

## Pastoralism in the Horn of Africa – To be or not to be: An Evolutionary Perspective

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### Abstract

The paper provides a broad context to the current status of pastoralism in the Horn of Africa from an economic and resource competition/conflict perspective. It argues that traditional pastoralism as we know it (i.e. an environmentally/socially sustainable livelihood) is going through serious self generated and externally driven evolution process which may be irreversible thus changing the pastoralist production system. This realisation is fundamental if planners, researchers and funders wish to contribute to the well-being of pastoral peoples in the region. Drawing from experiences from Eastern Sudan and Western Eritrea, the author argues that researchers and planners often ignore the above challenges and the changing livelihood parameters. There is also growing evidence that pastoral peoples are in urban and peri-urban economic activities in a symbiotic manner with other groups. Pastoral peoples are not as marginalized as is often claimed by some academics and over the last 20 years we have seen considerable growth in pastoralist led civil society organisations both at the national and local level. Pastoral peoples have now their political constituencies and have say in political systems regardless of the nature of the ruling elite. The author demonstrates that pastoral peoples despite the evolution mentioned above possess tremendous skills in animal production/management and own productive breeds of livestock, which could form the basis for more sustainable people, centred development. The author believes that it is critical to recognise and build on these opportunities to promote a new agenda for sustainable pastoral development.

**Key words:** The Beni-Amer, Ethnoveterinary, Pastoral technology, Livelihood parameters, Eastern Sudan, Western Eritrea  
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### The Regional Context

Pastoralism in the Horn of Africa in general is a major human occupation and source of livelihood and contributes considerably to food security. According to Fre (1989) pastoralism in Eritrea and Eastern Sudan is in general semi-sedentary, and has the following characteristics:

- It lacks uniformity and specialization; there is almost no clan which can be referred to as 'purely' pastoralist;
- It cuts across ethnic, cultural and ecological boundaries; communities interact economically and share available range resources;
- It is based on multi-species-based herding;
- It contributes significantly to the local economy through animal sales at local and regional markets.

The Horn of Africa, comprising of Eritrea, Somalia, Djibouti, Ethiopia, Sudan, Uganda

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and Kenya (the IGAD countries), occupies an area of 5.2 million km<sup>2</sup> and supports a population of some 160 million people. The arid and semi-arid lands (ASALs) and sub-humid lands constitute 80% of the land area and contain approximately 90 million tropical livestock units (TLU) that provide livelihoods for pastoralists (IGAD, 1990). These pastoralists survive in fragile ecosystems that are perpetually affected by drought and are continually threatened by desertification. Pastoralists and agro-pastoralists have therefore adjusted and adapted to these environmental challenges by evolving livelihoods mainly dependent on livestock and livestock-related activities. In fact on the basis of an intimate understanding of these fragile ecosystems, whose resources are scarce and variable, the inhabitants of the ASALs have adopted a mobile and flexible pattern of resource use that has proven to be sustainable. Mobility is in itself an important ecological adaptation and may, in part, explain why some of these pastoral areas have a higher productivity in terms of protein per hectare than Western and Australian ranches. Inevitably, the ability of livestock to convert low quality biomass into high quality products such as meat and dairy products gives it a central position, particularly with regard to food security.

### **Common features of Pastoralism in the Horn of Africa**

Some analysis of the common features of pastoralism in the Horn of Africa will help us understand the challenges facing pastoralist communities in Eastern Sudan and Eritrea, which is the main focus of this paper.

**Similarities of the production systems:** The production systems (pastoral nomadic, agro-pastoral, etc.) have important similarities throughout the Horn. In some cases, pastoralists may be highly specialized in breeding cattle, sheep, or camels and in other cases they may practice mixed farming. In montane regions of Ethiopia, Sudan, Kenya

and Eritrea, livestock play a significant economic role and are integrated with crop farming.

**Geographical spread:** In countries like Ethiopia, Eritrea and Kenya over 60% of the population is concentrated in the highlands and their peripheries, occupying only 30% of the total land surface. It is estimated that nomadic pastoralists typically occupy 70% of the total landmass.

**Similarity in ecological setting:** Most pastoralists inhabit vast savannas, coastal plains and some montane regions practicing extensive grazing systems.

**Pastoralism makes an important contribution to economies in the region:** A quick review of the national economies of the Horn countries clearly indicates the importance of the pastoral economy in terms of GDP. Pastoralism contributes 70% of GDP in Somalia, 25-35% in Eritrea, Sudan and Ethiopia and more than 10% in Uganda and Kenya (IGAD, 1990).

**Crossing borders and cross-border affinities:** Pastoralist communities are not as isolated as is often thought. Many of them cross borders in search of grazing/water resources as well as marketing opportunities. In very many cases, they have blood ties, through ethnicity or marriage, with pastoralist communities on the other side of the border.

**Highland/urban elite domination:** Many of the more powerful groups vis-à-vis the state (highland settlers, urban elite commercial farmers, the military and big foreign companies) tend to occupy traditional grazing lands on the pretext that it is in the national interest. Such interventions in many ways undermine traditional land management adopted by pastoralists and have made them more vulnerable economically.

**Disaster proneness:** Wars, droughts, famines tend to affect pastoral areas more than sedentary areas.

- There seems to be more insecurity in pastoral areas (due to insurgencies of one kind or another),

- Wetlands (riverine areas) in pastoral areas are under the greatest pressure, from expanding agriculture
- Famines tend to have their worst effects in pastoral areas.

**Neglect in terms of development interventions:** Reflecting on experiences so far, it is apparent that most development interventions in the pastoral areas are either imposed from the top by government and/or inappropriate, i.e. not tailored to the needs and aspirations of pastoral people. Such interventions have in fact led to further socio-economic and political marginalisation of pastoral peoples.

**Land tenure issues:** In most of the countries of the Horn of Africa, legislation regarding land-use does not accommodate or guarantee pastoral land rights and access. In some cases this has led to violent conflict between the state and pastoralists.

**Some new thinking and positive developments:** Over the last decade there have been some positive developments, which may positively affect pastoralist livelihoods region wide. These include:

- Greater recognition by the state of the positive economic contribution pastoralists make to the national economies.
- A greater knowledge base based on sound research on the pastoral way of life, and the overcoming of old stereotypes.
- The World Bank, UN agencies and international NGOs recognize pastoralism as an important form of land use, that makes an important contribution to the national economy, and are willing to support it.
- There are a number of local NGOs/CBOS, created and managed by pastoral groups, representing their interests.
- More and more pastoralist associations and unions are emerging as pressure groups in each country region-wide.
- Some governments, e.g. in Uganda and Kenya, have allowed the formation of parliamentary pastoralist groups (PPGs) bringing together MPs representing pasto-

ralist constituencies. The Federal constitution in Ethiopia (1996) recognizes pastoral land rights and the need to protect such rights.

- The idea of better services through mobile clinics, mobile schools, and mobile paravets is now being introduced in some of the countries.

### **Pastoral Technology and Brief Introduction to the State of Knowledge**

The reflections on indigenous pastoralist knowledge and practice (IPKP) among the Beni-Amer pastoralists in East -Sudan and Western Eritrea will focus on specific areas of knowledge and production that have emerged as deserving detailed work. Among the Beni-Amer pastoral technology has the following characteristics.

Firstly, there are those that can be called common livestock knowledge and practices. Examples are disease nomenclature and symptoms, ethno-botany, importance of good husbandry and so on. These are referred to as *kulna-lanaamru* or "that we all know".

Secondly, there are specialised knowledge and practices that are possessed by a smaller minority of pastoral or agro-pastoral people from within a large community or communities. Such people are referred to as *Seb-lalaamro* or people with knowledge. They perform special duties such as treatment of fractured and dislocated bones, assisting complicated births (breech presentation) and so on. They can offer services or advice out of the ordinary (i.e. outside common knowledge or practice). Thirdly, there are also specialised tasks and skills performed and accepted widely by members of the same tribal grouping. In this case the whole tribe refers to itself by the animal it specialises in. The Southern Beni-Amer for instance consider their cattle specialisation as common and consider themselves as *Seb-Aha* or men of cattle. In some cases and certainly in the case of Southern Beni-Amer such tribal spe-

cialisation is recognised by neighbouring non Beni-Amer groups.

It is important to stress however that Beni-Amer specialisation is not uniform in terms of management ability and productivity of various herds. Individual or group management ability influence production. The herd among the Beni-Amer is perceived as family capital and property the products of which can be shared with others.

Among the Beni-Amer however, keeping and managing good herds (meaning productive and healthy) is part of tradition. Pastoral knowledge is thus widely shared. But the Beni-Amer may be exposed to different grazing opportunities and risks (raiders, encroachment by farmers) which are bound to have an effect on herd productivity.

During the field research an observation was made that pastoralists and agro-pastoralists never complained about the quality of their breeds. Their priorities include official demarcation and allocation of their grazing lands, provision of wells nearer to settlements, more access to agricultural land after harvest, limiting the expansion of agriculture to reduce encroachment and severe punishment to cattle raiders. They argued that their breeds were producing less milk because of lack of good husbandry that is forced on them by lack of resources.

#### **Animal Production and Husbandry**

As far as cattle specialisation is concerned the Southern Beni-Amer who own dry and milking herds possess as a group highly specialised skills and underlying perceptions. For instance breed selection is done purposely to suit given conditions, e.g. topography, ecology and security. Best bulls are selected from a mother of a known genealogy. Characteristics, such as milk yield, character, colour and mothering ability were traditionally the main criteria for bull selection. During the liberation war in Eritrea in the seventies and the eighties they were sacrificing milk yield characteristics by crossing Bgait with the more wild Dwehin bull from the

Sudan as a deterrent to raiders

Knowledge of the different breeds of animals is fairly well spread. The origin of the animal, milking/kidding characteristics, adaptability - suitability to the present environment are known by most people and pastoralists breed with purpose.

The Beni-Amer thus try to produce productive animals and try to enhance the productivity of their cattle by manipulating their physiological capacity and animal behaviour. They encourage milk yields by massaging the udders of their cattle, chanting the cow's name during milking and so on.

They provide good management and care by taking out cows for night grazing (when it is cooler, to avoid day temperature which is 30-45°C), by seasonal provision of salt, crop fodder provision, limiting water consumption during the dry season and so on. They also keep productive females of up to 90%.

It seems that this area of knowledge of pastoral technology is where the Beni-Amer can make a direct contribution to our scientific knowledge of livestock production (Fre, 1989).

#### **Ethno-veterinary Knowledge and Practice**

The various diseases that affect livestock have local names that range from universally descriptive names such as cattle-plague *ghulhay* (shaver) to vaguely known disease such as Swellings Hbat. The seasonal characteristics of certain diseases caused by biting flies are known.

In one area the author established more than 30 commonly known livestock diseases. Disease nomenclature in some cases is detailed. Some of the causes and symptoms of disease and the general effect on animal health are known. Animal diseases are also categorised into four main categories: Killer diseases are referred to as '*agel*' (the predestined day of death) and they cannot be stopped, e.g. Rinder pest. Contagious diseases (those which are known to be so) or '*la-ad-ef*' can partly be prevented from spreading for example by isolation and/or

slaughter. Some diseases are perceived as chronic '*la-ad-ef*' and are hard to cure e.g. cpp (caprine pleuropneumonia). The last important category of diseases and/or accidental ailments are those that can be cured or '*lt-dawe*'.

Most diseases are not perceived as heavenly punishment but they are said to originate from lack of good husbandry. They attach great importance to good husbandry or *mera-senni* as best prevention against diseases. Mixing of flocks/herds or *hber* for example is seen as a predisposing factor to disease.

The distribution of knowledge is even among older people but is less detailed among younger people who may or may not be involved in direct herding. However, traditional veterinary practice unlike the common disease knowledge seems to be confined to a much smaller group of people who are described as *Seb-lalaamro* or "people with knowledge" and who perform specialised duties as mentioned earlier. One of their main specialisation is identifying the ailment properly and suggesting a cure or performing on the spot treatment. They are very highly respected by the community and always in demand. In their absence ordinary pastoralists try to perform the duties themselves which are only partly successful. Four of such people were identified and interviewed during the research. Such traditional medics resent that their work is not recognised by the government veterinarians who rarely visit them. The traditional medics approve of modern veterinary medicine in dealing with certain diseases such as Ringer pest (*Ghulhay*) and Anthrax (*Ansa*). They think some of their methods of treatment (such as fractured bone treatment) are better. They emphasised the complementarity (or synthesis) of the two practices in modern and traditional medicine.

The argument in the discussion on ethno-veterinary knowledge and practice will develop in two ways. Firstly, the several medical and nutritional practices in the systems

will be described by close comparison to Western veterinary medicine. Such areas include the straightening of fractured bones, providing laxatives to bloating animals, provision of salt, mange treatment by using medicinal plant saps and so on. It will be argued that in such cases intervention should be for improvement and upgrading and not for replacement of sound practices. Secondly, there are inherent weaknesses in disease prevention and perception even among the knowledgeable traditional medics - the diseases described as unknown (by divine act) or *agel* (the day) are simply unidentified. In such areas traditional medics if trained can be the best medium to reach the pastoral communities.

#### **Ethno-botanic Knowledge and Traditional Land Use**

The pastoral knowledge of ethno-botany among the Beni-Amer is not simply botanic. It contains detailed elements of oral taxonomy. The botanic knowledge is extensive but seems somewhat localised. Such knowledge is closely associated to animal nutrition (utilitarian), animal health (medicinal) and is used to classify livestock breeds by the ruminal flora they consume. The ethno-botanic knowledge that is to a large extent undocumented may be studied by different disciplines such as geography, ecology, agricultural anthropology, and so on. In the present context ethno-botany is treated superficially and only in relation to animal production and health.

The older Beni-Amer, Fellata Sudanese (Sudanese of West African origin) and the Beja have shown greater skills in classifying the vegetation and providing a historical account of some extinct vegetation. In one single case study a Fellata Sudanese agropastoralist was able to provide a full description (location, habitat, use, nutritive value, etc.) of 25 tree and grass species. An old Beni-Amer pastoralist identified 50 tree and grass species within a 45-km long riverbed.

Generally, the Beni-Amer describe their



vegetation under different ecological categories mainly as coastal, savannah lowland, riparian, montane and desert-type.

Among the Beja in the North, the Beni-Amer and the Marya plant knowledge extends to animal breeds as a means of general ruminal classification. The Beja refer to their camel breeds as *Hib-qualot* or tree eaters, *Aliab-qualot* or grass eaters and *Shallagait* or eaters of salt marshes along the coast of the Red Sea. The Marya and the Beni-Amer group their camels into white and red. The white breeds are known as Abet (browsers of salty plants) and red camels are known as Radyet (browsers of sweeter plants).

According to the agro-pastoral Marya who live north of the Beni-Amer in Northern Eritrea the white camel breeds 'Abet' are hardy and better survivors. During the decade of drought 1974-85 the white breeds were able to survive better because they were able to browse on a variety of sweet and salty plants. These plants are Ubel, Kulmt-Hanta (unidentified trees with salty taste) and Serob (*Caparis decidua*) as well as Osia (*Zizyphus spina-Christi*). The Red camels 'Radyet' on the other hand were more used to sweeter plants which were very few in drought years and suffered greater death rates.

Beni-Amer ethno-botany therefore consists of botanical ethno-semantics (tree, grass, herb names including extinct species), utilitarian and medicinal use of plants, ruminal, and floral knowledge and knowledge of range preferences.

The Beni-Amer ethno-botany is detailed enough to form some basis for range improvement and extension work, but there are also inherent weaknesses in the system which should be noted. Two such notable weaknesses are the perception that environmental resources for example trees and grasses, are unlimited, and the consequences of a degraded environment to pastoral future are not fully realised. This is worsened by the ever-increasing agricultural encroachment of traditional grazing territories, which

has led to lack of access and control by pastoral groups including the Beni-Amer. In other words, pastoral groups in the study region may have detailed botanic knowledge but an ever-decreasing land resource base.

Beni-Amer range resource control mechanisms are not particularly strong and have been put under external pressure (farming encroachment). The initial impression an outsider gets is that the Beni-Amer land use rules are more relaxed compared to the neighbouring Beja. Tree cutting for charcoal making and browse is more frequent. Grazing land according to the Beni-Amer custom is common to all Beni-Amer.

Non Beni-Amer groups such as the Rashaida, Artega, Hadendowa and others can use range resources as long as they do not challenge Beni-Amer authority on the territory. The Beni-Amer rules are stricter on agricultural land use and the use of wells by people outside the tribe. Land use systems are varied and complex and the focus in this research is on the utilitarian and medicinal aspects of traditional ethno-botany among the present study group.

### The Challenges in Context

The pastoralist communities on both side of the Eritrean-Sudan border (estimated population of 2.5 million) face similar challenges and could benefit greatly from political stability and possible livestock oriented development intervention in the Region.

The pastoralists in Western Eritrea (the Gash-Barka region estimated population over 600,000) suffered greatly from the high intensity conflict between Ethiopia and Eritrea (1961-1991 Eritrean liberation struggle period and sadly during the more recent Ethio-Eritrean border conflict from 1998-2000) The combination of challenges which pastoralist people faced and continue to face could be summed up as follows:

- Large scale displacement internally and across the border
- Loss of livestock due to air bombardment and looting by the Ethiopian army leading

to loss of assets and impoverishment

- Disruption of the established livestock markets at local, national and regional levels
- Sedenterisation in towns as the last resort
- Inability to cross to the Ethiopian traditional border grazing areas because of insecurity
- Spread of land mines in the grazing areas and such areas becoming "no go" for grazing
- Occupation of the high potential wet-land grazing areas by more dominant non-pastoral groups from other parts of the country
- Spread of muskit (*Prosopis juliflora*) in the high potential riverine areas
- Many of pastoralist youth abandoning the pastoralist way of life and adopting other occupations (joining the army by conscription, following up their schooling in a sedentary context, urbanisation etc.) This led to shortage of herding labour among the pastoralists who wanted to maintain the traditional way of life.

Pastoralists in Eastern Sudan (estimated populations 2 million) have traditionally been one of the most neglected populations politically and in terms of development interventions. As a result of such marginalization the people in the East fought a low intensity war (1996-2006) with the Central Government in Khartoum in order to bring about political changes. The conflict between the Central Government and the rebel National Democratic Alliance (NDA) came to a formal end by the signing a peace agreement between both sides. The agreement recognises the marginalisation of the pastoral peoples from Eastern Region and clear commitments to address the situation by both sides. The challenges pastoral communities in East-Sudan could be summed up as follows:

- Large scale internal displacement and many pastoral peoples abandoning their traditional settlement due to insecurity and forced to move into government held secu-

rity hamlets

- Destitution and large scale forced urbanisation
- Drought and famine proneness
- The uncontrolled spread of *Prosopis juliflora* in the wet land areas
- Disruption of the livestock trade in local and Middle Eastern markets
- Mining of some the grazing areas by the rebels and the government forces
- Intense competition over grazing land between farmers, pastoralists, the Government and the refugees from Eritrea and Ethiopia

The political systems on both sides of the border take very different approaches in addressing pastoral development issues.

In Eritrea where the pastoral peoples played an instrumental role in supporting the liberation war, the Government adopted the "sedenterisation by inducement and integration approach" and it seems that nomadic pastoralism will have no long-term future. There is no implicit Government policy for sedenterisation but most of the development interventions by the Government indicate that they are in favour of sedenterisation.

Development interventions are centrally guided and sedenterised pastoralists have been benefiting from improved health services, education, better soil/water conservation efforts and improved infrastructure. Many of the pastoral people are also represented in local councils and many of the pastoralist youth have joined the National service scheme which has become a duty to all able bodied youth. However, the room for pastoralist type CBOs and NGOs local and or international is very limited and one therefore can't say how far the pastoralists can go as far as representing their own interests. In the case of Eritrea the only realistic modus operandi would be working with the relevant Line Ministries at national and local level.

Among the major risks to the pastoralist livelihood are the pending fear of major drought because the failure of rains this year

and the unresolved border issue between Ethiopia and Eritrea (relations between the two countries have not yet normalised and this means no cross border mobility).

In the case of East Sudan the State government where the pastoral people are supposed to be represented is still in the process of being consolidated in the context of multi-ethnically based governance. The State Line Ministries are still at the embryonic stage; infrastructure is very poor, huge number of pastoralists are still internally displaced. Research institutions are being rebuilt and there is a scarcity in locally trained manpower. Services to pastoralist communities are almost non-existent despite the major contributions they make to the local/regional economies.

However, there are great opportunities to provide direct support to the emerging pastoralist led CBOs/NGOs in Eastern Sudan as well as the relevant Government institutions to address pastoral development issues.

#### **Opportunities and the Way Forward**

The paper attempted to present the broad context of pastoralism in which pastoralism operates in the Horn but also addressed the specific challenges pastoral peoples face in East Sudan and Western Eritrea. It would be very difficult to propose a full return to nomadic pastoralism as both case studies have shown but one has to think of widening the options and opportunities for pastoral peoples so that they can embrace the inevitable socio-economic and political changes. The following recommendations are not prescriptive nor the imagination of the author but are based on the realities on the ground. For convenience I would like to group the recommendations into: scientific/technical, institutional/policy and socio-economic. The recommendations are supposed to serve as entry points in a particular context of Eastern Sudan but with potential replications in Eritrea.

#### **Scientific/Technical**

- Detailed studies to clearly understand the full potential of existing livestock breeds and pastoralist knowledge systems with the view incorporating such an under-utilised resources in development. Produce an inventory of local knowledge systems and breeds
- Introduce better feeding regimes for the livestock based on locally available agricultural and other under-utilised resources such as crop residues, prosopis and other stuff
- Introduce new technologies for improved use of animal products (leather, hides, skins and dairy products) and expand marketing opportunities for livestock products

#### **Institutional and Policy**

- State and local authorities to secure land rights and stock routes for migratory pastoral nomads who wish to maintain some form of pastoral nomadism
- Strengthening the capacity of Line Ministries by providing short training in a variety of practical skills enabling them to have a better understanding of the pastoralist livelihood and address their needs without prejudice
- Orientation and awareness seminars for local authorities in order to help them appreciate understand the pastoral evolutionary processes and livelihood changes currently taking place among the pastoral people and informing development policy plans accordingly
- Provide direct institutional and financial support to emerging pastoral civil society CBOs and NGOs to advocate and lobby local/national government for policy changes in matters affecting their lives

#### **Socio-Economic**

- Conduct studies on the potential use of Urban and peri-Urban agriculture as a source of livelihood for displaced pastoralists



- Conduct studies on the role of women in the evolutionary livelihood context and proposed interventions accordingly
- Conduct proper studies on the contribution of the livestock sector to the national /regional economies identifying the main bottlenecks and propose solutions

In terms of immediate and medium term practical interventions in the study area, the evolving pastoralists would benefit greatly from the following interventions.

- Increasing fodder production based on locally available agricultural by products and thus enhancing the productivity of existing breeds
- Better understanding, improvement and use of the existing knowledge system
- Capacity building support to the emerging pastoralist led CBOs and NGOs
- Have a better understanding of the market chains and study the opportunities for processing livestock products to enhance food security

- Specific studies on skills assessment and interventions to support economic empowerment among ex-pastoral women
- Study the potential benefits of urban and peri-urban livestock production as an alternative livelihood for sedenterising pastoralists

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