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**PASTORAL DEVELOPMENT: LESSONS FROM THE PAST
IMPLICATIONS FOR THE FUTURE**

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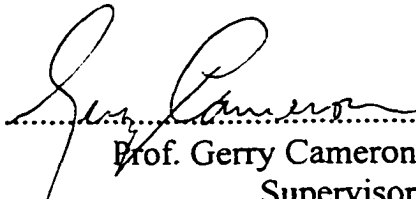
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**PASTORAL DEVELOPMENT: LESSONS FROM THE PAST;
IMPLICATIONS FOR THE FUTURE**

Thesis submitted in partial fulfilment of the requirements
for the
Master of Arts Degree
in
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Date of Submission: 29-10-98
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PASTORAL DEVELOPMENT: LESSONS FROM THE PAST; IMPLICATIONS FOR THE FUTURE

ABSTRACT

"Culture may be said to be the whole complex of distinctive spiritual, material, intellectual, and emotional features that characterize a society or social group. It includes not only arts and letters, but also modes of life, the fundamental rights of the human being, value systems, traditions, and beliefs."

Aguibou Yansane

The study of development, or indeed human life generally, necessitates the study of shared values and beliefs of all kinds, and the examination of their interconnectedness. Religion and kinship are just as significant as economic transactions and the political life of a people. Among policy makers and within some of the literature there is a current of thinking that attributes cultures as the main barrier to development. Simplistic conceptions of 'tribalism', or assumptions about the traditional attitudes of African herders are held up as an explanation for development failure.

Development theorists recognize that culture is an immense factor in determining the impact and outcome of development projects. However, besides the obligatory reference about the significance of culture within the development process until the emergence of the Alternative Development Paradigm and its key elements not much action was taken in regard to include culture in the development process.

The key elements of the Alternative Development Paradigm illustrate the interrelatedness of all aspects and sectors of society and have seriously challenged policies implemented within the realm of the Dominant Pastoral Development Paradigm.

This paper will examine the significance of endogenous development within the development of the pastoral Turkana in Northwestern Kenya. The paper argues that without including culture into the development process, not only will development efforts be unsustainable but in fact the costs of development are exacerbated.

**April, 1998
Barbara Holler**

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GLOSSARY OF TERMS

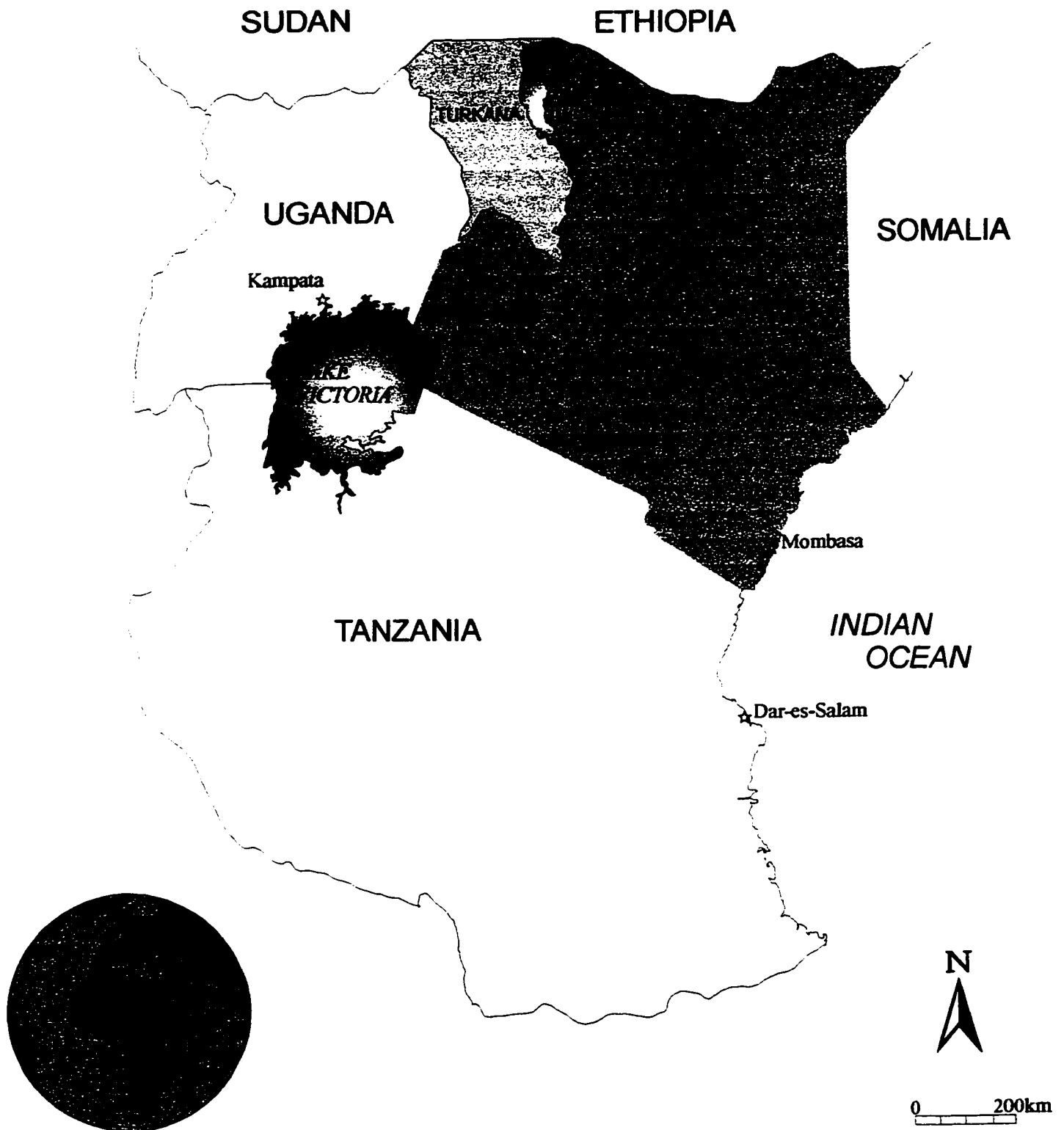
Cultural Ecology: Julian Steward developed an ecological approach to anthropology that focused on the adaptation of individual cultures to specific environmental circumstances. The methodology that is outlined for his theory involved a field of study he called cultural ecology; that is, the examination of the cultural adaptations formulated by human beings to meet the challenges posed by their environment.

Endogenous Development: as outlined by Marc Nerfin in 1975, concludes that development has to stem from the heart of each society, which defines in sovereignty its values and its vision for the future.

Pastoralism: Pastoralists are people who derive most of their income or sustenance from keeping domestic livestock in conditions where most of the feed that their livestock consume is natural forage rather than cultivated fodders and pastures. In most cases, also, pastoralists devote the majority of their working time and energy to looking after their livestock rather than other economic activities. Therefore the notion of a pastoral system usually but not always involves herding on natural pastures and implies that animal husbandry is economically dominant. In addition, it is sometimes stated that pastoral production systems are those in which 50% or more of household gross revenue comes from livestock or livestock-related activities, or when more than 15% of household food energy consumption consists of milk or milk products produced by the household. Pastoralism usually takes place in ecosystems in which the rhythm and nature of subsistence activities are conditioned by the physical environment. Pastoral economies are by no means insulated from the demands of expanding market economies.

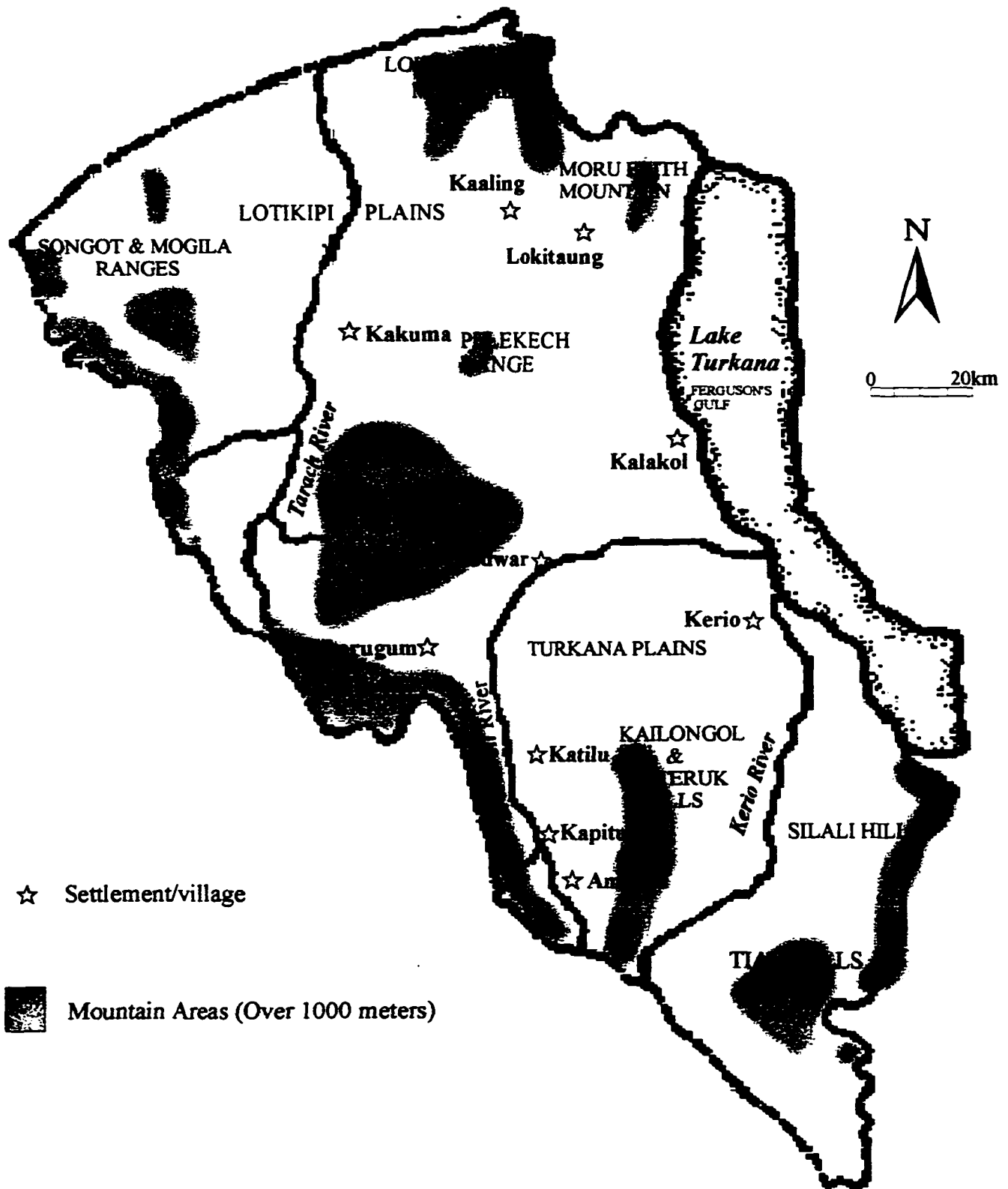
Social Soundness Analysis: Social Soundness Analysis is used to determine the cultural feasibility of development projects. This approach to project assessment was developed by the anthropologist Glynn Cochrane. An important component of Social Soundness Analysis is the identification of the beneficiary groups associated with the effects of a specific policy. This is important for, at least in theory, the policy framework of development efforts today have a mandate to direct most of their attention to the needs of the poorest of the poor.

EAST AFRICA



MAP 1 EAST AFRICA

THE TURKANA DISTRICT



MAP 2 TURKANA DISTRICT

1.1 Background

The study of development, or indeed human life generally, necessitates the study of shared values of all kinds, and the examination of their interconnectedness. Religion and kinship are just as significant as economic transactions and the political life of a people. Among policy makers and within some of the literature there is a current of thinking that sees culture as the main barrier to development. Simplistic conceptions of 'tribalism', or assumptions about the traditional attitudes of African herders are held up as an explanation for development failures.

Over time everywhere in the world modern life has intruded upon pastoral people, and there are few whose traditional way of life has not been severely challenged by new circumstances, constraints, and possibilities. Whatever their will and their circumstances, pastoral people have not been able to ignore or elude the new pressures; they like the rest of humankind, have been drawn into a smaller and more crowded world. Pastoral people are thus entangled more than ever in a web of social, economic, and political ties, with the pressures and constraints determined by factors largely outside their control. With the growth of industrial technology, world trade, urban and agricultural populations, government bureaucracies, pastoral people of limited numbers, primarily local orientation, with a dominantly subsistence oriented production system, are increasingly marginalized at the same time that they are being more fully integrated into wider

systems that they had little influence in forming.

1.2 Rationale of the Study

People, culture, and the environment are inseparable elements of the cultural ecology among the Turkana. As such, they are the key to sustainable development. Therefore those seeking to promote sustainable development will have to direct their attention to society as a whole and insist that it can not be reduced to purely economic or political factors. This statement does not imply that culture becomes more important than political economy; rather it involves examining the interplay between all sectors of society. What one needs to avoid is the assumption that the cultural factors are a sphere separate from the rest of the development process. A new approach to pastoral development has emerged with an emphasis on the preservation of this viable lifestyle. Over the past, development efforts undertaken among the Turkana pastoralists have met with negative effects on the environment and pastoral society, the preservation of pastoralism seems to be a step in the direction of sustainable development. These key elements, which are central to the alternative development paradigm, have precipitated from a growing awareness of interrelatedness of human ecology and environment. The key elements of the alternative development paradigm include self-reliant, need-oriented, endogenous, ecologically sustainable development, and development based on the structural transformation towards self-management and participation in the decision-making process. In the past, development efforts

among the Turkana pastoralists of Northwestern Kenya have followed the so-called mainstream approach, as discussed in the literature.

1.3 Research Question and Thesis Statement

This study investigates the significance of endogenous development within the process of development among the Turkana pastoralists. This will be done by applying the cultural ecology methodology as developed by Julian Steward.

Examining three development projects implemented in the Turkana District in the past will support the argument of the thesis. With secondary evidence discovered in the literature, a social soundness analysis on the impact of those development efforts will be illustrated. Thus, in terms of those objectives, the study addresses the following research question: **What significance does the element of endogenous development have in the success of development efforts among the Turkana pastoralists in Northwestern Kenya?**

Thesis statement

The study argues that endogenous development is the key factor for sustainable development among the Turkana pastoralists. In this study I will argue that without the incorporation of endogenous development, not only will development efforts be unsustainable but in fact the social, economic, and ecological costs of development projects are exacerbated. The study also hypothesises that without the incorporation of culture into development planning, development projects are not sustainable in the long run. With the application of

one of the key elements of the alternative development paradigm, endogenous development, significant obstacles to development will be avoided, inasmuch as alternative development is people-centred, need-oriented, ecologically sound, self-reliant, and aimed at structural transformation toward democratic participation in decision-making and self-government. The argument follows a logic based upon the methodology of cultural ecology, that both physical and non-physical factors cause and/or influence human behaviour. As a result, the incorporation of culture and the application of the element of endogenous development are vital in the success of development efforts. Theoretical evidence has been provided through literature reviews. The thesis proposes that more attention should be given to culture as a factor determining the outcome of development efforts within the pastoral sector and the significance of culture in the sustainability of development projects.

1.4 Conceptual Framework and Working Ideas in the Study

The conceptual framework of the thesis is rooted in the concepts and principles of ecological anthropology, applied anthropology, and the alternative development paradigm. Julian Steward developed an ecological approach that focused on the adaptation of individual cultures to specific environmental circumstances. The methodology he outlined for his theory involved a field of study he called cultural ecology; that is the examination of the cultural adaptations formulated by human beings to meet the challenges posed by their environments.

Social soundness analysis as illustrated in the literature is used to determine the cultural feasibility of development projects.

The literature pertaining to pastoral development appears to focus on two distinct operational approaches. The first, as discussed by several authors is the so-called mainstream approach, and the second is the alternative or new approach to pastoral development. Over the past thirty years, millions of dollars have been spent on elaborate projects in the pastoral sector in the Turkana District with few obvious benefits. Many development agencies, including national governments have spent most of their energy and money in irrigation schemes and other forms of settled agriculture. Those lessons from the past have serious implications for the future of pastoral development. The focus of pastoral development now shifted to a new approach of pastoral thinking which incorporated the key elements of the alternative development paradigm.

The schools of thought that concern themselves with pastoralism are varied and plenty and can be classified as either belonging to the mainstream or the new approach to pastoralism. The alternative development paradigm has been the only school of thought to seriously question and challenge the underlying assumptions and structure of the mainstream approach to pastoral development.

Therefore, this thesis bases its evaluation of pastoral development on the measures and concepts of the alternative development paradigm. The significance of those key alternative development concepts will be examined in the social

impact analysis of pastoral development efforts in the Turkana District.

What should development mean in the pastoral context? At this point it is enough to define it loosely so as to include the conscious pursuit of certain objectives with a view to increasing equity and equality. Clearly, development will include some kind of change and it is not the purpose of the study to argue that social change is necessarily bad, rather it is a naturally occurring process.

Mainstream view:

Main Elements : The mainstream view holds that most of the world's rangelands are suffering from desertification and that in most cases the cause of desertification is overgrazing by domestic animals, due to the increase in the numbers of livestock on rangelands. This increase in livestock numbers is, in turn, attributed to one or more of a number of causes acting alone or in conjunction with each other. One cause is an increase in the number of pastoralists and this triggers both a demand for more livestock to support the extra pastoralists and also a greater supply of herding labour to look after the extra stock. Another cause is thought to be an improvement in veterinary medicine and services which has reduced or eradicated many of the previous causes of livestock mortality and thus removed the main limitations to the growth of livestock populations. A third cause is thought to be traditional economic and social systems which place a very high social value on the accumulation of livestock numbers rather than on the economic value. In addition, it is also believed by some people that the penetration of the

international capitalist economy into pre-capitalist economic systems has led to the breakdown of previous self-regulatory mechanisms and an excessive pressure to increase both livestock and numbers and output. Most proponents of the mainstream view also hold that the technology is available to combat desertification, but that the principal reason why this technology is not applied is, once again, traditional economic and social systems, including systems of land tenure and the social institutions which accompany them. In particular, blame is put on communal grazing systems in which there is felt to be an inherent contradiction between private and public interests, because ownership and rights to the grazing lands are not limited and restricted.

Consequences of the Mainstream View: One consequence of the adoption of the mainstream view has been the haste with which range management programmes have been introduced. Since, it is thought, the rangelands are deteriorating fast, action had to be taken urgently, there is no time for research, and, even if the programmes are not optimal, they are better than a continuation of the present situation. Another consequence is to radically transform land tenure and institutions and organizations concerned with range management rather than to assist existing ones to adapt and take on new roles and functions. A further consequence of the mainstream view is an astonishing inhumanity towards the destitute of pastoral societies. Some documents explicitly refer to the folly of famine relief. Pastoralists are seen as destroying their environment, because their

own population growth or their social values require them to keep excessive numbers of livestock. A final important consequence of the Mainstream view is the tendency for pastoral development programmes to assign a key role to firm intervention by government and to management of resources by government officials. There is much talk of need for control and discipline. This follows from a distrust of existing pastoral institutions and from the belief that modern science has already discovered the technical solutions to the problems of the pastoral areas.

Alternative view :

Main Elements: The alternative view has its focus on the livelihood and the development of the pastoral sector. Within the area of range management there is an emphasis on improvement, rehabilitation, and creation of key resources. In addition, there will be a shift away from restrictive movements towards more mobility and flexibility. In the area of tenure is a focus on flexible tenure, which will include a complex mix of overlapping and integrated regimes. In addition, the focus will be on conflict negotiation, mediation, and arbitration. There is a strong emphasis on pastoral organizations for local management issues. And the extension workers are used as institutional organizers, rather than control and disciplining the pastoralists.

1.5 Methodology

This study relied on secondary material. Research was conducted in Halifax with sources from a number of libraries throughout Nova Scotia and overseas. The

Internet proved to be an excellent source of important information and a timely way of obtaining information from international organizations such as Oxfam, FAO, and other international organizations. This approach allowed for the procurement of sources not available locally. For the most part, the study relies on empirical evidence. However, given the author's physical location and the constraints mentioned above, some qualitative interpretations are made throughout the thesis.

1.6 Structure of the Thesis Argument

This study is divided into five chapters. Chapter One serves to describe the methodology and the framework of analysis as well as to present the thesis statement. The working definitions are provided in this chapter along with a description of the thesis. Chapter Two provides a detailed geographical, political, socio-cultural, and economic overview of the Turkana District in Northwestern Kenya. Chapter Three gives an illustration of three development projects and programmes to support the thesis argument. Chapter Four is a detailed analysis of those development projects with an emphasis on social soundness analysis. Chapter Five concludes the thesis by reiterating the key arguments presented in the previous chapters and by making some recommendations regarding pastoral development policies.

Literature Review

Knowledge of pastoralism as a way of life has a foundation in studies conducted by ethnologists during the past sixty years. Migratory pastoralists were viewed originally as a detached segment of humankind, an autonomous society with prehistoric origins and representing the type of the isolated, culturally integral tribe. The focus of interest in these early studies was on spatial movement and the way this movement affected social organization and subsistence patterns.¹

Research in the 1950s and 1960s shifted to a more specialized ecological inquiry into how balance was maintained, under presumably undisturbed conditions, between the human population, animals, and pasture resources. Following independence, the new governments of East Africa endeavoured to convert pastoralists to sedentary livestock producers. Such projects were in the main continuations of the colonial experiments. The development schemes of this period rarely, if ever, fulfilled expectations and seriously disrupted the relationships between pastoralists and their cultivator neighbours and associates.

Approaches to understanding pastoral development strategies have developed from a series of different theoretical perspectives. The most significant of those and those most relevant for the paper will be explored in the literature available.

¹ E. Evans-Pritchard. The Nuer. Oxford: Oxford University Press, 1940.
P.H. Gulliver. The Family Herds. A Study of Two Pastoral Tribes in East Africa: The Jie and Turkana. London: Routledge and Kegan Paul Ltd., 1955.
Oscar Lewis. Life in a Mexican Village. Urbana: University of Illinois Press, 1951.

The first of the approaches to place a significant proportion of importance on the interaction between the environment and humankind was the field of ecological anthropology, particularly the early work of Julian Steward. Steward argued that the cultural adaptation to a particular environment could be best understood through the interplay between resources, technology, and social organization.² Steward, along with Leslie White developed a techno-environmental approach to cultural change and both were influenced by Marxist thought. Steward proposed that cultures in similar environments would tend to follow the same developmental sequences and formulate similar responses to their environmental challenges. He termed those cultural features most closely associated with subsistence practices the cultural core.³ Cultures that shared similar core features belonged to the same culture type. He did not believe that cultures followed a single universal sequence of development. He proposed that cultures could evolve in any number of distinct patterns depending on their environmental

² Julian Steward. Theory of Culture Change: The Methodology of Multilinear Evolution. Urbana: University of Illinois Press, 1955. p: 18-29.

Emilio F. Moran. Human Adaptability. An Introduction to Ecological Anthropology. Boulder: Westview Press, 1982. p: 42-45.

R. Jon McGee and Richard L. Warms. Anthropological Theory. An Introductory History. Mountain View California: Mayfield Publishing Company, 1996. p: 221.

Richard R. Wilk. Economics and Culture. Foundations of Economic Anthropology. Boulder: Westview Press, 1996. p: 18-21.

³ Julian Steward, p: 37.

Ricard R. Wilk, p: 96-98.

Sutti Ortiz, ed. Economic Anthropology. Topics and Theories. London: University Press of America, 1983. p: 161-163.

circumstances. The methodology he outlined for his perception of a multilinear evolution involved a field of study he called cultural ecology; that is, the examination of the cultural adaptations formulated by human beings to meet the challenges posed by their environments.⁴ Cultural ecology differs from human and social ecology in seeking to explain the origin of particular cultural features and patterns which characterize different areas rather than to derive general principles applicable to any cultural-environmental situation. In this regard, Steward argues that cultural ecology represents both a problem and a methodology. The problem is to ascertain whether the adjustments of human societies to their environments require particular modes of behaviour or whether they permit latitude for a certain range of possible behaviour patterns.⁵ Steward's multilinear evolution is specific and relativistic; he analysed the adaptation of each culture to its specific environment.⁶ Julian Steward's early writings broke with both determinism and possibilism by rejecting general theory and emphasising the use of the comparative method to test causal connections between social structure and modes of

⁴ Julian Steward, p: 36-39.

Robert M. Netting. Cultural Ecology. Prospect Heights: Waveland Press, Inc., 1986. p: 4-7.

David R. Harris, ed. Human Ecology in Savanna Environments. London: Academic Press, 1980. p: 176-178.

Emilio F. Moran, p: 42-45.

⁵ Julian Steward, p: 39-42.

⁶ Julian Steward, p: 42.

R. Jon McGee and Richard L. Warms, p: 222-223.

subsistence. Steward saw social institutions as having a functional unity that could not be diffused or imitated as wholes. Steward's approach therefore was a functionalist one, concerned with the operation of a variable in relation to a limited set of variables, not in relation to an entire social system. Steward's functionalism was not so much concerned with equilibrium as with change and the causal connections that led to it. The cultural ecological approach proposed by Steward involves both a problem and a method. The problem is to test whether the adjustments of human societies to their environments require specific types of behaviour or whether there is considerable latitude in human responses.⁷ The method consists of three procedures: to analyse the relationship between subsistence systems and environment; to analyse the behaviour patterns associated with a given subsistence technology; and to ascertain the extent to which the behaviour pattern entailed in a given subsistence system affects other aspects of culture. In short, the cultural ecological approach postulates a relationship between environmental resources, subsistence technology, and the behaviour required to bring technology to bear upon resources.⁸ The crucial element in Steward's approach is neither nature nor culture. Rather, it is the process of resource utilization. The reasons for the priority he gave to subsistence are clear: obtaining

⁷ Julian Steward, p: 43-46.

⁸ Julian Steward, p: 41.
Emilio F. Moran, p: 50-52.

food and shelter are immediate and urgent problems in all societies, and patterns of work at a given level of technology are limited in their ability to exploit resources.⁹

The idea of strategies of resource exploitation has several advantages when one tries to understand the cultural ecology of East African pastoral people. First, the concept is firmly grounded in reality. East African pastoralists clearly are attempting to survive by the manipulation of livestock under environmental conditions of risk and uncertainty, and under social conditions of mixed competition and mutual dependence. Second, the resource-strategy concept commits the researchers to specify what differentiable activity it comprises, and impels the researchers to seek its causes and its consequences. Third, advantage lies in the way in which the central notion of strategy has been elaborated.¹⁰

Julian Steward and Leslie White set the stage for ecological anthropology and cultural materialism which is another important school of thought that illustrated pastoral development. Typically ecological-materialist anthropologists examine culture using an equilibrium model that traces energy flow within an ecosystem, for example, in terms of food production and the caloric expenditure of

⁹ Emilio F. Moran, p: 42-45.

¹⁰ David R. Harris, p: 176-178.

Tony Binns, ed. People and Environment in Africa. Chichester: John Wiley & Sons, 1996. p: 23-29.

human energy required to maintain the society in equilibrium.¹¹ Ecological-materialist studies differed from those of Steward and White in that the former tended to take local populations rather than cultures as their units of analysis. Additionally, the ecological-materialist perspective examined the interactions between populations and environments rather than treating the environment as a passive background that shapes culture but is not influenced by it. In the literature ecological-materialist work is divided into two approaches: neo-evolutionism and neo-functionalism. Neo-evolutionists were primarily interested in the origins of cultural phenomena. The neo-functionalists, on the other hand, took the position that social organization and culture were functional adaptations which permitted populations to exploit their environments successfully without exceeding the carrying capacity of their ecological resources.¹² Neo-functionalist studies adopted this concept of feedback from cybernetics to explain cultural stability. Marvin Harris is the leading proponent of a perspective called cultural materialism, a slightly different neo-functionalist approach. Harris' work follows the more traditionally Marxist perspective resurrected by Leslie White. Karl Marx believed

¹¹ Roy A. Rappaport. Pigs for the Ancestors. New Haven: Yale University Press, 1967. p:1-7.

Marvin Harris. Cultural Materialism. The Struggle for a Science of Culture. New York: Random House, 1979. p: 131-169.

R. Jon McGee and Richard L. Warms, p: 267-269.

¹² Roy A. Rappaport, p: 224-242.

Marvin Harris, p: 131-137.

that technology played the primary role in social evolution, influencing the sociological and ideological levels of society. While rejecting dialectics, cultural materialists firmly insist on the primacy of modes of production and reproduction, what Harris calls infrastructure, in determining behaviours and beliefs within a society.¹³

Another school of thought that concerns itself with pastoral development can be called the 'Tragedy of the Commons'-approach. Concern about falling living standards and a diminishing food-population ratio in theories of economic development are nothing new; it goes back to Malthus. This concern along with related fears about limits to growth, the carrying capacity of the world's environment, conservationism and ecology, began to gain renewed credibility in the late 1960s. This movement was especially boosted as a result of the work of an influential group, the Club of Rome scientists, who argued in favour of a zero growth rate for the sake of ecology.¹⁴ Garret Hardin has drawn attention to the aspect of common ownership of grazing land and its serious negative effects on the

¹³ Marvin Harris, p: 15.

James Lett. The Human Enterprise: A Critical Introduction to Anthropological Theory. Boulder: Westview Press, 1987. p: 92-96.

¹⁴ E.F. Schumacher. Small is Beautiful: Economics as if People Mattered. London: Blond and Briggs Ltd., 1973. p:49-54.

Michael Redclift. Sustainable Development. Exploring the Contradictions. London: Methuen & Co., 1987. p:32.

Mehmet Ozay. Westernizing the Third World. The Eurocentricity of Economic Development. London: Routledge, 1996. p: 121-126.

environment in his famous essay entitled 'The Tragedy of the Commons'. Hardin pointed out that in a situation where a number of pastoralists kept their livestock on a limited area of common land, it would pay each herd owner to increase the herd as much as possible and that the advantages to the herd owner of an increase of one animal would far outweigh the effect on him of the relatively slight degradation to the pasture by that animal. The logic is therefore remorseless: each owner will maximize the herd to the greatest extent and no individual will suffer in proportion to the increased advantage. Eventually, however, the population will face ruin and the whole social structure of people and animals will collapse.¹⁵ As a direct result an immense debate on the sustainability of the common resource management systems in the world took place, with special focus on the pastoral systems in the developing world.¹⁶

This school of thought and its distrust of traditional economic and social systems bases its ideas on two main sources. The writings of the anthropologist

¹⁵ Garret Hardin. "The Tragedy of the Commons." Science 162(1968): 1243-1248.
Garret Hardin and John Baden. Managing the Commons. San Francisco: W.H. Freeman and Company, 1977. p:45-56.

Bernard Campbell. Human Ecology. The Story of our Place in Nature from Prehistory to Present. New York: Aldine Publishing Company, 1983. p: 144-145.

¹⁶ Paul Harrison. Inside the Third World. The Anatomy of Poverty. London: Penguin Books, 1979. p: 71-73.

Stephen Sandford. Management of Pastoral Development in the Third World. Chichester: John Wiley & Sons, 1983. p: 85-96.

Bernard Campbell, p: 138-148.

Herskovits on the East African cattle complex have made many people believe that pastoralists' desire to accumulate large herds of livestock is not based on rational grounds related to their own material welfare, and that only a fundamental change in pastoralists' social values, and in their traditional institutions which reflect and support those values, can lead to a more rational emphasis on environmental conservation and material welfare. Allied to this suspicion of irrationality is this view's overwhelming concern with control over and stabilization of livestock numbers. Most pastoral societies do not have institutions which directly regulate and control the size of their members' herds.¹⁷ This mainstream view on pastoral development has largely lost theoretical support in recent years as the distinction between common property regimes, which consists in essence of jointly held property, and open access systems, which have no restrictions on resource use, and which are in fact subject to degradation, has become clear, and as more empirical studies have come out demonstrating the economic value of the commons.¹⁸

¹⁷ Melville J. Herskovitz. Man and his Work. New York: Knopf Publishers, 1948. p: 195-206.

C. Daryll Forde. Habitat, Economy, and Society. New York: Harcourt Brace, 1934. p: 292-307.

Paul Harrison, p: 71-73.

Bernard Campbell, p: 138-141.

John W. Bennett. Human Ecology as Human Behaviour. Essays in Environmental and Development Anthropology. London: Transaction Publishers, 1993. P: 304-305.

¹⁸ David Feeny, Fikret Berkes, Bonnie McCay, and James A. Acheson. "The Tragedy of the Commons." Human Ecology 18 (1990): 1-19

Terence J. McCabe "Turkana Pastoralism: A Case against the Tragedy of the Commons." Human Ecology 18 (1992): 81-103.

However, in spite of the fact that the 'tragedy of the commons' scenario is no longer accepted by many development theorists, the metaphor remains a powerful influence on, or at least a strong basis for the rationalization of, the policies of both national governments and international agencies which advocate settling pastoralists. There is a consistent tendency by agents of pastoral development to characterize traditional forms of resource management as problems impeding development.¹⁹

The Mainstream view resulted in a loss of autonomy for the pastoral people in Africa and an increase in dependence on the national governments. Many Third World governments are reluctant to tamper with existing socio-economic conditions in their countries. As noted by Kottak and Bodley, there is irritation by governments over the presence of tribal people in Africa, where they are regarded as a stigma, an affront to national pride. The main complaint of the governments is that the lifestyle of the pastoralists is incompatible with the aims of the state. Pastoralists among the Turkana do not go to school, cannot be reached easily by state medical services, and are 'lawless', but worst of all they may regard tribal loyalties above national loyalties, e.g. the Turkana tend to rely for help and protection on networks of social obligation and responsibilities which they form

¹⁹ Clare Oxby. Pastoral Nomads and Development. London: International African Institute, 1975. p:4.
Stephen Sandford, p: 24-43.
Bernard Campbell, p: 133-148.

throughout their lives.²⁰ As a result, hunger, overpopulation, degradation of the environment, or extreme poverty rarely reaches a critical level. An ecological and socio-economical balance is usually maintained at a relatively low level, avoiding overexploitation in one way or the other. On the other hand, some authors argue that irrigation development within the Turkana District can be viewed as a deliberate element in a strategy against what the Kenyan government perceived to be the destructive effects of pastoralism.²¹

The prevalence of the Mainstream view has had a number of serious consequences. One has been the haste with which range management projects have been introduced. Since, it is thought, the rangelands are deteriorating fast, action must be taken immediately, there is no time for research, and, even if the programmes are not optimal, they are better than a continuation of the present situation. Another consequence is a desire to radically reform land tenure and institutions and organizations concerned with range management rather than to assist existing ones to adapt or take on new functions. In the process much that is

²⁰ P.H. Gulliver, p: 46-49.

John Bodley, ed. Tribal Peoples and Development. A Global Overview. Mountain View, California: Mayfield Publishing Company, 1988. p: 135-136.

Conrad Philip Kottak. Anthropology. The Exploration of Human Diversity. New York: McGraw-Hill, 1991. p: 419-422.

²¹ John Bodley, 1988, p: 93-94.

Gordon R. Conway and Edward B. Barbier. After the Green Revolution. Sustainable Agriculture for Development. London: Earthscan Publications Ltd., 1990. p: 120-125.

Conrad Philip Kottak, p: 411-422.

valuable in the existing system is lost and the new institutions and organizations do not cater for a whole range of problems and eventualities with which the old ones had learnt to cope. One major problem has been a misplaced faith that the private ownership of land is the only answer to the dilemma of the 'tragedy of the commons'. In practice the alleged benefits stemming from the private ownership of grazing lands have usually not occurred.

A further consequence of the Mainstream view is an astonishing inhumanity to towards the destitute of pastoral societies. Some documents explicitly refer to the folly of famine relief (e.g. Hardin, 1977). Pastoralists are seen as destroying their environment, because either their own population growth or their social values require them to keep excessive numbers of animals. When recurring natural disasters such as droughts and epidemics produce a class of stock less destitute, this is seen as an inevitable and desirable squeezing-out of the least efficient stock owners which it would be environmentally immoral to hinder. Yet the argument is built on dubious foundations. The pastoral populations may not be growing fast and desertification may not be occurring. Where grazing pressure on rangelands is increasing this is often due to encroachment on the best grazing lands by cultivation by non-pastoralists or settled former pastoralists.

A final important consequence of the Mainstream view is the tendency for pastoral development programmes to assign a key role to firm intervention by government and to management of resources by government officials. There is

much talk of need for control and for discipline. This follows from distrust of existing pastoral institutions, and from the belief that modern science has already discovered the technical solutions to the problems of the pastoral areas. But this dominant role for government and its officials involves a number a major disadvantages. Few if any governments find that their pastoral areas are of major political or economic importance to them. Their commitment to the development of these areas is therefore likely to be small and spasmodic, and this is not a suitable background against which to propose energetic intervention and management.²²

The other school of thought to discuss pastoral development strategies is the alternative development paradigm. The alternative development paradigm has been the only school of thought to seriously challenge and question the mainstream approach to pastoral development. Therefore the alternative development paradigm is of significance for the future of pastoral development. This approach to development includes such key elements as self-reliance, sustainability, human-scale development, community-based, and endogenous development.²³ This

²² Clare Oxby. Pastoral Nomads and Development. London: International African Institute, 1975. p: 45.
Stephen Sandford, p: 17-19.

²³ David C. Korten and Rudi Clauss. People-Centred Development. Contributions toward Theory and Planning Frameworks. West Hartford, Connecticut: Kumarian Press, 1984. p: 26.
Bjorn Hettne. Development Theory and the Three Worlds. New York: Longman Scientific and Technical, 1991. p: 153-154.
Stan Burkey. People First. A Guide to Self-Reliant Participatory Rural Development.

approach to pastoral development has proved to be a major shift from the mainstream approach to pastoral development. This alternative approach to pastoral development involves a major rethinking of some of the key elements of the Mainstream view on pastoral development. The utility of terms and concepts such as 'vegetation of succession', 'carrying capacity', and 'degradation' are being reassessed.²⁴

This new thinking highlights in particular the differences between so-called equilibrium and non-equilibrium environments. Equilibrium environments are those that show the classic feedback mechanisms normally assumed in mainstream range management. In such environments vegetation change is gradual. Livestock populations are in turn limited by available forage in a density-dependent manner, so that excessive animal numbers, above a 'carrying capacity' level, result in negative effects on the environment. In the longer term this was assumed to result in more or less permanent damage.

By contrast, in non-equilibrium environments range degradation is not such

London: Zed Books, 1993. p:56.

Raff Carmen. Autonomous Development. Humanizing the Landscape. An Excursion into Radical Thinking and Practice. London: Zed Books, 1996. p: 31.

²⁴ Stephen Sandford, p: 174-182.

Ton Dietz. Pastoralists in Dire Straits. Amsterdam, Netherlands: Institute for Social Geography, 1987.

Tony Binns, p: 23-29.

Ian Scoones, ed. Living with Uncertainty. New Directions in Pastoral Development in Africa. London: Intermediate Technology Publications, 1996. p: 1-5.

an issue. Production potentials of both grassland and livestock are so dominated by rainfall that the livestock populations are kept low through the impact of drought or other events. Livestock, under such conditions, do not have a long-term negative effect on rangeland resources.²⁵ This new ecological thinking suggests a number of key principles for management and policy in the drylands of Africa. The high level of variability seen in dynamic ecosystems requires an emphasis on flexible responses to uncertain events, and mobility to allow the optimal use of the environment. Contingent responses are critical to successful survival in a hostile and uncertain environment. Because of unpredictability, prescriptive planning and imposed solutions will not work and locally derived responses are the key to success.

The call for need-oriented, endogenous, self-reliant development follows the exact pattern of the shift in pastoral development planning. Over the past, development efforts have relied too much on intervention and blueprint planning.²⁶ Since pastoral societies are subject to high levels of unpredictable variability,

²⁵ Tony Binns, p: 23-29.
Ian Scoones, p: 6-21.

²⁶ David C. Korten and Rudi Clauss, p: 299.
Kathleen Staudt. Managing Development. State, Society, and the International Contexts. London: Sage Publications, 1991. p: 1-4.
Manfred Max-Neef, Antonio Elizalde, and Martin Hopenhayn, eds. Human-Scale Development. London: Zed Books, 1993. p: 30-43.
Ian Scoones, p: 6.
Raff Carmen, p: 41-43.

blueprint planning is only to a small degree successful. Over the past decades, millions of dollars have been spent trying to make unpredictable environments more predictable. Rather than addressing the issues of variability and uncertainty directly, the development debate becomes dominated by unworkable, generalized solutions derived from simplistic assumptions of complex problems. Under conditions of environmental uncertainty, planned intervention of any sort becomes problematic. Conventional planning and mainstream development intervention are premised on assumptions that the future can be predicted, inferred from patterns that have occurred in the past. Blueprint plans are designed and development investments approved on this basis.

Within the framework of the alternative development paradigm there are two basic alternatives for planning in an uncertain world. The first objective aims to reduce uncertainties to probabilistic descriptions of variability by the collection of more and more data on more and more variables. The assumption is that more information will allow the prediction of outcomes at least in a probabilistic way. The result will be, it is hoped, a better defined problem allowing for more effective plans. These are still blueprint plans but better informed ones.

The second alternative is to accept that uncertainty and indeterminacy are fundamental and central.²⁷ No matter how much information is collective in a

²⁷ Ian Scoones, p: 7-13.

sensitive and differential manner, there is no way that all possible outcomes can be predicted and planned. Rather than aim for more complete information prior to intervention, it is better to act incrementally and initiate a learning process that monitors and feeds back lessons.²⁸ This is adaptive management. Adaptive management relies on principles and guidelines rather than blueprints and prescriptions; it relies on a continuous learning process, rather than time-separated planning implementation and monitoring and evaluation. These two options are obviously not mutually exclusive. For instance, adaptive planning management approaches may rely on pre-defined contingency planning; a set of blueprints that allow a response to a variety of circumstances. In other words, formal planning and policy-making may provide a framework within which adaptive planning can operate. Despite the potentials for overlap between these two approaches to planning, the differences between them are fundamental and have important implications. If the variability that characterizes pastoral systems is unpredictable and uncertainty prevails, that one is forced to explore approaches to planning and intervention that involve adaptive and incremental change, based on local conditions and local circumstances.²⁹

²⁸ David C. Korten and Rudi Clauss, p: 299-301.
Ian Scoones, p: 13-14.

²⁹ David C. Korten and Rudi Clauss, p 299.
Norman Uphoff. Local Institutional Development. An Analytical Sourcebook with Cases. West Hartford, Connecticut: Kumarian Press, 1986. p: 10-14.
Ian Scoones, p: 1-6.

There is a need to rethink planned intervention in the pastoral sector. Global solutions (e.g. the ranch model) imposed on local environments do not work. The assumptions that Western science and technology can provide planned solutions to particular problems under conditions of high unpredictability and immense variability is clearly unfounded. Yet the domination of Western science has engulfed so much of the development process, putting forward technical solutions to political problems such as poverty. Blueprint solutions so often ignore the important contextual issues of politics, history, and culture that necessarily impinge on technical development.³⁰

Without incorporating those aspects of a society into the development process little, if anything will be gained in the development efforts. The study of development, or indeed the study of human life generally, necessitates the study of shared values, and the examination of their multifaceted transformations. Religion and kinship is just as important as economic transactions and the political life of a

Robert Chambers. Challenging the Professions. Frontiers for Rural Development. London: Intermediate Technology Publications, 1994. p: 9-11.

³⁰ Stephen Sandford, p: 255-256.

C.A.O. Van Nieuwenhuijze, ed. Development Regardless of Culture? Leiden, Netherlands: E.J. Brill, 1984. p: 1-11.

Peter Worsley. The Three Worlds. Culture and World Development. Chicago: Chicago University Press, 1984. p: 41-44.

Leen Boer, Bieke Buijs, and Benno Galjart, eds. Poverty and Intervention. Cases from Developing Countries. Leiden, Netherlands: Institute of Cultural and Social Studies, 1985. p: 89-91.

John Bodley, 1988, p: 1-7.

Ian Scoones, p: 3-5.

people, and in fact these aspects are not really separable or comparable. Those aspects of life do not exist in isolation from one another. The idea that culture is the principal barrier to development is a current of thought that exists among policy makers and within some of the development literature. Simplistic conceptions of 'tribalism', or assumptions about the traditional attitudes of African herders are held up as an explanation for the failure of past development projects. The African pastoralists and their relationship with the land and animals is sometimes accepted as the reason why they are materially poor, why their environment becomes degraded, and why regional or even national economies fail to grow.³¹

The alternative development and its emergence as the most important approach to alternative pastoral development has resulted in a shift away from an interventionist approach to pastoral development. Development plans are usually guided by some kind of intervention philosophy, an ideological justification for outsiders to guide native peoples in specific directions. Beauclerc and others argue that the forces of national society tend to undermine indigenous people leaving them demoralised, impoverished, and poorly placed to exert any control over their resources and their future. The alternative development paradigm, however, calls

³¹ Peter Worsley, p: 41-44.

John Beauclerc, Jeremy Narby, and Janet Townsend. Indigenous Peoples. A Fuiiguide for Development. Oxford: Oxfam Publications 1988. p: 17.

John Bodley, 1988, p: 1-7.

for development plans that will allow the people to determine their own future and their relationship with the national society from a position of autonomy.³²

Interventionism bases, in general, its self-appointed mission of modernization, extension, innovation, management, technology transfer, and aid on ethnocentric perceptions of what is wrong with them and what is right with us. Theorists that move within the framework of the alternative development paradigm dispute most of these views. For thousands of years, pastoralists have done a reasonable job of taking care of themselves and-given their low energy adaptations-of managing their resources better than we manage our own.³³ In general, there cannot be much valid evidence found on the so-called common-property problem, which in its worst scenario will lead to collective overstocking, producing degradation of the environment. On the contrary, many of the most severe problems the pastoralists face today are due to their positions within nation states and their increasing dependence on the world cash economy. Looking at the key elements of the alternative development paradigm, pastoral development can not follow a

³² David C. Korten and Rudi Clauss, p: 284-299.

Kathleen Staudt, p: 1-4.

Michael Stiefel and Marshall Wolfe. A Voice for the Excluded. Popular Participation in Development. London: Zed Books, 1994. p: 197.

Raff Carmen, p: 82-88.

³³ John Bodley, 1988, 23-26.

Gordon R. Conway and Edward B. Barbier, p: 125-1127.

Dharam Ghai and Jessica M. Vivian, eds. Grassroots Environmental Action. People's Participation in Sustainable Development. London: Routledge, 1992. p:59-66.

universal or general path to development. Moreover, the alternative development conceives the process of poverty alleviation not just as a mechanism to get the destitute of the pastoral sector to cross a given threshold of income or consumption, but to enable them to achieve a sustained increase in productivity, and an integration of those people into the process of growth.³⁴

However, participatory, sustainable, and endogenous development projects aimed at the goal of increasing equity and equality pose an immense undertaking in the future of development projects. In the case of community participation, on the one hand, participation is regarded as the key to increase equality and equity. On the other hand, participation in development planning can result in greater inequalities. Greater local participation in planning tends to widen local or regional inequalities. It favours those areas which are better able to produce plans and to implement them, this includes better infrastructure, more competent staff, and better services.³⁵

³⁴ David C. Korten and Rudi Clauss, p: 299.

Robert Chambers. Managing Rural Development. West Hartford, Connecticut: Kumarian Press, 1985. p: 108.

Michael M. Cerne, ed. Putting the Last First. Sociological Variables in Rural Development. Oxford: Oxford University Press, 1991. p: 21218.

Stan Burkey, p: 56-57.

Manfred Max-Neef, Antonio Elizalde, and Martin Hopenhayn, p: 30-34.

Raff Carmen, p: 84-87.

³⁵ Robert Chambers, p:108-109.

Stan Burkey, p: 57-59.

Matthias Stiefel and Marshall Wolfe, p: 197-98.

Sustainable development can be argued to be one important issue within the area of development. The term sustainable development was used at the time of the Cocoyoc Declaration on Environment and Development in 1974 in Mexico.³⁶ The turning point in the emergence of the term sustainable development occurred in the mid-1980s, specifically with the publication of the Brundtland Report. This report highlighted the conflicting nature of conventional economic development and the environment, and popularized the concept of sustainable development. The alternative development calls for a transition towards greater sustainability , which will require a more holistic approach to development, entailing inter-generational equity as well as a harmonization of economic growth with other human needs and aspirations.³⁷

In general, people who rely primarily on natural resources for their livelihood, if they have been successful in establishing a sustainable mode of production, have typically developed methods to ensure the conservation of their environment. Such indigenously developed resource management strategies are commonly referred to as traditional, but they are by no means static. In general, those strategies are more formalized in areas and situations where resources are very scarce, such as the Turkana District in Kenya. Such traditional resource

³⁶ Michael Redclift, p: 32.
Mehmet Ozay, 121-126.

³⁷ Michael Redclift, *ibid.*
Mehmet Ozay, *ibid.*

management strategies are important to examine in more detail in the context of the search for sustainable development. In spite of the inherent limitations of many such systems, and the external and internal pressures to which they are subject, traditional systems have remained not only viable, but also active in many parts of the world. Where still in existence today, these systems involve elaborate social, technological, and economic mechanisms to safeguard resources.

2. General Features of the Turkana in Northwestern Kenya

2.1. Physical System

2.1.1 Topography and Location: The Turkana District consists of the whole northwest corner of Kenya and it represents about one-ninth of the land area of Kenya. In the north the district borders Ethiopia and the Sudan, while the west borders Uganda.³⁹ The border to the south is often referred to as a no-man's land between the frequently hostile relationships of the Turkana and the Pokot pastoralists.⁴⁰ Lake Turkana forms a natural boundary to the east of the Turkana District. The Turkana District as a whole lies in the Rift Valley, with a general altitude in the west at the foot of the escarpment of about 3,000 feet, while Lake Turkana lies about 1,230 feet above sea level.⁴¹ The Turkana District can be viewed as one great plain, consisting of sand, gravel, lava, pebble beds, rock brash, and red, grey, and brown soils.⁴² However, scattered over this plain are volcanic mountains and mountain ranges elevating to as much as 7,000 feet. The most impressive of these mountains, and of extreme importance as grazing lands, are the Loima Mountains in the western part of central Turkana.⁴³ These mountains

³⁹ Georg Henriksen. Economic Growth and Ecological Balance: Problems of Development in Turkana. Bergen: University of Bergen, 1974. p: 9.

⁴⁰ ibid

⁴¹ ibid

⁴² P.H. Gulliver, p:20.

⁴³ Georg Henriksen. p:9.

rise to an impressive 7,000 feet above the sea level.⁴⁴ Located northeast of the Loima Mountains is the Pelekech Range. Other mountains of importance are to the Turkana are the Songot and Mogila Ranges situated in the northwest corner of the district.⁴⁵ Noteworthy, in addition are Lokwanamor, Lorienetom, Lubur, and Mureris (Moru Erith) in the northeast, and Kailongol and Loiteruk in the south.⁴⁶ Those mountain ranges serve as important focal points during the pattern of grazing throughout the year. According to Gulliver, the Turkana also make use of the pastures in the Tiati and Silali Mountains in the extreme southern part of the Turkana District, as well as the Samburu Hills that slope into the Suguta Valley.⁴⁷

There are two main drainage basins in the Turkana District: Lake Turkana and the Lotikipi Plains.⁴⁸ The Omo is the only perennial river, flowing into the lake from Ethiopia. The two other major rivers feeding the lake are the Turkwell and the Kerio. However, neither of them carry water to the river all year long. The Turkwell River is around 200 miles long, one branch rising on the slopes of Mount Elgon.⁴⁹ It runs through the Turkwell Gorge and unto the Turkana plains, where it

⁴⁴ *ibid*

⁴⁵ *ibid*

⁴⁶ *ibid*

⁴⁷ P.H. Gulliver, p:24.

⁴⁸ Georg Henriksen, p:10.

⁴⁹ *ibid*

is joined by the Marmale River after some five miles.⁵⁰ The Turkwell is supposed to carry water permanently just about down to the irrigation scheme at Katilu. The main river running to the Lotikipi Plain is the Tarach River. However, this river, as well as all the others except the Turkwell and the Kerio, are dry the whole year round except for flash floods after rainstorms. They may then carry water for a few hours only, or for several days depending on the rainfall.

2.1.2 Climate: Turkana is an arid district, although the amount of rainfall varies from area to area.⁵¹ Rainfall throughout the district is uneven and unreliable and often it is not even adequate for the life of the Turkana. The Turkana divide the year into the wet and dry season.⁵² Most of the rainfall occurs between March and September.⁵³ In addition, there is often a short rainy period in November. Large parts of the district are estimated to receive an average rainfall of between 10 and 20 inches, decreasing to less than 6 inches in the driest parts such as central Turkana.⁵⁴ Areas that receive between 20 and 30 inches of rain each year are considered a potentially good farming area. Land receiving between 10 and 20 inches are described as marginal farming country. The land that receives less than

⁵⁰ *ibid*

⁵¹ Emilio F. Moran, p:176.

⁵² P.H. Gulliver, p:21.

⁵³ W.T.W. Morgan, ed. East Africa: Its Peoples and Resources. London: Oxford University Press, 1972. p:109-112.

⁵⁴ Georg Henriksen. p:10.

10 inches of rain in any given year is described as arid, and is regarded as virtually useless semi-desert. However, in the Turkana District where rainfall is low and unpredictable, variations around the mean become extremely important. The temperatures are high throughout the year, varying roughly between 70 and 100 degrees Fahrenheit ⁵⁵ Even at night the temperatures only fall slightly. At Lodwar, maximum temperatures vary between 80 and 104 degrees Fahrenheit. The potential of an area is usually based on its rainfall, soil conditions, and climate. According to this formula, the Turkana District has a very low ecological potential, however, the Turkana have been able to adapt and thrive in a hostile environment.

2.1.3 Ecology: Due to those high temperatures and the low rainfall, practically the whole of the Turkana Plains have been reduced to a semi-desert, with some parts being pure sand or rock and gravel desert. Most of the plains are covered with low, thorny bushes and thorn shrubs, and with patches of wizened grass. Scattered over the plains are also low acacia trees.⁵⁶ Along the water courses the vegetation consists of higher acacia trees, doum palms and in some places quite thick thorn scrub.⁵⁷ Usually there is not much more grass along the rivers than anywhere else in the plains. Notable exceptions are the Turkwell and the Kerio rivers. Their deltas on the shore of Lake Turkana provide relatively rich grazing

⁵⁵ *ibid*, p:11.

⁵⁶ *ibid*

⁵⁷ *ibid*

grounds and gardens for millet, and sorghum production.⁵⁸ Here are also found the various roots and tubers that the Turkana use for food, a special kind of root that they use against witchcraft, and a certain sponge-like fruit which some Turkana use for cleaning their bodies when bathing.⁵⁹ Some of the Turkana people entered a settled life style around Rumuruti after drought in the late 1970s. In general, the Turkana practice some simple cultivation consisting of planting a fast growing local kind of sorghum in low spots immediately after the rains. Any wider scale of agricultural activities is impossible because of the climatic and terrain conditions. Fishing on Lake Turkana has become increasingly important as well for some Turkana people.

South of Lodwar the Turwell River is rimmed on both sides by quite large trees, mostly acacia and thorn trees.⁶⁰ As one proceeds further south, the vegetation on both sides of the river grows denser with tall, thick grass. Reaching Kaputir and Katuli these belts of vegetation stretch for two or three miles from the river.⁶¹ It is in this area that the Ngitobotok live, a section of the Turkana tribe that have settled permanently as millet and sorghum growers.⁶²

⁵⁸ *ibid*, p:12.

⁵⁹ *ibid*

⁶⁰ *ibid*

⁶¹ *ibid*

⁶² *ibid*

In this southern plain vegetation in general is richer than in the central parts of the district. Here are extensive patches of quite good grass. The area seems to be little used by the Turkana for grazing, the main reason probably being the tense relation they have with the Suk. Along this southern part of the Turkwell River the stock is also endangered by the prevalence of the tsetse-fly.

The southernmost part of the district is also richer in wild animals than the rest of the plains. Here are elephants, rhinos, buffaloes, giraffes, and leopards.⁶³ Other animals which are found all over the Turkana District include guinea fowl, gazelles, and hyenas.⁶⁴ Also differing from the dry central plains is the Lotikipi Plain which in good wet seasons turns into a great swamp. In good years this is one of the major grazing areas for the pastoral Turkana, with tall and abundant grass.

Of the greatest importance for the pastoralists are the mountain areas mentioned above. Here there is permanent grass, thick bush, and tall trees. According to Gulliver, the bulk of the grasslands are between 4,000 and 5,000 feet. Finally, one area outside the Turkana District is important to mention. This is the so-called Ilemi triangle in the north.⁶⁵ In September 1972, the District Veterinary Office in Turkana stated that an estimated 50% of the Turkana were here or in

⁶³ *ibid*

⁶⁴ *ibid*

⁶⁵ *ibid*, p: 13.

other parts of the Sudan due to the better grazing conditions.⁶⁶

2.1.4 Demographic Characteristics: The Turkana people number about 340,000 and live primarily in the arid northwest part of Kenya. Although there is some movement into western Uganda as well as southern Sudan, most Turkana are confined to the 67,000 square kilometres that make up the Turkana District. In drylands traditional pastoral activity can either be part of a mixed farming system or can be carried out separately as nomadism. In the wetter semi-arid regions, pastoralism is carried out to supplement dryland farming by harvesting vegetation from difficult upland terrains or from areas distant from the villages.⁶⁷ The relative importance of pastoralism depends largely on climate conditions. The Turkana are pastoral nomads, keeping cattle, camels, donkeys, goats, and sheep because the climate of the district is not suitable for farming.⁶⁸ They belong to the Eastern Nilotes and its people and share a single language with seven other tribes in East Africa.⁶⁹ Those other tribes include the Karimojong, Jie, Dodoso, Nyakwai, Toposa, Nyangatom, and Teso, who are also referred to as the Karimojong

⁶⁶ ibid

⁶⁷ Peter Beaumont. Environmental Management and Development in Drylands. London: Routledge, 1989. p: 179.

⁶⁸ Wolfgang Weissleder, ed. The Nomadic Alternative. Modes and Models of Interaction in the African-Asian Deserts and Steppes. The Hague: Mouton Publishers, 1978. p:45

⁶⁹ W.T.W. Morgan. p: 37.

cluster.⁷⁰ During the nineteenth century and well into the twentieth century, the Turkana expanded southward and eastward, pushing the Marille and the Samburu out of their territories west of Lake Turkana so that these tribes came to live east of the lake only. According to Gulliver, the Turkana also fought the Pokot in the south and the Donyiro and Toposa to the north and the Dodoth and Karamojong to the west.⁷¹ Constant raiding has taken place between those tribes.

Through their aggressive behaviour, the Turkana were able to expand their grazing lands and acquire the livestock to support their growing numbers. The Turkana have survived by taking advantage of every opportunity that comes their way and this includes the expansion into non-Turkana areas. Their traditional system of nomadic pastoralism takes full advantage of the limited environment in which they live. Although it might appear to outsiders that they resist change, however, the Turkana have shown their openness to change by adapting to life in fishing communities, agricultural schemes, and urban centres.

Livestock are central to the Turkana culture and all aspects of their social, political, and economic life evolve around the livestock. Cattle, camels, sheep, and goats are vital to their lives and are the primary source of food. Livestock also play an important role in payment for bride wealth, compensation for crimes, fines for

⁷⁰ ibid

⁷¹Douglas H. Johnson and Daaavid M. Anderson. The Ecology of Survival. Case Studies from Northeast African History. Boulder: Westview Press, 1988. p: 197.

fathering illegitimate children, and as gifts on social occasions. The majority of the Turkana still follow their traditional religion. The Turkana believe in a God, Kuj, who is associated with the sky and is the creator of all things. However, the pragmatic Turkana are aware of the limitations and difficulties imposed by their harsh environment and they follow appropriate social and pastoral techniques to deal with them.

The diet of the Turkana changes seasonally and interannually with changing climatic and socio-economic circumstances. In a study conducted in 1982 among the Turkana pastoralists it was shown that the pastoralists subsist primarily from their livestock; milk provided 62 percent of annual dietary energy, 89 percent in the wet season and 30 percent in the dry season. During two later surveys of Turkana diets, the wet seasons of 1989 and 1990, milk was the most important food among women and consisted of 91 percent in 1989 and 94 percent in 1990.⁷² By the 1990 early dry season, diet comprised only 65 percent milk for Turkana women. Cereals made up 15 percent, and the remaining 20 percent of the diet were composed of meat (10 percent), blood (7 percent), tea and wild foods (3 percent).⁷³ This data demonstrates the fluctuation in the composition of the diet of the Turkana pastoralists. The composition of their diet depends on season, year, and

⁷² Elliot Fratkin, Kathleen A. Galvin, and Eric Abella Roth, eds. African Pastoralist Systems. An Integrated Approach. Boulder: Lynne Rienner Publishers, 1994. p: 120.

⁷³ *ibid*, p: 122.

location. However, among the Turkana pastoralists food for the human population of the pastoral areas in the Turkana District are provided by the herds owned and managed by the population. As a result, there exists a critical relationship between the human and the animal population in the Turkana District. Often, reference is made to the large herds of the Turkana, but seen in relationship to the human population that depends on those herds, they do not seem that excessive. Human and livestock census data from the Turkana pastoralists is scarce, so there is not that much information available on this relationship. Dyson-Hudson, in the early 1970s, provided information based on aerial surveys and this gives one somewhat of an idea. The people/livestock ratios for camels is 1:1.06, for cattle it is 1:1.02, and for small stock it is 1:17.7.⁷⁴ It is important that those ratios vary over time, reflecting the different demographic processes in both the livestock and human populations. Looking at those numbers, there is an indication that the livestock figures in the Turkana District are not extravagant in any way. On the contrary, it seems that very few pastoralists are able to meet their subsistence needs from their herds simply by consuming whatever the herd produces in the form of milk, blood, and meat.⁷⁵ The Turkana have to supplement their diets by collecting foods that are available in their environment like nuts, fruits, roots, and berries, through hunting

⁷⁴ Johan Helland. Pastoralists and the Development of Pastoralism. Bergen, Norway: Department of Social Anthropology, 1984. p:5.

⁷⁵ Johan Helland, p:7.

and by planting if and when this is possible and by exchanging parts of their herd products with agricultural foods available from their sedentary neighbours.⁷⁶ In the text by Chang it is documented that since only 30% of their current diet consists of grain, their dependence on the regional market system is insignificant.⁷⁷ Studies carried out among the Ngisonyoka section of the Turkana from 1981 to 1983 demonstrate that the Turkana still depend on food derived from livestock.⁷⁸ Milk is the most important item in the diet, supplemented by meat, blood, and grain. Grain is now purchased from Somali traders with money acquired from the sale of livestock or bartered for in the small agricultural community of Turkana people living along the Kerio River.⁷⁹ Grain, as discussed above, only make up about 30 percent of the diet at the end of the dry season and contribute almost nothing during the wet season.⁸⁰

2.2 Social System

2.2.1 Livestock and its Management: Animals are the main form of wealth, and animals enter into nearly all social relations and ritual events. Stock is crucial in any marriage contract, and animals circulate between men both as wealth

⁷⁶ *ibid*, p:8.

⁷⁷ Claudia Chang and Harold A. Koster, eds. Pastoralists at the Periphery. Herders in a Capitalist World. Tucson: The University of Arizona Press, 1994. p:161.

⁷⁸ *ibid*, p:208.

⁷⁹ *ibid*

⁸⁰ *ibid*

and as a ritual confirmation of a social relationship-a social bond. Both relatives and friends are tied to a man through reciprocal obligations which imply a delayed exchange of animal stock. Social prestige is usually proportionate to the number of animals a man owns. To have one's own homestead', *awi*, with all the different kinds of animals is the hallmark of a real Turkana man.⁸¹ Conversely, a man who does not have his own homestead and owns no animals, may often be characterized as being no man.⁸² As a boy grows up he is given an ox by his father, an ox which becomes the favourite of the boy and is his name-ox.⁸³ All men have their name-oxen, which means that others may call a man by the name of his favourite ox. There should be no doubt that the Turkana have a so-called cattle-complex in the sense that their herds have a special social and ritual value.

But the animals are not only ritual objects for the Turkana. They have to make their living from the herds and must behave economically with reference to them. Each herd owner must engage in economic and social strategies to ensure that his stock gets what it requires in terms of pasture, water, and human labour so that it leads to a steady increase of his herd. For all the men the increase in their number of animals is a major goal.⁸⁴ From the point of view of an individual

⁸¹ P.H. Gulliver, p:124.

⁸² *ibid*, p:59.

⁸³ *ibid*

⁸⁴ Georg Henriksen, p:18.

Turkana family, the main restriction on capital growth is the balance between the household's consumption needs and the amount of energy its herd yields, as well as the amount of labour it can muster to meet the herding requirements of the stock. From an ecological point of view, the main restriction is the number of animals that the available grazing area can sustain.⁸⁵

Despite the fact that the Turkana are divided into many territorial sections, these sections can not claim a monopoly on any territory. The Turkana will always state that the grass and water is free for everybody to use, and that everybody can move freely, without restriction with his animals. However, specific rights to waterholes that have been dug do exist to some extent, but nobody can be easily refused access to water for stock.⁸⁶

Basic for any understanding of the Turkana society is the natural environment of their district and the ecological adaptation that the human and animal populations have developed. The district as a whole does not offer uniform grazing conditions for the animals. The vegetation and water supply differs in the plains, the mountains, along some of the larger water courses, as well as with spatial and temporal differentiation in rainfall. This has fundamental implications for the strategies of herding. First of all, the different animals that the Turkana

⁸⁵Peter D. Little, Michael M. Horowitz, and A. Endre Nyerges, eds. Lands at Risk in the Third World: Local Level Perspectives. Boulder: Westview Press, 1987. p: 217-218.

⁸⁶ P.H. Gulliver, p: 37-38.

keep require different kinds and amounts of food and water. The cattle are dependent upon grass and need frequent watering. The camels and the goats need less water and can browse both trees and thorn bushes.⁸⁷ The sheep also browse the bushes, although they do better on grass.⁸⁸ Nevertheless, goats and sheep are usually herded together.⁸⁹ The donkeys graze, but seem to fare well even under extremely poor conditions.⁹⁰

As most Turkana keep all different kinds of animals, this implies that the stock- owning unit must be split into at least two camps: one that takes care of the cattle and its needs for water and grass, and another camp that takes care of the camels and the small stock..⁹¹ These camps live spatially apart from each other for months or even years on end. Whole families migrate separately to new areas of grazing and browsing as the conditions change with local rainfalls and the utilization of the pastures. Thus, only in exceptionally good years with enough rain may the cattle camp meet with the camel camp on the plains.⁹² All the camps usually have some donkeys with them, as they are used for packing when the

⁸⁷ Georg Henriksen, p: 20.

⁸⁸ *ibid*

⁸⁹ *ibid*

⁹⁰ *ibid*

⁹¹ *ibid*

⁹² *ibid*

camps move. The camels are used neither for packing, nor for riding but for trade, meat, and blood.

2.2.2 The Stock-Ownning Unit: the Family or *Aw*i: The basic social unit among the Turkana is the *awi* which consists of a man, his wives, and their children. The extended family and the matrilocal house are weakly maintained by the Turkana, whose emphasis is on the achieved independence of each mature man as head of his own herding unit. Structural conflicts between close relatives induce these men to shift apart and to move apart. A man is able to choose, by personal experience of practical relations, with which of his various relatives he will cooperate, whom he trusts and helps, and with whom relations are minimal even in the face of drought and famine.⁹³ Married sons remain with their father, although they become increasingly more autonomous, while daughters leave when they are married and join the nuclear family of their husbands. The unity of the family centers around the oldest man of the family who has inherited the ownership of the stock from his father. Though the family may be scattered over several homesteads, it always continues to be a distinct and corporate group. As discussed, livestock serves a multitude of purposes and is frequently passed from owner to owner: hence a family's wealth is liable to considerable fluctuations.⁹⁴ The

⁹³ Theodore Monod, ed. Pastoralism in Tropical Africa. London: Oxford University Press, 1975. p: 380.

⁹⁴ Z.A. Konczacki. The Economics of Pastoralism: A Case Study of Sub-Saharan Africa. London: Frank Cass, Ltd., 1978. p:52.

mechanism of bride wealth is of paramount importance. Daughters and sisters of a poor pastoralist will add to his flock at their weddings. On the other hand, a wealthy man expends stock upon his own and his sons' marriages. It is generally accepted that a man gives according to his wealth and, therefore, marriages between poor and wealthy have a strong redistributive effect.⁹⁵ Redistribution is also enhanced since, as a rule, bride wealth is made up of a large number of contributions, and on transfer it is divided amongst a large number of recipients. Close members of the family, for example uncles, sons, and brothers contribute to the accumulation of bride-wealth. At both ends relatives and bond-friends are involved.

Furthermore, there are processes which encourage the elimination from the community of persons deviating significantly in wealth from what is considered typical. At the one extreme, the elimination occurs through impoverishment.⁹⁶ At the other extreme, a wealthy livestock owner may seek new forms of investment, e.g. in agricultural land.⁹⁷ It is not uncommon amongst the very rich Turkana pastoralists to become permanent urban settlers. They differ in their attitudes from the poor, who settle in the expectation of resuming nomadic life as soon as they are in a position to do so.

⁹⁵ *ibid*

⁹⁶ *ibid*

⁹⁷ *ibid*, p:53.

Redistribution suggests the existence of a surplus. The redistributive mechanisms of the traditional society utilize this surplus to produce a greater degree of equality. The continuity of an economic system requires that a mechanism leading to polarization of wealth must be equalled by a mechanism that redistributes it. Otherwise the system would be destroyed in an exponential positive feedback explosion.⁹⁸ An example of a positive feedback can be found in the profit motive.⁹⁹ Firstly, the elimination of the poorest puts the resources previously used by their livestock, such as the pastures and the water, at the disposal of those who keep more livestock. Secondly, further impoverishment of the poor creates a supply of cheap labour for the benefit of those pastoralists who need it to tend their growing herds. Intensified commercialization, by stimulating production for the market, increases opportunities for investment within the pastoral community, which now retains its wealthiest members instead of eliminating them.¹⁰⁰

2.2.3 The Social Network: Among the Turkana there exists a strong notion of social obligation and responsibility towards each other. However, they are

⁹⁸ *ibid*

⁹⁹ *ibid*

¹⁰⁰ John G. Galaty and Pierre Bonte, eds. Herders, Warriors, and Traders. Pastoralism in Africa. Boulder: Westview Press, 1991. p: 269-271.

enemies to all neighbouring groups with the exception of the Jie.¹⁰¹ The Jie are traditional allies and folklore claims a relationship.¹⁰² The Turkana are fiercely independent and cattle raids are carried out against all surrounding tribes creating mutual enmity even today. The Turkana are feared by all their neighbours. Three to five families may cooperate in a neighbourhood but this is constantly shifting as each family relocates by their own decision.

2.2.4 The Pattern of Grazing: The Turkana are truly nomadic; they have no fixed residences and show a pattern of movement that varies from year to year. Although variation among individual pastoralists has been seen as an important feature of Turkana livestock management, it is impossible to abstract an idealised movement pattern. In general, Turkana families and their livestock congregate in wet season 'home ranges' and remain there as long as the forage is sufficient to support their herds of camels, cattle, sheep, goats, and donkeys. As the dry season sets in, herd owners separate their livestock holdings into species-specific and production-specific herds, which are then moved independently, usually under the direction of an adult son or brother of the herd owner. This pattern continues, depending on environmental conditions and labour availability, throughout the dry season. When the rains begin in the following year, the herds are returned to the

¹⁰¹ Douglas H. Johnson and David M. Anderson, eds. The Ecology of Survival. Case Studies from Northeast African History. Boulder: Westview Press, 1988. p: 196-198.

¹⁰² William Irons and Neville Dyson-Hudson, eds. Perspectives on Nomadism. Leiden, Netherlands: E.J. Brill, 1972. p: 14.

home area and the cycle repeats itself.¹⁰³ Stock must be herded in areas where there are both pasturage and water resources. From the description of the Turkana District provided above, it is obvious that at certain times of the year some areas are not able to support livestock, while other areas are only able to support thinly distributed herds. As vegetational resources become depleted, movement has to be made to areas where better conditions prevail. Conversely, as new resources become available following the rains, livestock can be moved again to former depleted areas.

To some extent these dietary requirements determine the areas in which the kinds of stock can be kept. Cattle are strictly confined to grasslands, which means the mountain areas all year round and the banks of water courses and the lower hills in fair wet seasons.¹⁰⁴ In accordance with the Turkana traditions of living in the plains whenever possible, the cattle are driven down from the mountains as soon as the new rains have produced sufficient graze in the plains, and are moved back only when compelled by exhaustion of graze there at the beginning of the dry season. There tends, therefore, to be a distinct difference between the localities of cattle herding in the two seasons-a decisive movement from the mountains to the plains and back again. In the poorer wet seasons some of the cattle herds may not be able to move down to the plains at all since there is only inadequate grazing

¹⁰³ Claudia Chang, p:204-205.

¹⁰⁴ P.H. Gulliver, p:27.

available.

Browsing, however, is ubiquitous, or almost so, in the Turkana District, varying only in quantity and quality. Even the worst of the central shrub desert region affords some browse in the wet season, whilst extensive areas of the plains provide some kind of supply right through the dry season. Therefore, the Turkana are usually able to keep their camels, goats, and sheep in the plains, although some parts cannot maintain herds throughout the year.¹⁰⁵ Camel and small stock herds tend to make gradual movements, going from part of an area and then moving elsewhere. The worst parts of the plains gradually empty as the dry season progresses, or perhaps a few widely scattered homesteads only may remain. There is gradual concentration in the better parts of the plains and in the mountains. Probably less than half of the browsing herds reach the mountains, outside of the worst years.¹⁰⁶ When the new rains begin, bush leafage quickly returns and browsing stock are able to disperse again fairly soon.

2.3 Economic and Political System:

2.3.1 Common Resource Management: In the pastoral groups, the pattern which has emerged during the modern phase of development has been one of increasing pressure on pastures. As a result of successful attempts to reduce mortality rates, human population is growing faster and so is the number of

¹⁰⁵ibid, p:28

¹⁰⁶ibid

livestock.¹⁰⁷ While, in the past, the existing institutions were consistent with the fairly stable needs of the group, today this is not always the case. Over the past, the Turkana have been the subject of wrong assumptions on common property resources and open access resources. A common property resource base is one that is only subject to environmental degradation when the symbiotic relationship between physical, and non-physical factors of a population and the environment is challenged. Among the Turkana this principle of common resource management applies to a group of families exercising common ownership rights over a specified territory. Common use of pasture land is open to every family in the group on an equal basis. In emergencies members of other groups may be permitted to graze their livestock temporarily by reciprocal agreement. The same system applies to water resources, except that in some cases persons or groups, who invested in boreholes, may be entitled to their exclusive use. By implication, the area of pasture within a certain radius of the water holes ceases to be easily accessible to other pastoralists. An asset commonly owned is argued to be economically inefficient in that it tends to be over-used, unlike assets subject to more restrictive property rights. However, it is in the best interest of the Turkana that their common resource base is treated with respect to future interest. The current movement patterns of the Turkana demonstrate that mobility remains the main adaptive

¹⁰⁷ Z.A. Konczacki, p:54.

response to environmental stress. Successful livestock husbandry in the harsh environment of the Turkana District depends on mobility. If the Turkana were to adopt a more sedentary lifestyle, they would have to adopt other means of subsistence to replace or augment their pastoral economy. With the exception of the flood plains of the Turkwell and Tarach rivers, there is little or no possibility for agriculture in the Turkana District. Failed pastoralists have traditionally settled in these areas, but there are no incentives for successful pastoralists to settle there.¹⁰⁸ People in the settlements are regarded as poor and of very low status. Other economic opportunities that have enticed pastoralists to settle in other parts of the world, e.g. investment in agricultural plots and wage labour, are no options for the Turkana.¹⁰⁹ Livestock raising is the only occupation an economically successful and respected man can hold.

2.3.2 Judicial System: There is an absence of either formal political leaders or groups capable of taking corporate action. There are no chiefs, no ruling class, and no centralized political institutions. Leadership is confined to the local level and is demonstrated by the local influence but there is almost a total lack of social sanction that compels people to follow. This is consistent with the Turkana independent nature. Important life events to the Turkana are initiation, marriage, child-bearing, and death.

¹⁰⁸ Claudia Chang, p:207.

¹⁰⁹ *ibid*

2.3.3 Economic System: Pastoralism is an economic activity in which humans and the herds of animals lives in a symbiotic relationship. In case of the Turkana it is carried on as the main form of subsistence. The Turkana, as a rule, do not practice agriculture and they raise livestock for food consumption and exchange. A typical family owns about twenty-five to thirty cattle and about one hundred to one hundred and fifty small stock.¹¹⁰ Very few families owned smaller herds or none at all, for existence without livestock in the Turkana District is viryually impossible. The members of the poor families work for more wealthy people if possible or were reduced to the life of gatherers or sedentary people dependent on food aid and fancy development schemes.¹¹¹ In general, the Turkana have no permanent settlement and are involved in movements of a seasonal nature, often described in the literature, as the pastoral nomadic cycle.¹¹² Relationships established by birth, kinship, or by conscious effort, affinal kinship and bond-friendship, gain in meaning and significance when they involve mutual rights and obligations concerning livestock. A herders position within the community is determined by his wealth, which is restricted to the principle animal herded. The

¹¹⁰ Z.A. Konczacki, p: 44.

¹¹¹ Juliet Clutton-Brock, ed. The Walking Larder. Patterns of Domestication, Pastoralism, and Predation. London: Unwin Hyman Ltd., 1989. p: 211.

¹¹² Z.A. Konczacki, p: 44.

term 'prestige system' has been created to describe this important cultural trait.¹¹³

Thus the ownership of cattle is the source of prestige in the East African cattle complex system, where family self-sufficiency is based and wealth assessed according to the number of livestock owned. According to some anthropologists, the pastoralists tendency to 'hoard' livestock is an expression of his craving for prestige; economic considerations play an indirect and definitely secondary role.¹¹⁴

Experience has taught the Turkana inhabiting semi-arid to arid lands that because of variation and limitation within climatic areas, that their subsistence economy is far more advantageous. The Turkana have the advantage of mobility, important in the event of drought. Prolonged shortage of forage and water will have the twofold effect of reducing the milking capacity of the animals, which may force the pastoralists to resort to greater reliance on meat, and of increasing the mortality of livestock. If the factor of animal epidemics is added it is obvious that the Turkana must reckon with an ever present possibility of serious losses.

2.4 Poverty Processes and Types of Poverty Among the Pastoral Turkana

Poverty is not necessarily a state of being but it is the effect of dynamic processes. While it is important to understand where poverty is greatest, it is critical to understand why it exists. This inquiry necessarily leads away from the

¹¹³ ibid

¹¹⁴ ibid

nature of the poor as individuals to the nature of their social and physical environment. Poverty is not only a personal phenomenon, it is a social status. As such, while its effects can be measured on the level of the individual, its causes must be sought elsewhere, in a number of closely related socio-economic processes. And from the point of view of poverty alleviation, the processes of becoming are just as important as the state of being poor.¹¹⁵

2.4.1 Policy-Induced Processes: National policies and institutions often have built-in biases which exclude the rural poor from the benefits of development, accentuate the impact of other poverty processes and fail to recognize the productive potential of pastoralists which could be realized with the right kind of support.¹¹⁶ In Kenya a significant proportion of public expenditure on agriculture was devoted to land purchase, settlement, and land registration. The great bulk of this expenditure benefitted the relatively small number of the newly settled farmers in Central, Rift Valley, and Eastern Provinces.

2.4.2 Dualism: One of the root causes of poverty in Africa is the dualistic pattern of development, initiated during the colonial rule in many parts of the continent and sustained since then by government policies aimed at generating a

¹¹⁵ Sappho Haramlobous. The State of World Rural Poverty: A Report on Africa. Rome:IFAD, 1994. p: 9.

¹¹⁶ *ibid*, p:12-13.

‘growth’ oriented development.¹¹⁷ Economic differentiation in pre-colonial Africa was limited both in space and in extent. The scope of differentiation was limited by land abundance and customary land tenure systems, the state of technology and the availability or lack of markets. Differentiation started in a significant way during the colonial period when the colonial rulers aimed at providing economic opportunities to settlers, plantations, and trading companies, and at generating revenues to meet the costs of colonial administration and secure cheap sources of foodstuffs and raw materials.

These objectives of the colonial rulers led to some fundamental changes in Africa and unleashed forces which created a deep cleavage in the traditional societies by creating a group integrated with the outside world producing for markets, and a group which remained subsistence-oriented. The changes included the establishment of plantations and exploitation of mineral resources and increasing incorporation of peasants in export crop production. In Kenya, these policies resulted in the loss or reduction of the land available to peasants or tribes in some areas, a variety of coercive measures to secure wage labour and strong disincentives to peasant crop production.¹¹⁸ This was accompanied by concentrations of public expenditures on social and economic infrastructures in

¹¹⁷ *ibid*, p: 13.

¹¹⁸ Edward B. Barbier. Economics, Natural-Resource Scarcity and Development. Conventional and Alternative Views. London: Earthscan Publications, Ltd., 1989. p:126.

specific areas, generally the most fertile parts of the country, where big farms, plantations, and mines were located. The cash crop producing areas received large allocations for development of infrastructure, transport and communications in order to integrate these areas with the trading centres and the ports.

2.4.3 Population Growth: In Kenya, the high population pressure is reflected in the small arable land area per capita of the agricultural population and the increasing fragmentation of the smallholder sector.¹¹⁹ Over 60% of the holdings in Kenya are of two hectares or under.¹²⁰ The increasing population pressure is causing a decline in arable land per capita, thus limiting the scope of expanded production.

2.4.4 Resource Management and the Environment: If poverty is both a cause and an effect of rapid population growth, so is poverty both cause and effect of many dimensions of degradation of the environment. Many of the rural poor live in areas of extreme environmental fragility. In the Turkana District the traditional resource management system has been seriously disturbed by national and international policies.

2.4.5 Natural Cycles and Processes: Natural phenomena can often reduce the rural poor to a state of total destitution. The 1992 drought in southern Africa underlined a stabilising factor that must be taken into consideration when planning

¹¹⁹ *ibid*, p:13-14.

¹²⁰ *ibid*, p:14.

for development in the region.¹²¹ In addition, the serious drought in 1995 in the Turkana District illustrated that settled pastoralists are extremely vulnerable to natural cycles and processes. In the Turkana District, the ecological balance is very delicate and special effort has to take place in order to ensure that pastoralists are protected from the negative effects of natural disasters.

2.4.6 Types of Poverty: Pastoralists in Kenya are subject to various different types of rural poverty. Those types of poverty include overcrowding poverty and sporadic poverty.¹²² The term overcrowding poverty, as the name implicates, consists of material depravation arising from population pressure and limits on resources which in turn will breed alienation and overcrowding poverty. Vulnerability to natural calamities, eg. drought and insecurity produces traumatic or sporadic poverty which can be transitory but often ends up being endemic. Isolation, alienation, technological deprivation, dependence and lack of assets are also signs of endemic poverty.¹²³

¹²¹ibid

¹²²ibid

¹²³ibid

3. Description of Development Efforts

This part of the paper will give a description of several contemporary development projects implemented among the Turkana pastoralists of northern Kenya. The projects that have been chosen for the paper take a somewhat different approach than those projects implemented in the past. However, even with a growing realization of the need to involve pastoralists more fully in the planning of development and to build on their existing knowledge of their environment, in most cases, development planners introduce changes that are in no way appropriate for the Turkana. The cultural ecology of the Turkana has to become the main focus of attention during the process of successful development planning. First of all, a description of the development projects that are basis for this discussion will be provided.

Pastoral areas are typified by high levels of unpredictable variability within an ecological sense. From one season to the next, it is virtually impossible for the pastoralists to determine environmental factors. As a direct result, pastoral strategies involve high levels of contingent responses. The more uncertain the environment, the more desperate the attempts by development planners to find technical solutions and adopt generalized solutions to problems intrinsic to pastoral areas.¹²⁴ It will be vital to shift the focus of planning to adaptive management. This

¹²⁴ Ian Scoones, p: 5.

approach to planning is reliant on the data and information already compiled and still to be compiled, and also relies on principles, guidelines, and a continuous learning process.¹²⁵

3.1 The Oxfam Restocking Project

3.1.1 Context of the Project: The Oxfam Restocking Project was launched in early 1985.¹²⁶ Beginning in 1983, Oxfam responded to a severe drought in the Turkana District and elsewhere in Kenya in a variety of ways. From 1983 to the present, Oxfam has been restocking pastoralists in the Turkana District to assist them to recover from drought and reenter the pastoral economy.¹²⁷ An initial feasibility study had been carried out in the Kerio River area in mid-1984.¹²⁸ During this period, discussions were held internally on ways to assist pastoral groups in Turkana. One idea was to move some of their breeding stock to areas where the grazing was more readily available, i.e. to the coast or around Kitale in the west. Unfortunately, all areas were equally negatively affected by drought, so this idea had to be dropped.¹²⁹ Another proposal was to improve the outreach of the

¹²⁵ *ibid*, p: 6.

¹²⁶ David W. Brokensha and Peter D. Little, eds. Anthropology of Development and Change in East Africa. Boulder: Westview Press, 1988. p: 190.

¹²⁷ Thomas E. Downing, Kangethe W. Gitu, and Crispin M. Kamau, eds. Coping with Drought in Kenya. National and Local Strategies. Boulder: Lynne Rienner Publishers, 1989. p: 344.

¹²⁸ David W. Brokensha, et.al., p: 191.

¹²⁹ Thomas E. Downing, et.al., p: 345.

livestock marketing system, with Oxfam and other groups acting as buying agents using cash and maize for the purchases.¹³⁰ This idea was also dropped due to the build-up of cattle waiting to be slaughtered at the Kenya Meat Commission.¹³¹ Although there may be a need for restocking after a major drought, pastoral systems might be able to restock their own members. The social system of the Turkana have a network of social obligations and responsibilities which would allow for destitute pastoralists to be restocked by their kin, or bond-friends. However, in this specific case these restocking mechanisms had collapsed. There is the notion that in cases of extreme emergency, those traditions of social obligation and responsibility may corrode.¹³² On the basis of those findings discussed in the feasibility study a pilot restocking project was recommended. To facilitate rehabilitation of the pastoral economy, the Oxfam Restocking Project was developed.

3.1.2 Objectives of the Project: The principal objectives of the project were to provide destitute families with the means to return to the pastoral sector.¹³³ Furthermore, this project decided to experiment with different kinds and levels of

¹³⁰ibid

¹³¹ibid

¹³² Clare Oxby, ed. Assisting African Livestock Keepers. The Experience of Four Projects. London: Overseas Development Institute, 1991. p: 48.

¹³³ David W. Brokensha, et.al., p: 190.

livestock 'packages'.¹³⁴ In addition, the project planned to explore the possibility of establishing so-called herders associations among restocked families, based on the traditional Turkana cooperative grazing community or *adekar*.¹³⁵ Those *adekars* are made up of several *awis*. In its initial phase, a manager and his assistant, both anthropologists, were recruited to manage the project.

3.1.3 Selection of Participants: Defining the Beneficiary Population: As of September 1986, over 300 families in the Kerio River area had been restocked and a total of nearly 20,000 small stock distributed.¹³⁶ Each family received between 50 and 70 small stock, one pack donkey, and, in order to give the flock an opportunity to establish itself in the first year, a supplement of between 540 and 720 kg of maize.¹³⁷ Of the families that received livestock, 40 percent were headed by women, whose husbands were no longer able to support the family.¹³⁸ Sufficient animals have to be given to each family to give them a reasonable chance of building a viable herd. The actual number and mix of animals depends on the ecology, prevailing rangeland conditions, traditional livestock management, and existing herds. In this specific case, Oxfam focused primarily on the

¹³⁴ *ibid*, p: 190.

¹³⁵ *ibid*, p: 190.

¹³⁶ *ibid*, p: 191.

¹³⁷ *ibid*, p: 191.

¹³⁸ Thomas E. Downing, et.al., p: 351.

distribution of female goats given their high fertility rate.¹³⁹ Enough grain for a year is required, until the young females have matured and produced offspring. One has to realize that restocking projects in the Turkana District are not unusual. In 1963, only shortly before independence, there had been an earlier attempt to distribute small stock to destitute families. Only 20 small stock were distributed per family, however, and no attempt was made to provide a comprehensive package-including maize, pack animals, camping equipment, veterinary support-which would have allowed a family to return to the pastoral sector as a viable unit.¹⁴⁰ As a result, most of the families that received stock were soon back on famine relief.

3.1.4 Development Strategy: In contrast to those unsuccessful attempts to restock the Turkana, the Oxfam project is intended as a much more radical and comprehensive experiment to allow destitute Turkana who have fallen out of the pastoral sector through drought and livestock disease to reestablish themselves as nomadic pastoralists. Although in 1984 the livestock distributed were gifts, in the subsequent years the animals were loans and had, in part, to be repaid.¹⁴¹ Overall, the project represents a significant departure from most previous development projects in this area, which were based on the assumption that destitution

¹³⁹ *ibid*, p: 349.

¹⁴⁰ David W. Brokensha, p: 191.

¹⁴¹ Thomas E. Downing, p: 349.

represented a natural process of adjustment to carrying capacity.¹⁴²

Ecological constraints have limited the economic options available to the Turkana people. Livestock husbandry is the only viable way of supporting a large human population in the arid environment of the Turkana District.¹⁴³ Recent studies of land use in southern Turkana demonstrate that the Turkana are using their natural resources efficiently, without causing environmental degradation. For the system to work, however, the people and the livestock must be highly mobile. In addition, the livestock management system must be flexible enough to allow each herd owner to act as an independent decision maker so that he can adjust his management strategy to current environmental conditions and available labour.¹⁴⁴ Overstocking in the Turkana District is more assumed rather than proven.¹⁴⁵ Information from anthropologists and ecologists working on the South Turkana Ecosystems Projects (STEP) indicates that there is no long-term range degradation except around permanent settlements, and that much of the area in the south is deserted of both stock and people.¹⁴⁶ In 1982 only half of the district was occupied, and within this half 45 percent of the population was living within five kilometres

¹⁴² David W. Brokensha, p: 191.

¹⁴³ Claudia Chang and Harold A. Koster, eds. Pastoralists at the Periphery. Herders in a Capitalist World. Tucson: The University of Arizona Press, 1994. p: 211.

¹⁴⁴ *ibid*, p: 208-209.

¹⁴⁵ David W. Brokensha et al., p: 191.

¹⁴⁶ *ibid*, p: 191.

of a permanent settlement.¹⁴⁷

The pattern of range exploitation is therefore very uneven. While there are heavy concentrations of both people and stock near permanent settlements, large areas of the best grazing lands, especially near the borders of the district, are left unoccupied. The main reasons for this are, first, livestock raiding in border areas, and the growth of permanent settlements-relief camps, administrative/trade centres, irrigation schemes-that have attracted an increasing number of poor pastoralists.¹⁴⁸

Second, while droughts are a recurrent factor of marginal pastoral environments like the Turkana District, their consequences for the local population vary. These consequences are often most severe not as a result of the degree of livestock and population increase, but of the degree of external interventions that restrict mobility and create permanent settlements. Destitution, indeed, has often little to do with drought at all, but has been a direct consequence of national incorporation.¹⁴⁹

Third, in most of the district there is no real economic alternative to livestock keeping for the majority of the population. There is growing evidence of an increasing inequality in access to pastoral resources. The *maskini*, or poor

¹⁴⁷ *ibid*, p: 191.

¹⁴⁸ *ibid*, p: 191.

¹⁴⁹ *ibid*, p: 192.

Turkana, live in the peri-urban slums of towns like Lodwar and Kakuma, or in the irrigation schemes and relief camps, or along the lake shore.¹⁵⁰ They eke out an existence as charcoal burners, distillers of illicit alcohol, prostitutes, odd-job men, food-for-work labourers, part-time farmers, and fishermen.¹⁵¹ Their chances of returning to the pastoral sector are increasingly remote. They are caught in a poverty trap, for even if they do manage to buy a few livestock, they cannot afford to maintain the extensive set of social relationships necessary for survival back in the pastoral sector.¹⁵² The aim of the Oxfam Restocking Project was to enable those destitute pastoralists to become self-sufficient once more. It is increasingly evident that impoverishment is becoming permanent for a large number of Turkana, and this impoverishment has more to do with the particular structure of opportunities in the district than with questions of 'carrying capacity.'¹⁵³

There are good reasons, therefore, to reject any preconceived assumptions about pastoral development. While overstocking may be occurring, it cannot be assumed, and certainly should not be the basis of interventions in the pastoral sector to control livestock movements and shift people out of pastoralism. What is required is a clear identification of long-term trends in the pastoral economy, and

¹⁵⁰ *ibid*

¹⁵¹ *ibid*

¹⁵² *ibid*

¹⁵³ *ibid*

in particular the increasing shift of resources into the hands of fewer and fewer people.¹⁵⁴

In an environment like the Turkana District, there is little point in spending large sums on a search for alternatives to pastoralism. Irrigation schemes or fishing did not prove to be a viable alternative to pastoralism and there is now growing awareness to emphasize livestock development.¹⁵⁵ The first FAO/UNDP irrigation scheme to be established was in 1966 at Kekarongole, around 30 kilometres south of Lodwar; it was followed by Cadell and Amolem in the early 1970s.¹⁵⁶ The costs that occurred were immense and operating costs amounted to over three times the gross margin any farmer could expect from their plots.¹⁵⁷ Those attempts to settle destitute pastoralists in northern Kenya in the 1970s and 1980s, often happen to be planned on irrigation schemes. Those solutions to the twin problems of poverty and environmental degradation in semi-arid lands are far from unusual and have for the most part been met with little success. Following a series of droughts since the mid-1960s, famine relief efforts began in the Turkana District. In 1982 the Turkana Rehabilitation Programme was supplying food to 80,000 people, as a result of which the intense drought of 1984 was ridden out. As a result of past

¹⁵⁴ *ibid*

¹⁵⁵ *ibid*, p: 189.

¹⁵⁶ *ibid*, p: 188.

¹⁵⁷ *ibid*, p: 189.

attempts to merge relief and development, substantial numbers of Turkana pastoralists have been settled along the seasonal rivers of the Kerio and Turkwel in irrigation schemes, and on the shores of Lake Turkana as fishermen. The first irrigation schemes were begun in 1962 by mission organizations as an alternative to pastoralism for Turkana on famine relief. The Kenyan government and the series of bilateral and multilateral aid agencies have subsequently been involved in the management of those schemes, which have proved inordinately expensive. A Ministry of Agriculture appraisal in 1984 calculated that the total development cost of the Turkana cluster of small scale irrigation schemes represented US\$ 21,000 per household. This is expensive even by the low standards of African irrigation, and represents fifteen times the cost of setting up each family with a herd of replacement livestock, and the equivalent to famine relief for two hundred years.¹⁵⁸

3.2. Turkana Rural Development Programme

3.2.1 Context of the Programme: Since 1980, **NORAD**, the Norway's governmental development agency, has cooperated with Kenya in implementing the multi-sectoral **Turkana Rural Development Programme** within the framework of the national Arid and Semi-Arid Lands Programme.¹⁵⁹ The cost of

¹⁵⁸ W. M. Adams. Green Development. Environment and Sustainability in the Third World. London: Routledge, 1991. p: 108-109.

¹⁵⁹ Peter Ngunjiri. In a Dry Land. London: The Panos Institute, 1989. p: 5.

the programme between 1980 and 1988 is US\$ 13 million.¹⁶⁰ A new agreement was expected to be signed in 1988 but the Norwegian government pulled out. Within the framework of this programme the Kenyan government is trying to integrate the Turkana into the political, economic, and social life of the country.¹⁶¹ The District Development Programme has hitherto aimed mainly at helping the pastoralists, who were affected severely during droughts and famines in the 1960s, 1970s, and 1980s.¹⁶² But a change is now taking place whose purpose is to keep the nomadic culture itself alive, despite the stresses and strains which that culture entails. What are some of the elements of the rural development programme, and how they affected the Turkana people and the arid environment on which they must depend for their livelihood?¹⁶³ Some aspects of the programme include a road-building programme, general agricultural development and especially irrigation, the provision of drinking water, forestry and the grazing problem, the failure to establish a fish-freezing plant on Lake Turkana, education and health, and some small projects to benefit women.¹⁶⁴ To what extent are these Norwegian-supported activities leading to sustainable development in the Turkana District?

¹⁶⁰ *ibid*

¹⁶¹ *ibid*, p: 6.

¹⁶² *ibid*

¹⁶³ *ibid*

¹⁶⁴ *ibid*

3.2.2 Objectives of the Programme: The overall objective of the Turkana Rural Development Programme is to improve the living conditions of the Turkana people. One of its most important elements has been long regarded the construction of a road between Kitale and Lodwar and from Lodwar to Kalakol on the shores of Lake Turkana.¹⁶⁵ This aspect of the programme has been regarded as vital to open the District to penetration by development planners and investors.

Animal husbandry has been the traditional mainstay of the Turkana economy, and a number of projects in the Turkana Rural Development Programme aim to strengthen the pastoral production system. The traditional livestock herders benefit from the provision of veterinary services, animal-disease investigation and a camel development project. These activities according to the planners of the Turkana Rural Development Programme are important, because herding livestock is an integral part of the culture and identity of the Turkana.

3.2.3 Development Strategy: The development strategy employed by the planners can be best described as interventionist and taking a blueprint approach to planning. There has been a heavy emphasis on encouraging settled farming. Although the people had previously been involved, on a sporadic basis, in the growing of sorghum and maize, when the FAO came to the district it plunged them into a whole new world of agriculture with technical aspects that were wholly

¹⁶⁵ *ibid*

unrelated to Turkana agriculture.¹⁶⁶ In the FAO projects, agricultural machinery tended to do the work. The equipment played a central role, proved to be very expensive. When NORAD joined the Turkana agricultural projects in 1982, a decision was taken to switch from tractor-farming to hoe-farming, so as to encourage the people to participate. The bulk of the programme has concentrated on irrigated agriculture in the south of the Turkana District. The Katilu irrigation scheme serves more than 600 families.¹⁶⁷ Farmers are taught how to make use of the river waters to irrigate their plots, called *shambas*, to enable them to grow their own food. Basin irrigation is practised, and when the rivers are dry, they use water from boreholes that were sunk with NORAD's assistance.¹⁶⁸ Government field officers are able to reach the farmers because the NORAD package includes transport for the officers, a notion that has been described as 'tarmac' or 'urban bias' by Chambers. This contrasts with the situation in many parts of the country where officials are unable to reach the farmers due to lack of transport.

When the irrigation scheme was managed by FAO, they used the farrow system of irrigation.¹⁶⁹ When NORAD took over, they changed it to basin irrigation, which was not mechanised, with water being directed to the plots

¹⁶⁶ *ibid*

¹⁶⁷ *ibid*, p: 8.

¹⁶⁸ *ibid*

¹⁶⁹ *ibid*

manually.¹⁷⁰ However, the River Turkwell, on which the scheme is based carried a lot of silt. According to one government agricultural officer trapped water comes to the plots carrying the silt, though the silt is mainly to be found in the conveyors from which it is later scooped out. In the short term silting can be ignored but in the long term it will change the soil structure. The officials running the irrigation scheme finally agreed that silting was indeed a problem and the only way it could be solved was by introducing silt traps. A number of these have been introduced in some schemes; some have worked, while others have failed.¹⁷¹ Siltation remains a major problem. Looking at the Katilu irrigation scheme, since NORAD's involvement things have worked out the way they were supposed to. The farmers at Cadell have hand-pumps with which they draw water, but farmers said that in the dry months of January, February, and March there is sometimes no water from the boreholes. The only complaint which the farmers have, though it is not a direct concern of the donors, is the fact that they are being asked to plant the Serena type of sorghum.¹⁷² The farmers would prefer their traditional variety, which they say is a perennial and quicker to mature, with the seeds for next year coming from the harvest.¹⁷³ With the new Serena variety, the farmers have to buy new seeds every

¹⁷⁰ *ibid*

¹⁷¹ *ibid*

¹⁷² *ibid*

¹⁷³ *ibid*

year.¹⁷⁴ The women and children complained, moreover, that the new strain was bitter and could not be eaten raw. In the Turkana District, sorghum is cultivated and harvested within a very short period of time due to the unreliable rainfall pattern. The traditional sorghum is considered to be drought-resistant.¹⁷⁵ Women told officials that raw sorghum is a vital food to the women and their children. Its milky substance is very nutritious and this is the reason why local Turkana children are hardly ever undernourished. The stalk of the traditional crop is sweet and people chew on it to quench their thirst. The Turkana people have turned to agriculture, and though they first came reluctantly, they now like it and have, according to the reports by NORAD, adapted to the new life quickly. Government officials claim that they will be able to run the project even when the donors leave, their only fear being that the government might not allocate enough funds to run it as smoothly as it is running today.

3.2.4 Selection of Participants: Defining the Beneficiary Population:

The people in Katilu were once displaced persons. They came to Katilu after many of them had lost their livestock and some of them even their relatives to cattle rustlers, and therefore lost the ability to act within the network of social obligation and responsibility within their society. The NORAD aid programme has given

¹⁷⁴ *ibid*

¹⁷⁵ A.E. Hall, G.H. Cannell, and H.W. Lawton, eds. Agriculture in Semi-Arid Environments. Berlin: Springer Verlag, 1979. p:171.

them short-term relief. Although they are now able to feed themselves and have a surplus for sale the question remains how the system of settled agriculture will function in face of drought.. There is talk of introducing a cash crop, probably cotton, and once this is achieved, it is predicted by the government that the Turkana people will have raised their own standards of living, which are now among the lowest in Kenya.

3.2.5 Effects of the Programme: The women have been most adversely affected by this new life. They now have to take their children to school and be left without helpers when they work on their plots or look after their livestock. To that extent, their quality of life has deteriorated. The attempt to settle the Turkana has had a profound effect on their traditional lifestyle and has hit the women particularly hard. In the traditional pastoral life, women enjoyed a great measure of economic independence, by way of the animals their household received for their dowry. But the new, settled way of living deprives them of livestock, rendering them destitute and wholly dependent on their husbands.¹⁷⁶ The number of concubines has increased; these women have little claim of the men, who frequently shirk all responsibility for pregnancies. To help alleviate this situation, NORAD has included a number of projects for women in its overall Turkana development programme. The part played by women in these projects has been

¹⁷⁶ Peter Ngunjiri, *ibid.*

carefully thought out to make use of their abilities in productive ways. They are engaged in making mud-blocks, baskets, in baking bread, and, in Lodwar town, there is a sewing scheme.¹⁷⁷ It remains to be seen whether they will reap the long-term benefits of their children's education.

Once the Turkana settled down, the Kenyan government had to deal with another problem, that of supplying them with water. Several projects were started which, as usual, ran out of funds. The Ministry of Water Development then approached NORAD to see how it might be able to help. NORAD's programme of assistance in the water supply sector is being implemented in phases.¹⁷⁸ When the final phase is completed in the year 2008, it is hoped that all homes in the areas covered will have access to clean water.¹⁷⁹ The first phase, which includes Katilu, has ended and water is flowing close to where the people live. They no longer have to go searching for it. According to officials at the Ministry of Water Development in Lodwar, the first phase of the water project even covered areas that were not originally in the plans.¹⁸⁰ The second phase, now under way, is meeting the needs of the town of Lodwar, whose population is growing rapidly.¹⁸¹

¹⁷⁷ *ibid*, p:18.

¹⁷⁸ *ibid*

¹⁷⁹ *ibid*

¹⁸⁰ *ibid*

¹⁸¹ *ibid*

This second phase involves digging two boreholes by the River Turkwell and pumping water to the towns by means of solar pumps.¹⁸² Since most of them are not permanent and therefore have no plumbing, the water is being sold to the public at kiosks which have been put up at strategic places.¹⁸³ This is a luxury compared with the long distances people had to walk in search of it. But there are serious negative side-effects. When water was introduced to Lodwar, nothing was done to dispose of it after it was used. The waste-water seeps quickly into the sand and it can be feared that it may in the long run contaminate the sources of the clean water. Moreover, water being sold at the kiosks gets spilled and the soggy sand becomes a breeding ground for mosquitoes, a serious health hazard.¹⁸⁴ This problem is not confined to Lodwar town, but also affects Katilu where there is a successful water project in operation. The solution to those problems could be a sewerage system. In addition, there should be raised questions on the fact that the ground water running out as the rate of consumption rises in the town. Farmers at the Katilu irrigation scheme have complained that water levels went down during the dry seasons.¹⁸⁵ This means that they would be even worse off in the event of a drought. But at least the farmers have boreholes.

¹⁸² *ibid*

¹⁸³ *ibid*, p: 11.

¹⁸⁴ *ibid*

¹⁸⁵ *ibid*

The water projects in Lodwar and Katilu are both considered a success. The government officials running these projects are satisfied that nothing better could have been achieved. They are convinced they are capable of continuing the projects after the donors have gone, but wonder what is going to happen when the project vehicles, supplied by the donors, are withdrawn.¹⁸⁶ They are also concerned that some of the engineering components used are not of local manufacture. Engines broke down and could not be repaired because local components were of the wrong size. And water pipes used by the scheme are made to the donor's standards, not the same as those used in Lodwar town. Should one of them burst, local pipes and many are made in Kenya would not be compatible.

The Turkana are by tradition a nomadic, livestock-herding people. One of the basic policies of the whole Turkana Rural Development Programme is to maintain the traditional culture and lifestyle, so the settled pastoralists were allowed to keep their livestock.¹⁸⁷ Today, the ability to buy more animals is a concrete sign of success. Today their animals now far outstrip the figure which the officials originally allowed when the pastoralists joined the irrigation scheme. It is feared that the presence of thousands of goats may overgraze the area, thus laying the land bare and exposing it to soil erosion. So those with livestock inside the irrigation scheme have been asked to take their animals to graze outside the area.

¹⁸⁶ *ibid*

¹⁸⁷ *ibid*, p: 12.

But the farmers complain that there is no one to watch the animals; the owners are working on their *shambas*, and their children are attending school.¹⁸⁸ The local environment already started to suffer from the presence of too many animals.

The settling of potential farmers at Katilu has had devastating effects on forests in the area, besides the effects of overgrazing. In the first place, farmers had to build houses for themselves, and they cut trees to do so. Secondly, they had to clear land in order to farm properly, so the natural forests were depleted further.

But the forestry department, which is also supported by NORAD, is educating the farmers about the need to replace trees which they cut down.¹⁸⁹ The response of the farmers has been quite good, but the rate of planting has not even begun to make good the trees that have been lost.¹⁹⁰

One of NORAD's main objectives in the Turkana District is the conservation of the existing forest resources, the planting of seedlings around the major settlements and in areas of ecological stress, and the carrying out of trial studies to determine the technical basis for tree-growing in the district. Forestry staff and administration personnel are trained in the importance of trees and woody shrub to Turkana.

NORAD came to northern Kenya to bring famine relief to thousands of

¹⁸⁸ *ibid*

¹⁸⁹ *ibid*

¹⁹⁰ *ibid*

Turkana stranded in relief camps after prolonged periods of drought. It concluded that the development of lake fishing would be a better long-term solution to food shortages than continual provision of relief food.¹⁹¹ The fish resources in Lake Turkana have been exploited by at least some of the nomads since before the Norwegian support to the Turkana programme commenced. New fishing technology had in fact been introduced to the Turkana before NORAD arrived on the scene, helping them move away from subsistence fishing to commercial fishing.¹⁹² Commercial fishing was, however, hampered by the absence of an organised marketing system. There were no cold-storage facilities and the roads were bad. With financial grants totalling US\$2.9 million, NORAD helped to establish a marketing organization and build a huge cold-storage plant.¹⁹³ The fisheries project was one of the largest in the entire NORAD-supported Turkana programme.

For the first time ever, fishermen in Turkana were organised into a marketing group and provided with outside markets for their produce.¹⁹⁴ As they made use of improved equipment, their catches also improved and they began to earn money. The word spread that fishing was a lucrative trade.

¹⁹¹ *ibid*

¹⁹² *ibid*

¹⁹³ *ibid*

¹⁹⁴ *ibid*

In order to regulate the catches and stabilise the price of fish, a study was carried out in 1976 into the feasibility of a fish-freezing and storage plant.¹⁹⁵ The study concluded that such a factory would be viable, and would enable the fishermen to store and release fish in accordance with the fluctuations of demand.¹⁹⁶ The building of the fish factory proceeded. The factory, an ice-making and cold-storage plant at Kalakol, cost US\$2 million but was never completed according to plan.¹⁹⁷ And it never worked properly. One reason was that to freeze the fish in outside temperatures normally around 38 degrees centigrade would have taken more electricity than was available in the whole district.¹⁹⁸ Someone had failed to think ahead.

But the failure of the factory did not deter the fishermen. When word went around about the fortunes being made at the lake, Turkana pastoralists moved down from the hills and came to the lake shore mostly around Namukuse, where they set up camps.¹⁹⁹ It never occurred to anyone to regulate the arrival of newcomers, so there was a sudden increase in the population at Namukuse. Pastoralists hoping to become fishermen cut down trees to make houses for

¹⁹⁵ *ibid*

¹⁹⁶ *ibid*, p: 13-14.

¹⁹⁷ *ibid*, p: 14.

¹⁹⁸ *ibid*

¹⁹⁹ *ibid*

themselves-trees which have never been replaced. Neither the government officials nor project staff were prepared for the influx, which is especially ironic since their whole intention was to get the Turkana to come to the lake.

Their livestock, meanwhile, was neglected, much of it dying as a result of a drought that was not particularly severe. With the money they had made from the sale of fish, the pastoralist-fishermen purchased more livestock to make good their losses, but the animals continued to die from neglect. The fish trade eventually declined, partly due to the fall in the level of the lake's water. The new fishermen lost interest and returned to their traditional lives, to find that their grazing land had been seriously degraded by those they had left behind. The trouble with schemes that turn out to be not well thought out, it would seem, twofold: the people's expectations are frustrated, and when they return to their traditional way of life problems have piled up in their absence. In this very practical sense, bad planning is a recipe for confusion. It leaves people, in some cases anyway, with less than they had before.

The failure of the fisheries project, into which NORAD had by the end of 1986 poured more than US\$2.9 million, has mainly been blamed on the high technology used in the construction of the factory, the lake's falling water level, and the lack of a breeding ground for the lake's most common fish, tilapia.²⁰⁰ This

²⁰⁰ *ibid*, p: 14-15.

fish' original breeding area, the Ferguson Gulf, has no water left. The Turkana traditionally dry their fish; the idea of freezing was new to them. The donors had meant well, as the drying and smoking of fish used to consume a great deal of fuelwood, which the district simply did not have. The fish factory in Turkana turned out to be a folly. The project was also doomed because the factory was too big. When the feasibility study was undertaken in 1976, the idea was to put up a small factory. Even without the factory, many of the fishermen who gave up could come back and make a decent living with the support of practical assistance the people value.

3.3 The Lokitaung Pastoral Development Project:

3.3.1 Context of the Project: This project is located in the Lokitaung Division in the Turkana District. The project is working in a difficult region where there is a history of hardship and relief food aid. The programme began as the Turkana Water Harvesting Project, helping to develop systems of water harvesting for crop production, while also introducing animal ploughing.²⁰¹ The project has trained local people, many of them women, to become water harvesting technicians. The most interesting aspect of this project is its evolution into a long-term development programme, mostly concerned with pastoral production, the main

²⁰¹ Will Critchley. Looking After Our Land. Soil and Water Conservation in Dryland Africa. Oxford: OXFAM Publications, 1991. p: 46.

occupation of the local people.²⁰² The project is largely managed by the local people themselves. Pastoralism in the Turkana District, as has been discussed earlier, is the most viable subsistence system. The balance can, however, be upset by disease and drought. Crop production is not possible without irrigation or some form of water harvesting. In some areas, the Turkana carry out a little sorghum cropping, especially where flooding of rivers leave some moisture in the ground.

3.3.2 Objectives of the Project: The Lokitaung Pastoral Development Project began in 1984 as the Turkana Water Harvesting Project with the two objectives: demonstrating appropriate rainwater harvesting systems; and introducing animal draught for ploughing and earth moving.²⁰³

3.3.3 Development Strategy: This was at a time when food-for-work was still widely used by project planners in the Turkana District. The Lokitaung Pastoral Development Project had little choice but also to use food-for-work also, for the construction of rainwater harvesting systems.²⁰⁴ However, the objective was to reduce food rations gradually and to put the people in charge of food distribution. The long-term objective of the project is to strengthen the capacity of traditional pastoral institutions to sustain and increase local food production, and to

²⁰² *ibid*

²⁰³ *ibid*, p: 47.

²⁰⁴ *ibid*

reduce household vulnerability to seasonal food shortages.²⁰⁵ The intermediate objectives are to strengthen to capacity of appropriate pastoral institutions to initiate, manage, and develop responsive food security projects; to develop a range of sustainable technologies which increase food production at the household level; and to contribute information and experience gained to district policy makers and to encourage greater recognition of pastoral institutions as appropriate vehicles for development.²⁰⁶

3.3.4 Selection of Participants: Defining the Beneficiary Population:

The estimated pastoral population of Lokitaung Division is 40,000 with an additional 12,000 settled population.²⁰⁷ Project beneficiaries only comprise a tiny proportion of this number. Beneficiaries were carefully selected after a consultation process between the extension worker and an informal network of local elders.²⁰⁸ Of those wanting to become participants they had to have at least 15 female goats, and had to be able to organise a workforce, and could prove specific rights over the land to be developed. Such criteria ensured that the project was open for marginal pastoralists. According to project documents only about 152

²⁰⁵ Richard Hogg. NGOs, Pastoralists, and the Myth of Community: Three Case Studies from East Africa. *Nomadic Peoples* 30: 1992, p: 131.

²⁰⁶ *ibid*

²⁰⁷ *ibid*

²⁰⁸ Clare Oxby. African Livestock-Keeper in Recurrent Crisis. Policy Issues Arising from the NGO Response. London: International Institute for Environment and Development, 1989. p: 37.

families are actually registered project members.²⁰⁹ However, many non-members benefit from the project and have access to project stores. Nevertheless, the total number of direct beneficiaries is relatively small, probably only a few thousand people scattered in four different locations.²¹⁰

The target population are marginal pastoralists with less than 100 small stock per family; the project recognised at an early stage that it was these marginal pastoralists who were most likely to benefit from the project, as crop production was never likely to be more than a supplement to a predominantly pastoral economy.²¹¹

It was decided to organise management of the project under a local Management Board drawn from members of committees in each of the three project centres. The committees themselves would be based on existing local institutions. Management would be by the people themselves, with only a minimum of outside help or interference.²¹²

3.3.5 Effects of the Project: Activities at the start were centred around improved rainwater harvesting for sorghum production. The idea was that crops would help to supplement income from livestock, and by bartering surplus grain,

²⁰⁹ Richard Hogg, p: 131.

²¹⁰ *ibid*

²¹¹ *ibid*

²¹² Will Critchley, p: 47.

families could rebuild their herds. The policy was to help families who only had a few animals remaining to return to their traditional lifestyle as pastoralists.

The main technical intervention in this area has been technical training of farmers in a range of appropriate techniques, such as site survey methods, the design of water harvesting systems, and especially of earthworks, and levelling and construction methods.²¹³ Work began on sites at Kachoda and Loarenyak and at Manalongoria, the site of the Salvation Army water harvesting project near to Lokitaung, and gradually expanded outwards to other areas. By September 1990, some 215 gardens had been improved.²¹⁴

Water harvesting is a technology intended to improve garden yields. In general, rainwater harvesting can make sorghum production a little more reliable in this area and it was believed that improvement could be made to some of the bunding techniques used by earlier relief programmes. There was also much traditional agricultural knowledge to build on which provided an excellent starting point.²¹⁵ The Lokitaung Pastoral Development Project helps to improve existing sorghum gardens, and to establish some new ones. Traditionally some Turkana plant sorghum where rainwater runoff accumulates in natural depressions making

²¹³ Peter Blunt and D. Michael Warren, eds. Indigenous Organizations and Development. London: Intermediate Technology Publications, 1996. p: 2-4.

²¹⁴ *ibid*

²¹⁵ Will Critchley, p: 47.

growing conditions favourable. The local sorghum variety requires very little water and can be harvested after two months. The project aimed to improve the collection of rainwater runoff to give the crop more moisture to survive the arid conditions. The project had a number of problems with early design of water harvesting systems. However, much was learned from the experiences of other projects in the area. The technique has been developed over the years, and the locally trained technicians have helped to design improvements, such as a new spillway system, locally called *irimeto*.²¹⁶ The rainwater harvesting system consists of earth bunds on three sides of individual plots.²¹⁷ These plots range in size from half an hectare to two hectares.²¹⁸ The plots are sited where small channels bring runoff during storms and the runoff is held by the earth bunds. Surplus runoff runs away around the tips of the two arms which extend up the slope.²¹⁹ Those earth bunds are built to a maximum of a metre in height, and are up to eight meters in base width.²²⁰ Although the earth is carried in metal basins by the workers, oxen have been trained to pull a scoop to bring heaps of soil closer.²²¹ The scoops are also

²¹⁶ *ibid*, p: 48.

²¹⁷ *ibid*

²¹⁸ *ibid*

²¹⁹ *ibid*

²²⁰ *ibid*

²²¹ *ibid*

used to level the plots, so that the water will spread better, and the crops grow more evenly.²²²

In addition to introducing oxen scoops, the project has trained oxen and donkeys to plough. Traditionally land is prepared by hand. Therefore, animal draught has been a significant technical intervention of the project. The project objective has been to show that animal draught can significantly reduce the need for manual labour, particularly in the construction of otherwise labour-intensive water harvesting sites. As FFW has declined so interest in animal draught has increased, particularly along the lakeshore. However, the majority of sites have been improved using project animals because the Turkana are reluctant to use and train their own animals. The project brought in an animal draught trainer from another part of Kenya, who in turn trained one local Turkana in each of the three centres. A new and appropriate type of plough has been introduced, based on the Ethiopian *ard*.²²³ The ploughshares are made by local blacksmiths, and the frames of the ploughs are made from local wood.

The Lokitaung Pastoral Development Project is managed by a local Management Board. Members of this board are drawn from the local committees, which are based at the three centres of activity: Loaengak, Kachoda, and

²²² *ibid*

²²³ Will Critchley, p: 48.

Kaaling.²²⁴ These three committees are based on traditional institutions. They consist of traditional area or *ere* representatives and local project technical staff.²²⁵ Those locational committees have considerable authority in their locations and can override decisions made by the management board²²⁶ The project receives financial and technical support from Oxfam and the Intermediate Technology Development Group respectively. A small number of local staff are employed, including the Project Secretary, and the following staff at each of the three centres: an elder *ekarabon*, a monitoring/store person, a technician, and an animal draught trainer. Several of the project staff are women, as are the majority of the members of the local committees.²²⁷

Food-for-work has been the main incentive to assist families in construction of water harvesting systems. There is a long history of food-for-work in the Turkana District, and when the project began, it would not have been regarded as possible to start such a project without some food aid. The project has a clear policy on food-for-work : to use food aid only when necessary, and to reduce food rations gradually, thereby reducing dependence; and to put the people in charge of

²²⁴ *ibid*, p: 49.

²²⁵ Richard Hogg, p: 131-132.

²²⁶ *ibid*, p: 132.

²²⁷ Will Critchley, p: 49.

the distribution of their food.²²⁸ One of the first moves by the project was to put elders in charge of the distribution of food rations. This delegated responsibility to the local people. A steady reduction in food rations has been achieved, and by 1989, the ration has been reduced to a quarter of that first given out.²²⁹ One of the most positive aspects of the project is the way it has achieved local participation in management and the organization of activities. Voluntary participation in construction of water harvesting systems is growing all the time. In 1990 there was a shortage of food-for-work supplies, and yet construction continued. Maintenance of structures, almost everywhere is voluntary. By June 1990 over 200 families had received assistance to improve their sorghum plots.²³⁰ There are no exact figures on yield improvements, but the general consensus of the participants is that their yields have increased. However, little information is available on the relative performance of traditional unimproved as against improved gardens.²³¹ A direct comparison is not possible. One can assume that plots yields of improved versus unimproved gardens are better, simply because they retain water longer. However, the variation in yields even within one location appears extremely large. In Kaleng, for example, in 1989 yields of improved plots ranged from 0-667 kg per plot, and

²²⁸ *ibid*

²²⁹ *ibid*

²³⁰ *ibid*

²³¹ Richard Hogg, p: 132.

in Loarenyak from 390-1300 kg per plot.²³² Given this range of variation, and the likelihood that the best unimproved plots are likely to outperform the worst improved plots, the question of opportunity costs and labour invested in garden improvements becomes increasingly important.²³³ More importantly, the harvest is more reliable with a good harvest expected about three years out of five.²³⁴

There are limits to what water harvesting for crop production can do for the Turkana people. Many of the families in the area have already improved their plots. The Management Board has now decided to change the emphasis of the project from water harvesting to include livestock and food security. The project hopes to become self-reliant in the future. Already food-for-work is being phased out. But it remains to be seen how truly independent of outside assistance the project can become. The water harvesting system is quite expensive, especially when compared in relation to the unreliable yields in the arid conditions of the Turkana District. However, costs have been reduced by the use of the oxen scoops.²³⁵ There may be the possibility of developing new ideas, such as using brushwood or planted shrubs to catch wind-blown sand and form bunds in a

²³² *ibid*, p: 133.

²³³ *ibid*

²³⁴ Will Critchley, p: 50.

²³⁵ *ibid*

natural way.²³⁶ Oxen and donkey ploughing has not been adopted as quickly as it was hoped, mainly due to the fact that it takes time to train people and their animals. However, ploughing has been made quicker and easier with the introduction of the Ethiopian ard-type plough. Crop husbandry could be improved. This is one of the objectives of the future programme. A wider variety of crops and varieties could be planted, better pest control introduced, and more use made of take-a-chance planting of crops like cowpeas.²³⁷ Improved monitoring systems are needed. These are indeed being developed in order to measure yields, the rate of restocking which has taken place, and other important effects of the project.

The project has been successful, despite its limited achievements, in the context of the very difficult environment of the Turkana District. The project has managed to develop into a community-based programme, with a reduced dependence on support from the outside. The project has also evolved from a simple water harvesting project to a long-term programme focusing particularly on the people's main priority, pastoralism. Existing local institutions have made a very good base for the development of local management committees. Training of local people in the technical skills of water harvesting and animal draught has worked well. The water harvesting system used by the project, although quite costly, works well. The project has taken models from other projects, and used its

²³⁶ *ibid*

²³⁷ *ibid*

own experience to develop a system over a period of time. Locally trained staff have made an important contribution in this process. Problems which are being faced by this project include the relatively high cost of its water harvesting system, the need to improve monitoring, a variable standard of crop husbandry and a rather uncertain future.

Development projects have rarely succeeded in the Turkana District. Often projects have been based on food relief, and have been introduced hurriedly without proper planning. When the need for food relief ends, the development process also stops. Irrigation and fishery schemes have both been tried in the Turkana District, but with little success. In most of these cases the technology was inappropriate, and the social issues not properly considered.

4. Analysis of Past Development Efforts

4.1 Definitions

Since the early 1960s there has been an increasing tendency to evaluate development programmes and projects. Development programmes in this practice was understood more in a social dimension to the more dominant, economic basis of development. Social cost-benefit analysis emerged as an accompanying technique to evaluate those programmes. More broadly concepts such as the social effects of projects, the social impact of projects, and social indicators have all emerged during the past twenty-five years.²³⁸

Social soundness analysis is used to determine the cultural feasibility of development projects.²³⁹ This generalized approach to project assessment came to be used by researchers working for the US Agency for International Development, starting in the mid-1970s. The approach, in large part, was developed by the anthropologist Glynn Cochrane. Cochrane had done assessment work for various development agencies, including the World Bank and the British Ministry of Overseas Development. In theory, Social Soundness Analysis is an assumption of social responsibility on the part of public agencies. In particular, Social Soundness Analysis is concerned with the impact of a planned change or an intervention on a

²³⁸ David Marsden and Peter Oakley, eds. Evaluating Social Development Projects. Oxford: Oxfam Publications, 1990. p: 29.

²³⁹ John Van Willigen. Applied Anthropology. An Introduction. Westport, Connecticut: Bergin & Garvey, 1993. p: 161.

group's "quality of life," that it, its traditions, social relationships, and institutions.²⁴⁰

Three areas of inquiry are to be examined for each project. Those areas include sociocultural feasibility, potential spread effect, and social impact, or distribution of benefits and costs among different groups. Sociocultural feasibility requires an examination of local values, beliefs, social structure, and organization in order to determine the compatibility of the project with the perceptions and practices of the target population.²⁴¹ Spread effect refers to the likelihood that the new practices or institutions introduced among the initial project target population will be diffused among other groups.²⁴² The third important component of social soundness analysis is the identification of the beneficiary groups associated with the effects of a specific project.²⁴³ Social impact assessment requires the identification of groups that would be positively affected by a project, those that would be adversely affected, and in what ways. Participation of the target population in all phases of the project, from identification through implementation, is also to be specified.²⁴⁴ This is important because of the policy framework of

²⁴⁰ William Derman and Scott Whiteford, eds. Social Impact Analysis and Development Planning in the Third World. Boulder: Westview Press, 1985. p: 78.

²⁴¹ *ibid*, p: 23.

²⁴² *ibid*

²⁴³ Van Willegen, p: 161.

²⁴⁴ Derman, p: 23

development efforts which today have a mandate to direct most of their attention to the needs of the poorest of the poor. This mandate requires a commitment to what Cochrane calls social mapping. Social mapping is basically a process of ethnography that involves the collection of data on ethnicity, social organization, belief systems, wealth forms, patterns of mobility, and access to basic human needs.²⁴⁵

The project design process as outlined by Cochrane directs the attention of the appraiser to a number of criteria that should be considered during project design. Based on those elements the assessment of the rural development projects aimed towards the Turkana pastoralists implemented in different regions of the district will be examined.

1. **Contextualism**- assuring that the project ideas fit with the cultural landscape.
2. **Incrementalism**- assessing the magnitude of the social change involved.
3. **Minimum participant profiles**- analysing the social characteristics of project participants.
4. **Spread effects**- estimating the magnitude of project impact.
5. **Motivation**- providing reasons for participation in projects.
6. **Estimating time factors**- approximating the length of time required for social change.

²⁴⁵ Van Willigen

7. **Benefit incidence-** observing who gains and who loses during the life of a project.
8. **Communication and learning-** seeking ways of facilitating and encouraging innovation and adaptation.
9. **Design of extension efforts-** building the organization of extension work.
10. **Using indigenous organization-** maximizing the use of local management talents.²⁴⁶

The cultural appraisal process outlined by Cochrane is nontechnical, in that it does not present much beyond a checklist with illustrative cases as a means of specifying the research process. The cultural ecology of development approach as outlined by Podolefsky describes this approach as follows; "The term signifies the use of a cultural-ecological perspective to investigate the changes experienced by rural societies in adapting to the new environments created in the incorporation process."²⁴⁷ These adaptations result in major changes in the patterns of resource-use and production in local systems. Cultural ecology stresses the importance of resource-use patterns and production as the vital elements linking the natural environment and the human population and also influencing relationships among individuals and social groups. Particular emphasis is placed on alterations in the

²⁴⁶ Van Willigen, p: 162.

²⁴⁷ Aaron Podolefsky and Peter J. Brown. Applying Cultural Anthropology. An Introductory Reader. Mountain View, California: Mayfield Publishing Company, 1991. p: 90.

spacial patterns within the local system; and the influences binding the village community to the outside world. This perspective is extremely useful because it encourages outsiders to view systems in their historical and future dimensions, that is, to attempt to understand how those systems developed, what kinds of changes they are undergoing, what they might look like in the future, what their ultimate evolutionary viability might be, and how they are linked to other systems, particularly to those at more macro level. The patterns and rational underlying decisions made by the Turkana pastoralists are called the adaptive strategies. In addition to the adaptive strategies there is also a phenomenon called the adaptive processes, which examines how individual decisions add up to form patterns of adjustments or systems. These patterns of adjustments fit within the social and natural ecological setting of the Turkana District, and the ultimate long-term social and ecological consequences of these processes. There should be growing concern about the larger development processes, which impinge upon the traditional life-style of the Turkana in the name of progress. Those issues include loss of traditional life-style and acculturation, deforestation, desertification, the effects of population growth, the effects of a transition from subsistence to cash crop economy, and similar processes which emerge from a cultural ecology of development perspective.

In Social Impact Assessment, research is geared towards predicting the social effects of various types of projects. Usually the process involves the

examination of unplanned effects of major construction projects on families and communities, before the project is implemented. In this limited sense, social impact assessment is a kind of effect study. Social impact assessment is equally important in the design process. Usually the process involves the consideration of the effects of various design alternatives. Social impact assessment often involves the use of secondary data. Socio-cultural feasibility requires an examination of local values, beliefs, and social structure, and organization in order to determine the compatibility of projects with perceptions and practices of the target population. Spread effects refer to the likelihood that new practices introduced among a target population will be diffused among other groups. Social impact assessment requires the identification of groups which would be positively affected by a project, those adversely affected, and in what ways. Participation of the target population in all phases of the project-from identification through implementation-is also specified.

Taking those factors into account it is a significant discovery to realize that the key elements of the alternative development paradigm fit into the ideological landscape of the cultural feasibility assessment. Paulo Freire argued that in order to determine whether a society is developing, one must go beyond criteria based solely on indices per capita income as well as those which concentrate on the study of gross income. In his view, the basic elementary criterion is whether or not the society's political, economic, and cultural decision-making power is located

within.²⁴⁸ Proponents of the alternative development paradigm believe that development should be need-oriented, geared to meeting both material and non-material human needs; endogenous' stemming from the heart of each society; self-reliant, implying that each society relies primarily on its own strength and resources; ecologically sound and sustainable, utilizing rationally the resources of the biosphere; and based on structural transformation as an integrated whole. The direction of this structural transformation is indicated by the normative content of the other four points. This implies that there is no universal path to development. Every society must find its own strategy.²⁴⁹ Of those terms mentioned above only those relevant to the paper will be examined. These terms include contextualism, incrementalism, benefit incidence, design of extension efforts, and using indigenous organizations.

4.1. Contextualism: One can safely argue that the astonishing number of development failures can be attributed not only to mechanism of the exploitation and to the hostile power relationships with oppressed classes, but also significantly to the cultural resistance of the local population to a type of economy they both fear and reject. Interventionist development projects are like so many development packages prepared in the forwarding countries for transfer to or sale in the Third

²⁴⁸ Stan Burkey. People First. A Guide to Self-Reliant Participatory Rural Development. London: Zed Books, 1993. p: 30.

²⁴⁹ *ibid*, p: 31.

World. Extensionism specializes in removing from these packages all traces of their culture of origin. Thus sterilized, they are transmitted, projected into a presumed cultural vacuum. However, it is vital for the cultural feasibility of development projects to take cultural diversity and plurality of practices into account in order to be successful. A society is only viable and sustainable when it is rooted in a history and culture. People's culture is the giver of meaning and this meaning is the guarantor of autonomy and dynamism.²⁵⁰

While clearly there is a good deal that we do not know about pastoral peoples and pastoral production systems, we do know that the characteristics of these systems have profound relevance for a development consisting of economic growth, socio-economic equity, and political participation. Among those main characteristics of pastoral production systems are mobility, constraints on access to pasture and water, decentralization of authority regarding the movement and welfare of animals, social organization of sufficient flexibility to allow for the simultaneous exploitation of a range of ecological opportunities, species and demographic complex herd structures, complex pattern of animal exchange and circulation, and complex relationships with sedentary farmers, townspeople, and traders.

The pastoral nomads of the Turkana District have evolved a highly

²⁵⁰ Raff Carmen. Autonomous Development. Humanizing the Landscape. An Excursion into Radical Thinking and Practice. London: Zed Books, 1996. p: 152-153.

successful adaptation to extremely arid conditions and for thousands of years of years have maintained a relatively stable relationship with their environment and their sedentary neighbours.²⁵¹ This satisfactory adjustment to both civilization and natural environment has been increasingly threatened by the intervention of the Kenyan government. The government has set out to solve what they consider to be the nomad problem by settling the Turkana on irrigation schemes. This approach to restrict the mobility of the Turkana stems from the the fact that because of their mobility the government is unable to impose controls over them, and that they seem to place tribal loyalties above national loyalties.²⁵² Those settlement schemes pose significant problems for the pastoralists since their traditional way of life is interrupted and the devastating effects of those attempts to settle the Turkana can only be estimated in the long run.

The Lokitaung Pastoral Development Project is explicitly aimed at marginal pastoralists. A question which the project fails to address is whether as a pastoral development project it is addressing right problems or constituency. In the long term, whatever the project does, is it appropriate for the project to encourage marginal pastoralists to survive in the pastoral sector? Would it not be more cost-effective for the project to direct its resources at the mainstream pastoral sector?

²⁵¹ John H. Bodley. Victims of Progress. Menlo Park, California: Cummings Publishing Company, 1975. p: 118.

²⁵² *ibid*

Only by expanding the capacity of this sector to absorb more people through aggregate increases in livestock and forage production, is the long-term future of marginal pastoralists in the Turkana District likely to be assured. If the project wants to be a pastoral development project then it at least needs to start to debate some of these strategic issues and to get a better idea of how the pastoral system in Lokitaung Division actually operates. There is no indication from project documents that the project has any detailed information on livestock movements, relationship between movements, water points, and settlement patterns, ownership and access to resources. It is on building blocs like these, however, that the project is likely to build a pastoral as opposed to water harvesting development project. Therefore, it is misleading to talk about pastoral development when the focus of the project points to a totally different direction. The concept of water harvesting for crop production is not wholly unknown to the Turkana who use indentions made by nature to plant and grow sorghum in them because those retain water for longer.

4.2. Incrementalism: Economic diversification among the colonial and post-colonial administration of Kenya was the major goal of all development efforts that have taken place in the Turkana District. The focus of policies has been to encourage the development of economic alternatives to pastoralism. Although a few Turkana had always fished in the lake, the development of a fishing industry started as a famine relief measure. However, in recent years the catches of fish and

the fishermen's incomes have dropped, and Ferguson's Gulf, the original source of most of the fish has dried up. Today the Turkana whose living standards the project was supposed to uplift remain as destitute as ever. The large fish-freezing plant built at the lake with Norwegian funds in the early 1980s at a cost of approximately US\$1.6 million, has never been used. Even in its heyday, the fishing industry never contributed to any permanent shift away from livestock keeping. What it did was to allow poor Turkana the opportunity to diversify economically while continuing to invest in livestock. A crucial point in connection with these new economic opportunities is that those who pursue them with some success invest as much as possible of their earnings in livestock.²⁵³ In the last five years, largely as a result of the poor performance of the development projects implemented in the Turkana District there has been a rethinking of development priorities. The Norwegian government, the largest single bilateral donor in the district, is committed to a phased withdrawal not only from the agricultural schemes, but from its support of the Turkana Fishermen's Cooperative. The Norwegians no longer view either irrigation or fishing as an answer to the problems of pastoral destitution. Even among the district officials there is a growing awareness of the need to emphasise livestock development. Along with a shift of interest back to the pastoral sector has come a growing realization of the

²⁵³ Brokensha p:187.

need to involve pastoralists more in the planning of development and to build on their existing knowledge of the environment. The recent Turkana District Livestock Plan exemplifies the new approach to pastoral development. This plan calls for the maintenance of the present mobility of the Turkana pastoral system as making best use of the vegetation in an area of unpredictable rainfall. In addition, the plan calls for the avoidance of activities that could encourage settlement in the form of permanent camps or semi-permanent camps with attached herds.

Furthermore, there will be a need to maximize the involvement and contribution of the district's inhabitants in all aspects and phases of livestock development, and consequently, to formulate this development at an appropriate level. Lastly, the plan stresses the need to lay heavy emphasis on improving stock-owner/institution contact through effective methods of extension, familiarization, and training.²⁵⁴ As a direct result of the Turkana Livestock Plan, Oxfam has become involved in the implementation of their Oxfam Restocking Project. However nicely it might fit into the cultural landscape, this project has to take into consideration the fact that restocking will only be effective if the destitute pastoralists are provided with the sufficient livestock numbers in order to survive in their environment. In order to return to their traditional lifestyle numbers of livestock provided by Oxfam or any other development organization, have to range between fifty cattle and up to one

²⁵⁴ David W. Brokensha and Peter D. Little, eds. Anthropology of Development and Change in East Africa. Boulder: Westview Press, 1988. p: 189-190.

hundred small stock and additional pack donkeys. For centuries, pastoralism has been the dominant economy and way of life in the arid and semi arid lands of the Turkana District. Pastoralists have relied on sheep, goats, cattle, and camels for subsistence, using mobility and herd dispersion to take advantage of the uneven distribution of rain and to withstand drought. The Oxfam Restocking Project has selected families that were destitute and no longer able to operate effectively in the pastoral sector. They were small families with few animals, who were willing and able to move away from the market centre once they were restocked. In addition, families were also selected with the help of local groups of elders, government administration, and the NGO staff.

The first government irrigation scheme to be established in the Turkana District was located in the Omo Delta in the 1940s, but due to international boundary changes the area was later incorporated within Ethiopia. Two further schemes were established in 1951-1952 on the Turkwell River near Lodwar, the district headquarters. Both were intended to increase local food production substantially by diverting unpredictable spate floods into levelled basins for crop production. The crop was intended to grow to maturity on a single flooding. Both schemes suffered from severe flooding, however, and were later abandoned when the river shifted its course.

These initial attempts at irrigation development were relatively modest, but in the early 1960s, after the 1960-61 drought, two influential reports recommended

a rapid expansion of irrigation in the district. According to Brown, only 2,430 families could exist off the products of the existing stock population in the Turkana District, and around 16,000 families should therefore be absorbed into other occupations. This assertion was later repeated in the 1964 FAO report: Although a population of 125,000 in an area of 24,000 sq. Miles may not seem much, agronomists agree that, in a purely pastoral economy, the district can only support a small fraction of this number. Consequently, overgrazing has been going on for a long time causing a severe deterioration of the vegetation and a decrease in stock carrying capacity.

The first FAO/UNDP scheme to be established was in 1966, at Kekarongole, some thirty miles south of Lodwar; it was followed by Katilu and Amolem in the early 1970s. The cost of these schemes was very high. The 1984 Ministry of Agriculture evaluation estimated total expenditure in the 1983/84 at US\$61,240 per hectare or US\$21,800 per tenant household, and the operating costs alone amounted to over three times the gross margin any farmer could expect from his plot.

Due to low and variable annual yields, irrigation farming in the Turkana District has never offered an even marginally secure economic existence, let alone a profitable alternative to pastoralism. Even in the good years few farmers were able to support themselves from their plots alone. The average net income from an irrigated plot in 1982 was only US\$ 966. At the Katilu scheme in 1983, the net

income from a typical irrigated plot was likely to be less than US\$ Ksh 1,000, or the equivalent of the price of one large cow.²⁵⁵ Irrigation development has therefore done little to provide a viable alternative to pastoralism; farmers on the schemes continue to invest in livestock. Indeed, if anything, the process of desertification has been exacerbated rather than alleviated by the schemes. Along the Turkwel, for instance, the population of Katilu scheme increased from almost nothing in 1970 to over 10,000 by 1980. As a result there has been massive destruction of forest along the banks of the Turkwel for buildings, stock enclosures, fuelwood and farm plots, and localized heavy overgrazing by settlement herds and flocks.

Irrigation development is the most frequently employed technique for increasing the food production capacity of the Turkana District.²⁵⁶ The attempt to increase agricultural output that results from converting floodplains and rivers into agricultural land is threatened by salination; decline in fish yields when streamflow characteristics are altered; seasonal breeding grounds on the floodplain are eliminated; and swamps are reduced in size or drained. Clearing of floodplain forests and bush savanna for agricultural expansion is costly in ecological terms since the environment is increasingly put under pressure. This is not only because

²⁵⁵ Brokensha, p: 188.

²⁵⁶ Robert W. Kates and Ian Burton, eds. Geography, Resources, and Environment. Chicago: University of Chicago Press, 1986. p: 89.

of the destruction of an important source of fuelwood and construction material, but also accelerates soil erosion due to overgrazing. Pastoral activities are indeed adversely affected by irrigation schemes. The conversion of seasonal fallow pastures to arable farmland can exacerbate both the long-term impact of grazing pressure on nearby rangelands or increase the pressure on the land around the settlements once the pastoralists are settling down.²⁵⁷ In the Turkana District, a conversion to settled agriculture is only appropriate under circumstances of crisis, and for a limited period of time.²⁵⁸

The history of pastoral development in the Turkana District has been dominated by a widespread concern over the effects of overstocking and overgrazing. Almost every intervention in the pastoral sector has been justified in terms of those twin evils. As a result, not only has the lion's share of development resources gone into the development of alternatives to pastoralism, while the pastoral sector itself has been relatively neglected, but when intervention have taken place, they have been imposed from above with little effort to involve the pastoralists themselves. With the expansion of cropping in nearly all rangeland areas of the Turkana District one can expect one of the long-term consequences to be the loss of important dry season grazing areas to permanent settlements and

²⁵⁷ *ibid*

²⁵⁸ Clare Oxby. African Livestock Keepers in Recurring Crisis. Policy Issues Arising From the NGO Response. London: International Institute for Environment and Development, 1989. p: 16.

agriculture. As a result of population increase and the influx of landless farmers, as well as government policies, which favour the development of expensive and labour-intensive irrigation schemes and agriculture over pastoral production helps to explain the expansion of cropping in an area like the Turkana District.²⁵⁹

In addition, there is also an increase in livestock numbers. In spite of short-term fluctuations in livestock numbers as a result of drought and disease, all the evidence points to a long-term increase in livestock populations, largely as a result of improved animal care. The result is that there will likely be increased pressure on what is an already diminished resources base.

Since the incorporation pastoralists have lost power vis-a-vis the centre. They have little influence on the government, which tends to be dominated by agricultural groups. As a result, the government policies, such as the encouragement of settlement and agriculture and the conversion of dry season grazing areas to national parks and game reserves, are frequently inimical to pastoral interests. Associated with national incorporation is the gradual dominance of economic life by the market place. Pastoralists are increasingly forced to sell their livestock or livestock products to buy food and other goods. This increasing dependence on the market increases their vulnerability to market forces and price

²⁵⁹ Richard Hogg. NGOs, Pastoralists, and the Myth of Community: Three Case Studies from East Africa. *Nomadic Peoples* 30:1992, p:123.

fluctuations.²⁶⁰

Furthermore, with the development of irrigation schemes among the pastoral Turkana, there is also taking place a rapid change in pastoral land rights. Pastoralists that do not participate in those development efforts find themselves marginalized as members in the nation-state. As they are increasingly squeezed by processes of sedentarization, impoverishment and expropriation of higher potential land by the government and marginal farmers, they are under increasing pressures from both within pastoral societies, as they become increasingly internally differentiated, and from without, by government and development agencies, to change the basis of traditional rights in land.

4.3. Benefit Incidence: One of the major factors that will determine the positive outcome of any development project is the degree to which people are allowed to participate in their own development.²⁶¹ There are occasions when development from within can be facilitated by outside assistance. This carries with it inherent problems especially if the change agent has an agenda of its own. The aim of the Oxfam Restocking Project was to enable the pastoralists to be self-sufficient. Sufficient animals had to be given to each family to give them a reasonable chance of building a viable herd. Pastoralists, however, have a variety

²⁶⁰ Brian Spooner and H.S. Mann, eds. Desertification and Development: Dryland Ecology in Social Perspective. London: Academic Press, 1982. p: 76.

²⁶¹ D.R. Fraser Taylor and Fiona Mackenzie, eds. Development from Within. Survival in Rural Africa. London: Routledge, 1992. p: 239.

of means of acquiring livestock and restocking themselves after a drought, epidemic, or theft. Milk animals are loaned to relatives, animals are exchanged to balance a herd, and animals are begged, either as gifts or with future obligation. These means of restocking are less successful after a widespread, severe disaster, when the entire clan is unable to spare livestock. Often families will send some of their members to relief centres until the herds recover. When NGOs restock the poor families, it may be best to wait until the drought emergency is over. This encourages the traditional restocking measures to assist some of the families and the rangelands to recover before stocking rates increase.²⁶² In the restocking project after the initial phase in 1984, the animals distributed had to be repaid. However, the repayments and conditions on disposal of the families hinder herd development and restrict the renewal of social networks of livestock exchange. The restocked families are self-sufficient in good or average years, which 1985-87 have been, but they would not be able to withstand a drought that might cause a mortality rate of 50 percent in their herds. They have had little surplus to sell for cash needs or to invest in maintaining traditional livestock entitlement relationships.²⁶³ On the other hand, restocking is cheap in comparison with irrigated agriculture when one looks at the average cost per household of the

²⁶² Thomas E. Downing, Kangethe W. Gitu, and Crispin M. Kamau, eds. Coping with Drought in Kenya. National and Local Strategies. Boulder: Lynne Rienner Publishers, 1989. p:348.

²⁶³ *ibid*, p: 349.

Oxfam Restocking project, in relation to the number of households concerned and the number of animals distributed. The Oxfam Restocking Project cost \$1200 for each of 381 families (50-70 shoats, 1 pack animal, grain distribution, and domestic equipment for each family).²⁶⁴

4.4. Design of Extension Effort: It is important to distinguish community development from extension work.²⁶⁵ Development work in rural areas can be categorized as a series of activities concerned with extension or control. Controlling departments are responsible for the provision of financial service, the maintenance of law and order, physical plant supervisors, and so on. Extension departments are responsible for the implementation of a specific field program seeking to involve local people in say, medical matters, a preventive health routine, or with an agricultural program such as the planting and harvesting of new cash crops.

A program of extension activities involves specialist personnel who must try as far as possible to work together. This team should meet frequently. Each member explains his or her departmental policy, answers questions, seeks assistance, and agrees on the role in the overall development pattern. At this point priorities can be agreed on, resources allocated, and the kinds of help that various

²⁶⁴ Clare Oxby, ed. Assisting African Livestock Keepers. The Experience of Four Projects. London: Overseas Development Institute, 1991. p: 50.

²⁶⁵ Glynn Cochrane. Development Anthropology. New York: Oxford University Press, 1971. p: 56.

departmental members can give and expect can be made clear to all who are involved in the extension program.

An action program in a rural area spanning several specialist fields must close ranks; it can not afford to project a compartmentalized image. Villagers are unaware which specialist is responsible for what section or aspect of a program and may well ask the first extension worker who visits questions which are outside his field, though within the specialist sphere of one of his or her colleagues. To counter this possibility each member must arm himself or herself with basic knowledge about all fields in the action program sufficient to be able to answer questions and to hold the line until the real specialist is at hand.

At the village level there could be nothing more dangerous than overdeveloped specialization; and the enthusiasm of people can not be retained or their comprehension of what is going on improved if a specialist answers their questions by saying that he knows nothing, that they must wait until the specialist who does know visits.

4.5. Using indigenous organization: The Turkana pastoralists in Kenya have a very loose tribal organization.²⁶⁶ Livestock movements are decided by the *awi*, which is a collection of families and their livestock. This is the basic unit of which organization and management, operating quite independently to take

advantage of available resources. There are loose informal organizations known as *adekars*, which are groups of *awis*, but these are transient and cohere only on a seasonal basis. The *adekars* maximizes the use of the vegetation both in time and space through a movement system of wet and dry season grazing reserves. Such a system of resource management is made more complex with sharing, flexibility, and mobility of the people. The herding unit, based on a group of families called an *adekar*, follows roughly, but not precisely, the same annual movement, and retains a relationship with the people from the other *adekars* who control a different grazing area and who may want or need to use an alternative route. The maintenance of such mutual support networks is based on stock sharing, which is an important factor in maintaining relations with in-laws, relatives, and bond friends.²⁶⁷ The *adekar* might look attractive as an indigenous institution to work with and through, because it operates on a larger scale than does the *awi*, but it could not function in any decision-making or coordinating role. The overarching tribal organization, which serves to resolve disputes not handled at lower levels, is not a decision-making institution either. It does not have sufficient knowledge or standing to manage rangeland resources. The lesson to be learned is the fact that the basic unit of range management is the family or group, which is small and only loosely knit with others because of the need for mobility and flexibility. Some

²⁶⁷ Terence J. McCabe "Turkana Pastoralism: A Case Against the Tragedy of the Commons." *Human Ecology* 18 (1990):166.

higher level institutional links can be useful, but more in a negotiating or advisory role than an authoritative one. Hogg argues that much has been made of the traditional institutions through which the Lokitaung Pastoral Development Project operates. In reality, however, project documents are far from clear what these institutions are, and how they are constituted. There is certainly no indication that all water harvesting groups are either traditional or sustainable. Buried in the rhetoric of community-based programmes there is a dearth of real information as to the nature, form, and functions of these communities. To date it is clear that in spite of the handover of project management to a local board, Oxfam and ITDG continue to contribute a sizable financial and technical input, and that it is likely to continue for some time to come.²⁶⁸

Almost from its inception project management has stressed the need to work with Turkana. As the project has evolved this has been translated into working with traditional Turkana institutions, building up capacity to control and manage the project and project interventions, especially the water harvesting component. This approach culminated in mid-1988 with the handover of project management responsibility to a local management board. Community development is considered a major part of the project's work.²⁶⁹

In spite of the rhetoric of strengthening local institutions and community

²⁶⁸ Hogg, p: 136.

²⁶⁹ *ibid*, p: 135.

participation which runs through the project, a major constraint is that one is given insufficient background information on traditional Turkana resource-owning groups in the project area to be able to evaluate project claims to be using or working through traditional groups. The Lokitaung Pastoral Development Project tries to employ the institution of the *ere* which play an important role in the natural resource management strategies of the Turkana. The *ere* describes an area of more or less permanent settlement where the herd owner and his family has exclusive rights to natural resources.²⁷⁰ However, it is unclear, for instances, how project *ere* groups relate to traditional *ere* groups, how many people are in each *ere*, what proportion of *ere* members are involved in project activities, and how these *ere* articulate with the local committees and other resource management groups in this area.

The approach Oxfam takes in the Lokitaung Pastoral Development Project is flawed because it fails to define adequately what it means by community. It fails to collect baseline data on the traditional pastoral system and monitor project progress in achieving project objectives. It lacks technical backup. It also fails to work with the Kenyan government and its small scale and community focus prevent it from tackling the wider problem of rangeland areas with an increasing population and declining resource base. The Turkana rely entirely on traditional

²⁷⁰ McCabe, p: 167.

resources for their subsistence needs. It follows that the best way of maintaining adequate standards of living is to assure sufficient land under legal title and allow them to manage their resources in the ways they know best. The Turkana, who have a long experience of drought and famine, are encountering it now on a new scale. The Turkana have always operated on a fairly sustained economic basis. Trade-offs had to be made: pastoralists often have a high rate of stocking, as an insurance against stock deaths from drought. Their traditional system is highly vulnerable to change imposed from the external agents. Where the area of land available is reduced, subsistence is threatened. The change to sedentary life styles will rapidly exhaust soil and promote disease. Since the Turkana facing land shortages and other intrusions from the outside world they also find themselves more closely tied to the market economy. They are frequently tempted to neglect traditional subsistence activities in favour for wage labour or cash cropping, in the expectation of providing for their nutritional needs in the market place. Rather than strengthening their dependence on the market economy, the top priority for the Turkana with impaired subsistence is to recover a strong subsistence base that guarantees all of them an adequate lifestyle.²⁷¹

The improvement of livestock unfortunately calls for coordinated action in land and water rights, water development, veterinary services, animal husbandry,

²⁷¹ John Beauclerc, Jeremy Narby, and Janet Townsend. Indigenous Peoples. A Fieldguide for Development. Oxford: Oxfam Publications, 1988. p: 42.

range management, livestock marketing, and community development. It is often very difficult to obtain coordination at the local level. Probably the most effective single intervention for pastoral people has been water development, but this can also lead to overgrazing and human and animal disease, or local construction of water supplies may actually accelerate the transition to individual land holding. Nevertheless, water development is essential for range management. In Africa, browse resources are very important and have consistently been underestimated by outsiders; research has tended to focus on grass resources. Water harvesting has not been successful with nomads. There are very few technical packages for improved livestock production which yield results demonstrably superior to pastoralists' own practices. Outside breeds often perform poorly so that breed improvement is not an easy option. Camels and milking goats are being introduced to ex-cattle pastoralists in areas subject to increasing drought or with ample browse; they can be a tremendous advantage to nomads who must live on milk for extended periods. Both are browsers and therefore productive for a longer time in the dry season.²⁷²

²⁷² *ibid*, p: 72.

CHAPTER 5. CONCLUSION

Development theorists have always stressed the significance of noneconomic factors within the development planning and execution process, only to forget about it after having made the obligatory reference.²⁷³ The reasons for this are obvious once one tries to define culture. A culture is the fundamental condition for collective action, it should be the tool for beneficial development planning. Different theories of planned change have been in existence for a very long time. However, there is a need for a valid and reliable development theory that concerns itself with planned changes among the Turkana pastoralists. The Alternative Development Paradigm has formed the basis for approaches to pastoral development that attempt to initiate changes that are responsible in a cultural sense but even with the proper application there is yet much to be learned. The application of the key elements of the Alternative Development Paradigm calls for an understanding of the process of cultural change, how related forces interact and direct events towards a particular outcome. It is of immense importance to approach the term culture within development thinking holistic and sensibly. The holistic approach to culture is premised on the recognition that social phenomena of every kind are interconnected. This statement does, however, not imply a new culturalism, in which culture becomes more important than political economy;

²⁷³ Bjorn Hettne, p: 193.

rather it involves examining the interplay between economic and political institutions and the rest of the daily life. It is important to realize that the cultural factors are a separate sphere from the rest of the development process.

In the area of pastoral development during the colonial period and the decades following independence have had devastating effects on the livelihood and the natural environment of the Turkana pastoralists. Today, the Turkana are struggling for a future as herders within a capitalist economy and are trying to overcome the negative impacts of the failed development policies of the past decades. Many times in the past, cultural systems out of balance with their natural environment have had massive cultural change forced upon them. Risk and Uncertainty are all-pervasive in an area like the Turkana District where pastoralists are struggling to preserve their traditional culture. Since the Turkana inhabit marginal lands, they are familiar with fluctuating climate and variable soil and pasturage, and with the uncertainties these factors introduce into the production process. A variety of social and economic strategies have evolved through the years to cope with those conditions. Migratory life itself permits adjustment through moving to better locations. Some adaptations are technical, including ways to regulate access to water and other natural resources. Significant strategies also exist in the social system and involve exchange relationships and bond friends, as well as diversity in livestock. However, over the past this concept of culture has been virtually ignored by development planners who focused primarily on the

political economy of a society. Experiences in development failures of the past decades has led to a growing awareness of the significance of endogenous development. The relative failure of development schemes and projects among the Turkana was viewed as a matter of importance for two reasons. In Kenya, the pastoralists are an important source of animals products and nutrition, therefore, their activities deserved encouragement. Secondly, the ongoing failure of development schemes was a matter of concern to ministries and technical assistance agencies because of their costs and because the schemes were believed to have been carefully conceived and planned. However, those development schemes were culturally incompatible and failed to justify changes in terms of locally perceived needs.

The Alternative Development Paradigm and its key element endogenous development argues that the development process has to take the culture of any country into consideration. This, however, can be a challenge to the nation state; since the national culture of Kenya is different from the Turkana culture. This aspect of development argues that different communities within the same society have distinct codes of behaviour and different value systems. This concept of culture could be contrasted with a hegemonic concept assumed to consist of a shared national culture. It is important to note that this aspect of the Alternative Development Paradigm moves from interventionist and blueprint development towards a development strategy that is based on cultural variety. The official

acknowledgement cultural variety will result in participation, self-reliance, sustainability, need-oriented, and human-scale development. To sum up, endogenous development stems from the heart of each society and defines in sovereignty its values and vision of the future and without it no progress will be made to achieve an increase of equity and an measure of equality among the pastoral Turkana in northern Kenya. Social, political, and economic change will be a part of development efforts but the cultural fit of development efforts among the Turkana is vital for the survival of the people.

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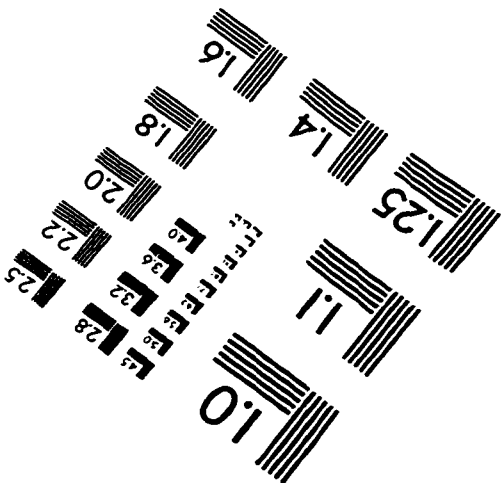
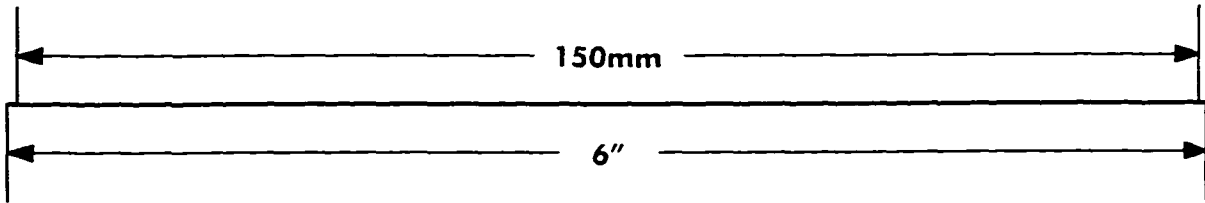
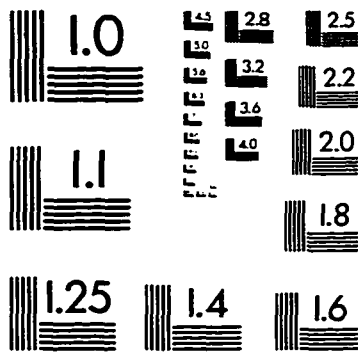
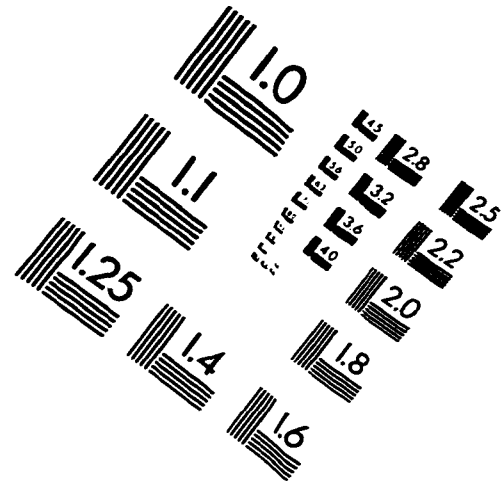
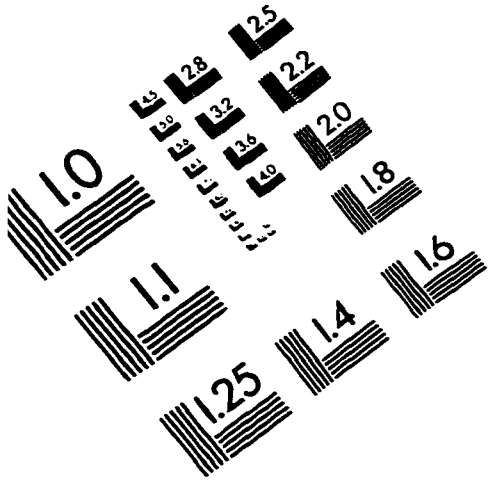
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