes a practice of leadership because the individuals are coerced, they are less innovative to defend themselves and they have become victims of a mighty individual who enjoys the benefits of his innovation. He can dictate others, he can satisfy his sexual appetites without delay, he can satisfy his anger and he can never claim to be hungry. His wrath becomes a vice and his happiness becomes the virtue of the society, his subjects. He turns to be a model of life and new borne grow to admire his stance. They want to be like him, they want to become him, and they want to have it all.

This, to me, is the beginning of reason, the genesis of collective action and the foundation of morals. Individuals who have their appetites oppressed will bridge their views on what is right, they will agree on what is wrong and they will put in place a system to enable them have a collective satisfaction of their appetites. This will be the end of coercion, it will be the beginning of consent and it will be the foundation of societal ethics. Satisfying sexual appetites will no longer be a matter of need, it will require strong reasoning as to why these appetites should be satisfied, more rewards might be demanded and less punishments would turn out to be the case. Consent to become organized will result to subsidiarity and as more innovations continue to become, reason will be the defining character of man. How best you can think will be witnessed on the tactics of persuasion and not coercion.

Ethics is basically defined to be a collection of morals, uniting in a common goal and interpreted with the logical tools of a society. There is a clear difference between morals and ethics, morality is an individual act while ethics becomes a collective act. The fundamental aspect of morality is that it is need based, tends to be static and resists change. Although morality forms a basic part in defining ethics, I must say that ethics is a concert of moral perspectives.

Living an ethical life:

As I have said, it is impossible to talk of individual ethics simply because of the level of analysis. At the individual level, we can only talk of the impacts of ethics but not the development of ethics; we can nevertheless talk of ethical practices. At the societal level, likewise, we cannot talk of morality, we have to view issues in a collective perspective, we have to develop all inclusive view of reality and we have to permit a concert of ideas, everything goes and everything changes. We have to be based on consensus and at some times, we have to be coerced (in areas we have little knowledge).

Life experiences differ according to space and time. As we grow older, our preferences change, our knowledge on issues becomes diversified and our relation to others becomes more specific. We simply understand our position in the society, we simply understand our needs as individuals and we develop a respect for the social structures that sustain our well being as a human species. Our imagination is moral based and our morality is put on check by the ethical norms that we have developed as interdependent individuals of a society. We realize the need to support one another and we realize the need to protect our immediate environment without provocation of our partners in other segments of the planet. All these, become possible when we agree to reason.

Reason is the ability of the mind to generate preferences that determine our specific actions. It is the ability to organize our views in concert with those of others in quest for a stronger understanding of reality or occurrence of events. This ability is what differentiates humankind from other species, that we can think in concert with other species in our ecosystems.

As much as traditional ethics is important (in organizing humankind, developing critical thinking), there comes a need of diversifying ethics, so that we not only concern ourselves with human beings, we need to develop better systems of reasoning that results into constant research for a peaceful co-existence with nature. As much as man has evolved to accept that certain appetites can be surpassed only with a concert of ideas, so must we use the same approach to perfect certain ethical practices, not that they are becoming irrelevant, but that they are not all inclusive of the recent discoveries.

Living an ethical life requires that man develops a peaceful co-existence with other species; it requires that man takes the charge of sustaining, not only himself, but all the ecosystems on this planet. Living an ethical life will require a multidimensional approach to issues, an ethical life will require a detailed research on many of the things that we have not yet discovered, and an ethical life will require a basic approach. It will require deep innovation, a planetary approach to freedom and it will be in need of letting everything grow and everything flow, we must not alter the natural system of life. We must protect those species that we are putting in danger through our human induced practices. We must think of ethics in a planetary view. We must on look the

consequences of our actions on this planet as protective or projective, do we represent other species in our ethical decisions or do we only represent ourselves? This is why eco ethics will require an artistic approach, it will require more imagination and it will depend on our sympathy, not for ourselves, but for other species that we are putting at risk. That is why climate change, a human induced phenomena, will be highly consequential, not only for we humans, but for other species as well. Am told, at a recent outreach by the Institute for African Ecology and Philosophy, that there are some birds that are facing extinction, there are some plants that are phasing out. All because our understanding of ethics is not imaginative enough, not creative enough and not inclusive of others with whom we share this space.

Which Way Forward

The only way forward is to recognize the importance of art, the importance of concert and the ultimate role of subsidiarity of the human species in its dominant practices that ruin earth. Human societies are dynamic; most change in many ways and at increasing speed (Kinne 2002) where ecological dynamics form the cradle, motor and directive force of life. Humanity can only survive with a new concept of ethics, the eco ethics – a construct that extends beyond the narrow and self-centered world we have built for our immediate ends. We need a construct that can grow, adapt and mature in concert with nature and humanity, and that is open to change, development and critique. This artistic approach to ethics gives a laudable possibility of taking the lead in implementing the generally good virtues that can sustain our ecosystems.

That as much as art is an imaginary way of focusing our thoughts, a created reality within ourselves, it can best be described as a strategy. Hence, talking of arts would have the same meaning as strategizing the latter being more diverse while the former being passionate; based on emotions.

When we talk of the ‘Art of Ecological Ethics’, I simply intend to imply the strategies we have in adapting if not transcending the best ecological practices we have developed over time. Art becomes the easiest way to represent our ethical concerns, it best positions our intentions from past to future and it glances at our immediate perspectives of life on earth, whether in concert with other species or as humankind.

We must develop our own meanings of eco ethics, and these meanings must be pragmatic, situational and stable. We must involve others in understanding the meanings we develop about eco ethics, we must open ourselves for criticism and it is only through these artistic approach, that perfection of our ideas results to be of benefit to nature.

Other people may wish to argue that we live in a world that was perfectly created by God, and all the happenings were part of His intelligent design, that our behavior in this planet does not matter, we only need to survive as human beings, we only need to concern ourselves at the ethics of humanity. I would argue in contrast to this, that this perspective is unscientific, too religious and has no place in the real world. The only superior value we have as humankind is that we are conscious of our actions. As conscious animals, we think of knowledge as something that we consciously know. A zoologist might see knowledge as facts that are useful for survival and reproduction, whether or not they are known to mind. A good example or art is the products of

our activities as species of the earth, a spider develops a web and a fisherman develops a net. These are tactics of survival; they are artistic expressions of our intentions as different species and are subjects of interpretation, not as knowledge, but as actions within our ecosystems. Eco ethics needs such symbolic tactics to make it integrative, it needs transcendentalism to make it stable, it need not be a source of knowledge but logically, it can form part of our ways of living. A spider doesn't know how to make a web as a fisherman knows how to make a net. Spider genes are a recipe for legs, muscles and spinnerets, together with the brain whose artistic diagram causes it to manipulate muscles in such a way that a web automatically results. The spider – presumably- knows nothing of webs any more than the humankind knew to build itself during the nine months of unconscious gestation. We can therefore not talk of our being in this world as intelligently designed simply because we have no passions in its wonderful aesthetics, simply because our understanding of science is limited. We must see everything as being in a constant change and we must see each species struggling for its survival, in their different ecosystems. The only passionate call is to involve art, to interpret ethics of our ecology in an artistic way, which will be an all inclusive approach. We need to be able to create our own meanings of life, we need to develop our own understandings of eco ethics and we need to develop better concepts that describe eco ethics. We need to be enlightened, to emancipate from this self imposed tutelage. We need to broaden our intelligence by concerting ideas, we need to test ourselves scientifically and we need to improve the general solutions to the existing problems. We will not be rescued by any god, we will only be rescued by our improved understanding of life, our improved perception of ethics. We need to break from any dogmatic perspective, we need a secular approach to reality, we need to take charge as human beings, the custodians of this planet; we need to develop appetites for art, we need to be creative and we need not forget our past experiences. And that is why I have a declaration that would be worth to share, that: "As secular humanists, we believe in the central importance of the value of human happiness here and now. We are opposed to absolutist morality, yet we maintain that objective standards emerge, and ethical values and principles may be discovered, in the course of ethical deliberation. We are committed to the uses of the rational methods of inquiry, logic and evidence in developing knowledge and testing claims to truth. We believe the scientific method, though imperfect, is still the most reliable way of understanding the world. Hence, we look to the natural, biological, social and behavioral sciences for knowledge of the universe and man's place within it. We appreciate the great benefits that science and technology can bring to humankind, but we also recognize the need to balance scientific and technological advances with cultural explorations in art, music and literature."

Further Reading

1. Otto Kinne (2002) Eco Ethics Further Developed: text 01.05.2002, EEIU Brochure, Oldendorf/Luhe, Inter – Research.
2. www.eeiu.org/chapters/nabuur/reports.html

2. Developing Eco Ethical Concepts and Creating Your Own Meanings:

One thing commonly agreed by many when asked to define freedom, is that it embeds the ability to make independent choices, have personal interpretations but relate well with commonly perceived norms of the society. We are therefore entitled to think in any way we can, but our actions must conform to the rules that define our society to be what it is.

With this in mind, we will also agree that different societies will tend to behave in different formalities, and freedom will endeavor to become relative with our indulgence in different societies.

In attempting to debate this topic, I am intrigued to use Emmanuel Kant as the key philosopher, whose ideas are worthy of this stance, how we behave, how we perceive ourselves and what we mean when we claim to know different consequences of our actions.

The central idea in Kant's conception of enlightenment is that of submitting all claims to authority to the free examination of reason:

Reason depends on this freedom for its very existence. For reason has no dictatorial authority; its verdict is always simply the agreement of free citizens, of whom each one must be permitted to express, without let or hindrance, his objections or even his veto.

By this means, authority deriving from reasoned agreement among individuals, each relying on his or her own independent judgment, is gradually to displace authority deriving from tradition, status, office, or might, in both theoretical and practical matters. The form of this public encounter is critique:

Our age, is in especial degree, the age of crisis [kritik], and to criticism everything must submit. Religion through its sanctity, and law-giving through its majesty, may seek to exempt themselves from it. But they then awaken just suspicion and cannot claim the same respect which reason accords only to that which has been able to sustain the test of free and open examination.

“Nothing,” insists Kant, “is so important through its usefulness, nothing so sacred, that it may be exempted from this searching examination, which knows no respect for persons.” This holds for reason itself: only through a sustained critique of reason can we ascertain its “lawful claims” and reject all “groundless pretensions”.

Paul Ricoeur (1999) in a book edited by Richard Kearney and Mark Dooley has argued that memory constitutes of knowledge of past events, or of the pastness of past events. In that sense, it is committed to truth, even if it is not a truthful relationship to the past. This, therefore, makes it possible to speak of an ethics of memory. Memory has the aspect of knowledge and the aspect of action. Whatever we do within our specific environs translates into memorable consequences, and when we develop criticism of our actions, we gain insights into debating the moral personalities amongst ourselves. Concepts of ethics become a collective significance resulting from collective actions that are memorable, not by a single individual, but by a group. And that is why we are able to describe our memories as ethically fit or morally correct; they are products of the mind from whence we derive knowledge and from where we record our actions. But as

anthropologist have traditionally defined the nature of man to be social and political, interdependence of our actions, whether illicit or laudable remain a personal challenge that we must enlighten ourselves if at all we will be able to have independent ethical perceptions that are commonly enjoyed. Politics is conceived as the reflective form of substantial ethical life, namely as the medium in which the members of somehow solitary communities become aware of their dependence on one another and, acting with full deliberations as citizens, further shape and develop existing relations of reciprocal recognition into an association of free and equal consociates under law.

Karl Ameriks (2005) has highlighted some of the works of Immanuel Kant and in a phrase “the content of the ideas is determined by ordered variations of the idea of something unconditioned, an idea that comes from making the general logical maxim of reason, namely to seek to the condition of any particular conditioned judgment, into a real principle so that a unity [of reason] is brought to completion. One thereby assumes that if the conditioned is given, the whole series of conditions...which is therefore itself unconditioned, is likewise given, that is, contained in the object and its connection (A308/B364)

The same interdependence between using ones own reason and reasoning in concert with others is stressed in Kant’s account of the maxims of common human understanding in the Critique of Judgment: the first maxim, “to think for oneself,” is balanced by the second, “to think from the standpoint of everyone else.”

Prof. Otto Kinne argues that traditional ethics tend to resist change and to be static; they are one-sided and focus on a single life form among millions – humanity. Thus to be able to meet the immense tasks confronting modern humanity, we need a new ethical concept – a construct that extends beyond the narrow and self-centered world we have built for our immediate ends. We need a construct that can grow, adapt and mature in concert with nature and humanity and that is open to change, development and critique. And this unites with Immanuel Kant’s maxim on judgment, which we need to think from the standpoint of every other species as well as from the stand point of our species.

Elsewhere Paul Guyer(2005) argues in his interpretation of Kant’s teleology, that there are aspects of our experience of nature that make it necessary for us to conceive of nature as purposive in a way that is also sufficient for the satisfaction of morality’s requirement that its own ends be realizable in that nature. That Kant argues that we can only conceive of particular laws of nature – as members of a system of such laws, and that we must conceive of such a system as the product of an intelligence similar but more powerful than our own, although of course we can have no knowledge of the existence of such thing. The meaning of life is not to be found in a secret formula discovered by ancient prophets or modern gurus, who withdraw from living to seek quiet contemplation and release. Life has no meaning per se; it does, however, present us with innumerable opportunities, which we can either squander and retreat from in fear or seize with exuberance (Paul Kurtz 2004). The meaning of life is in the present moment of experience as it is brought to fruition, as well as in the delicious memory of past experiences and the expectation of future ones, that the richness of life is exemplified and realized. The meaning of life is that it can be found on its own terms for ourselves, our loved ones, and other sentient

beings. It is found in the satisfaction intrinsic to creative activities, wisdom and righteousness. One doesn't need more than that and hopefully one will not settle for less.

We create our own conscious meanings; we invest the cultural and natural worlds with our own interpretations. We discover, impose upon and add to nature. The meaning of life is tied up intimately with our perception of our ecosystems, our ethical interdependence; it is tied up intimately with our plans and projects, the goals we set for ourselves, our dreams and the successful achievement of them.

Human beings have found their meanings within the context of a historical cultural experience, and in how they are able to live and participate within it. Life, when fully lived under a variety of cultural conditions, can be euphoric and optimistic; it can be a joy to experience and a wonder to behold.

The optimal way of solving political and social questions is to rely on the method of intelligence. Though the content of our political programs and policies may vary, the methodology of critical intelligence is the most reliable guide to social action. We have obligations both to present and future generations; and to the preservation, enhancement, and well-being of all life on the planet Earth. It is time we turn away from the ancient dogmas and doctrines of the past, and reach out to a new future. Using science, reason, and free inquiry blended with empathy and caring, it is possible to build a new civilization not mired in the false illusions spawned in the infancy of the race. This points to a new global culture to which common moral decencies, ethical excellences and exuberance can contribute. Eco ethics can help humankind achieve a new stage in planetary development.

Alasdair MacIntyre (1999) maintains that the enlightenment is an historian construction. Here, the most canonical text was and is Kant's *Beantwortung der Frage: Was ist Aufklärung?* Of 1784. And Kant's text has of course had its heirs and successors, most recently Foucault's of 1984, whose title repeats Kant's *Was ist Aufklärung?* ('What is Enlightenment?' in the Foucault Reader, ed. P. Rabinove, New York: Pantheon Books, 1984).

Both Kant and Foucault defined enlightenment as primarily a task, the task of achieving a condition in which human beings think of themselves rather than in accordance with the prescriptions of some authority. For Kant in 1784, such reasoning in the sphere of morality requires the adoption of the standpoint of what he took to be universal reason, a standpoint independent of the particularities of kinship and political ties, one's culture and one's religion.

Foucault in his 1984 essay asserted that the task set by Kant embodies attitudes towards the relationship of past to present, towards practical enquiry into how we are constituted as moral subjects of our own actions' (op.cit.,p.49), that we still need to make our own, but we must now do so without the hope of being able to 'identify the universal structures...of all possible moral action' (p.46). It is instead through investigating our contingency and or particularity that we will become able to test those limits that we must transcend, if we are to become free.

Kant's essays on enlightenment, perpetual peace, the contest of the faculties, and the theory and practice make it clear that the value of public scholarly debate is lost if the realm of judgement

passes over into the realm of action. In this sense, political judgement of the philosopher is parallel to the aesthetic judgement, which can demonstrate the good without being able to put it into practice and which is fundamentally disinterested.

Wayne Waxman (2005) has quoted an argument from Locke regarding the signification of words, “that words in their primary or immediate signification, stand for nothing, but the ideas in the mind of him that uses them, how imperfectly soever, or carelessly those ideas are collected from the things, which they are supposed to represent. Thus in making plans for action, one thing a sensible person seems to do is inquire what things (events, states of affairs) he or she wants, not as a means to something else, but just for themselves (Richard Brandt 1996:12)

Malachi Haim Hocoohen (2000) argues that Karl Popper had limited knowledge of German intellectual life, and in this, he misinterpreted not only Hegel but also contemporary German intellectuals as well. Hegel felt that morality and politics would not survive the chasm that Kant had opened between moral freedom and natural necessity, ethical absolutes and historical contingency. He tried to close the gaps. Popper argued that his closure left no room for criticism. To Popper, if the actual was rational, then reality was rational. Thus, defending his commitment to rationalism, Popper stated that “rationalism is bound up with the idea that the other fellow has a right to be heard, and to defend his arguments.” Furthermore, it “is an attitude of readiness to listen to critical arguments...admitting that I may be wrong and you may be right and by an effort, we may get nearer to the truth”.

In the life course of a human being, there progressively emerge, coexist and closely interact the three facets of the human “trinity”: man is a biological individual, a social actor, and a reflecting and deliberating subject. Each of these facets carries on a dialogue with its own environment: the organism’s material environment; the actor’s social milieu; the subjects’ inner world. Since the three facets with their respective dialogue obviously share one and the same brain, it follows that the latter takes on the role of mediator in the threefold dialogue which evolves across the life course.

“How selfish soever man may be supposed, there are evidently some principles in his nature, which interest him in the fortune of others, and render their happiness necessary to him, though he derives nothing from it except the pleasure of seeing it. Of this kind is pity or compassion, the emotion which we feel for the misery of others, when we either see it, or are made to conceive it in a very lively manner. That we often derive sorrow from the sorrow of others, is a matter of fact too obvious to require any instances to prove it; for this sentiment, like all other original passions of human nature, is by no means confined to the virtuous and humane, though they perhaps may feel it with the most exquisite sensibility. The greatest ruffian, the most hardened violator of the laws of society, is not altogether without it” (Adam Smith)

Otto Kinne identifies the six dilemmas of planet earth and he asserts that the understanding, enlightenment and progress from this situation will need a collective approach. Yes, we can have our own independent meaning for eco ethics, but together we must be in concert for a stronger thesis. Ever since Charles Darwin in the nineteenth century, evolutionary concepts have become central to our understanding of nature. The theory of evolution seeks to explain the change of species through time in terms of chance mutations, differential reproduction, adaptation, natural

selection, and other natural causes. This may very well be called “evolutionary naturalism.” Human behavior is thus understood by drawing from many sciences, including biology, genetics, psychology, anthropology, sociology, economics and other behavioral sciences. The historical sciences help us interpret the functioning of social institutions and human culture. Any “theories of reality” area thus derived from the tested hypothesis and from theories rooted in scientific inquiry, rather than from poetic, literary or theological narrations, interesting as these might be. We need to develop, if we can, interdisciplinary integrative generalizations drawn across the sciences, and with this, we will be able to create our own meanings. E.O. Wilson has used the term consilience, which he borrowed from the nineteenth century philosopher of science William Whewell.

With an understanding of ecological ethics, good life is attainable by human beings; and the task of reason is to discover the conditions that enable us to realize happiness. There however remains a disagreement between those who maintain that the main test of moral principles should be teleological – that is, judging moral rules by whether they fulfill our long-range ends – or deontological, following Immanuel Kant who maintained that prima facie, general moral principles have some independent moral status. With better enlightenment, and best understanding of eco ethics, I believe that we should take into account both sets of data – values and ethical principles- though most important test is consequential and involves an examination of competing claims within a situation. Moral absolutism must be rejected as dogmatic and repressive.

LITERATURE CITED

1. Ed, Richard Kearney and Mark Dooley (1999), *Questioning Ethics: Contemporary Debates in Philosophy*, New York, Routledge Inc.
2. Karl Ameriks (2005), *Interpreting Kant's Critiques*, New York, Oxford University Press Inc.
3. Kimberly Hutchings (1996), *Kant, Critique and Politics*, London, Routledge Inc.
4. Paul Guyer (2005), *Kant's System of Nature and Freedom: Selected Essays*, New York, Oxford University Press.
5. Wayne Waxman (2005), *Kant and the Empiricists*, New York, Oxford University Press Inc.
6. Richard B. Brandt (1996), *Facts, Values and Morality*, New York, Cambridge University Press.
7. Malachi Haim Hocohen (2000) *Karl Popper – The Formative Years, 1902 -1945: Politics and Philosophy in Interwar Vienna*, Cambridge, Cambridge University Press.
8. Ed. Seymour Feshbach and Jolanta Zagodzka (1997) *Aggression: Biological, Developmental and Social Perspectives*, New York, Plenum Press.
9. Ed. Knud Haakonssen (2004), *Adam Smith: The Theory of Moral Sentiments*, Cambridge, Cambridge University Press.
10. Paul Kurtz (2004) *Affirmations: Joyful and Creative Exuberance*. New York, Prometheus Books
11. Otto Kinne (2002) *Eco Ethics Further Developed: text 01.05.2002*, EEIU Brochure, Oldendorf/Luhe, Inter – Research.

3. The Process of Foreign Policy and its Relations to Eco – Ethics

Foreign policies are the strategies used by governments to guide their actions in the international arena. Foreign policies spell out the objectives state leaders have decided to pursue in a given relationship or situation as well as general means by which they intend to pursue those objectives. Thus, day to day decisions made by various arms of government are guided by the goal of implementing foreign policies.

Joshua S. Goldstein(2001) argues that the process of foreign policy formulation is a process of decision making. That states take actions because people in governments choose those actions. I see this as a shallow expression, it doesn't give a detail of the real process of foreign policy. However, he asserts an authoritarian approach to the whole notion of policy, that it is an act of specialized individuals in our government. Am trying to wonder the best approach in debating environmental policies that cut across borders; is it a preserve of the government or is it a process that involves the citizens as well as the government? These issues cannot be debated here, but hope that in the light of expressing eco ethics as a pre-requisite of a policy, we will gain more insight in such matters.

Roger Lincoln et al (1998) define ecologism to be the incorporation of ecological factors into economic and political decisions. Ecological responsibility, or sustainability, is the primary aim of green politics and flows directly from the idea of limits to growth. A sustainable society has the capacity to last because the ecological carrying capacities of the planet are not exceeded. If the planet (and human society) is to survive, then development – economic, social, and political – must be self sufficient and geared towards the satisfaction of basic needs. Development must be guided by the principal of futurity so that the impact of economic activities on natural resources today does not prevent future generations of humans from meeting their needs and will allow non – human nature to flourish; thus futurity mixes the anthropocentric aim of protecting future generations of humans with the ecocentric aim of preserving the well-being of non-human nature (Neil Carter 2001 p.45)

Much as we may wish to incorporate ecologism in our endeavor to position our strategic interests as nation states, the basic word remains ethics of our environmental decisions. With so much to be shared among nations, and so much commonality, there is always a need for cooperation.

Minimizing greenhouse gas emissions will require policymakers to take some tough decisions. Even though the economy as a whole stands to benefit from well-designed market-oriented policies for reducing emissions. Action - or inaction - by government always helps create winners and losers in the marketplace. The challenge for policymakers is to design policies that fully engage the energies of civil society. Their goal must be to open the floodgates of industrial creativity. Experience shows that companies often respond rapidly and positively to incentives and pressures. Given the right policy environment, the business sector will roll out low-emissions technologies and services faster than many now believe possible.

Policymakers can learn from one other and share ideas and experiences. They may choose to go further, coordinating national policies in order to have more impact in a globalized marketplace. Governments in developed parts of the world should also consider the effects of their climate policies on others, notably developing countries, and seek to minimize any negative economic consequences.

Gino J. Naldi (1999) argues that protection of the environment and management of environmental problems are increasingly coming under the auspices of international law. That this is not surprising, given the major environmental crises of recent times, be it the nuclear disaster at Chernobyl, oil spillages at sea, or human activities contributing to the concentration of greenhouse gases in the atmosphere, with

ensuing consequences on global warming, climate change and rising sea levels, have emphasized transnational nature of their effect. Collective efforts to deal with such problems are therefore necessary.

International environmental law is a relatively recent phenomenon which had its inception in 1972 when international community expressed its concern to protect the environment in Stockholm Declaration. In 1992, the UN Conference on Environment and Development (Rio/Earth Summit), met to develop international environmental law into the new millennia. These initiatives brought forth a number of multilateral treaties protecting the environment. However, the developing world poses its own set of problems and Africa has been particularly susceptible to environmental degradation in recent years, accentuating a malaise of mismanagement. The causes are various: drought, deteriorating water resources, the spoliation of natural resources, deforestation, overgrazing and over - cropping, and desertification.

World industrialization and technological development have increased international interdependence through functional economic integration and transnational communication. Actions taken by one state now routinely affect other states' access to natural resources and to the benefits of a healthy environment. The global threats to the natural environment are thus a major new source of interdependence. And regional alliances are becoming a common trend.

Joshua S. Goldstein defines an alliance as a coalition of states that coordinate their actions to accomplish some end. That most alliances are formalized in written treaties; concern a common threat and related issues of international security, and endure across a range of issues and a period of time (not just for one issue at one time). Alliances generally have the purpose of augmenting their members' power relative to other states. By pooling power capabilities, two or more states can exert greater leverage in their bargaining with other states.

When states define their ecologism within their foreign policies, they must consider the norms involved, whether timely or socially. A policy therefore has aspects of functionality and those of instrumentality. We could define a policy to be a hypothesis containing initial conditions and predicted consequences (instrumentalism) or as a program that serves as a guide to behavior intended to realize the goals an organization has set for itself. Thus, in alliances, policies are formulated as commitments to act in certain ways under certain conditions.

Rober P. George argues that the principle of subsidiarity would restrict the authority of any world government to those problems which cannot be successfully dealt with by national governments, just as it restricts the authority of national governments to those problems which cannot be dealt with successfully by regional governments, of regional governments to those problems that cannot be dealt with successfully by local governments, of local governments to those problems that cannot be dealt with successfully by neighbourhood groups and other private associations, and of such groups and associations to problems which cannot be dealt with by families.

The family thus remains the basic unit of the society, but with interdependence of our problems, the nature of the world systems, common problems call for common solutions, thus the levels of interactions continue to become complex; yet with cooperation, these problems become manageable.

It therefore becomes a huge impediment to representing national interest in issues of global concern, where other people tend to refute agreements on the auspices that they are protecting their national interests or other people explain that national referendum denies them the capacity to indulge in some worthy courses. This brings us to the issue of preferences, public choice, democracy and natural crisis.

The public choice translates into a process of aggregating diverse preferences into a single collective preference, but dully asked, is whether the public is clearly informed on the consequences of the choices being made? It is on this note that I insist that information on issues that affect the world, common issues like climate change, must have a trickle down effect to the common man. Given that the literacy level of many African countries is low, then, the capacity to grasp abstract concepts become a matter of chance, with many people remaining un-informed and others prefer to be ignorant following the technicality of understanding such global issues. Thus, issues of democratic consent in making global decisions become unclear, the choices made on behalf of the public remain authoritarian and in this way, the long term costs of implementing policies are constantly increasing. The best way forward would be to keep the public informed, to involve the public in defining wonderful ethical concepts that could be part of national policies worth being integrated at the regional level, or even in our alliances at a cross continental level.

What then is Eco Ethics?

Prof. Otto Kinne (2002) argues that life on earth has evolved, it exists in ecosystems where everything changes and everything flows. In contrast, traditional ethics tend to resist change and to be static; they are one-sided and focus on a single life form among millions – Homo sapiens. That to be able to meet the immense tasks confronting modern humanity, we need a new ethical concept – a construct that extends beyond the narrow and self-centered world we have built for our immediate ends. A construct that can grow, adapt and mature in concert with nature and humanity and that is open to change, development and critique.

With this, I could define eco ethics to be a multidimensional approach, related to conservation and well-being of our planet, all the biotic life forms in it and its general nature as earth. That as much as ethics is a product of decision making, its consequences stand to be judged in relation to our daily activities and the growing interdependence that is inevitable. We live in a planet full of diversities.

Tim O' Riordan (2002) argues that biological diversity or biodiversity in its short hand is the variety of living organisms on earth, the range of species, the genetic variability within each species, and the varied characteristics of ecosystems. He notes that the threat of extinction hangs over 10 percent of known birds' species, 20 per cent of known mammal species, 5 percent of known fish species and 8 percent of all recorded plant species. Yet genetic variability establishes the primary form of evolution, the adaptability of wild species to human-induced change, including cultivation and domestication, and the basis of special breeds of animals and plants that provide fundamental basis for modern food production. This is part of the natural functions that need to be protected. Additional alterations to our ecosystems in unpredictable combinations could result in weakening of ecological absorptive capabilities. There is a need to put the best policies in action and there is a need for global approaches in resource management, environmental protection and even, ecological ethics.

In line with the advocacy of Prof. Kinne, for a multidimensional focus on all life forms, the principle of eco ethics will need an all inclusive management policy. That issue of climate change will affect not only we humans, but also other species as well. And it could be said that there is a rising number of endangered species, as noted by Prof. Riordan. Approaches to be developed will be beyond single state initiatives, there will be more needs for global frameworks in coping with or adapting to this ever changing ecology as an act of consequentiality. We need to obey the precautionary principle and act at the little knowledge we have, though predictions might not gain appetites for preferential decisions, common problems will require a common alliance.

Although the term eco ethics would be interpreted differently, it would inherently mean that we have different eco ethics concepts on different situations. My belief is that with a multidimensional view of eco ethics, we would develop a common thesis that unites our perception of ecological ethics.

The term eco ethics could be split into two perspectives: ecology and ethics (though others prefer economy and ethics).

J.L. Chapman and M.J. Reiss (1992) define ecology as the study of organisms in relation to the surroundings in which they live. These surroundings are called the environment of the organism. Thus ecologists are always aiming to understand how an organism fits into its environment. This makes the foreign policy strategists to be practical ecologists, in that they endlessly try to understand how we humans could best fit in our environments, whether regionally or locally in relation to other international actors. The word ecology was first used by a German called Ernst Haeckel in 1869. It comes from two Greek words oikos meaning home and logos meaning understanding. Haeckel described ecology as the 'domestic side of organic life' and 'the knowledge of the sum of the relations of organisms to the surrounding outer world, to organic and inorganic conditions of existence'. This surrounding outer world is another way of saying environment.

With this, I maintain that human beings will behave differently in their orientation to specific environments, and this is also same with other species, their actions will be determined with their interaction and relations developed in those specific environments. Behavioral ecology thus, investigates the behavior organisms' show as related to their ecology. For example, if we want to understand how an individuals feeding behavior helps it to survive and reproduce, we need to know a lot about its ecology. I have thus introduced this term 'behavioral ecology' with specific concern on east Africa (Kenya, Uganda and Tanzania)

The three countries that founded the East African Community have some common traits that cut across their borders. First, the issue of language; the Maasai's are found both in Kenya and Tanzania with common cultures, traditions and basic principles of livelihood. It will therefore be difficult to differentiate or categorise a Kenyan Maasai from a Tanzania Maasai. The same issue goes for the Luo and Karamanjo who are found in Uganda and Kenya.

When it comes to animals, the Maasai Mara cuts across the border to join Tanzania where the name changes to Serengeti. The region has a tradition of wild animals and to both governments it forms part of the national reserves, contributing heavily to their economies through tourist attraction and research. The point of all this is to show the interdependence that we have, as humans and as members of the planet. As much as Maasai's cross Tanzania into Kenya and retain their identities, so do the buffalos and Lions in the Mara, and so is the fish in Lake Victoria.

I insist that as much as the foreign policy strategists have put priority in preserving some cultures from extinction (due to tourist revenue), the same could be done for all species (even those with no economic value). That as custodians of the earth we are bestowed with the responsibility of developing utilitarian principles of ethics that cut across the divide as species of the earth.

M.J. Mwandosya and A.K. Semesi et al (1997) in their study for the development of a strategy for the conservation of coastal biological diversity in Tanzania have defined biodiversity as the sum total of a country's plant, animal and microbial resources (and, by extension, the ecological systems they form and occupy). That conservation of biodiversity does not mean the protection of species for their sake but it is also to ensure the suitable utilization of the species without eliminating them for good. Here we mutually relate economic ethics and ecological ethics. Thus, biodiversity should be conserved so as to sustain the

life processes on earth. It has to be recognized that the majority of the species are not used directly by man but their ecological role and support of other species is very critical. Many of these represent the raw materials for important economic activities.

Elsewhere, Edward O. Wilson (1992) comments that the most wonderful mystery of life may well be the means by which it created so much diversity from so little physical matter. And he defines a species to be a population whose members are able to interbreed freely under natural conditions. This clarifies my earlier notion of biodiversity and the need for good ethical constructs that preserve not only humankind but has concern for the other kinds of species. He argues that there is an implicit principle of human behavior important to conservation: *the better an ecosystem is known, the less likely it will be destroyed*. “That in the end we will conserve only what we love, we will love only what we understand, we will understand only what we taught”. There is need for transcendental ethics, and there is need of perfection in our daily strategies of relating as actors in the world system or as members of this diverse biosphere.

Orienting our Ecologism:

Wilson notes that every country has three forms of wealth: material, cultural and biological. The first two are understood well because they are substance of our everyday lives. The essence of the biodiversity problem is that biological wealth is taken much less seriously. He argues that this is a major strategic error, one that will be increasingly regretted as time passes. Diversity is a potential source for immense untapped material wealth in the form of food, medicine, and amenities. That the fauna and flora are also part of a country’s heritage, the product of millions of years of evolution centered on that time and place and hence as much a reason for national concern as the particularities of language and culture. To illustrate this point, I will consider using the Miraa (Khat) plant in Kenya with special consideration to ethics and national policies.

According to a survey I conducted at the University of Nairobi and the United States International University – Africa Campus, 98 percent of Muslims do not consume alcohol; they consider it sinful and an instrument of the evil. Surprisingly, 80% of the Muslims chew Miraa in compensation for their non – consumption of alcohol.

Ezekiel Gebisa (2004), attempts to explain the meaning of Khut chewing amongst the Ethiopian community of east Africa. He argues that in Harerge, Khat has historically served the same function as such mild stimulants as Kola in West Africa and coca among the indigenous people of South America.

1. It is chewed to reduce fatigue and sensation of hunger and thirst – the leaves are extremely bitter, probably the property that relieves thirst.
2. Political and religious leaders customarily gave visitors Khat as a sign of politeness, while individual hosts have been expected to provide a handful of the leaves to friends and guests as an indication of hospitality.
3. Among the Oromo, births, marriages and religious festivals are celebrated by chewing Khat and, on occasions such as funerals and naming ceremonies, Khat leaves are celebrated as gifts.
4. During the popular wadja ritual – a ceremony of group prayer performed at times of illness, death or calamity – large amounts of Khat are consumed by the participants.
5. Khat leaves are furnished at weddings to add glow and glitter to the occasion and increase felicity for the newly wed couple and the invited.

With all these elements of culture in Ethiopia, Somalia and parts of Kenya, countries like Tanzania, Rwanda and Uganda have categorized the plant as a toxic, an illicit drug, an element of corruption for the young and a cause of mental diseases. Thus, a passenger travelling by bus from Kenya to Tanzania, if he

has bought Khat for the purposes of entertainment, relaxation e.t.c, will have to get rid of them while approaching Tanzania.

This element of the rules is of major importance, biodiversity need to be appreciated regionally to enhance common economic approaches in analyzing benefits or conservation measures. If Uganda, Rwanda and Tanzania could legalise the consumption of Khat in their countries, then, new avenues of trade could be developed, farming would have a new dimension and interdependence of our economic policies would also be stronger. All these, however, depend on our commitment to develop mutual thesis for eco ethics or econ ethics.

Gino J. Naldi notes that in recent years, Africa, along with other developing countries, has had to contend with the growing practice by Western companies in particular, the dumping, often of illicit, toxic and dangerous substances, with all the risks that implies for the health, life and well being of local populations, as well as the detrimental effect on the ecosystem. This has translated into the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal adopted in March 1989 under the auspices of UNEP. Where Africa formed an alliance with other third world countries to put a check on the growing ecological toxins in their environs.

The Bamako Convention on the Ban of the Import of Hazardous Wastes into Africa and on the Control of their Transboundary Movements within Africa was adopted by OAU at Bamako Mali, in January 1991 and entered into force on 22 April 1998. It concerns itself with:

1. The transfer to Africa of polluting technologies
2. Importing hazardous wastes to Africa
3. Dumping hazardous wastes at sea, internal waters and waterways
4. Adaptation and development of preventative, precautionary approaches to pollution problems.

All in all, the response of the international community to the problems posed by environmental degradation has encouraged the adaptation of national, regional and global level measures, albeit gradual and fragmentary, which have made it possible to develop a set of standards and principles, and rights derived there-from, with the aim of protecting the environment. Nevertheless, much still remains to be done and international cooperation, including development of strong eco ethics thesis, seems vital.

LITERATURE CITED

1. Joshua S. Goldstein (2001), International Relations, New York, Longman
2. Neil Carter (2001), The Politics of the Environment: Ideas, Activism, Policy, Cambridge, Cambridge University Press.
3. Roger Lincoln et al. (1995), A Dictionary of Ecology, Evolution and Systematics, Cambridge, Cambridge University Press.
4. Gino J. Naldi (1999), The Organisation of African Unity: An Analysis of its Role, London, Mansell Publishing Limited.
5. Gary Goertz(2003), International Norms and Decision Making, Maryland, Rowman & Littlefield Publishers Inc.
6. Robert P. George, ed. David R. Mapel et al (1998) International Society: Diverse Ethical Perspectives, New Jersey, Princeton University Press
7. Ed, Tim O' Riordan and Susanne Stoll – Kleemann, Biodiversity, Sustainability and Human Communities: Protecting beyond the Protected, Cambridge, Cambridge University Press.
8. J.L. Chapman & M.J. Reiss, Ecology: Principles and Applications, Cambridge, Cambridge University Press.
9. M.J. Mwandosya and A.K. Semesi et al (1997), Towards a Strategy for the Conservation of Coastal Biological Diversity of Mainland Tanzania, Dar es Salaam, Center for Energy Environment, Science and Technology.
10. Edward O. Wilson(1992), The Diversity of Life, New York, W.W. Norton & Company Inc.
11. Ezekiel Gebissa (2004), Leaf of Allah: Khat and Agricultural Transformation in Harerge Ethiopia 1875 – 1991) Ohio, Ohio University Press.

4. Sustainability Ethics and Risk Management

As much as the concept of ethics becomes a relative perception, morality will always be viewed to be the first step in its formulation, orientation and even, its consensus. The capacity of man to develop specific preferences has always made it difficult to justify the accuracy of our actions. Utilitarian's have always resorted in analyzing the impacts of the different acts we develop as human beings. Utilitarianism calls for maximization of goodness in society, that is, the greatest goodness for the greatest number. Louis P. Pojman (2006) identifies the two main features of utilitarianism, that is, consequentiality principle and the utility principle. The **consequentiality principle** states that the rightness or wrongness of an act is determined by the goodness or badness of the results that flow from it. It is the end, not the means that counts; the end justifies the means. The **utility principle** states that the only thing that is good in itself is some specific type of state (e.g. pleasure, happiness, welfare). An act is right if it either brings about more pleasure than pain or prevents pain, and an act is wrong if it either brings about more pain than pleasure or prevents pleasure from occurring. All these views could be right, but notably that we live in a society where interdependence becomes not only a virtue, but the only ethical way to sustain ourselves. That to be able to develop ourselves, we first need to understand the nature of our societal systems. Margaret Peil (1998) argues that social structure or organization of a society may be seen as a network of roles involving interaction between individuals and groups which give the society its unique qualities and the characteristics it shares with others. It includes the processes by which influence, authority and power are exerted, the interdependence of individuals and groups through segregation or integration, and the broad patterns through which social order is maintained and social solidarity promoted.

As a result of the interdependence of institutions of a society, change in one aspect of life tends to lead to change in other areas. For example, with the introduction of motor transport, vehicles need roads rather than footpaths, so people must be organized to build roads. New jobs are introduced, such as driver and fitter. Goods and people can move more easily from place to place; this aids centralization, government control and the development of cash crop farming. Thus, chains of interdependence are inevitable, we live in a time where interdependence is a virtue; that no state is self sufficient, no society is essentially satisfied with its system of production, thus, we satisfy our societal appetites by exchanging what we have for what we need and cannot produce.

Sustainable development is defined to be an economically viable development that does not result in the continual degeneration of the environment and the loss of renewable resources; the use of land and water to sustain production indefinitely without environmental deterioration, ideally also without loss of native biodiversity; the utilization of a renewable resource in such a manner that it retains its capacity to regenerate. John Cairn (2003) argues that humankind needs a global ethical consensus on sustainable use of the planet—sustainability ethics. Sustainability ethics has the goal of developing a sustainable, mutualistic relationship between humankind and the interdependent web of life that serves as Earth's ecological life support system. That ecosystem is notoriously non-linear, chaotic, and complex, and, as a result of this predicament, they suffer from the same challenges observed in weather systems, brain physiology, or quantum mechanics. He further argues that the issue surrounding sustainability is often clouded with the lack of consensus regarding what to sustain; or worse, even where clarity is achieved, consensus

is missing on determining sets of indicators for verifying that goals have or have not been reached. Science is essential in choosing endpoints or indicators for the latter situation, but ethics is essential for establishing goals.

Elsewhere, Prof. Otto Kinne argues that life on earth has evolved and exists in ecosystems where everything changes and everything flows. Thus, to be able to meet the immense tasks confronting modern humanity, we need a new ethical concept – a construct that extends beyond the narrow and self-centered world we have built for our immediate ends. We need a construct that can grow, adapt and mature in concert with nature and humanity and that is open to change, development and critique.

The Risk of Climate Change

For Africa, it is vital to define how vulnerability to natural hazards relates to the effects of climate change, and to other development challenges. These include food and livelihood security, access to basic social services, HIV/AIDS and other diseases, gender and income inequality, injustice, conflict and forced migration. In Africa the combination of these into complex mixtures of vulnerability and risk is especially challenging. The Disaster Risk Reduction concept has only recently been adopted and slowly transcribed in regional and national strategies and development plans. This might result from the fact that traditionally, there has been a focus and funding for emergency management/ response, rather than prevention. UNEP/UNFCCC (2002) insists that climate change is a threat to mankind and no one is certain about its future effects or their severity. That responding to the threat is expected to be complicated and difficult. There is even some remaining disagreement over whether any problem exists at all: while many people worry that the effects will be extremely serious, others still argue that scientists cannot prove that what they suspect will actually happen. In addition, it is not clear who (in the various regions of the world) will suffer most. Yet if the nations of the world wait until the consequences and victims are clear, it will probably be too late to act.

The truth is that in most scientific circles the issue is no longer whether or not climate change is a potentially serious problem. Rather, it is how the problem will develop, what its effects will be, and how these effects can best be detected. Computer models of something as complicated as the planet's climate system are not far enough advanced yet to give clear and unambiguous answers. Nevertheless, while the when, where, and how remain uncertain, the big picture painted by these climate models cries out for attention. For example:

- **Climate and agricultural zones may shift towards the poles.** Increased summer dryness may reduce mid-latitude crop yields, and it is possible that today's leading grain-producing areas (such as the Great Plains of the United States) would experience more frequent droughts and heat waves. The pole ward edges of the mid-latitude agricultural zones - northern Canada, Scandinavia, Russia, and Japan in the northern hemisphere, and southern Chile and Argentina in the southern hemisphere - might benefit from higher temperatures. However, in some areas rugged terrain and poor soil would prevent these countries from compensating for reduced yields in today's more productive areas. A warming of more than 2.5°C could reduce global food supplies and contribute to higher food prices.

- **Melting glaciers and the thermal expansion of sea water may raise sea levels, threatening low-lying coastal areas and small islands.** The global mean sea level has already risen by around 10 to 20 centimeters during the past century, and global warming is expected to cause a further rise of 9 to 88 cm by the year 2100. The most vulnerable land would be the unprotected, densely populated coastal regions of some of the world's poorest countries. Bangladesh, whose coast is already prone to devastating floods, would be a likely victim, as would many small island states such as the Maldives. These scenarios are alarming enough to raise concern, but too uncertain for easy decisions by governments. The picture is fuzzy. Some governments, beleaguered by other problems and responsibilities and bills to pay, have understandably been tempted to do nothing at all. Maybe the threat will go away. Or someone else will deal with it.

The UNFCCC has responded to the lack of consensus on some issues by promoting action in spite of uncertainty on the basis of a recent development in international law and diplomacy called the "precautionary principle" under which activities that threaten serious or irreversible damage can be restricted or even prohibited before there is absolute scientific certainty about their effects.

According to the UNEP (2002), as the human population continues to grow, the demands human beings place on the environment increase. The demands are becoming all the greater because these rapidly increasing numbers of people also want to live better lives. Already there are severe problems supplying enough fresh water to the world's billions. Burgeoning populations are draining the water from rivers and lakes, and vast underground aquifers are steadily being depleted. What will people do when these natural "tanks" are empty? There are also problems growing and distributing enough food - widespread hunger in many parts of the world attests to that. There are other danger signals. The global fish harvest has declined sharply; as large as the oceans are, the most valuable species have been effectively fished out.

The convention has attempted to respond to this issue in three ways:

- ***It supports the concept of "sustainable development"***. Somehow, mankind must learn how to alleviate poverty for huge and growing numbers of people without destroying the natural environment on which all human life depends. Somehow a way has to be found to develop economically in a fashion that is sustainable over a long period of time.
- ***The Convention calls for developing and sharing environmentally sound technologies and know-how.*** Technology will clearly play a major role in dealing with climate change. If we can find practical ways to use cleaner sources of energy, such as solar power, we can reduce the consumption of coal and oil. Technology can make industrial processes more efficient, water purification more viable, and agriculture more productive for the same amount of resources invested.
- ***The Convention emphasises the need to educate people about climate change.*** Today's children and future generations must learn to look at the world in a different way than it was looked at by most people during the 20th century. That many (but not all!) pre-industrial cultures lived in balance with nature. Now scientific research is telling us to do much the same thing. Economic development is no longer a case of "bigger is better" - bigger cars, bigger houses, bigger harvests of fish, bigger doses of oil and coal. We must no longer think of human progress as a matter of imposing ourselves on the natural

environment. The world - the climate and all living things - is a closed system; what we do has consequences that eventually come back to affect us. Tomorrow's children - and today's adults, for that matter - will have to learn to think about the effects of their actions on the climate. When they make decisions as members of governments and businesses, and as they go about their private lives, they will have to take the climate into account.

Risk Management in Africa and other Developing Countries

In a speech delivered to the fourth Tokyo international conference on African development (May 29, 2008), Mr. Takatoshi Kato, the deputy managing director of the International Monetary Fund explained that the IMF is committed to playing its part to help deepen understanding and deal with the complex challenges posed by climate change. He argued that Climate change poses particularly serious macroeconomic, fiscal, and financial challenges for low-income countries. These countries are more vulnerable to climate change because most of them are located in already hot tropical regions and are more heavily reliant on climate-sensitive sectors, such as agriculture, forestry, and tourism. They also have a more limited capacity to adapt to climate change, given their lower income levels and weaker institutional frameworks. Africa is the continent that is most vulnerable to climate change. In the coming years, many African countries are likely to experience more severe droughts and declines in water supply, which would further aggravate food shortages on the continent, where 95 percent of population depend on agriculture for their livelihood. Health and water systems of African countries may also come under increased stress in the coming decades from more intense and possibly more frequent natural disasters. Coasts may be flooded, and populations may seek to migrate, raising the risk of social conflicts. According to some estimates, almost one billion people in Africa and Asia could experience shortages of water by 2080, more than nine million could fall victim to coastal floods, and many could face increased hunger.

Mr. Takatoshi maintained that the IMF stands ready to provide financial assistance to member countries in response to a range of macroeconomic disturbances, including natural disasters, for example, through the exogenous shock facility (ESF) that provides policy support and financial assistance to low-income countries. Recognizing that climate change is a long-term process, and while the incidence and severity of weather-related macroeconomic shocks is likely to increase as a result of climate change, much uncertainty remains. That as events unfold in the years ahead, the Fund itself will have to adapt how it helps member countries respond to challenges such as global warming.

Disasters are global problems that have been recognized by the United Nations as some of the leading causes of socio-economic stagnation. Several conventions have been held to address them like the Hyogo Framework and the famous Kyoto Protocol. However, there is little impact on the ground as communities continue suffering when disasters strike. The only way for effective disaster risk management in Africa is an integrated approach that considers the accumulation and range of risks that households and communities face, including slow-onset crises which dominate many parts of Africa. The impact of disasters is felt most deeply by poor people who are often least able to prepare and least able to recover. In some countries, early

warning systems help some sectors of the population but everyone should have the opportunity to reduce the risk of disasters and to mitigate the effects.

The communities normally face serious hurdles in utilizing their natural resources, this affects their abilities to have control and ownership of their livelihoods. Lack of sustainable livelihoods in turn affects the choices they can make with respect to where they live, their abilities to rise up when disaster strikes. The community knowledge to survive before, during and after disasters is integral to risk reduction. Thus when the practitioners and communities work together the impact and sustainability of the disaster risk reduction is greater. Vulnerability is always context and area-specific, and needs to be linked to capacity assessment which is both a diagnostic tool as well as a transformative process. Such assessment must however adopt a livelihood approach.

Community base in terms of poverty, HIV/AIDS, food security and access to safe water is normally much smaller as compared to its response capacity. Response capacity refers to man - power, social amenities, health care, and information for adequate response during times of disasters. This puts the community at risk. For disaster risk reduction to be meaningful it must have the community at its centre by enhancing their resilience and reducing their vulnerability. This will in turn build their response capacity as a community. However, there are challenges facing training in disaster management for risk reduction in Africa, including the lack of expertise to carry out research, training, analysis and monitoring as contrasted to high demand for disaster management experts. Another challenge is poor infrastructure and equipment to offer more meaningful disaster management training courses. The absence of baseline data and information on natural environment makes it difficult to assess vulnerability and risks. There is need to promote increased awareness of the importance of disaster reduction as an integral component of sustainable development, with the goal of reducing human, social, economic and environmental losses due to natural hazards and related technological and environmental disasters.

Many of the actors in the Eastern Africa disaster management field are International NGOs. Unfortunately some of them are not in touch with real needs and priorities of communities, and consequently community coping systems and indigenous disaster management knowledge is rarely incorporated in their strategies. Although disasters may be natural, vulnerability is situational, thus, Key factors in producing the people's vulnerability include social structures, power systems and the political economy. As the political- economy expends pressure on the social structures and power systems, for instance by increased taxes, and taking away of land from the poor, the communities' vulnerability increases. In order for the "release" from disaster to occur, the vulnerability of the community must be reduced and their capacity enhanced. This can be achieved by easing the pressure on the community by for instance securing their livelihoods, and giving them access to resources. In summary, community based disaster management could be defined as a process of capitalizing on local knowledge, appropriate local practices, and available resources to reduce vulnerability and increase capacity; generally refers to locally practiced disaster mitigation measures, there is a need to enhance community sense of ownership of local resources. This makes them ready to support common approaches in managing the common disasters that they are vulnerable to face as a community. There is a need to develop an integrative approach while practicing sustainability ethics and disaster risk management. use of indigenous and/or community knowledge in disaster risk

reduction for instance community practice to deal with cyclic or seasonal hazards such as flooding and drought. Such knowledge, when integrated with modern knowledge, offers a powerful contribution for dealing with disasters. However, such an issue needs to be approached carefully due to the possibility of myths and superstitions being taken as scientific fact.

Strategies for Sustainability Ethics and Risk Management

Humankind has been bestowed with intelligence that necessitates its capability to act as custodians of other species. I have attempted to delve much of this discussion on how disaster management has been a major concern for Africa and other developing countries that have strong poverty bases, commonly referred to as poor communities. Risk therefore becomes a relative factor; other species face risks identified within their own ecosystems. John Cairn maintains that strategies starting at the highest system level are referred to as ‘top-down,’ and strategies designed for components, local or regional, are referred to as ‘bottom-up.’ He argues that “There must be a global strategy for sustainability (‘top-down strategy’) but also a strategy that considers the unique issues and ecosystems of each bioregion (‘bottom-up strategy’). Holistically practicing top-down and bottom-up sustainability strategies, including several intermediate ‘connecting’ levels, is a formidable, daunting task. The most promising way to connect these interdependent activities is an ethical ‘cement’—sustain-ethics”.

The best strategy of sustaining our planet and being able to cope with the uncertainties that we face in the name of natural risks or disasters will require a regional approach. States must unite regionally and share their moral concepts towards better ethical concepts, there will be a need to develop laws that cut across the borders. International law is the body of rules which are legally binding on states in their intercourse with each other. These rules are primarily those which govern the relations of states, but states are not the only subjects of international law. International organizations and, to some extent, also individuals may be subjects of rights conferred and duties imposed by international law. (Martin Dixon & Robert Mccorquodale: 1991). Having a regional approach as strategies for developing sustain ethics, debating eco ethical concepts will require not only subsidiarity, but both bottom – up and top- down methods of integration. As much as we would love to preserve our traditional ethics, science must take its course and perfection must be the definitive aspect of our alliances. Lerroy Benet(1995) defines a regional organization as a segment of the world bound together by a common set of objectives based on geographical, social, cultural, economic or political ties possessing a formal structure provided for in formal intergovernmental agreements. This is why organizations like Eco Ethics International Union remain relevant in their initiatives at regional level, in creating systemic responses to natural questions and making the world a safer place to practice interdependence without unethical practices in our ecology.

LITERATURE CITED

1. UNEP/UNFCCC (2002), Understanding Climate Change: A beginner's guide to the UN Framework Convention and its Kyoto Protocol, UNEP's Information Unit for Conventions, Geneva, Switzerland.
2. Takatoshi Kato (speech, 29/02/ 2008), Implications of Climate Change for Africa, At the Fourth Tokyo International Conference on African Development, Yokohama, Japan.
3. John Cairns Jr. (2003), Eco Ethics and Sustainability Ethics, ESEP Book 2, Inter – Research, Oldendorf/Luhe, Germany.
4. Prof. Otto Kinne (2002), Eco Ethics Further Developed: text 01.05.2002, EEIU Bronchure, Inter – Research, Oldendorf/Luhe.
5. Roger Lincoln et al. (1995), A Dictionary of Ecology, Evolution and Systematics, Cambridge, Cambridge University Press.
6. Xaxier Ochieng (2006), Report of the East African Forum on Local Perspectives on Disaster Risk Reduction, Action Aid/Provention Consortium, Nairobi, Kenya.

5. Interpretative Development

I was trying to gather some ideas about development, the Project Nabuur Initiative decided to assist in assessing our EEIU Nabuur opinions, and the diversity of responses I got, really shaped my perception of understanding the unique term, development. Here are some of the individual views on development:

1. The process by which an initial idea is turned into a finished screenplay. Includes optioning the rights to an underlying literary property, and commissioning writer(s) to create a treatment, first draft, second draft, rewrite, and polish.
2. The training and nurturing of people to acquire new horizons, technologies, or viewpoints, enabling leaders to guide their organizations onto new expectations by being proactive rather than reactive.
3. Act of improving by expanding or enlarging or refining.
4. Growth: (biology) the process of an individual organism growing organically; a purely biological unfolding of events involved in an organism changing gradually from a simple to a more complex level.
5. The systematic use of knowledge and understanding gained from research directed toward the production of useful materials, devices, systems, or methods, including design and development of prototypes and processes.
6. The process of converting a latent electrostatic image into a viewable image.
7. A process of social and economic advancement, in terms of the quality of human life. The term often implies the dominant Western world- view, involving such elements as a belief in progress, the inevitability of material growth, the solution of problems by the application of science and reason.

All the above illustrations attempt to explain development in different aspects, from our daily activities to the more generally understood, and most probably, generally accepted meaning of development. In this chapter am greatly interested in economics ethics, am interested to know how individuals appreciated and control the economic structures in their societies, just to maintain a peaceful coexistence with each other and promote co-evolution of humanity and other species. How is this possible?

The main goals of economic development are to alleviate poverty and to uplift the overall well-being of the people. Eco – development however extends the scope of the seemingly drab economic development, that is, when environmental well- being becomes a joint goal of economic development (George Ngugi Njuguna 2007). Eco development assumes that the overall goal of development is to creatively enrich human life in its socio-economic dimension at both national and individual levels.

David K. Leonard and Scott Straus maintain that sub Saharan Africa's development problems are inseparable from its politics. That international political force, well beyond sub Saharan Africa's control has hobbled the continent, but some countries have been able to adapt public policies that have improved their development performance. They try to explain the political influence that inevitably interferes with the development priorities of Africa, for example, the post election violence witnessed in Kenya in early 2008, a politically induced crisis that has resulted to

increased food prices, stalled development projects that are of great importance to the citizens (e.g. construction of health centers, education centers and even roads), there is so much greed for top positions of leadership in government, a practice that has seen conditionalism as a trait of campaign. How we behave as a nation has great detail on how we get to be defined as a people. People in each culture develop certain responses to common situations. These responses to certain stimuli make it possible to predict behaviours and therefore persuade others....when a group of people wants to change your way of thinking to its way of thinking without consideration of your values or beliefs, this is brainwashing (Hogan, 2003) and that is why D. Michael Warren et al (1999) argues that indigenous knowledge – the local knowledge that is unique to a given culture or society – contrasts with the international knowledge system which is generated through the global network of universities and research institutes. They argue still that indigenous knowledge is important as it forms the information base for a society which facilitates communication and decision making.

Wole Soyinka (1993) in his reflections about Nigeria ended up with a book of poems, fictions and a play. Though his creativity has resulted to many plays (as a playwright), is still believe that his passion for art has intriguing impact on the progress of ethics, the understanding of development and more so, the influence for change. Consider this part of the poem:

Mists of metamorphosis
Men of swine, strength to blows
Grace to lizard prances, honor
To sweetmeats on the tongue of vileness

These four lines have a deeper ecological meaning; the interpretation you decide to give it depends on the artistic elements that drive your mind. Does it have an ethical meaning, does it criticize development, and does it translate to eco ethics? These are questions that I cannot debate here.

One measure of civilization is mans understanding of the natural world and of his place in nature. In his search for this understanding, man has called upon magic, demons, spirits, gods, and essences to help him explain some of the perplexing and fearful events of nature. Thus, Norman Abraham et al define the science of biology as that human activity which is directed toward seeking knowledge about living matter. Thus development is the systematic use of knowledge and understanding gained from research directed toward the production of useful materials, devices, systems, or methods, including design and development of prototypes and processes. . With all these understanding, what then becomes of less developed or the underdeveloped? D. M.Muia and J.E. Otiende (2004) agree that underdevelopment refers to a state of affairs where society largely;

- a) Lacks the ability to provide basic needs adequately
- b) Lacks a sense of worth and self respect and therefore suffers low self esteem
- c) Is unable to exercise choice i.e. people are not free to determine their own destinies

In February 2002, British Prime Minister Tony Blair warned that the west could face new terrorist threats unless measures were taken to relieve African poverty (BBC World Service, Feb 6, 2002). In contrast, economic conditions in Africa have deteriorated alarmingly, which should

not have been the case given the continents immense development potential and untapped mineral wealth (George B. N. Ayittey 2005). Africa is the world second largest continent after Asia. It has 54 independent countries 48 on the mainland and 6 island states – with population estimated for the year 2000 at 784.4 million, 13 percent of the world. The colonial partition of Africa started in the 1830 based on arguments that Africans had no history prior to direct contact with Europe and that they didn't have any development of their own and so it was basically a continent of grown up children. Africa is facing a great challenge in which economic, political and business leadership must be exercised in an increasingly globalised economy. The region ought to urgently define its comparative advantage, upgrade infrastructure and technology as well as improve the quality of human capital. James Shikwati (2004) argues that the level to which an individual, a group of individuals or a society develops depends to a large extent on that people's identity, that is, who they believe they are. This identity is derived from a host of factors including past successes, failures and interactions with other communities. That the past of African people has for a long time remained obscure making the average Africans to have a false view of themselves consequently blocking the African's psyche and hindering development. Goran Hyden (1982) has argued that the production of knowledge about Africa is still very much dominated by a western perspective, bourgeois or Marxist. While a considerable amount of interesting material has been produced, it is hardly exaggerating to say that topics for research, or examples for debate, have often chosen to strengthen prevailing paradigms. That the intellectual menu has been prepared outside Africa. It has come a time that we must say Africans for a better perception of Africa, we have to defend our ecosystem, we have to portray our ethical preferences and we must create the concepts that will bring a positive understanding of Africa elsewhere in the world. Wayne Hudson and Steven Slaughter, in their book, *Globalisation and Citizenship* (2005) have attempted to define globalization as a process where distant events or influences significantly affect local political and social activity. That various forms of human activity are increasingly transversing the world and connecting people in different parts of the world more densely and more quickly than in previous times. Thus, globalization implies that political, economic and social activity is becoming inter-regional or intercontinental in scope and that there has been intensification in the levels of interaction and interconnectedness between states and societies.

Is Africa becoming a property of the West or is Africa still enchained with its developmental dilemma's? David Bassil (1994) maintains that the trend of thought which led to Africanism may be traced to remote conceptions of a continent peculiar to itself and therefore, in an ideal or mystical sense, unified within itself – the Africa of antiquity from which came “always something new”. What Bassil tries to explain relates to the issue of colonialism, the development of appetites by foreign nations to appreciate Africa more than the native Africans. He also tries to reflect on the emancipation from a culture of ignorance to a revolutionary stance where Africans began to discover for themselves, the richness of their continent and the mechanisms available in controlling, for their own benefits, this common wealth that united States in different regions. We could talk of gold in West Africa hence names like Ivory Coast, Gold Coast e.t.c. And that the continent is full of things yet to be discovered.

The needs of globalization are what led to colonialism. In my opinion, colonialism was a result of exploration by the Europeans for raw materials that could keep their industries in business. Colonialism was in line with the industrial revolution of the eighteenth century and a clear date

remains 1885 when the Berlin conference resulted into partition of Africa into colonies of Europe. It is this wicked trends of globalisation that has forced Africa to seek an identity of itself and put in adequate control, a protective agency that shall not see the negativity of globalisation affect the richness or interfere with its own pace of discovery. Globalisation is often seen as an anti-democratic force that removes sovereignty from legitimate national governments and concentrates it instead in the hands of unelected and unrepresentative organizations such as MNCs, the WTO and the World Bank. That these MNCs or intergovernmental organizations have increasingly defined their unique ways of operation that cut across nation – states. They formulate policies and require that the member states implement these policies. For instance, the World Bank and the structural adjustment programmes. It is therefore essentially true that these kinds of organizations tend to practice sovereignty that is supranational. A kind of sovereignty that is anti-democratic to the state sovereignty

In the face of growing poverty, the spread of diseases such as AIDS and malaria, and almost total marginalization in the world economy, donor aid fatigue and the general endorsement of neoliberal economic policies on the part of the international institutions, a number of African leaders began to recognize the virtue of regional and sub-regional cooperation as a possible route out of the malaise that affected the entire continent. ..Regionalism thus emerges from the internal dynamics of the region, and the motivations and strategies around the world, with no dominant paradigm to which all countries and regions subscribe. (Mary Farell 2005 pg1) and that is why Richard L. Haris argues that the study of Africa in the western academic circles has been hopelessly biased by the influence of government funding on academic research, grants from large private foundations, the bureaucratization of knowledge by disciplines, the prevailing social and political ideologies and the general ethno centricism of western scholars, experts and policy makers. To correct the distortions resulting from this situation, a great deal of intellectual effort and research needs to be concentrated on the real barriers to development in Africa and the manner in which these barriers can be overcome.

Globalisation has several implications for business persons. First it heightens competition. For business persons in the developing world it means competition between unequal partners. Secondly, globalisation internationalizes macro-economic policies. With increased economic interdependence, every nation is concerned that other nations maintain sound macro economic policies (Jimnah Mbaru 2003). Although the policy instruments applied in various countries may look alike, it is important to recognize the underlying differences, especially in conceptions about international trade. While in the western world technology policy has often been conceived in the context of causal relationships, the Japanese strategy tended to take a systems approach. These are important considerations when examining the transferability and relevance of some of these policy measures. The problems facing African economies cannot be dealt with adequately without taking a systems view (Calestous Juma et al 1993), this will be the step toward a defined econ ethics.

LITERATURE CITED

1. George Ngugi Njuguna (2007), Environmental Planning and Management, Nairobi, Act Press
2. D. Michael Warren et al. (1999), The Cultural Dimensions of Development, London, Intermediate Technology Publications Ltd
3. Norman Abraham et al (1970), Biological Science: Interaction of Experiments and Ideas, Colorado, Prentice Hall Inc
4. Eldred Drosimi Jones (1988), The Writing of Wole Soyinka, New Hampshire, Heinemann Educational Books Inc.
5. James Shikwati (2004) Reclaiming Africa, Nairobi, Inter Region Economic Network Inc.
6. David K. Leonard and Scott Straus (2003) Africa's Stalled Development, London, Lynne Rienner Publishers Inc
7. D.M. Muia and J.E. Otiende (2004), Introduction to Development Studies for Africa, Nairobi, Acacia Publishers
8. Jimnah Mbaru (2003), Transforming Africa: New Pathways to Development, Nairobi, East African Educational Publishers
9. Calestous Juma et al (1993), The Adaptive Economy: Economic Crisis and Technological Innovation, Nairobi, ACTS Press
10. Richard Harris (1975), Political Economy of Africa, Massachusetts, Schenkman Publishing Company Inc.
11. George B. N. Ayittey (2005) Africa Unchained: The Blue Print for Africa's Future, New York, Palgrave Macmillan.
12. Goran Hyden (1982), Beyond Ujamaa in Tanzania: Underdevelopment and Uncaptured Peasantry, Nairobi, Heinemann Educational Books Ltd
13. David Seddon with Daniel Seddon Daines (2005) A Political Economic Dictionary of Africa, London, Routledge
14. Mary Farrell et al. (2005), Global Politics of Regionalism: Theory and Practice, London, Pluto Press
15. Basil Davidson (1994), The Search for Africa, London, James Currey Ltd.
16. Wayne Hudson et al. (2005), Globalisation and Citizenship: Transnational Change, London, Taylor and Francis Group

6. Ecological Implications of Food security

The majorities of the poor in least developed countries live in rural areas and depend upon agriculture for the bulk of their livelihood. It is now widely accepted that it will prove impossible to achieve the millennium development goal on hunger and poverty reduction unless agriculture sector is successfully developed. For this to occur, a substantial increase in both domestic and external resources flowing into agriculture is needed. Governments need to commit more of their own resources to the agriculture sector (African leaders have committed putting 10% of their budgets into the sector), however, the sectoral ministries of agriculture also need to enhance their performance in the effective utilization of these resources through strengthening their public financial management (PFM) systems, their service delivery on the ground, and their monitoring and evaluation systems in order to demonstrate impact.

At the thirty fourth session of the Food Agriculture Organisation of the United Nations, held in Rome 2007, so much was focused on the growing insecurity of food, the increasing poverty and the dormant helplessness of African population.

The most recent estimate of the number of chronically undernourished people in the world is about 854 million for the period 2001 – 2003, of whom 820 million live in developing countries, 25 million in countries in transition and 9 million in developed market economies. Sixty one (61) percent lives in Asia and in the Pacific, while Sub – Saharan Africa accounts for 24 percent of the total of estimated undernourished people.²

Although the number of undernourished has declined in Asia and Latin America, in Sub Saharan Africa, the numbers have continued to rise and there are now estimated to be no less than 206 million people in this position. Virtually, no progress has been made towards the World Food Summit (WFS) target of halving the number of undernourished people by 2015. Since 1990 – 92, the undernourished population in the developing countries has declined by only 3 million people: from 823 million to 820 million. The scale of the task involved in substantially reducing hunger is enormous. The solutions lie not only within agriculture, but also in the broader political, economic and social enabling environment. Stimulating strong economic growth and economic diversification in rural areas, are also part of the solution needed, and indeed, it can be argued that food insecurity is itself a constraint on growth. One of the principal constraints to increasing agricultural production is the lack of investment in the sector.

In March 2002, 50 heads of State or Government, the private sector, civil society and all the major intergovernmental financial, trade, economic and monetary organizations gathered in Monterrey in the International Conference on Financing for Development. The conference was held following the endorsement of the Millennium Development Goals in 2001 with the aim to accelerate the release of the required financial resources for its accomplishment. Developing countries agreed to direct more resources to development, to take measures towards public management systems, to increase expenditure effectiveness, and to create an enabling environment for internal and external private investment. Developed countries committed to

² This section draws upon; State of Food Insecurity in the World 2006, FAO

increase international financial resources and technical cooperation for development, debt relief, and participation of developing and transitional countries in international trade.³

The 31st G – 8 Summit in Gleneagles in 2005 made a renewed commitment to development, especially in Africa. This was inspired by the Commission for Africa established by the Government of the United Kingdom in 2004 to formulate new ideas for improving development aid. The summit agreed to write off the entire US\$ 40 billion debt owed by 18 most Heavily Indebted Poor Countries (HIPC), and to double aid to Africa by the end of the decade (from US\$25 billion in 2004 to US\$ 50 billion in 2010). The commission for Africa specifically recognized agricultural development as key to African development⁴. In many countries, investment codes appear to have been designed more to protect national vested interests than to attract investors. The processing of applications and obtaining licenses is often slow and costly, contracts are not always enforceable and the legal system is often unreliable. Foreign investment is crowded out as government interests create an “un-level playing field” for the private sector. Further, the fragmentation of the regional markets and the lack of common investment conditions make investment costs high.

The low level of foreign direct investment (FDI) in the agricultural sector in developing countries reflects the perceived high risks involved, particularly in Africa, including: political instability, poor management of the economy, absence of enforceable legal framework and the virtual absence of supporting infrastructure and services in the rural areas⁵. The more than 20 serious armed conflicts in the last decade have also deterred private investment in many parts of the continent.

A recent exercise (January to June 2007) initiated by the UN Secretary – General’s Special Humanitarian Envoy for the Horn of Africa, led by FAO and WFP, looked specifically at the challenges of increasing investment for food security in the region. The Horn of Africa has perhaps the worst record of natural and human – induced disasters in the world and is heavily dependent upon external assistance including large volumes of food aid⁶. Consultations in the region demonstrated that, although there are many opportunities to enhance food security of vulnerable populations in the region, the tried – and- tested technologies have received inadequate financing from both governments and donors⁷. Although quick to act and generous in their response to emergency situations, donors have given little support for communities that have survived such emergency situations but are still perilously close to life threatening disasters. Support for so – called “transitional investments”, designed to bolster the livelihoods and resilience of people who have come out of disaster, is missing. Resources for long – term investment in agriculture for commercialization of production, aimed at stimulating growth in the economy. But this means that less attention is given to those living in marginal and remote areas where commercial opportunities are scarce. Transitional investments in such places can

³ This section is based upon, Financing Agriculture: Issues, Constraints and Perspectives, 2008, FAO

⁴ See FAO Common Interest, Report of the Commission for Africa, 2005

⁵ This section draws upon World Development Report, 2006m UNCTAD

⁶ Based on an interview I conducted with Mr. Okubo Yufnalis, Legal Advisor to the IGAD Secretariat.

⁷ See the chapter Biological Eco Ethics

help build strong foundation for recovery and growth, so that farmers can benefit from longer – term development assistance. But with all these said, with this entirely expressed, the key question remains understanding the terms used, it remains unclear to gain the meaning of food security. When do we say a region is insecure, what causes this food insecurity and what way is best? All these need the eco ethical analysis, the eco ethical approach that approves of a concert, beneficial subsidiarity and more to it, a convention of solutions.

Explaining Food Security

According to the International Fund for Agricultural Development, every 3.6 seconds a person dies of starvation. This finding illustrates the alarming state of malnutrition in the world today, and the frightening truths of poverty and hunger are most evident in the developing regions of Africa, where more than forty percent of the people are unable to obtain sufficient food on a daily basis (IFAD).

There is a multitude of factors leading to food insecurity, including limited availability of arable land; inadequate water supply and other environmental disasters; diseases; conflicts; and insufficient tools and infrastructure for successful agricultural production and transportation. In rural, developing regions, family farmers, who have limited resources to support a large proportion of the population, dominate agricultural production. Thus, the availability of education to family farmers of agricultural research and technologies is crucial to ensuring sustainable food supply.

On this note, food security can be defined as: access by all people at all times to enough food for an active, healthy life. Its essential elements are availability of food and ability to acquire it. But for greater understanding of this explanation, let's look at the cultural elements, how does the way of life influence our activities towards being sustainable, how do we shape our eco ethical practices? In East African countries, there is a cultural emphasis on large families. According to the United States Agency for International Development (USAID), the average family size in Ethiopia averages about six children. Women generally marry early, around the age of sixteen, and thus they begin to have children at an earlier age, which is one factor in large family size. In contrast, in Kenya, the average number of children in the family has dropped to around four from around eight throughout the last two decades⁸. Kenya's national family-planning programs and promotion of contraceptive use have helped reduce the average Kenyan family size.

While lack of education engenders a state of poverty, poverty itself in developing countries and rural areas hinders the advancement of education. Poverty forces families to employ children at home and in the fields to provide income for the family. Impoverished families, in many cases, cannot pay the costs for sending their children to school, and the necessity of earning income for the survival of the family discourages families from educating their children. While education of youth is valuable, the most important factor in increasing food production in East African countries is emphasis upon family farmers. Rural farmers comprise the majority of East African

⁸ Based on, "Family Planning in Ethiopia." USAID: From the American People. 20 Sept. 2006. Available at http://www.usaid.gov/our_work/global_health/pop/countries/ethiopia.html

populations. Agriculture is a main source of livelihood for eight out of ten Ethiopians.⁹ Arable land is necessary for increased agricultural production, and thus, limited availability of fertile land is a major hindrance in guaranteeing adequate food production. Joseph Kinyua, Permanent Secretary of the Ministry of Agriculture in Kenya, explains in his April 1, 2004 report, “Towards Achieving Food Security in Kenya,” that small-scale farmers account for 75% of total agricultural production, allowing them to dominate Kenya’s agriculture. Mr. Kinyua states that “small-scale farmers produce over 70% of maize, 65% of coffee, 50% of tea, 90% of sugar, 80% of milk, 85% of fish, and 70% of beef and related products” on small land holdings of two to three hectares. However, farmers’ limited access to land, infrastructure, and technology is not the only barrier to improving food and nutrition security. Factors, such as civil conflict; natural disasters; gender inequality in societal roles; diseases; and poverty-related factors such as income and lack of education, also play major roles in limiting food security in Eastern Africa. Graça Machel¹⁰ President of the Foundation for Community Development in Mozambique and former Expert of the Secretary General of the United Nations on the Impact of Armed Conflict on Children, explains that civil strife is a major cause of food insecurity in East African countries such as Burundi, Eritrea, Somalia, and Uganda. Many of the conflicts stem from ethnic rivalries and environmental scarcities and concerns, such as drought and famine, deforestation, and the inequitable distribution of natural resources (Machel 2-6).

Food insecurity is also due in part to inequalities in societal gender roles. Asha-Rose Migiro¹¹, Member of Parliament and Minister of Community Development, Women, and Children in Tanzania, explains that in East African countries such as Tanzania, women have disadvantaged social roles (1-2). Although women perform most of the agricultural work for the family, the men appropriate income gained from farming, which gives women little power and endangers food security (Migiro 1-2). Women in East Africa tend to carry a heavy workload, caring and preparing food in addition to participating in agricultural activities to provide for the family (Migiro 1-2). This workload naturally becomes heavier and burdensome when resources such as water and wood are scarce.

Education of family farmers is necessary to reverse these factors that lead to reduced agricultural production and food insecurity. Educating farmers about results from agricultural and sustainability research and providing them the technical and financial support to implement methods from this research is crucial in increasing agricultural productivity. Currently, agricultural productivity is falling in East African countries. According to the New Partnership for Africa’s Development (NEPAD), a program associated with the Food and Agriculture Organization of the United Nations (FAO), agricultural yields have been level or falling for food grains and legumes, such as maize, millet, sorghum, yams, and groundnuts (peanuts) due to insufficient investment in factors that contribute to agricultural productivity and efficient use of

⁹ Based upon Rural Poverty Portal, International Fund for Agriculture and Development (IFAD), 12 Sept. 2006

¹⁰ Machel, Graça, and Norman Borlaug. Assuring Food and Nutrition Security in Africa by 2020. International Food Policy Research Institute, 2004. Proceedings of an All-Africa Conference, April 1-3, 2004, Kampala, Uganda. 19 Aug. 2006

¹¹ Migiro, Asha-Rose, and Kankonde Mukadi. Assuring Food and Nutrition Security in Africa by 2020. International Food Policy Research Institute, 2004. Proceedings of an All-Africa Conference, April 1-3, 2004, Kampala, Uganda. 9 Sept. 2006.

resources¹². Thus, investment in agricultural research and implementation of effective farming methods would help to increase agricultural productivity and allow African farmers to generate income by becoming successful in market.

When farmers are educated of agricultural research, they can apply the knowledge to implement the effective farming methods to increase food production. Because most farmers in the largely rural, East African countries have little financial support to implement new farming methods and technologies, organizations such as the United Nations, World Bank, and private organizations should invest in programs to financially support the farmers and provide the technologies and infrastructure to enact efficient agricultural methods. Then and only then, will farmers have the incentive to apply the methods found from agricultural research, which will ultimately lead to higher agricultural productivity. Income generated from increased agricultural productivity would stimulate growth, because farmers would have the financial resources to invest in technologies, hired labor, and more efficient farming practices that would increase agricultural productivity on farms. Agricultural productivity¹³ would also stimulate a growth of jobs in industries related to food, which would further develop agriculture and increase production (von Braun 7-8).

I therefore bring my understanding towards a new definition of food security, that it is the guarantee that families have regular and permanent physical and economic access to a basic food supply whose quantity and quality are sufficient to meet nutritional needs. Machel (2006), former Expert of the Secretary General of the United Nations on the Impact of Armed Conflict on Children, explains that governments must have transparency in decision-making, because citizens, and foremost the women, children, and rural populations that form the majority, are not aware of the governments' decisions and as a result are powerless to bring about change. By increasing participation and representation in government through the promotion of democratic ideals, East African countries' governments would be held accountable for ensuring the needs and rights of their citizens. These governments should ensure the safety of their people by regulating arms trafficking and reducing military spending for conflicts, and instead invest in education, healthcare, and nutrition to improve citizens' living standards. Ensuring food security and improving the lives of East Africans lies in the joint effort of the international community and country governments.

This brings me to even better conclusion, that food security will be a state in which all people in a locality, especially those who are most vulnerable, have stable access to healthy, culturally-appropriate food from non-emergency sources at all times. Food insecurity results when people in a locality do not have an adequate, healthy, and stable food supply.

¹² "Comprehensive Africa Agriculture Development Programme." New Partnership for Africa's Development. Nov. 2002. Food and Agriculture Organization of the United Nations. 15 Sept. 2006. Available at <http://www.fao.org/docrep/005/Y6831E/y6831e00.htm#TopOfPage>.

¹³ Von Braun, Joachim, M.S. Swaminathan, and Mark W. Rosegrant. Agriculture, Food Security, Nutrition and the Millennium Development Goals. International Food Policy Research Institute. 12 Mar. 2006. Available at http://www.ifpri.org/pubs/books/ar2003/ar2003_essay.htm.

Focus on Kenya

Garissa Market is an important livestock market for Somalia, northeastern Kenya, and parts of Ethiopia. As much as 75 percent of cattle in the market are from southern Somalia, especially the Bay, Gedo, and Juba Valley regions. Overcrowding by Ethiopian pastoralists in parts of the Gedo and Middle Juba regions since May could lead to early depletion of grazing resources and abnormal livestock migrations to riverine areas in Lower Juba Region in September. Such migrations could significantly disrupt livestock trade.

The collapse of Somalia's national government in the 1990s and the subsequent disappearance of official customs and revenue collection systems 'liberalized' cross-border livestock trade between Kenya and Somalia. The terminal market for most livestock in the cross-border trade area is Garissa Market, the largest and most important cattle market in southern Somalia and northern Kenya. Its market shed includes southern and central Somalia, part of Somali Region of Ethiopia, and Kenya's Northeastern Province. Garissa is one of several terminal markets for livestock from southern Somalia and Ethiopia, but it also serves as a major transit and assembly market, supplying other major markets in Kenya, particularly Machakos, Nairobi, and Mombasa and other coastal towns. In southern Somalia and the Northeastern Province of Kenya, cattle are an important economic asset, especially among pastoral and agro-pastoral livelihood groups. Cattle provide sources of livelihood through milk and meat production and market sales.

Over the past 17 years, the importance of the cross-border cattle trade among pastoral populations in these areas has increased due to the high value of cattle and increasing seasonal demand for slaughtering and restocking in parts of Kenya and Tanzania. Although there are no official statistics, anecdotal evidence suggests that the bulk of cattle (60-80 percent) sold in Garissa Market come from Somalia¹⁴. The rest of the livestock come from Wajir, Mandera, and Ijara districts of Kenya, as well as from border areas of Ethiopia. However, several years of poor rains have reduced pasture and water availability in much of the Garissa Market shed, including parts of southern Somalia. Moreover, outbreaks of livestock diseases, recurrent conflict, and insecurity along the border prompts frequent border closures between the two countries, significantly impacting cross-border trade and, subsequently, pastoral livelihoods.

Cattle marketing and associated service sectors provide a range of employment and income-earning opportunities for populations on both sides of the border. Contributions of cattle trade to the cash incomes and purchasing power of various population groups within pastoral areas are significant. Despite the seasonality of cattle demand and prices, the cattle trade has a multiplier effect on local economies through the creation of employment opportunities, wealth, and extensive inter-sectoral linkages. Some of the population groups benefiting from the livestock sector include: cattle owners; hired cattle herders; cattle branders; cattle traders, buyers and brokers; sellers of fodder and water; veterinary professionals and other animal health assistants; truck owners, money vendors; militias who extort illegal taxes at check points; and local authorities who generate revenue through legal taxation on livestock sales. The principal

¹⁴ Based upon East Africa Regional Food Security Update, August 2008, USAID/FEWSNET, Nairobi.

destinations for livestock from Garissa are adjoining areas in Kenya's Eastern Province; Nairobi, Mombasa, Voi Range, and Mpeketoni (near Lamu).

Severe weather shocks in southern Somalia and northeastern Kenya from 2004 to 2006 had a significant impact on the Garissa Market catchment. The 2004 *deyr* (October–December) rains and 2005 *gu* (April–July) rains were both below normal. The resultant drought affected the entire Garissa Market catchment area (an area that, since the 2005/06 drought, has also been known as the Mandera Triangle) during the 2005 *deyr* season. This drought caused unseasonal migration to riverine areas, increased resource-based conflicts, high animal mortality rates, and depletion of the livestock asset base in 2006. This was followed by above-normal *deyr* rains in 2006, which caused the worst flooding of the Tana, Juba, and Shabelle rivers since the 1997 El Niño. These floods inundated farmlands, destroyed assets and road infrastructure, and resulted in an outbreak of Rift Valley Fever (RVF) that affected livestock productivity and value. Consequently, the Government of Kenya (GoK) closed Garissa Market between January and March 2007.

The Way Forward

To underlie the ethical implications involved in sustaining our environment, living productively and managing the consequences of human induced changes, a lot remain un-debated. As I have said earlier, in other chapters, that there is need for a concert of ideas, there is no time for dogmaticism in ethics, we need to adapt to changes in time and we need to create an embedded space where we could represent our issues, not at the expenses of other species, but in consideration of their existence. As much as food security remains an ethical problem, linked to illiteracy, poor land practices and climate change, only commonly agreed practices will serve as emancipation from this catastrophe. That is why a regional approach to eco ethics is important, and that is the initiative that the Intergovernmental Organization on Development (IGAD) has taken, clearly outlining its priority areas as:

- Food Security and environmental protection
- Promotion and maintenance of peace and security and humanitarian affairs, and,
- Economic cooperation and integration.

The Intergovernmental Authority on Development (IGAD) in Eastern Africa was created in 1996 to supersede the Intergovernmental Authority on Drought and Development (IGADD) which was founded in 1986. The recurring and severe droughts and other natural disasters between 1974 and 1984 caused widespread famine, ecological degradation and economic hardship in the Eastern Africa region. Although individual countries made substantial efforts to cope with the situation and received generous support from the international community, the magnitude and extent of the problem argued strongly for a regional approach to supplement national efforts.

In 1983 and 1984, six countries in the Horn of Africa - Djibouti, Ethiopia, Kenya, Somalia, Sudan and Uganda - took action through the United Nations to establish an intergovernmental body for development and drought control in their region. The Assembly of Heads of State and Government met in Djibouti in January 1986 to sign the Agreement which officially launched

IGADD with Headquarters in Djibouti¹⁵. The State of Eritrea became the seventh member after attaining independence in 1993.

In April 1995 in Addis Ababa, the Assembly of Heads of State and Government made a Declaration to revitalize IGADD and expand cooperation among member states. On 21 March 1996 in Nairobi the Assembly of Heads of State and Government signed 'Letter of Instrument to Amend the IGADD Charter / Agreement, establishing the revitalized IGAD with a new name "The Intergovernmental Authority on Development". The Revitalized IGAD, with expanded areas of regional cooperation and a new organizational structure, was launched by the IGAD Assembly of Heads of State and Government on 25 November 1996 in Djibouti, the Republic of Djibouti.

The Inter Governmental Authority on Development has a number of objectives; I will highlight those relevant to my topic on this chapter:

- Initiate and promote programmes and projects to achieve regional food security and sustainable development of natural resources and environment protection, and encourage and assist efforts of Member States to collectively combat drought and other natural and man-made disasters and their consequences;
- Mobilize resources for the implementation of emergency, short-term, medium-term and long-term programmes within the framework of regional cooperation;
- Facilitate, promote and strengthen cooperation in research development and application in science and technology.

All in all, it is evident, through demonstration of regional approaches, the associative diplomacy involved, that the countries understand the regional impact of natural disasters, regional climate and even regional food insecurity. No country is completely self-sustainable, interdependence will remain a virtue towards solving common problems, it will be the pillar for economic ethics and the bedrock for eco ethics, we need treaties that unite policies, we need binding agreements that improve the livelihood of Africans and we need action, to stem out illiteracy. The way to meet this target is what I must now try to explain. This I will do in the next chapter.

¹⁵ Based upon the Founding of IGAD available at www.igad.org

7. REVISITING CLIMATE CHANGE

The African Center for Technological Studies (ACTS) defines climate change as permanent changes in traditional mean climate conditions of the local environment. Climate Change can also be defined as a change of climate that is attributed directly or indirectly to human activity that alters the composition of global atmosphere and which is, in addition to natural climate, observed over comparable periods of time (Adhengo 2008)

Many people interpret climate change in relative concepts, they give it a common perception developed from the impressive meaning that the words have, and as such, refer to it as a weather pattern. This has been debated, disproved and contested over the years, and with the steadfast growth of diplomacy, there have been a multilateral approach in bringing this basic knowledge to the citizenry.

Elsewhere I have argued that for public understanding of climate change, there is need to know its determinants and the importance of cooperation on this front.

The Natural System:

The physics and chemistry of Earth's atmosphere largely determines our climate. The Earth's atmosphere is layered. In the lower atmosphere, from the surface up to about 11-km (troposphere), temperature decreases with increasing altitude. This layer is about 1/1200 of the diameter of the globe, but its physics and chemistry are crucial to sustaining life on planet. Because the cold dense air on top of warm less dense air is unstable, the layer is fairly turbulent and well mixed. It contains 99% of the atmospheric mass. From 15 to 50 km, the temperature increases with altitude, resulting in a stable upper atmosphere (stratosphere) with almost 1% of the atmosphere mass. Above 50 km are the mesosphere and the thermosphere, which have little effect on climate.

Three primary gases make up 99% by volume of Earth's atmosphere – Nitrogen (78.09%), Oxygen (20.95%) and Argon (0.93%). However, it is the rare trace gases, that is, Carbon dioxide (CO₂), Methane (CH₄), Carbon Monoxide (CO), Nitrogen Oxides (NO_x), Chlorofluorocarbons (CFCs) and Ozone (O₃) that have greatest effect on our climate.

These trace gases are known as **green-house gases** or radioactively important trace species (RITS). They are radioactively important because they influence the radiation balance or net heat balance of the Earth.

The important feature of greenhouse gases is that they absorb certain infrared wavelengths, thus, they trap heat in the troposphere and stop it from escaping to space. Therefore, the greater the concentration of greenhouse gases, the greater the amount of heat trapped in the lower atmosphere.

To achieve greenhouse gas emission reductions, governments have formulated national policies and signed international agreements. Almost 100 countries have agreed to an international treaty – the 1997 Kyoto Protocol – to reduce greenhouse gas and lessen the rate of climate change.

However, some argue that science has not yet proven beyond a doubt, that climate change will result in a significant damage to ecosystems. They believe that reducing fossil-fuel use will place too large burden on industry and economy.

Natural Responses to Climate Change:

According to another theory, human beings evolved when a drying trend 10 million years ago was followed around three million years ago by a sharp drop in world temperature. The ape-like higher primates in the Great Rift Valley of Africa were used to sheltering in trees, but, under this long term climate shift, the trees were replaced with grassland. The apes found themselves on an empty plain much colder and drier than what they were used to, and extremely vulnerable to predators (UNFCCC/UNEP 2002).

That extinction was a great possibility and the primates seem to have responded with two evolutionary jumps- first to creatures that would walk upright over long distances, with hands free for carrying children and food; and then to creatures with much larger brains, who used tools and were omnivorous (could eat both plants and meat). This second, large brained creature is generally considered to be the first human.

Shifts in climate have shaped human destiny ever since, and people have largely responded by adapting, migrating, and growing smarter. During a later series of ice ages, sea levels dropped and humans moved across land bridges from Asia to the Americas and the Pacific islands. Many subsequent migrations, many innovations, many catastrophes have followed. Some can be traced to smaller climatic fluctuations, such as a few decades or centuries of slightly higher or lower temperatures or extended droughts. Best known is the Little Ice Age that struck Europe in the early middle ages, bringing famines, uprisings, and the withdrawal of northern colonies in Iceland and Greenland. People have suffered under the whims of climate for millennia, responding with their wits, unable to influence these large events.

UNEP (2002) further notes that we humans have been remarkably successful as a species that we may have backed ourselves into a corner. Our numbers have grown to the point where we have less room for large-scale migration should a major climate shift call for it. And the products of our large brains – our industries, transport, and other activities - have led to something unheard of in the past. Previously the global climate changed human beings. Now human beings seem to be changing the global climate. The results are uncertain, but if current predictions prove correct, the climatic changes over the coming century will be larger than any since the dawn of human civilization.

Politics of Climate Change

Many politicians and policy makers claim that climate change is not only the most serious environmental problem currently facing the world, but also, one of the most important international problems per se. That many nations were varied as per “What do we know about climate change?”

In 1988, the Intergovernmental Panel on Climate Change (IPCC) was jointly established by the World Meteorological Association and the United Nations Environmental Program to provide member governments with state of the art assessments of the science, the impacts and the economics of – and the options of mitigating and /or adopting to - climate change (IPCC 2001c,p.vii)

It’s been continuously becoming an issue of development for those African countries involved in balancing and checking of how the climate change policies impact on their national politics, economy and wellbeing.

The ultimate objective of the UNFCCC Convention is to achieve, in accordance with the relevant provisions of the Convention, stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.

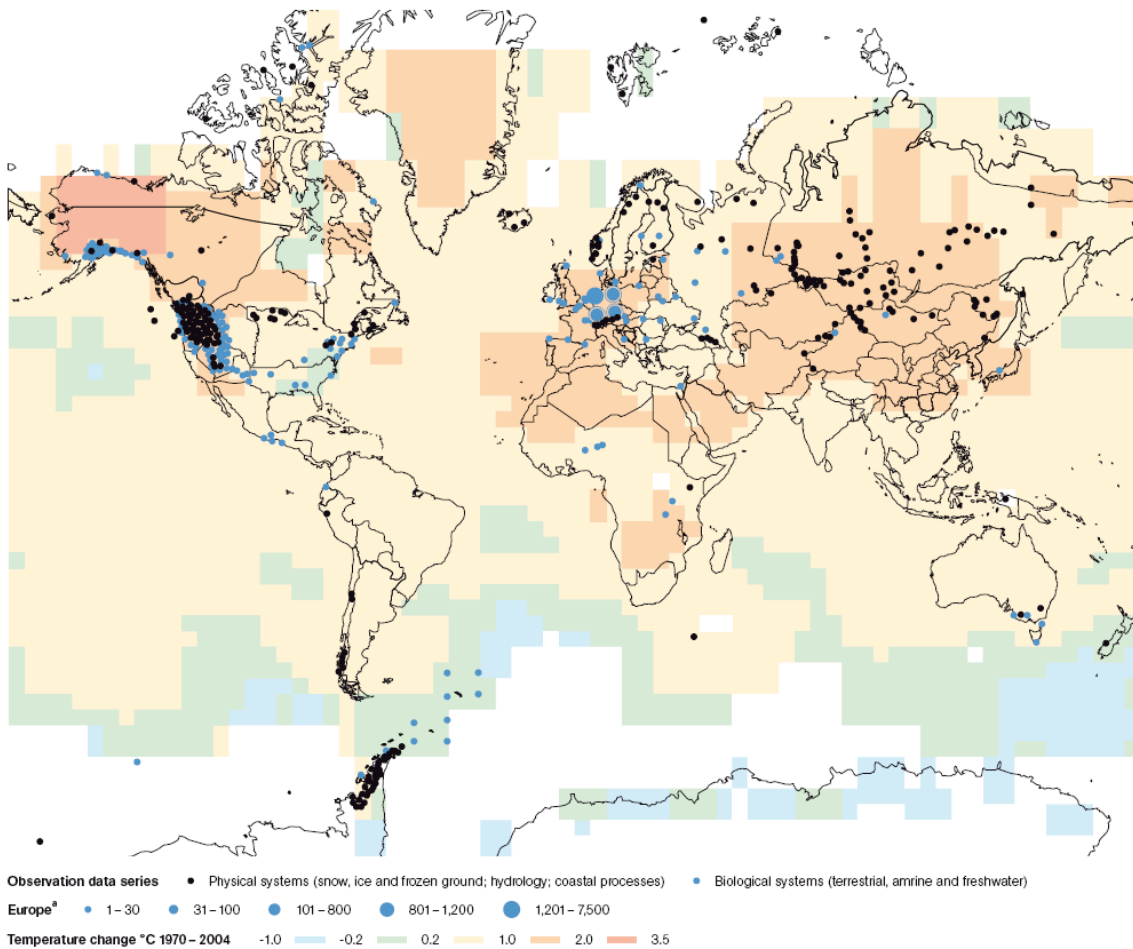
Briefly, the Convention prevails upon countries to, among other things, formulate, implement, publish and regularly update national and where appropriate, regional programmes containing measures to mitigate climate change; cooperate in preparing for adaptation to the impacts of climate change; develop and elaborate appropriate and integrated plans for coastal zone management, water resources and agriculture, and for the protection and rehabilitation of areas, particularly in Africa, affected by drought and desertification, as well as floods.

In addition, signatories are expected to take climate change considerations into account, to the extent feasible, in their relevant social, economic and environmental policies and actions, and employ appropriate methods, for example impact assessments, formulated and determined nationally, with a view to minimizing adverse effects on the economy, on public health and on the quality of the environment, or projects or measures undertaken by them to mitigate or adapt to climate change.

Yvo de Boer, executive secretary of the 2007 United Nations Convention on Climate Change, in a forward to a book “Uniting on Climate Change”, argues that climate change has come to be recognized as one of the most critical challenges ever to face humankind. That the impacts range from sea level rise, melting ice caps and glaciers, along with increased incidences of drought and flooding. He argues that the world has recognized climate change not to be solely an environmental problem. Rather, it has become an economic, trade and security issue that will increasingly dominate global and national policies as its impacts become more apparent.

Figure I-1.

Changes in physical and biological systems and surface temperature 1970 – 2004



Source IPCC WG II Fourth Assessment Report, Figure SPM – 1

Like a blanket round the planet, greenhouse gases trap heat energy in the earth’s lower atmosphere. If levels rise too high, the resulting overall rise in air temperatures – global warming- is likely to disrupt the natural patterns of climate.

Thus in its fourth Assessment Report, the Intergovernmental Panel on Climate Change (IPCC) concluded that the evidence that climate change is already occurring is unequivocal and is due in large part to human activity. The IPCC says that the world faces an average temperature rise of 3°C this century if greenhouse gas emissions continue to rise at their current pace and are allowed to double from their pre-industrial levels (UNFCCC 2007). The impacts of this climate change, particularly temperature increases, are witnessed on natural and human systems around the world (see figure 1).

Developing countries will suffer more than others as their lack of resources makes them especially vulnerable to adversity or emergencies on a major scale. Yet on a person basis, people in developing countries contribute only a small proportion of the greenhouse gas emissions.

The United Nations Convention on Climate Change (UNFCCC) divides countries into three main groups with differing commitments:

ANNEX I Parties include the industrialized countries that were members of OECD (Organisation for Economic Development) in 1992, plus countries with economies in transition (EIT Parties), including the Russian Federation, the Baltic States and several Central and Eastern European States.

A requirement that affected only annex I countries is that they were to adopt climate change policies and measures with the aim of reducing their greenhouse gas emissions to 1990 levels by the year 2000.

ANNEX II Parties consists of the OECD member of annex I but not the EIT Parties. They are required to provide financial resources to enable developing countries to undertake emission reduction activities under the convention and to help them to adapt to adverse effects of climate change.

NON ANNEX I Parties – as they are termed for ease of reference- are mostly developing countries. They are required to submit national adaptation programs of Action (NAPA) that open the way for LDC's to inform donors of their vulnerability to climate change and of their adaptation needs.

Education, training, public awareness , public participation and public access to information are essential for gaining support for measures to combat and cope with climate change. Article 6 of the convention seeks to spur action at the national level as well as cooperation at regional and international levels, to provide the education, training and public awareness needed to understand and deal with climate change impacts.

The convention continues to serve as the focus for intergovernmental action to combat climate change. It also remains the hub for critical reporting, finance, technology transfer and other baseline issues that form the backbone of climate change process. A parallel process has been the adoption in 1997 of the Kyoto Protocol with its legally binding emission targets for industrialized countries and subsequent development of rules for its implementation.

Impacts of Climate Change in Africa

The impacts of climate change in Africa are likely to encompass the following (AfDB et. al. 2002):

- (a) increase in drought, flood, windstorms and other extreme climate phenomena will negatively affect water resources through reduced freshwater availability, food security, human health (such as spread of malaria in the arid zones), industrial production and weakened physical infrastructure base for socio-economic activity, resulting in reduced development;
- (b) changes in rainfall (including likely wetting in east Africa and drying in southeast Africa) and more intense land use will result in increased deforestation, loss of forest quality and woodlands degradation across the continent that will worsen desertification (particularly in

- west, northern and southern Africa). This will exert greater pressure on already strained coping strategies and will very likely result in increased poverty;
- (c) Sea level rise leading to coastal erosion and flooding, particularly in west, eastern and north Africa, and bleaching of coral reefs along the Red sea and Indian ocean coastal zone. With more than one-quarter of the population living within 100 km of the coast and most cities concentrated along the coastline, the vulnerability to marine-induced disaster from tidal waves and storm surges will increase;
 - (d) The decrease in river basin run-of and water availability for agriculture and hydropower generation due to changes in rainfall and river sensitivity to climate variation will likely result in increased cross-boundary tensions. This will result in more conflicts, intensification of existing conflicts or reduced ability to resolve them.

Responding to climate change in Africa

Adhengo (2008) notes that there are two basic approaches to responding to climate change: mitigation and adaptation. Mitigation refers to limiting global climate change through human interventions to reduce sources, or enhance the sinks, of greenhouse gases. Thus, mitigation aims at improving long-term climate patterns by reducing the hazard of climate change impacts.

The second approach to responding to climate change effects is to change human use patterns of the earth system so as to better adapt to climatic conditions before excessive or unsustainable losses occur. Adaptation is defined as adjustments in ecological, social or economic systems in response to actual or expected climatic stimuli and their effects or impacts. Adaptation aims at moderating the adverse effects of climate change by reducing vulnerability to climate effects through a wide range of interventions.

The two approaches of mitigation and adaptation are not mutually exclusive in responding to climate change effects: both are necessary in addressing climate change risks. However, the choice of either approach, or the optimal combination, depends on several considerations, including the underlying nature of climate risks, the development context of decision-making and time-lags to realize benefits of implementing the specific approach.

General strategies for adapting to climate change

The following six general strategies for adapting to climate change should form the basis for developing adaptation responses to be mainstreamed into development instruments:

- (a) preventing losses, for example increasing the resilience of infrastructure and physical development and reforesting degraded hillsides
- (b) reducing losses to tolerable levels, such as improving management of climate-sensitive natural resources and economic production systems, promoting economic diversification to reduce over reliance on climate-sensitive primary industries, and, emphasizing agricultural processes that guarantee minimum yields even under the worst conditions
- (c) sharing or spreading risk, to ease the burden on those directly affected by climate change, such as through insurance or disaster assistance

- (d) changing a use or activity that is no longer viable, such as retrofitting a thermal power station with combined cycle gas turbines to enhance conversion efficiency
- (e) changing the location of an activity, such as re-siting critical service infrastructure restoring sites, such as reclamation of degraded coast land

In Nov 2006 COP 12 and COP/MOP 2 met in Nairobi, Kenya on impacts, vulnerability and adaptation to climate change. The aim of the Nairobi Work Programme (NWP) was twofold:

- To assist all Parties, in particular developing countries, including the least developed countries and small island developing States, to improve their understanding and assessment of impacts, vulnerability and adaptation; and
- To assist all Parties to make informed decisions on practical adaptation actions and measures to respond to climate change on a sound scientific, technical and socio-economic basis, taking into account current and future climate change and variability.

The expected long term outcomes of the NWP are:

- Enhanced capacity at international, regional, national, sectoral and local levels to further identify and understand impacts, vulnerability, and adaptation responses, and to select and implement practical, effective and high priority adaptation actions;
- Improved information and advice to the Conference of the Parties (COP) of the United Nations Framework Convention on Climate Change and to its subsidiary bodies on the scientific, technical and socio-economic aspects of impacts, vulnerability and adaptation;
- Enhanced dissemination and use of knowledge from practical adaptation activities;
- Enhanced cooperation among Parties, relevant organizations, business, civil society and decision makers, aimed at enhancing their ability to manage climate change risks;
- Enhanced integration of actions to adapt to climate change with those to achieve sustainable development.

Identified Challenges in Climate Change Diplomacy

On 3rd April 2008, the Africa Civil Society, unanimously standing as the Climate Change Campaign Africa, issued press statements through their newsletter, the Viewpoint. In this statement, they highlighted some key elements that were of concern to the adaptability measures:

- That the Fourth Assessment Report of IPCC has predicted doom for the African continent if urgent action is not taken to combat climate change;
- The IPCC has rated Africa as the region that will be most affected by the impacts of climate change due to its vulnerability;

They thus resolved that (amongst other issues)

- **Technology transfer:** The transfer and development of technology should be suitable and contextual to the recipient countries. Annex I countries should honour their commitments by assisting Africa to attain the necessary technology for takeoff to a sustainable development path.
- **People-centered climate change response:** We reckon that little has been achieved in the search for sustainable solution to climate change because the subject has not been rooted into the people. There is a complete disconnect between what the technocrats/elites are doing in meetings (boardrooms) and what communities perceive about climate change. It is time to connect with people by engaging community groups such as women, indigenous peoples and the disabled, as they are the ones who are most impacted.

LITERATURE CITED

1. UNFCCC (2007), *Uniting on Climate Change: A guide to Climate Change Convention and Kyoto Protocol*, Climate Change Secretariat, Bonn, Germany.
2. UNFCCC (2007), *The Nairobi Work Program: On Impacts, Vulnerability and Adaptation to Climate Change*, Climate Change Secretariat, Bonn, Germany.
3. UNEP/UNFCCC (2002), *Understanding Climate Change: A beginner's guide to the UN Framework Convention and its Kyoto Protocol*, UNEP's Information Unit for Conventions, Geneva, Switzerland.
4. *Viewpoint Issue 4(2008) Climate Change Campaign Africa*, Climate Network Africa, Nairobi, Kenya.
5. *Climate Change: Causes, Effects and Solutions*, John T. Hardy, John Wiley & Sons Ltd, England, 2003.
6. *Joint Implementation Under the Convention on Climate Change: Opportunities for Development in Africa*, Rolf Selrod et.al., ACTS Ltd, Nairobi, 1995
7. African Development Bank and others (2002), *Poverty and Climate Change: Reducing the Vulnerability of the Poor*, A Contribution to the Eight Conference of Parties to the United Nations Framework Convention on Climate Change. Consultation Draft. October 2002.
8. Boaz Adhengo (2008), *Impact of Climate Change Policies on Africa's Development Concern*, EEIU, Oldendorf/Luhe, Germany.

8. ECO ETHICAL TECHNOLOGIES

Everyday, we read in the media, doom stories about the imminent end of the planet; how we are about to destroy our world through over exploitation and industrialization. There is no doubt, that, as a species, living on a planet with finite resources, we face many problems. We can either wait for the end of the world or face our problems in full, because every environmental problem on this planet could be readily solved.

Milton Wainwright (1999) has argued that no science is required, all we have to do is to change our ways, stop reproducing and stop consuming. But because of our incapability to develop the political will for change, we have to use our technology to combat any problems that arise from its use. For instance, since we pollute the atmosphere with car exhausts, the fruits of technology, we must use technology to produce non – polluting cars.

Man is intrinsically innovative, constantly thinking of better ways to survive and tackle his problems. He is constantly converting short term solutions into long term effects. He is constantly adding value to himself and his environment. Technology can thus be defined as an invention by humankind for the purposes of adapting to the problems of the planet. Competition is becoming inevitable with natural occurrences; the careless nature of man is indicating consequences for induced scarcity. There is a need to create a surplus value in every aspect of life, there is a need to reduce competition on resources and this requires a technological change. But innovative competition has its side effects if not guided by principles of ethics, where humanity develops techniques of survival that are harmful to other species

Charles Cooper (1996) argues that innovation theory contains insights into how and why technical capabilities are developed in the industrial sectors of advanced countries. In effect, they give some new dimensions of meaning to the concept of accumulation of local technological capabilities, which has come to play an important role in technology policy in developing countries (imitation). He explains that the terms under which imitation processes take place in developing countries are essentially mediated by the ways in which technology is transferred from industrialized countries. Technology transfer is the process by which technology, knowledge and information developed in an organization, in a given area, or for a particular purpose is applied and utilized in a different setting or context (Vicente Sánchez and Calestous Juma 1994). Hence literature on developing countries customarily distinguishes two main mechanisms of technology transfer: ‘direct’ transfers, which involve transactions with machine suppliers, engineering consultants and other agents in industrial countries; and ‘indirect’ transfers, done by licensing agreements with innovative firms in industrialized countries that have successfully appropriated relevant segments of the production technology.

The general perception of technology in most developing countries is the equipment, skills, managerial competence and technical specifications associated with the production of goods. Technology transfer therefore refers mainly to the flow of such production capacity. This limited perception of technology has led to the false view that technological development is inherently an expensive process which must rely on external input and financial resources. It would be wise for developing countries to focus on accumulating technological capacity, which is the ability to generate and manage technical change (including the related skills, knowledge and experience as

well as institutional structure and networks). In this respect, technological development is a purposive and dynamic process that builds on period gains and is articulated through specific institutional arrangements. It takes concerted and guided efforts and does not emerge from the mere act of investing in new production facilities (Calestous Juma, Edith Mnene 1994).

The study of biotechnology by social scientists is still in its infancy. While there is a wide consensus among governments, firms – both large and small, new and old- and scientists and technologists that biotechnology will have at least as broad an impact in the future as microelectronics and information technology, its potential has yet to be realized. This makes its study both interesting and dangerous (Martin Fransman, Charles Cooper 1996), flowing from the great degree of uncertainty that is present in any new field of technology in the early stages of its development, and particularly a radical technology like biotechnology that will have impact a broad range of products, processes, and industries.

Biotechnology is a set of techniques that uses living organisms or substances from those organisms to make or modify a product, to change the characteristics of plants or animals or to develop micro-organisms for specific purposes. In this respect, biotechnology is a collection of varied techniques that are targeted to a wide range of applications in other sectors of the economy. Thus economists in different conceptual persuasions agree that changes in technology can have a major economic impact. That invention of ideas that formulate technology becomes a key process, these ideas are used to produce and sell new or improved products, processes, and services. We could therefore define biotechnology to be the use of biological organisms for commercial ends. According to this definition, biotechnology is as old as human civilization, as is clear from activities such as brewing of beer, fermentation of wine and production of cheese. Hence, in understanding the contribution made by science to biotechnology, it is necessary to examine the relationship between science, technology, economy and society. All in all, social scientists have been reluctant to examine the causes of technical change, preferring instead to analyze its consequences.

We could define environmental biotechnology as the application of technology to natural, agricultural and man – made environments. The rise of environmental studies, which must surely be amongst the most inherently applicable of applied sciences, and the growing importance of biotechnology usage in this respect, remain two of the most encouraging developments for the future of our planet.

Gareth M. Evans and Judith C. Furlong (2003) maintain that there are three key points for environmental biotechnology interventions, namely in the manufacturing process, waste management or pollution control. Accordingly, the range of businesses to which environmental biotechnology has potential relevance is almost limitless. One where this is most apparent is with regard to waste. All commercial operations generate waste of one form or another and for many, a proportion of what is produced is degenerative.

Apart from issues of biotechnology, economics and development, the most important connotation is ethics. Ethics remains the bedrock of humanity, and for this case, secular ethics is the most relevant for continuous development of knowledge

We could define environmental biotechnology as the application of technology to natural, agricultural and man – made environments. The rise of environmental studies, which must surely be amongst the most inherently applicable of applied sciences, and the growing importance of biotechnology usage in this respect, remain two of the most encouraging developments for the future of our planet. Ethics remains the bedrock of humanity, but creating a balance of the various interests represented in the academia of environmental studies remain catastrophic. There is a need to develop better concepts that steer interpretative approaches, that encourage secular progress of idea, that are not traditionally static, but open to criticism, are avenues of change and are full of respect for all the stakeholders in earth, with this, I mean other species that cannot think or express themselves. Rather than sharing one morality, we confront strikingly different concrete moral visions and accounts of moral obligations, rights and values. Each account asserts its own priority. When asked how to justify these diverse moral understandings, some appeal to considerations of consequences; others appeal to principles of right or wrong that are dependent on outcomes. H. Tristram Engelhard Jr. (1996) notes that given the limits of secular moral reasoning, all that is available is a means (within certain constraints) of giving moral authority to common undertakings without establishing the moral worth or moral desirability of any particular choices. That the project of securing as much universality as possible for the claims of bioethics has roots in the enlightenment of all persons outside of any particular religious and cultural assumptions.

Politics is often seen as a dirty word. We lament when issues become “politicized” or when science gives way to politics”. An old adage is ‘never discuss politics, religion or sex’. Yet, just as the biophysical world is the basic component of natural resources, politics is the stuff of people interacting with each other, their environment and governmental institutions, all of which affect nature greatly (Hanna J. Cortner and Margaret A. Moote). In ecosystem management, objectives for land and water resources are related first and foremost to the integrity, vitality and resilience of ecosystem structures and processes. Ecosystem management reflects growing public awareness and acceptance of environmental values, increasing emphasis of the scientific community on ecological concerns such as biodiversity, and changing professional practices that view conditions of the land to be just as relevant as the quantities of outputs that can be produced. Key to ecosystem management is the goal of ecological sustainability – protecting and restoring critical ecological components, functions, and structures in perpetuity so that future as well as current generations will have their needs met - a concept of eco ethics. George Njuguna (2007) argues that environmental planning and management often addresses not only optimum use of resources and residual management, but also their equitable distribution. Due concern is accorded to the ordinary citizens with limited bargaining platform and ability *vis a vis* the industry for example, planners recognize the inherent right of the citizenry to the commons and use this fact to argue for the right to clean air, land, water and a healthy living environment without having to pay for services that have been free for generations. Environmental planning and management therefore entails the control of the inevitable entropic effects of developing socioeconomic system.

In span of a few thousand years, humanity has spread itself and its artifacts across the globe, becoming the planet’s most powerful, most widespread and most dangerous form of life. Though constituting only one out of countless millions of species that currently make the earth a home, humans directly appropriate or otherwise destroy much of the solar energy that is biologically

fixed on earth's landmasses. In gaining this ever increasing prominence, Leslie Paul Thiele (1999) notes that we have caused demise of thousands and perhaps millions of other species. Eco ethics lament the selfishness and shortsightedness of this planetary usurpation. The environmental degradation that human beings impact upon the earth gets directly translated into human suffering: human disease from polluted air, land, and water, human hunger and want from depleted natural resources, and human physical and mental misery produced by overcrowded living conditions, the absence of wilderness. Are we not creating artificial problems, are we not interfering with the natural flow of events, are we contesting our ability to think innovatively, are we sure of the need for ethics? I think that we are creating a crisis; I believe that we are becoming hazardous and I know that we are facing complexity of risk management. All these, due to the economic implications of our creativity, the side effects of technology, the absence of morality in technological transfer and the patent system that creates selfish practices, limits ethical concert of ideas, limiting ecological planning and developing self-centered approach to issues. This kind of thinking, this narrow approach of events, this delimiting perception of humanity as part of multi-species, this non consideration of our membership in concert with other species, is what has endlessly created a crisis.

Dirk Glaesser (2004) argues that the term crisis comes from the Greek 'krisis', which means differentiation or decision. Within the legal sphere, the term was used to describe the differentiation between just and unjust, thus, in business administration crisis is termed to be a process that negatively influences the development of a company to a considerable extent. Then, how do we define crisis in relation to environmental studies, how do we explain crisis in light of eco ethical practices.

The Bottom Line

The most important thing to know is that the problems of humanity are as old as the origin of industrialization, that they are as old as the technological revolution era. These problems have been catalysed by lack of consensus, lack of diplomacy and too much secrecy in economics. There is need for econ ethics based on eco ethics. Technological innovations are commercial ends, developed as a means to create trade. And as the complexity of issues create appetites for ethics, there is an ever growing need to unite the technological approaches, hence biotechnology, which gives a greater hope of have ecological ethics as its basic pillar, too much remains unknown and too much remains patented (yet discovered), there is a need for sharing, there is a need for morality and there is a need for secularization of our ethics. Enlightenment is the only way forward, the best route of organizing our ecosystems, thus Christensen et al. on the report of the ecological society of America committee on the scientific basis for ecosystem management (Journal for the Ecological Society of America, 1996) maintain that "Ecosystem management is management driven by explicit goals, executed by policies, protocols and practices, and made adaptable by monitoring and research based on our best understanding of the ecological interactions and processes necessary to sustain ecosystem composition, structure and function

LITERATURE CITED

1. Milton Wainwright (1999), *An Introduction to Environmental Biotechnology*, Kluwer Academic Publishers, Massachusetts, U.S.A.
2. Charles Cooper (1996), *Technology and Innovation in the International Economy*, United Nations University Press, Maastricht, Netherlands.
3. Vincente Sánchez and Calestous Juma, (1994), *Biodiplomacy: Genetic Resources and International Relations*, ACTS Press, Nairobi, Kenya.
4. Gareth M. Evans and Judith C. Furlong (2003) *Environmental Biotechnology: Theory and Application*, John Wiley & Sons Ltd, England, U.K.
5. H. Tristram Engelhardt Jr., (1996), *The Foundations of Bioethics*, New York, Oxford University Press.
6. Hanna J. Cortner and Margarte A. Moote (1999), *The Politics of Ecosystem Management*, Washington, D.C., Island Press
7. George Ngugi Njuguna (2007), *Environmental Planning and Management*, Nairobi, Act Press
8. Leslie Paul Thiele (1999), *Environmentalism for a New Mellenium: The Challenge of Coevolution*, New York, Oxford University Press.
9. Dirk Glaesser (2004), *Crisis Management in the Tourism Industry*, Burlington, Elsevier Butterworth – Heinemann Inc.

9. The Paranormal Nature of Ethics: Implications on Food Security

With the ever changing situation in Kenya, east Africa and elsewhere in the world, different ideologies have been put into practice, there has been an improvement in diplomacy and many countries have taken a regional initiative to address the key issues that affect the well being of their population. Food security remain the most basic of all, and the incapacity to create a supply in response to the demand for food in the desperate regions, has often promoted traditional beliefs to be the response on issues that could be scientifically explained and addressed. Some interesting communities view food crisis and climate change as a paranormal phenomena, as much as we are in the 21st Century, still people insist on dogmatic understanding. Governments are afraid of loosing their mandate, they view that denying paranormal practices will be denying democracy, others view that these practices are embedded in our cultures and can only cause a better facility for controlling the populations, the less they know, the more manageable they become. Paranormal could be understood as generic classification of phenomena and information not readily understood or explained by a preconceived system of scientific or spiritual beliefs. Hence, lots of issues, ranging from climate change, risk management and food security will widely fall in this bracket. But is this fair enough? Does it necessitate the commercialization of agriculture? Is it positive for nationalism? What does science tell us on the growing disparity of class, or the ever growing sophistication of our livelihood? Are we doing agriculture in any improved way..?

The prices of agricultural commodities, including staples of many African diets, have risen sharply over the last several years. The sharpest rises have been within the past six months. Since 2005, the prices of maize and wheat have doubled, and the price of rice has now reached unprecedented levels (see Table 1). According to the World Bank, the Food and Agricultural Organization of the United Nations, and the United States Department of Agriculture, rising prices are likely to persist through 2015.¹⁶

Table *1*

Agricultural Commodity Prices (\$US/metric ton), 2005 to the Second Quarter, 2008

Cereals	2005	2006	2007	1st	2nd
				Quarter 2008	Quarter 2008
Wheat	152	192	255	411	347
Maize	98	122	163	220	259
Rice	288	304	332	516	953

¹⁶ World Bank, "Rising Food Prices: Policy Options and World Bank Response" (April 2008).

Source: International Monetary Fund (IMF), "Table 3. Actual Market Prices for Non-Fuel and Fuel Commodities, 2005-2008," IMF Primary Commodities Prices (www.imf.org, accessed Aug. 12, 2008)

As I explained earlier¹⁷, the supply of food may be affected by land and water constraints, underinvestment in rural infrastructure and agriculture, lack of access to fertilizer and irrigation, trade policies, and weather disruptions. Factors that affect the demand for food include rising energy prices and conversion of croplands to biofuel production, population growth, globalization of food markets, and changing diets.

East Africa, which includes Burundi, Eritrea, Ethiopia, Kenya, Rwanda, Somalia, Tanzania, and Uganda, imports fertilizers and food and contains some of the poorest countries in the world. Periodic drought, dependence on rain-fed agriculture, low agricultural productivity, and frequent conflict undermine local food production, contribute to food insecurity, and create greater dependence on food aid. For example, the December 2007 post-election conflict in Kenya disrupted production and trade and displaced farmers and laborers, which caused the normally food-secure regions of Central and Western Kenya to become food insecure. The conflict resulted in a post-harvest loss of 300,000 metric tons of maize¹⁸. One might expect higher food prices to benefit rural farmers and lead to higher incomes and increased production, but in East Africa this isn't necessarily the case. It is difficult for small farmers to increase production in response to higher prices for several reasons, including: lack of available land, inadequate irrigation, rising fertilizer prices, inability to get insurance and loans, and reluctance to risk investment with no guaranteed return. In fact, despite the higher prices of the foods they are producing, farmers in some parts of East Africa have actually planted less this year¹⁹. East Africa remains one of the most food-insecure regions in the world. Food security, which is defined as "when all people at all times have both physical and economic access to sufficient food to meet their dietary needs for a productive and healthy life," is a broad and complex measure. It is usually studied through three dimensions: food availability, food access, and biological utilization/absorption of food. In the past, technological improvements in agriculture allowed food production to comfortably exceed population growth, resulting in declining food prices. This pattern of declining food prices, however, has recently reversed and there is growing concern among policymakers and researchers as to whether the previous progress will continue. Population growth can also have an impact on the food supply and access. In many areas population growth has been associated with land fragmentation and resettlement schemes in fragile environments that directly affect food production. Specifically, land fragmentation contributes to inefficient and destructive farming practices and increased cultivation of marginal land, which often reduces food production (this is highly influenced by the traditional ethics, the cultural livelihoods).

¹⁷ See Ecological Implications of Food Security

¹⁸ "Kenya Food Security Outlook: April to September 2008," accessed online at <http://www.kenyafoodsecurity.org>, on July 8, 2008.

¹⁹ "The New Face of Hunger," *The Economist*, April 17, 2008.

The Organic Action Process

The world still faces a fundamental food security challenge, it is not only a problem of East Africa, it is a human induced, facilitated and realized problem. Despite steadily falling fertility rates and family sizes, the world population continues to increase, and so, in parallel, will the absolute demand for food. Food demand will also shift in the coming decades, as (a) economic growth increases peoples purchasing power, (b) growing urbanization encourages people to adopt new diets vis a vi their cultures (c) climate change threatens both water and land resources.

Food security of any region is not simply a question of producing enough food to meet demand; it is also influenced by a multitude of factors, both natural and human induced. Increased food supply will not necessarily mean increased food security for all. What is important, is who produces the food, who has access to technology and knowledge to produce it, and who has the purchasing power to acquire it, thus creating a superstitious effect that can result in further food insecurity. As noted from chapter eight, agriculture, by its inherent multi-functionality, has the potential to both influence and address the factors that contribute to food insecurity. Organic agriculture relies on five capital assets for success (natural, social, human, physical and financial). According to UNEP/UNCTAD (2008: 10), organic farming increases access to food on several levels. First, increased quantity of food produced per farm leads to household food security which results to all members of that household having access to enough food. Second, the production and selling of food surpluses at local markets means that farmer's benefit from higher incomes, which increases their purchasing power. Third, fresh organic produce becomes available to more people in the wider community. Finally, organic farming enables new and different groups in a community to get involved in agricultural production where previously they were excluded for financial or cultural reasons²⁰. The way the world grows its food will have to change radically to better serve the poor and the hungry if the world is to cope with growing population and climate change while avoiding social breakdown and environmental collapse. It becomes truthful to assert that sustainability in agricultural systems incorporates both the concepts of resilience (capacity of systems to resist shocks and stresses) and persistence (the capacity of systems to continue over a long period of time), and address many wider economic, social and environmental outcomes. The aim of organic farming is thus to create integrated humane, environmentally and economically viable agricultural systems that rely to the greatest extent on (a) local or non-farm renewable resources, and (b) the ethical management of ecological and biological processes. Organic agriculture is a defined system of agricultural production that seeks to promote and enhance an ecosystem's health while minimizing adverse effects on natural resources. The FAO/WHO Codex Alimentary guidelines recognized by UNCTAD in its Trade and Environment Review of 2006, defines Organic Agriculture as a holistic production management [whose]primary goal is to optimize the health and productivity of interdependent communities of soil, life, plants, animals and people". A major point to note is that the recent food –price hike and the rising fuel prices contributing to it, has made it important to make agriculture less energy and external input dependent. Organic and near-organic agricultural methods and technologies are ideally suited for the many poor, marginalized smallholder farmers in Africa, as they require minimal or external inputs as they use locally and

²⁰ For detailed example, refer to the "EEIU NABUUR IN MARIGO" Report available at www.eeiu.org/chapters/nabuur/reports.html

naturally available materials to produce high quality products, and encourage a whole systemic approach to farming that is more diverse and resistant to stress.

As much as organic farming is less sophisticated, more open and welcoming to all people at any level of the population, most governments in Africa have resisted its incorporation to national systems on the justification that it is traditionally propelled, it is based on superstitious malpractices and is not consistent with growth. Many scholars have resisted the enhancement of the organic action process claiming that they promote paranormal reasoning, suppress creativity and are not compatible with the time, they are not technologically friendly.

What is the Paranormal?

Paranormal is a phenomena which seem to defy the known laws of science, thus, parapsychology- refers to the study of paranormal phenomena. The word paranormal derives from the words “para” meaning beyond, and normal. So the term paranormal really means something that is beyond the normal. It is therefore accurate to say that paranormal is any experience that happens beyond the range of scientific explanation or normal human capabilities. These experiences may include hauntings, telekinesis, telepathy, clairvoyance, or any other rarity that cannot be justified by the five senses.

In our recent tour to Kilifi district in Kenya²¹, we viewed a diverse happenstance that provoked our independent interpretations, ranging from poverty to the effects of hunger. As a secular organization, our analysis was mainly based on the scientific understanding of the situation, vis a vi the general condition of that particular environment. And the experience from this trip intrigued interesting questions; is there a form of knowledge that cannot be derived from the usual sources of human experience, and that need not be justified by reference to them? According to the classical religious tradition, there is, it has been called the “mystical experience” or “mystical consciousness.”²² Mysticism is supposed to untap an esoteric form of knowledge of a transcendent realm of being that lies deep within the soul. This knowledge is incapable of being translated into ordinary sensory empirical terms; it defies the categories of cognitive logic; it is extra-ordinary in its essential nature. Yet it is supposed to be the most important knowledge we can discover; and it points to a reality beyond our normal consciousness of the world. The people of Kilifi district are highly superstitious that it becomes contentious to describe them as a religious community. I doubt whether calling them primitive will justify the problem I intend to explain, but this will not be accurate, in that, we have schools and colleges in this place. I think that there are deep-seated psychological and organic needs that help explain the behavior of mystics. There is a tendency for self – affirmation and self esteem, a desire to devote oneself to something or somebody, and that is why in this community, we have so called medicine-men, fortune tellers and even symbolic understanding of natural hazards. This community remains the best example to elaborate the paranormal implications of ecological ethics, how do people behave in response to a global crisis, how does the literacy level affect their sustainable practices, how do they respond to concerns of development? Kilifi district is the

²¹ The EEIU Nabuur On campus Project for November 2008

²² This is how Prof. Paul Kurtz, expresses this anomaly.

most unstable community in Kenya, a lot of research has been conducted by the EU Federation, but no comprehensive understanding has gained an insight, the findings remain fixative, situational and not viable for scientific involvement. It is on this note that the government of Kenya invested so much on adult education in this region, to facilitate easier interaction between policy researchers and the community, and to involve the traditional methods of responding to natural disasters in the on going formulation of risk management strategies. Food security has remained a key concern for this region, and the effects have been enormous, the comments made by civilians from Kilifi demonstrate how naïve they are towards the regional disaster. Some blame food security for their actions, some believe that it is Gods way of communicating to them and as such, they have resisted outside help for so long. It has taken coercion by the government, for them to realize that they mystical understanding of food crisis is indeed an hallucination and has no place in development. Groups like Eco Ethics International Union have been recognized through their local involvement, planting trees and educating the communities on sustainable agriculture, bridging the gap between traditional ethics and the changing time, introducing different eco ethical thesis and promoting a skeptical approach to livelihood. At one time, during our tour, there was a repeated incidence, where a group of primary school children were making animal sounds. Some barked like dogs, others were hissing and some were making sounds of a sheep. A look at their traditional practices even confused me more, they believe on a sacred forest (that has now been labeled a national conservatoire) where they conduct their worship and consult with their priests on what to do. It is a practice that everyone must give gifts to the priest (who seems un affected by the general cries of the community) in terms of food, clothing and even money. He is recognized a highly divine. Whatever he says is treated with respect and his comments are interpreted as law, more than the national constitution we have in Kenya. The girls never progress beyond primary education and the boys, though many finish their primary education, are usually old at time of completion²³ remaining traditionally oriented and resistant to change by all means. It is on this note that introducing sophisticated agricultural practices in the region has remained an impediment; there is no supporting education to ease this task. Organic farming remains the way out, and the side benefits are great compared to the mystical practices that these communities have refused to let go.

Paul Kurtz (1986) explains that mysticism has been widely associated by hallucinations²⁴ where people claim certain capabilities after eating or gaining influence in certain ways. This could be the case with the Kilifi priest or divine men. That there are many varied accounts of the use by primitive tribes of certain plants to bring hallucinations. Mexican Indian tribes used peyote, Native Americans smoked stramonium, and the Samoyed shamans of Siberia ate poisonous toadstools to induce ecstatic visions. The Pythia at Delphi in ancient Greece fasted for three days, chewed laurel leaves, and afterwards breathed noxious vapors (could this relate to insufficient food situation in east Africa?). Apparently there is a deep tendency within the human species to want to alter consciousness by various stimulants (either knowingly or unknowingly) and intoxicants; marijuana, cocaine, heroin, alcohol, coffee, tea and tranquilizers are only some of the modern forms.

²³ The kind of education they have is not consistent, you learn at your own pace. Some take breaks of two years, some marry while still in primary school and get disinterested in further learning.

²⁴ See page 103 - 104

I insist that in order to tackle the regional problems we face, we must involve science, we must know how the spill over effect best benefits the local communities, we must promote literacy and we must resist traditional ethics in all its form. Mystical explanation of reality has no place in our time, it is an element of the primitivity of our founding societies, these are historical archives that were erroneous and innovations have misplaced them. Kilifi district demonstrates that ethics has a long way to go, especially eco ethics, defining the best practices without involving the paranormal understandings are not acceptable to them. And that is why, likes of me, will endeavour to introduce situational affirmations of eco ethics, responding to the need for education, simplification of abstract explanations and involvement of the community in their efforts to get enlightened, emancipated and be informed on ways of not having natural hallucinations caused by lack of food, poor diet and consumption of toxicants that they do, not knowing that they are scientifically unhealthy and their side effects include vulnerability and mystical experiences. This is the way for eco ethics, educating the communities and involving them in this global stance. As much as nature remains a key element, religion has no place in ethics, though we may borrow much from the success of organized religion, we shall endeavor not to replicate their thoughts in our co evolution. Everything goes and everything changes²⁵. There is need to promote skepticism, there is a need to integrate traditional methods into our modern ways. That is why activities like organic farming remain important, they improve on the traditional ways of farming, but involve academic elements, promote the concept of good diet and more so, a market oriented approach to production. There is the economic aspect of life; we need to depend on ourselves for the emancipation from our induced problems. Food security can be challenged in different ways; the only ingredient lacking is consensus. And this, will highly depend on the best way forward. Paul Kurtz (1994)²⁶ maintains that the principle of skepticism implies that the reliability of a hypothesis, theory, or belief is a function of the grounds, evidence, or reasons by which it is supported. Is Kilifi ready for this initiative? Are Kenyans happy for innovation?

LITERATURE CITED

1. UNEP/UNCTAD (2008), Organic Agriculture and Food Security in Africa, New York/ Geneva, UNEP/UNCTAD
2. Paul Kurtz (1986), The Transcendental Temptation: A Critique of Religion and the Paranormal, New York, Prometheus Books.
3. Paul Kurtz (1994), Living Without Religion: Euphraxophy)

²⁵ Based on EEIU Bronchure by Prof. Otto Kinne

²⁶ See page 29

