

# **MILKING DRYLANDS**

Gender networks, pastoral markets and food  
security in stateless Somalia

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**Michele Nori**

## **Thesis**

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## **List of Acronyms and Abbreviations**

CMM	Camel Milk Marketing
EC	European Commission
ESR	Ethiopian Somali Region
FAO	Food and Agriculture Organization
FCM	Fresh Camel Milk
FEWS NET	Famine Early Warning Systems Network
FSAU	Food Security Assessment Unit, Somalia
GTZ	Gesellschaft für Technische Zusammenarbeit
HDI	Human Development Index
HH	households
IDP	Internally Displaced Person
IFAD	UN International Fund for Agriculture Development
IFPRI	International Food Policy Research Institute
IIED	International Institute for Environment and Development
ILC	International Land Coalition
ILRI	International Livestock Research Institute
IUCN	International Union for Conservation of Nature
JNA	Joint Needs Assessment
LPP	League of Pastoral People
MDGs	Millennium Development Goals
MIS	Marketing Information System
MLFR	Ministry of Livestock and Forest Resources
NGO	Non-Governmental Organization
NIE	Neo Institutional Economics
OCHA	UN Organization for the Coordination of Humanitarian Affairs
ODI	Overseas Development Institute
OIE	Office International des Epizooties, currently World Organisation for Animal Health
PCI	Pastoralists Communication Initiative
PDRC	Puntland Development Research Centre
PMC	Primary Milk Collectors

PR Property Rights  
PRA Participatory Rural Appraisal  
RRA Rapid Rural Appraisal  
RVF Rift Valley Fever  
SCF Save the Children, UK agency  
SMC Secondary Milk Collectors  
SoSh Somali Shillings  
SR Small Ruminants  
TLU Tropical Livestock Unit  
ToT Terms of Trade  
UNCTAD UN Conference of Trade and Development  
UNDP United Nations Development Program  
UNEP United Nations Environmental Program  
UNICEF UN Children's Fund  
UNIFEM UN Development Fund for Women  
VSF Vétérinaires Sans Frontières, CH agency  
WFP World Food Program  
WISP World Initiative for Sustainable Pastoralism  
WSP War-Thorn Society Project

## List of Somali Word Explanations

- Aqaal* Mobile housing  
*Berkaad* Cemented underground water reservoirs collecting water from rains of from trucks  
*Cayd* Household in need  
*Daayn* The credit system  
*Day* Fresh milk  
*Degaan* territorial unit under the control of one group  
*Deyr* The short rainy season, approximately from September/October through November.  
*Dilaal* Local market brokers who assist buyers and sellers over price negotiation.  
*Diya* Blood payment  
*Dukaa* Shop, kiosk  
*Fonio* Radio call system  
*Galaan* Milk unit equivalents to 0.75 liters  
*Gehar* Boys scouting for new pastures  
*Gu* The long rainy season, approximately between April and June  
*Haj al Khedir* Most important muslim festivity, when pilgrims convey to the Mecca  
*Haruub* Traditional container for milk collection  
*Hawala* System to wire money  
*Hoorweyn* Satellite herd  
*Kaame* Camp  
*Karuur* Deeply sour milk  
*Jebleeh* Middlemen mobilising producers, collecting and concentrating animals  
*Jilaal* The long dry season approximately from January to March/April  
*Midgaan* Occupational *casta* group  
*Mowsin* The period from before Ramadan to the end of the *Haj al Khedir*  
*Nugul* Household-related herd  
*Qat* Widely used local stimulant/narcotic (*Cathula Edulis*) whose leaves are chewed  
*Ramadan* Fasting month for the Muslims  
*Reer* People belonging to a same unit  
*Sawaaqi* Drovers for market animals  
*Shiir* council of groups representatives  
*Suuk* Market  
*Suusaac* Slightly sour milk  
*Tumaal* Occupational *casta* group  
*Xagaa* The short dry season, approximately from July through August/September  
*Xeer* Customary rule  
*Yarad* Dowry  
*Yibir* Occupational *casta* group



## **SUMMARY**

The Somali economy historically hinges around mobile livestock rearing. Pastoral resource management at local level has become increasingly intertwined within regional and international market systems. Such patterns have undergone dramatic changes in the last two decades; the collapse of the central state, with the fall of Siad Barre's regime, has reflected and induced major societal reshaping. The clan-based structure of the Somali society has regained its prominence, leading to violent conflict in some areas and innovative patterns of governance in others. Population movements and economic dynamics emanating from these conditions have further contributed to the remoulding of access to, and utilisation of, resources amongst Somali pastoralists.

Milk is important in Somali culture. Most milk is from dromedary camels, of which Somalia has more than 6 million, which is almost half the world's total. They are raised almost exclusively for their milk, the local staple food. The role of camel milk as an income generator in NE Somalia is quite recent as the sale of camel milk was considered a taboo until recently – as it still is in other parts of the Horn of Africa. Previous reported experiences of its commercialization in Somalia relate to the late 1980s, when camel milk marketing networks were established in southern Somalia to serve demand from the capital city, Mogadishu. As a result of the civil strife that has remoulded the Somali socio-economic fabric, camel milk has increasingly become a marketable commodity in other parts of the Somali ecosystem and its trade has developed accordingly.

By investigating the nature and the dynamics of camel milk production and commercialisation this research explores the ways such recent changes have impacted on society as well as on local livelihoods in a specific portion of Somalia, the north-eastern territories of Puntland - where commercialisation of camel milk is increasingly a key dimension of the strategy to enhance livelihood options amongst pastoralists. This thesis explores the extensive networks and sophisticated arrangements and mechanisms of cooperation and examines the set of social and cultural relations that characterise them. Through a comparative analysis with the more traditional trade of livestock which characterises Somali pastoralism, the dynamics behind the integration of pastoral economies into market dynamics are unveiled.

The commoditisation of camel milk involves on one hand the construction of a new market and on the other a reshaping of range resource management patterns. These processes in turn participate in reshaping the relationships amongst groups and individuals, and those between people and the environment within which they operate. While camel milk production is a men's task, its commercialisation is almost entirely managed by women – reflecting different gender positioning within the clan organisational set up. By disentangling the role of clan structures and gender roles, this work demonstrates the relevance of articulating an institutional perspective with an actor-oriented approach in order to comprehensively address the social embeddedness of market functioning. In this perspective analysing camel milk marketing represents a consistent and novel entry point to explore societal change in the Somali pastoral society and to assess its related implications.

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This research is the fruit of investigations undertaken over a number years on the developments of camel milk marketing in Puntland, Northeast Somalia. The inspiring start was the collaboration with the milk marketing program the Italian NGO Africa '70/UNA was implementing in the region since 2001 (UNA milk). Through that experience, a number of questions triggered my thinking and pastoralism became a fascinating system, still only partially understood.

Many days were spent roaming around Qardho rangelands, in the Sool plateau and down the Sanaag valleys, stepping over white beaches and stroking blonde camels, feeding on goat meat from breakfast to dinner, sneaking through the buildings of Boosaso and Qardho - imagining an uncontaminated environment and a detached society, annihilated by a longstanding civil strife. Reality on the ground was in fact astonishingly different with local livelihoods embedded in a number of inter-related trends and flows, which extended to the strong links established with the international environment and the indigenous institutional setting integrating in the wider global picture.

It is no news that the state has failed its role in Somalia. Nevertheless in parts of the country, society has in fact evolved during the longstanding statelessness. Societal mechanisms have been forged to steer and manage the important market integration the Somali economy is undergoing. This market integration is reshaping access to, and utilisation of, resources in the whole Horn of Africa, from grazing pastures to fishing shores, from seaports to information routes, from water to milk. My feeling is that a thorough understanding of such mechanisms is critical to understand ongoing dynamics reshaping this sensitive region of the world. Lessons could also be learnt on the ways pastoralists manage resources in an increasingly complex, interdependent and unpredictable environment – increasingly similar to the global society with which we are all dealing.

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Amongst others, this work aims at challenging one of the many false assumptions about Somalia, that it is one of the most dangerous places on earth (Gettleman, 2009). I have spent long and enjoyable periods in Puntland, roaming on milk collecting pick-ups and sleeping in the bush, with absolutely no problem but warm sympathy and friendly assistance instead.



## FOREWORD

In 2001 I got the opportunity to be involved in a project concerning the development of camel milk markets in Puntland, undertaken by the Italian NGO UNA/Africa 70, through EC funds. This opportunity provided me with the chance to assess and analyse an activity that was little mentioned in official documents, despite its seemingly major relevance for local livelihoods. When I arrived in Puntland in 2001, I could not match what I was witnessing with what was reported in the papers I had been given for briefing; I encountered a lively society and a booming economy, with a number of diverse ongoing activities and people busy in different enterprises. I went back to the official papers and still could not find the sparks I found on the ground.

While the problems and the constraints of Somali society were largely recognised and debated, only limited attention was given to its strengths and potentials. Somalis inhabit one of the most hostile environments on the globe, from which they are capable of exporting about four millions smallstock heads yearly; they have gone without a central state for about 20 years by now and have challenged the major military powers of the region and the world, often successfully. Does this mean anything?

To address this question a comprehensive understanding of the Somali society and its recent developments was deemed necessary. Within this framework this thesis explores societal and ecological changes that have affected pastoral societies of North-east Somalia, in particular during the last two decades. The development of an institutional novelty – the commoditization of camel milk – is investigated in detail to unravel the social, economic and ecological changes that have taken place. The wider sociological debate on pastoralism and the development of low potential, marginal areas was found to be useful as it provided me with the analytical tools to engage with the emerging realities of pastoral livelihoods. It appeared extremely useful to combine insights from anthropological and rural sociological disciplines with neo-institutional economics perspectives on social change and development.

The challenge of this research is to demonstrate that approaches linking human-nature relationships and societal change in a causal relationship that inevitably leads to resource degradation and, eventually, to conflict and insecurity, offer limited support to grasp the complexity of rural development. This dominant perspective has misguided scientific as well as political efforts in pastoral environments throughout the 20th century, representing more often a burden rather than a trigger to understand pastoral resource management and livelihood systems. Economists in general, including Marxists, have tended to consider pastoralists as a pre-agricultural social form in the evolutionary hierarchy of societies (Gunn, 1990). A long time had to elapse until the pastoralism became recognised as a skilled form of natural resource management, based on the finely-honed symbiotic relationship between local ecology, domesticated livestock and people in resource-scarce, climatically marginal and highly variable conditions (Nori and Davies, 2007).

Unfortunately by the time academics and practitioners started to recognize pastoralists as knowledgeable and skilled resource managers, and to recognise the overall relevance of their products and services acknowledged, the agenda of global politics was rapidly

changing. Pastoral areas have been the primary targets of state retrenchment under Structural Adjustment Programs, while the history of intervention failures diverted development funds off herding societies (Waters-Bayer and Bayer, 1994; Swift, 1996).

By late 1980s major donors stopped investing in pastoral areas, and some argued for a policy of benign neglect toward arid areas on the grounds that little can be done there (Swift, 1991). Only recently pastoralism got back on the international agenda, for a number of different and contrasting reasons - ranging from emergencies generated by food and/or social securities, the threats herding societies pose to global security – such as banditry, terrorism and piracy, all located in Somalia – to the increasing search for precious mineral resources in different pastoral regions, and the chase for *wastelands* where to set biofuel production (SoS Sahel, 2008).

In the light of this renewed interest for pastoralism in development, policy and academic environments a main challenge for social scientists consists in keeping pace with the fresh thinking generated by ecological scientists concerning the non-equilibrium dynamics, and the related skills pastoralists show to cope with spatial and temporal variability and overall uncertainty (Behnke 1992; Scoones, 1999).

This thesis centers on the marketing of camel milk (hereafter CMM) in NE Somalia, known as the region of Puntland, a part of the world where no formal state government has existed for the last two decades. Marketing of camel milk is a relatively new phenomenon in this area, as its commoditization was considered taboo until recently – and still is in other parts of the Horn of Africa. The marketing of camel milk is an important innovation that has contributed to reshaping the local economy, with relevant implications for the whole community. Indeed, it represents an important strategy to expand and diversify livelihood options for local pastoralists, as well as for a number of other vulnerable social groups.

The shift from a taboo to an important livelihood strategy has necessarily involved crucial reconfigurations in the local institutional setup, with new rules and roles triggering institutional change. By analyzing the origin, evolution and mechanisms governing the evolution of this market, this thesis shows the critical role an understanding of the local institutional environment can play in assessing evolving livelihood patterns. The main research focus is on the primary social, economic and political arrangements that have made CMM possible in the aftermath of the civil conflict that generated the statelessness characteristic of this region of the world.

Marketing of camel milk in Puntland represents an important innovation that has contributed to reshaping the local economy with relevant implications for the whole community. This research claims that pastoralists are the most concerned about pressures on and changes in their natural and socio-political environments upon which they base their economy. Degradation of the natural resource base and conflictive conditions represent most important threats to pastoral livelihoods, whose complex institutional environment aims at securing adequate availability and accessibility of critical resources.

In this sense this research disputes the resource degradation paradigm which asserts that population growth leads in time to degradation and depletion of the natural resource base. This would imply that more people necessarily mean less resources, rather than different or transformed resources. This paradigm does not consider the diverse range of options

communities undertake to cope with and manage environmental change and does not seem able to address the interconnections between different levels of analysis. The Desertification Myth exemplifies this point, as pastoral resource management has been blamed for decades as the main reason for advancement of deserts and depletion of marginal lands (Leach and Mearns, 1996a). The New Ecology approach and recent contributions from the wider Global Climate Change debate have in time helped understanding that herding societies are more likely the primary victims – rather than the culprits – of unsustainable resource management patterns for which ‘developed’ and ‘urbanised’ societies are to be blamed (Nori and Davies, 2007). Efforts should therefore shift to support the adaptability of pastoral societies, rather than dismantling their pillars.

In the same line, this research also challenges the environmental conflict paradigm, which asserts that a causal relationship is to be found between a given status of the biosphere (scarcity) and a type of social group behaviour (conflict). This approach has been largely utilised to explain conflict in marginal areas, such as those inhabited by pastoralists (cfr. Homer-Dixon, 1991 & 1999 as quoted in Haggman, 2006). However, this perspective does not render fair service to understanding pastoral resource management, which is characterised by a high degree of negotiations, ties building and exchanges. As increasing overall productivity in marginal environments proves a hard task (cfr. Stanford, 1983), peaceful and cooperative relationships amongst the different groups become critical. Such relationships enhance opportunities to access and share different resources, so as to minimize livelihood risks by widening options for production, exchange and coping.

While resource degradation and violent conflicts often co-exist at global, regional and local levels, they are not per-se related to one another at a causal level (Haggman, 2006: 45). Many pastoral regions in the world suffer nowadays from conflictive situations, which are often legacies of past policies (e.g. colonial boundaries setting in cases such as in Sudan, the Kurdistan region, areas of the Sahara and of the Middle East) or current wider geo-political plays (such as in Darfur and the Ethio-Eritrean border, conflict in Afghanistan or the Chinese rush to oil in the Sahelian belt), rather than directly related to the bellicosity of their inhabitants<sup>1</sup>. In fact the Somali case clearly indicates that violent conflict and physical insecurity concern the greener areas of the region, where cropland and urban resources are at their best, while pastoralist Northern Somalia has not experienced major violence in the last 10 years despite lack of internationally recognized statehood.

This is not to say that environmental degradation and conflict are not major concerns for pastoral livelihoods, but that a more appropriate contextualisation is needed to disentangle the reasons behind and the effects beyond such processes, as human-nature interactions acquire specific forms and meanings in different places and at different times (Warren, 1995; Battebury and Bebbington, 1999). Leach *et al.* (1997) advocate an approach that moves away from framing environmental problems in terms of population pressure on a limited natural-resource base, to a disaggregated approach that considers the role of the institutions that mediate the relationship between different social actors and their environment.

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<sup>1</sup> For more detailed analysis of conflict dynamics in pastoral areas: Nori M. et al., 2005 - *Herding on the Brink: Towards a Global Survey of Pastoral Communities and Conflict* - An Occasional Paper from the IUCN Commission on Environmental, Economic and Social Policy; Gland (Ch)

The idea that development in marginal environments is a linear process where population growth triggers resource scarcity which in turn leads to conflict reduces the agency of local actors to a simple subsistence model. This seems a limited approach. In these models local people are left with limited room for choice and action as they are supposed to merely follow trajectories defined by macro processes without seemingly having any chance to interfere, to bring change, or to resist and react (Haggman, 2006). Instead what we see is that Somali pastoralists have managed to establish forms of stateless governance, further integrate their economy into global markets and are becoming increasingly specialised at the individual level as well as diversified at the household level - so to better play with the risks and the constraints involved in their livelihood system. This highlights how pastoral livelihoods are fine-tuned to deal with complex and unpredictable environments.

In the wake of this renewed interest for pastoral societies this thesis thus tries to contribute to the understanding of pastoral livelihoods as the interaction of effective institutions and organisations with a changing environment, and to the conceptualisation of pastoralists as attentive and capable agents of change. Furthermore this research raises some important elements concerning the potentials pastoralism holds vis-à-vis adaptative capacities and sustainable resource management, which are matters of increasing concern in current development debates. This argument will be developed through a comprehensive analysis of the skills which enable the production and marketing of camel milk in North Eastern Somalia, where such activity is already extraordinary under extremely harsh conditions – as most well-funded and technically-skilled agencies and programs concerned with the same would attest. It is my belief that an understanding of how (processes) and why (causes) this happens, provides important contributions to review pastoral experiences under a more creative light.

This research aims to bring a fresh picture from a part of the world which has recently only been investigated and analysed in a limited way, despite its critical relevance in the current global setting. Somalia is not only a ‘disaster waiting to happen’, but it also is a place where people live, change, innovate, make mistakes, learn lessons and develop accordingly. As this study aims to show, local society and people are much more active and innovative than they are currently described.

In the Somali culture when people meet after some time they toast each other with ‘*wiil iyo caano*’ which means ‘(may you have) sons and milk’; when they leave for some time they wish each other ‘*nabad iyo caano*’, ‘(may you have) peace and milk’. Many changes have affected the Somali region in recent decades, but still, in one way or another, milk has to be there, and without doubt it is milk from camel.

Finally, this research tries to explain the centrality of camel milk in the Somali culture, and why if there is milk it means peace and prosperity are there, and vice versa. The presence of milk in fact indicates favourable conditions, both in the ecological and the socio-political spheres. Most importantly, this study shows how behind this resource, milk, as much as behind sons and peace, there are Somali women, critical agents of change within the current setting. While traditionally much relevance is given to production aspects in the management of local resources, this work poses equal importance on the productive and the commercial domains of camel milk, and how these are embedded within the institutional environment and relevant to the shaping of local livelihood patterns.

Chapter 1 introduces the current state of the art concerning the debate over pastoralism, in the academic as well as in the policy environments. Challenges ahead to bring pastoralism back onto the development agenda are described from the available literature. The chapter concludes with the operational methodologies and the logistics of the Milking Drylands research. Chapter 2 describes Puntland today and the socio-economic patterns of its population. Despite its apparent scarce natural resource base, the region offers a number of diverse livelihood sources. Chapter 3 assesses the structure and the functioning of the local institutional setting in its different aspects, and the way it regulates access to and utilisation of societal resources. Chapter 4 analyses the articulation of Somali pastoralists into the wider global market in an historical perspective, up to the recent events that have made Somalia a stateless country. Chapter 5 addresses the implications of such process for the livestock economy, looking at its organisational, economic and social implications. Chapter 6 describes in detail the societal mechanisms behind the production and the commercialisation of camel milk and provides a set of information and data which triggers an in-depth understanding of its evolution and its functioning. The sociological implications of this novelty market are thoroughly debated in Chapter 7, with a specific concern for the clan and the gender perspectives. Chapter 8 concludes this thesis by putting the findings and understandings of the research in the perspective of the wider academic and policy debates – with the intent to contribute modestly to improving development assistance to pastoral regions all over the globe. The evolution of camel milk marketing in Puntland - which indeed has been somewhat astonishing during the last decade – represents the microcosm we analyze to understand how and why pastoral livelihoods have changed, what role market-integration of the pastoral economy played, and what are the implications for sustainable local livelihoods.





## Chapter 1 - RANGELANDS AT STAKE

Differences between the *old orthodoxy, mainstream view* and the *new thinking*, as well as their implications, will be assessed and analysed. A main shift in discourses over sustainable development in pastoral regions took place in the 1980s with the recognition of pastoralists as active and capable agents of change. Despite a newly-inspired understanding of the drivers behind resource management in pastoral societies the socio-political dimension that embed their livelihood systems are still only partially appreciated; this represents a key limiting factor in translating the new thinking into adequate political and operational approaches.

Institutional analysis of pastoral societies is thus a quite recent undertaking. It results from a 'failure syndrome' that has characterised development interventions in arid environments as well as from an improved understanding of the ecological and economic potentials of pastoral livelihoods. The misconception of pastoral resource management that has for a long time permeated policies and investments in these regions, has contributed to weakening its effectiveness all over the world. A fair indicator of such dynamics is represented by the increasing degree of food and social insecurities that characterise most pastoral regions nowadays. An assessment of these dynamics and their recent evolutions represents an important step to address remaining gaps towards more appropriate advice and policy decision-making.

### Mobile Livelihoods

Pastoralists are the people who rely on mobile livestock rearing as the main source of their livelihood. Different specific definitions exist which focus on either the source of livelihood, income or *sustenance*, the use of labour or their cultural identity (Sandford, 1983; Swift, 1988; Zaal, 1999). Different degree of integration with seasonal crop production characterise agro-pastoral groups.

Extensive pastoral production occurs in some 25 % of the global land area, from the drylands of Africa (66% of the total continental land area) and the Arabian Peninsula, to the highlands of Asia and Latin America. The World Initiative on Sustainable Pastoralism<sup>2</sup> currently gives an estimate of 100 million to 200 million pastoralists worldwide; IFAD is currently working with a figure of 200 million.<sup>3</sup> A multi-donor study of 1997 (McDowell and de Haan) talks of '*an estimated 100 million people in arid areas, and probably a similar number in other zones, [for whom] grazing livestock is the only possible source of livelihood*', possibly including extensive mixed crop-livestock systems. For sub-Saharan Africa estimations vary from 22.5 million pastoralists (NOPA, 1992)<sup>4</sup> to double that (Markakis, 2004). Swallow (1994) further estimated that in Africa there were 216 million - almost 10 times as many - agropastoralists deriving significant quantities of feed from natural pastures. It is always a sensitive issue to quantify pastoral populations and to draw a line between pastoralism and agro-pastoralism.

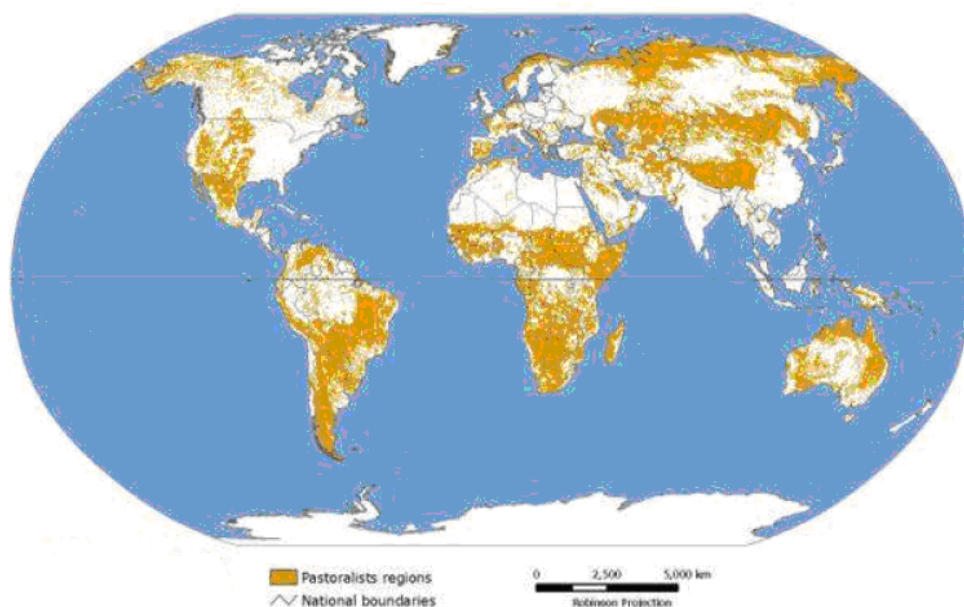
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<sup>2</sup> <http://www.iucn.org/wisp/index.html>

<sup>3</sup> Antonio Rota pers. comm.

<sup>4</sup> "Nomadic Pastoralism in Africa", A major review and research project funded by Unicef and the UN Sudano-Sahelian Office

Pastoral systems are important to global society as they support herders' subsistence, provide large quantities of food and non-food products (which play a major role in ensuring local food security), and contribute significantly to the national economies of poor countries (cfr. Nori and Davies, 2007; WISP, 2008). These contributions accrue from areas where soil, rainfall and temperature conditions provide limited effective options for alternative land uses. Furthermore pastoralists' capacity to enhance protection and regeneration of the natural resource base compared to other land uses is also being increasingly acknowledged, as was mentioned in the previous chapter.



**Figure 1.1 Global distribution of pastoralists**

Source: Nori and Davies, 2007

There are strong commonalities in the livelihood strategies of these groups who exploit the distant and diverse drylands or highlands of the world, from the dry Sub-Saharan African lowlands to the cold Asian plateaux, from the tropical savannah to the cold northern steppe – a feature that is much less evident among other population groups across the globe. Pastoral groups inhabit environments characterised by a limited resource potential, climatically marginal and highly variable agro-ecological conditions. Under such conditions mobile livestock rearing has a natural comparative advantage over other land uses (Cossins, 1985; Hubl, 1986). The constraints posed by the physical and agro-ecological set up are critical in shaping the socio-economic livelihood patterns of pastoral communities, which critically hinge upon strategies that continuously adapt to a limited, variable and unpredictable resource endowment. Pastoral resource management has evolved precisely to tackle these bio-physical constraints and is shaped to adapt to the resource endowment, in what Bonfiglioli (1988) defines as 'survival ideology'.

Pastoralism is not the intermediate development stage between mobile hunting and gathering on one hand, and settled agriculture on the other. Instead archaeological evidence suggests that pastoralism in Africa developed in direct response to cycles of long-

term climate change and variability, and spread throughout northern Africa as a means of coping with an increasingly unpredictable and arid climate (Brooks, 2006). Today pastoralists are recognised as active, knowledgeable and capable managers of risk, defining pastoralism as a highly reliable system aimed at the search and attainment of reliable peak performance through utilizing and managing highly complex strategies (Roe et al., 2003). Risk taking is seen as a proactive rather than a passive strategy, as it enables higher performance. Differently from what was previously theorized, pastoralism is thus the result of a process of specialisation in marginal resource management rather than a 'backward' stage before farming.

The process of domestication of and adaptation to the hosting environment is an important feature characterising pastoral developments; according to Drysdale (1993) while it is true that Somalis could have survived in those lands without camels, it is also true that camels could not survive in those environments without men. All things considered pastoralism represents a complex form of natural resource management, hinging on the direct interaction between three systems in which pastoral people operate, i.e. the natural resource system, the resource users system and the larger geo-political system (Pratt et al, 1997; Nori et al., 2005).

**Livestock** stands for the vital 'technology' that allows transforming range vegetation into human edible products as well as fibres. Livestock also enables storing and transferring food from one season to another and moving it from one place to another, thus to help buffering critical food gaps. Animal transport capacities allow for pastoral mobility and trade patterns; livestock is thus a primary means of production and a service provider. Animals are also important as means of transaction as it represents the primary source of exchange, saving, income, loan and gift and often the sole instrument for saving, investments and insurance. It helps shape social relationships by providing employment, wealth, prestige, identity, respect and connectedness within and outside the community. Exchange of animals among households or groups creates exclusive ties, which are relevant for a number of livelihood strategies. The presence of large and small ruminants in pastoral herds and the combination of animals with different foraging habits and reproductive rates serves to enhance complementarity of resource utilisation and minimisation of risks related to production failures. Diverse pastoral societies are characterised by different animal species, a function of local agro-ecological conditions and which in turn carry specific socio-political implications.

**Mobility** is critical to pastoral performance as it enables opportunistically tracking temporarily-available resources, seizing opportunities and fleeing from approaching trouble. Swift has recently classified mobility according to its main objective, whether related to production or exchange (Swift, 2008)<sup>5</sup>. Other classifications rely on the geographical dimensions of mobility and the applied patterns. Within those frameworks mobility is defined as vertical, linking highland with lowland areas for winter, spring and summer grazing, or as horizontal, through different zones such as the north-south transhumant movements in the Sahel. A distinction can also be made between regular movements and emergency movements during critical times, due to drought, conflict or other reasons. Patterns of mobility range from pure nomadism (opportunistic, no fixed base), through various forms of transhumance (set migratory routes on a seasonal basis), to

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<sup>5</sup> Swift also mentions a third class under 'escape mobility', which is not considered here.

degrees of agro-pastoralism (with seasonal attachment to crop production), each demanding different involvement of household and herd members (Nori et al., 2005).

**Table 1.1 Regional zonation of pastoral systems**

Zone	Main Species	Status
Sub-Saharan Africa	Cattle, camel, sheep, goats	Declining due to advancing agriculture
Mediterranean	Small ruminants	Declining due to enclosure and advancing agriculture
Near East and South-Central Asia	Small ruminants	Declining in some areas due to enclosure and advancing agriculture
India	Camel, cattle, sheep, goats	Declining due to advancing agriculture but peri-urban livestock production expanding
Central Asia	Yak, camel, horse, sheep, goats	Expanding following de-collectivisation
Circumpolar	Reindeer	Expanding following de-collectivisation in Siberia, but under pressure in Scandinavia
North America	Sheep, cattle	Declining with increased enclosure of land and alternative economic opportunities
Andes	Llama, alpaca	Contracting llama production due to expansion of road systems and European-model livestock production but expansion of alpaca wool production

Source: Blench, 1999

In productive terms, mobility of people and animals provides the best strategy to manage low net productivity, unpredictability and risk on arid and semi-arid lands. Seasonal movements are essential for pastoralists to tackle marked spatial and temporal variations in livestock grazing resources while ensuring that localized pressure over resources is reduced. Only a limited number of animals are allowed to graze a given pasture land, thus making pasture restoration possible at times while also enabling avoidance of disease vectors in some areas (e.g. ticks, tsetse flies). Furthermore, by splitting herds into different groups and keeping them apart, pastoralists minimize risks arising from animal diseases, whose occurrence increases with growing concentration of animals in one place. Mobility is therefore an ecological as well as an economic necessity, involving a number of social features.

Apart from the natural capital provided through rangelands and livestock, mobility critically hinges upon technical as well as socio-political factors, as both human and social assets are important in ensuring mobility for pastoral communities.

- The pastoral *human asset* is characterized by an in-depth knowledge of complex rangeland agro-ecological dynamics, critical in detecting resource *availability* to ensure livelihood strategies and coping mechanisms. Pastoralists' Indigenous Technical Knowledge includes familiarity with patchy range resources and understanding erratic climatic patterns - both relevant in tracking environmental conditions – together with an intimacy with livestock physiology and productivity and a through understanding of soil and plant types (refer to Box below)

- Pastoralists' *social capital* includes cultural and religious mores and values, social norms, duties and responsibilities to kinship bonds, and conflict management mechanisms. Strong social organisation and customary institutions are critical for the effective management of unpredictable environments, as institutions govern herd mobility, pooling of labour for production or security, and spreading of risk through systems of reciprocity and obligation (Davies and Nori, 2008). Through the principle of reciprocity<sup>6</sup> in user rights, these factors play a critical role in ensuring *access* to different range resources in times of need as well as resolving disputes during periods of stress. Social capital is also relevant in establishing alliances and exchanges with other groups and land users and in setting up effective market networks. Societal mechanisms provide the enabling environment for trust mechanisms and information systems that have facilitated trade, credit and market-integration by curtailing transaction costs that would be otherwise very high (Mc Intire, 1993).

**BOX 1 - Somali pastoral indigenous knowledge** (excerpt from Elmi, 1989:36)

Somali herders know their environment very well. They have names for all plants and soil types. They can clearly explain in detail the topography and landscape wherever they once herded their camels. Types of plant growth, species diversity from one area to another, camel preferences in different seasons, plant saltiness, the flowering time of each species, etc are all understood. They can easily differentiate which plant species increase milk production when eaten by camels, or tell from the smell of the milk the plant species camels consumed. They know which species are useful for medicinal purpose. A camel herder is capable of distinguishing his own individual camels from his friends' or clan's by its footprints, pace, toe size and shape; and by the sound of the camel bell. Herders can tell whether the animal was loaded or not, tired or fresh, lame or had only one eye; walking or foraging; thirsty or watered, and so on. They also distinguish people by their footprints and the type of shoes they wear.

The camel owners live simply and freely. They dislike outside pressure from authorities beyond their control. They can go without food for days and never complain. When a camel man travels long distances in search of lost camels or for other reasons, he does not take food except for a few litres of water to sip when he feels thirsty and for praying. Food is provided by the camps he visits. He wraps himself with a sheet or blanket and sleeps on bare ground. He rests on grasses under the shade of trees in the day, or close to shrubs for wind protection at night. Most of the time camel herders wear no shirts, but they seldom walk without shoes. They can walk hundreds of km through a roadless wilderness without losing their directions. Even at night they find their destination using stars as their guidance. They have exceptionally good memories. They remember the smallest details of important events that happened decades ago, and pass them to younger generations orally in a story or a poem.

These two assets are closely intertwined, as the socio-political institutions enable pastoralists to capitalise on their knowledge of the environment and of the production system (Niamir-Fuller, 1999; Davies and Nori, 2008). Mobility is not just about herds moving 'where'; it is also about managing the 'where' so that herds can move (Roe, *et al.*,

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<sup>6</sup> *Reciprocity* is the medium through which interdependence among individuals and groups is established and maintained so to spur informal negotiation rather than war and mechanisms exist as well as incentives not to violate rules (e.g. revenge) (Niamir-Fuller, 1999).

2003). Not only do households constantly spread themselves over the terrain, in response to climatic fluctuations and the needs of herd management, but membership of pastoral households is also continually changing as labour is allocated and reallocated between management units (Dahl and Hjort, 1979). Overall pastoral strategy is one of asset diversification and optimisation of regenerative stock capacity (Bonte, 1981; Joekes and Pointing, 1991). Different household members or communities specialize in different aspects of livestock and environmental management; most pastoral women, for example, play a particularly important role in managing animals' health, as well as in administering peace keeping and ties binding (Niamir Fuller, 1994; Gardner and El Bushra, 2004 for the Somali case).

As stated, exchange-related mobility is also of critical importance within pastoral livelihood patterns and indications are that its relevance is on the increase<sup>7</sup>. This form of mobility aims at enhancing opportunities to establish and develop reciprocal mutual exchange relationships with other groups (farmers, urban dwellers, traders, etc.), to access different market opportunities (so to sell own products and to purchase staples and inputs such as water and veterinary drugs), and to search for complementary livelihood sources. Exchange-related mobility is not necessarily to generate an income per-se, but rather to access the chance of exchanging goods and services, to acquire or share information, and to participate in wider networks. The traditional relevance attached to market exchanges is attested by historic trade activities, such as salt and silk caravans, which, together with long-established livestock trade routes, represents an important part of many pastoral societies.

In recent times few pastoral systems have remained purely subsistence oriented, and often not by their choice (e.g. Dinka and Nuer groups caught in the South Sudan war). Instead exchange relationships are particularly vital for pastoral societies compared to other rural groups; some of the main driving factors in this process are the pastoralists specialised production system, their reliance on deeply seasonal production patterns and the need to acquire non-animal products. Mechanisms to enhance access to starch-based staples such as cereal grains or flour have been strategic in satisfying the food needs of growing pastoral populations all over the world. The increasing substitution rates between direct utilisation of animal products and consumption of exchanged cereals is the most important reason that has allowed consistent growth of population on rangelands (Helland, 2000). The sale or bartering of animals products have been instrumental to this end (refer to Swift, 1986 for meat and Kerven, 1987 for milk products in the Sub-Saharan Africa case).

The terms of trade between livestock and non-livestock products is one of the main triggers for such exchange processes; when valued in terms of caloric energy obtained, these tend to be generally favourable to pastoral producers, as they can obtain more calories by converting animals to cereals through exchange with agriculturalists (Kerven, 1992; Dietz et al., 2001). While a kilogram of meat or milk is valued in markets more than a kilogram of grains or flour, weight for weight, the energy content (calories) of cereals is greater than that of milk. As an indicative example, camel milk contains about 700 cal/kg, while traditionally exchanged cereals such as rice and wheat contain about 3.300-3.500 cal/kg

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<sup>7</sup> The World Initiative for Sustainable Pastoralism has recently elaborated a number of regional reviews of the literature on Pastoral Economics and Marketing in 2006 and 2007.

(FSAU, 2001)<sup>8</sup>. Pastoralists are thus generally on the gaining side of these exchanges. This analytical framework, though, tends to underestimate other important nutritional components of milk such as proteins, vitamins and micronutrients.

Cereals represent a particularly important source of calories for pastoralists during the dry seasons when overall milk production decreases consistently and might not satisfy the energy requirements of the household. In the 1980s, Herren noted that at the height of the dry season, camel milk was clearly not a staple food for southern pastoralist households. During dry times milk contribution to the daily household energy requirements was very small; without sales, this proportion could have been about three times higher but still not enough to directly cover daily requirements. As a result milk was marketed and most of the cash earned through milk sale was directly converted into food (Herren, 1990). Similarly a case study in the Ogaden (Ethiopia's Somali Region) – traditionally a food insecure area – shows that the sale of livestock milk products generates more than 80% of the income needed to satisfy basic needs among pastoral households (while it contributes about 40% during the rainy season, when milk is in surplus) (Abdi Abdullahi Hussein, 1999). The developing trade of pastoral milk products in the Somali region seems thus a consistent strategy within the local household economy.

Pastoralism as a multifaceted livelihood system involves complex resource management patterns, dealing simultaneously with a range of different factors and events over which herders have limited control. Coping with this complexity presupposes much organizational and spatial flexibility as well as specialization across communities and within the households and the herds themselves. An in-depth understanding of the mechanisms governing these dynamics seems therefore critical to support the sustainable evolution of pastoral livelihood systems.

#### *False Assumptions, Wrong Advice*

Amongst the many specific features that characterise pastoral populations, one deserves peculiar attention: the highest rate of failures in development policies and investments (Sandford, 1983; Waters-Bayer and Bayer, 1994; Scott, 1998). Such history is a dramatic sequence of misconceptions, wrongdoings and overall ineffectiveness. Already by the end 1980s Harrison (1987:226) quotes a World Bank survey that records 300 failed projects in Africa, partly or wholly concerned with pastoral developments. In the 1990s, a series of reports showed that the African pastoral sector experienced the greatest concentration of failed development projects in the world (Cernea, 1991; Bonfiglioli, 1992; de Haan, 1994; UNDP, 1994; Abdullah, 1995; FAO, 2001; Sivini, 2006). For most herders neither productivity nor income improved. For most rangelands, the sustainable capacity to produce useful browse and graze was not enhanced. For most donor and lending agencies, anticipated financial rates of return were not achieved (Horowitz and Jokwar, 1992). Somewhere something had gone wrong as the visibility of investments in pastoral areas were not perceivable.

The development discourse that has been driving interventions in these regions has been in time triggered by the idea that herding societies are not able to develop institutions capable of regulating the balance between people, livestock and vegetation. Despite their existence and evolution in marginal and harsh environments for millennia, pastoralists have been

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<sup>8</sup> These rough indications obviously do not account for the higher nutritional value of milk compared to cereals in other terms such as protein or vitamin contents.

perceived and pictured as economically irrational, willfully ignorant (Bennett, 1988), self-destructive (Anderson, 1999), engaged as they seem in threatening peaceful neighboring communities and pillaging the natural environment (Livingstone, 1977; Haaland, 1984); what Horowitz and Jokwar defined as the *anti-nomad morality* (1992). Conceiving pastoralism as economically inefficient, environmentally harmful and socially backward called for its deep restructuring as a natural resource management as well as a livelihood system.

The agenda behind such discourse was to make pastoral production systems more profitable to the national economy, either by converting their lands to farming (and lately into national parks), or by incorporating pastoralists into the market economy (Galaty et al., 1980; Talle, 1988). In that sense pastoral development was conceived as increasing livestock productivity - with more livestock products available for local and export markets - rather than improving the welfare of pastoralists (Sandford, 1983). With this intent, investment policies in pastoral areas have followed a progression that initially addressed technical solutions targeting the productive aspects of pastoralists' main commodity (livestock), and then moving to a wider approach targeting the managerial aspects of pastoral natural resource base (rangelands). In more recent times attention has shifted to livelihood patterns of pastoral groups, with an increasing concern for understanding and providing support to the underpinning social structures and processes underpinning their livelihood. Salih (1991), finally, adequately outlined the following definition: livestock development represents an economic activity governed by the rules of the market economy, while pastoral development is a social activity geared towards 'developing' the pastoralists.

**Table 1.2 The three main stages of development interventions in pastoral areas**

Period	1950s to 1970s	1980s to 1990s	recently
Focus	technical aspects of the livestock production system	efforts aimed at redressing range management	enabling environment for effective pastoral management
Actions	new breeds, forage production, feeding supplementation, animal health / veterinary systems, water availability, marketing facilities	grazing reserves, group ranching, land titling, herders' organizations	Land rights, institutional change, conflict resolution, regional mobility, credit provision, information systems

Somalia is a good example of such an 'interventionist' model – through a number of large scale projects and schemes devoted to agriculture, water drilling developments, animal health services, and livestock production and marketing - and its consequent dramatic failure. The illusion that development was to be brought through material improvements aimed at enhancing productivity levels turned soon into the recognition that such interventions have proven unable to improve people's livelihoods but rather undermined their ecological as well as socio-political fabrics (Gunn, 1990). Misconception and political manipulation of development investments were at the roots of the conflictive relationships between Somali pastoralists and the central state, which eventually led to its collapse, and the civil war originated from the weakened capacity to regulate and resolve disputes around pastoral resources (PDRC, 2003:56).



This development discourse evolved from a detrimental nexus of colonial governance, scientific homogenisation and simplistic economic theories. It led to a distorted interpretation of the relationships between the environment and the inhabiting human society (Warren, 1995). Much as in Mao's famous story about the fool, the finger and the moon, the range ecologist saw shrubs and desertification where pastoralists perceived a good browsing resource, the economists saw too many emaciated animals where the herder perceived a good drought-coping asset, the bureaucrat reported limited livestock meat commercial off take while the nomadic household was concerned about the milk produced by their herd.

Garret Hardin's '*tragedy of the commons*' exposure in 1968 merely provided a theoretical frame for an already existing and accepted discourse among western politicians, academics and practitioners, by pointing out the inherent contradiction between private and public interests in managing pastoral resources. *"The tragedy of the commons develops in this way. Picture a pasture open to all. It is to be expected that each herdsman will try to keep as many cattle as possible on the commons. As a rational being, each herdsman seeks to maximize his gain. The rational herdsman concludes that the only sensible course for him to pursue is to add another animal to his herd. And another, and another. But this is the conclusion reached by each and every rational herdsman sharing a commons. Therein is the tragedy. Each man is locked into a system which compels him to increase his herd without limit in a world that is limited. Ruin is the destination towards which all men rush, each pursuing his own interest in a society that believes in the freedom of the commons. Freedom in a commons brings ruin to all"* (Hardin 1968:1244).

In Hardin's vision the tragedy stays in the fact that local users, people, have no shared norms and rules – institutions – to regulate the resource use at a level that does not lead to its destruction. This notion added to another leading discourse of the 'cattle complex', introduced by Herskovits already in 1926, who believed that pastoralists's desire to accumulate large herds is not based on rational ground related to their own material welfare (Sandford, 1983:15). These perspectives provided a critical benchmark to a distorted vision about pastoralism, through their intrinsic misconceived patterns of pastoral resource management and livelihood systems which served to pave the way to the negative myths of overstocking, desertification and insecurity. Extreme drought events in the Sahel and the Horn of Africa during the 1970s and 1980s and increasing conflict in pastoral regions further supported this vision that pastoral resource management was at the root of unsustainable livelihood patterns and processes of environmental degradation.

Through time Hardin's 'tragedy' discourse eventually materialised. In a USAid discussion paper on pastoral development projects in Africa's Sahel, Horowitz noted: *"So many documents, officials, and even scientists repeat the assertion of pastoral responsibility for environmental degradation that the accusation has achieved the status of a fundamental truth, so self evident a case that marshalling evidence in its behalf is superfluous if not in fact absurd, like trying to satisfy a sceptic that the earth is round or the sun rises in the East"*<sup>9</sup>.

Two options logically arose to avoid such 'tragedy'. One rested on the idea that the control of common property resources should be taken by a central government; the other – pushed by neoclassical economists – advocated that the commons should be transformed into private property (Berkes et al., 1989; Feeney et al., 1990). This paradigm provided scientific backing to legitimising modern / statutory control over resources by pointing out

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<sup>9</sup> Horowitz 1979: 27 – quoted in Ellis, 1994

that traditional / community use of forests, wildlife, fisheries and pastures would otherwise result in such tragedy (Haller, 2002). Range resources were at stake and local structural irrationality and ignorance became seen as in dire need of 'external' wisdom and expertise. Imported range management practices represented the most valid alternative to indigenous ones, and indeed foreign skills and expertise found their way through development programs in pastoral environments. Until the late 1980s, most rangeland programs were still directed by foreign 'experts' (Kelly, 1986). In this sense Hardin's thesis provided a rationalization for World Bank programs calling for sweeping privatization of land and commercialization of livestock production (Fratkin, 1997:241); these experiences have admittedly provided disappointing results in both the environmental and socio-economic domains, particularly in Sub-Saharan Africa, as experiences in Kenya (Mwangi, 2005), Angola (Cruz de Carvalho, 1974) and Botswana (Peters, 1994) attest. In the best Foucauldian way, thus, the diagnosis turned to be the disease, and the surgeon converted into a killer.

A true concern for the livelihood of pastoral groups and the underlying social structures and processes regulating resource tenure and utilization has developed only in recent times. Apart from the acknowledgement of the dramatic degree of development failures amongst pastoralists and the recognition of their increasing vulnerability in food and social security terms, main factors that have led to an in-depth rethinking of development paradigms for such regions include a) an increasing appreciation of the goods and services provided by pastoral groups to the wider society<sup>10</sup> and b) a better understanding of the agro-ecological dynamics characterizing rangeland ecosystems. Innovative analytical dimensions point to the effectiveness of pastoral institutions within their ecological context, thus helping to challenge old *mainstream orthodoxies* (Konczacki, 1978; Sandford, 1983; Lane and Swift, 1989; Lane, 1998).

### *The Missing Balance*

Until a few decades ago the range ecology paradigm was deeply embedded in '*notions of balance or equilibrium in nature*' with a long tradition in Western thought, evolving from a track traceable to the Greek, medieval Christian, and eighteenth century rationalist ideas (Scoones, 1999:481).

Since the beginning of 20th century when Clements (1916) introduced ideas of ecological stability, range ecologists have mainly been interested in processes of vegetation succession towards a stable climax. Within this frame population dynamics were regulated on simple population-growth models developed from the work of Malthus. The traditional paradigm thus implied a range management model hinging upon a trade-off between animals and crops and the maintenance of (ecological) stability (Warren, 1994:194), where overgrazing represented the major threat to this balance. In this framework the carrying capacity concept, indicating the maximum sustained yield levels an ecosystem can bear within the equilibrium thinking, became a critical concept in defining people-environment interactions. With some exceptions (i.e. Elton, 1930) this mainstream view has been driving academic and policy decision-making in the management of marginal environments until the late 1980s.

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<sup>10</sup> Such as the appreciation for animal proteins contributing to local food security (Delgado et al., 1999), the growing relevance of livestock trade to national GDPs for poor Sahelian countries (WISP, 2008; Hesse and McGregor, 2006), and diverse forms of environmental services (Lane, 1998; Nori and Taylor, 2007).

It is against this bias that pastoral resource management was blamed as ineffective and unsustainable. The Annual Reports of the Veterinary Department of British Somaliland in the 1930s and those of the ecological surveyors Grover and Gilliland in 1947 blamed the practices of local population for poor ecological and economic performances, and still in the late 1980s it was reported that Somalia had eight times ‘too many’ animals (Bartels et al., 1990) <sup>11</sup>.

Through longer-term controlled studies, quantitative methodologies and sharper analytical tools (Gunn, 1990:29) new range ecologists showed that arid and semi-arid environments are inherently unstable, meaning that populations or other components are not in long-term balance with other elements of the system. Rainfall variability is so high and unpredictable that it represents the primary cause of complex ecosystem dynamics (Scoones, 1994; Ellis, 1994); contrary to the former paradigm livestock and vegetation do not control each other, and external shocks (i.e. drought) rather than endogenous processes (i.e. animal pressure) determine the state of vegetation and livestock numbers (Ellis and Swift, 1988; Sandford, 1994). Change in non-equilibrium environments does not occur gradually, does not follow successional models and does not show the classical feedback regulatory mechanisms.

In such models management plays a limited role; non-equilibrium systems are fundamentally resilient in that rangeland plants rapidly recover when rain comes. In this perspective concepts such as ‘climax vegetation’, ‘overgrazing’ and ‘carrying capacity’ are accordingly highly problematic as they fail to recognize the variability and patchiness of arid lands ecology (Coughenour et al., 1985; Ellis and Swift, 1988; Homewood and Rodgers, 1991; Behnke and Scoones, 1992; Behnke et al., 1993; Behnke, 1994); drought and desertification trends are more the result of long-term climatic oscillations/ patterns rather than of detrimental local land use patterns/ human activities – as the recent Climate Change debate is also demonstrating (Davies and Nori, 2008).

Based on this new insight about ecological dynamics within these environments, a growing body of evidence sprang to support the view that pastoralists have evolved effective systems to utilize and protect resources in the common long-term interest, provided specific conditions exist (e.g. pressure from external environments is limited) (Warren, 1994; Niamir-Fuller, 1999). New range ecologists assessed and demonstrated that raising livestock through seasonal migration is a uniquely efficient way to draw the maximum well-being out of marginal areas unsuitable for other forms of agriculture while also ensuring a good degree of environmental conservation. In the same way photographs develop from dark negatives into colorful pictures, pastoralist institutions started being recognized for their capacity to regulate access to users and sanction abusers, and to conserve and protect the natural resource base in ways that are more effective than exclusive and private forms of ownership (IDS, 1988; Behnke and Scoones, 1992; McCabe, 1990; Bromley, 1992; Peters, 1994; Turner, 1993). Indeed most national parks, natural reserves and wildlife sanctuaries in the world have been carved from pastoral areas, thus attesting to their richness in biodiversity and their being endemic to an impressive variety of animals and plants<sup>12</sup>.

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<sup>11</sup> quoted in Warren, 1994

<sup>12</sup> refer to Lane, 1998; Nori and Taylor, 2007 for a further discussion on this.

By challenging some basic, and often deeply embedded, concepts of nature or natural-ness, balance, and order, non-equilibrium thinking fuelled thus the ideological side of the debate, directly addressing the divine order of Nature characterising classical ecology and other disciplines (e.g., structural functionalism in anthropology, tradition/modernity in sociology, etc.), which were permeated by positivism and linked to evolutionary ideas about change from one steady state to another.

A whole new language emerged to describe the complex dynamics of non-equilibrium systems, with terms such as *variability, resilience, non-equilibrium dynamics, persistence, resistance, instability, adaptive change, non-linear interactions, etc...* (Scoones, 1999). Rather than in need of externally-led development based on equilibrium and predictability concepts, pastoral resource management started being increasingly recognised as a complex dynamic pattern of behaviour, fine-tuned to non-equilibrium and thus unpredictable ecosystem functioning (Ellis, 1994).

Obviously the debate involved scientific knowledge and the related power dimension. As Kuhn has revealed, science itself is a social construction and the trajectories of its developments as much as the outcomes of its efforts are deeply embedded in wider societal frameworks, where culture and power play important roles (1962). Science is deeply penetrated by culture, and indeed the strength of the mainstream view depicting pastoralists as inefficient and irrational was mutually reinforced by exchanges between three groups: ecologists, economists and authoritarian governments, as identified by Warren (1994). External interests and actors needed a general reference framework to structure and justify their encroachment on pastoral lands; scientists worked thus to provide paradigms that were eventually legitimated by their 'institutionalisation', and acquired in this way necessary recognition and funding (*ibidem*).

Unsurprisingly the misinformed image of pastoralists as 'pillagers' has characterised policy visions through different time periods and in the different corners of the globe, from colonial states to post-colonial bureaucracies, from Western to Soviet ideologies, from United Nations agencies to concerned non-governmental organizations.

#### **BOX 2 - UN vision of pastoralism**

The evolution of the United Nations' vision towards pastoralists and rangelands is a particularly representative example of this generalised feeling. The first Convention on Desertification (UN COD, Nairobi 1977) identified in pastoral land use a main cause of environmental degradation for marginal lands, in a position that tended to 'blame the victims' (as to Gunn, 1990:27). This position was reiterated in the UNEP 1984 Governing Council. It was only during the 1990s that the United Nations Conference on Environment and Development (UN CED) legitimised the relevance of local communities' knowledge, rights and capacities towards what had been defined as 'sustainable development'. Agenda 21 strongly advocated a combination of government decentralisation, devolution and community participation for communally managed natural resources. In 1994 the UN Convention to Combat Desertification (UNCCD) placed a major emphasis on improving the livelihoods of drylands inhabitants as a main measure to achieve its goal (Swift 1996; Leach et al., 1996b), but the provisions of the Convention remained weak as to matters concerning access to land (Drylands Coordination Group Report No. 4). Recent efforts through the UN-supported World Initiative for Sustainable Pastoralism (WISP, [www.iucn.org/wisp](http://www.iucn.org/wisp)) programme are aimed at further challenging this critical policy domain (Nori et al., 2008:13).

In one way or another modernization of pastoral systems has always meant a deep reorganization of their societies and the expropriation of their resources. While colonial governance set the path for such discourse, theories of modernization continued to permeate interventions in rangeland management in post-colonial governments. These, inspired by different ideologies, simply continued reproducing policies that aimed at grabbing pastoralists' resources while ignoring their relationships with the natural resource base and neglecting their basic subsistence rights. This approach also characterized independent state governments that tried to differentiate from the western styles of colonial powers. In the Middle East, the 20th-century ruling elite and the urban middle class have appropriated the vision of British and French Mandate officials, adapting it to the nationalist credo, and have "*declared nomadic pastoralism a backward way of life antithetical to social and national development*"<sup>13</sup>.

*"If the colonizers were guilty of ignoring customary rights generally, the indigenous African officialdom is similarly guilty of ignoring pastoral tenure with the same air of prejudice, indifference, ethnic chauvinism and discrimination"* (Tenga, 2004:xx). Everywhere the mobility that characterise pastoral resource management was conceptualised as an institution that could not fit within the new modernizing frame. Though with diversity, most independent African states – including Algeria, Sudan, Egypt, Ethiopia, Nigeria, Somalia and Mali - choose sedentarisation as the development path for pastoral groups; such references can be still found in most post-colonial constitutions (Gunn, 1990; Markakis, 2004).

Neither the Soviet nor Chinese experiences escaped this fate, as their development policies were deeply embedded in western paradigms<sup>14</sup>. The Soviet experience was also extended in the Horn of Africa, with the nationalisation-cum-sedentarisation programs replicated in the 1970s in Ethiopia, Tanzania and Somalia (Scott, 1998). Again, Somali pastoralism represents a vanguard case to analyse these trends. Despite their theoretically different ideological and political background all international actors playing a role in developing Somali rangelands and applied similar strategies and practices. Great Britain, USSR, US, Italy, Germany, World Bank and the UN agencies all supported large-scale agriculturally oriented projects in greener areas and programs finalised to enhance livestock commercial off-take in pastoral environments (cfr. Gunn, 1990). The starting point for these development processes were major changes in the existing institutional environment, with a main shift from a risk-reduction to a profit-maximization perspective.

While disagreement might arise on some of these matters, what is evident nowadays is that an enabling environment for sustainable patterns of endogenous development for pastoral areas has not yet seen the light. Investments in social and economic infrastructure have been very low and most food and land policies have addressed the needs of farming and urban communities - rather than those of pastoralists; with irrigation schemes eating out precious grazing areas and market prices for animal proteins lowered to enhance consumption of city dwellers. The revenues of the tourism industry generated through the conversion of pastoral lands into national parks and natural conservation areas have rarely fed back into local development schemes. Neither has the exploitation of important

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<sup>13</sup> Mundy and Musallam, 2000 - quoted in Chatelard, 2005

<sup>14</sup> refer to Sneath (1998) for an interesting assessment of grassland degradation in areas administered through Russian and Chinese policies, involving state-owned agricultural collectives and permanent settlements (as reported in Ostrom *et al.*, 1999).

underground resources – oil, uranium but also water - which has fuelled conflict rather than positive development onto pastoral territories.

*At terms with trade*

Paradoxically the consistency of managing resources in a pastoral way became more appreciated at a time when investments in marginal areas were already consistently decreasing. Daunted by the complexities of the pastoral question, by the difficulties of finding appropriate ways of intervening, and by the modest populations involved, the international development agencies were in fact becoming less and less involved in pastoral regions (Waters-Bayer and Bayer, 1994; Thebaud and Batterbury, 2001; FAO, 2001).

This helps partially explaining 1) why efforts needed to bridge the theoretical and development gaps have lacked adequate political and financial backing and 2) why the social and economic dimensions of pastoral resource management are still less well understood than the ecological issues - this having in turn hampered translating the new thinking into pastoral-friendly political and operational approaches Behnke, 1992; Scoones, 1994; Zaal, 1999; Scoones, 1999; Thebaud and Batterbury, 2001).

Along these lines Devereux points out that both the classical and the new range ecology schools of thought focus too much on the natural resource base and not enough on the other elements of pastoral systems (2004). This seems to follow from Dahl's concern that however important ecology has been historically, its importance in shaping pastoral modes of life is in decline; the political and economic place of the pastoral society in a wider national and international context is more important for the future of pastoralism (1980: 200). In this perspective the integration of pastoral economies into market mechanisms represents a main new risk that pastoralists face. Looking into the structures and the mechanisms that govern this process and the related reshaping of pastoral livelihoods critically contributes to understanding the intricacies that characterise people-environment relationships in the African drylands. While most literature has traditionally focused on exploring evolving livestock trade in pastoral areas, limited attention has been devoted to the marketing of pastoral milk production and its related social, economic, nutritional and environmental implications (Kerven, 1987). This thesis aims to redress this concern.

In the analysis of economic exchanges importance has typically been allocated to the technical matters of market relationships, with social and political aspects of markets functioning becoming an issue of recent concern. As the Neoclassical approach mainly addressed the production aspects, a gap has been increasingly perceived in the understanding of the organizational structuring of markets, with issues of governance becoming central in more recent approaches (Williamson, 2000). The New Institutional Economics (NIE) approach is of particular relevance in this context, as it has been able to forge an analytical frame that gives adequate relevance to socio-cultural and organizational aspects, but still leaves an important room for the dimension of individuals as economic actors. 'Neo' Institutionalists differ from 'Old' ones (i.e. Veblen, 1919) as they not only assert that institutions are critical in shaping economic actions, but they also try to explain how they do this.

The pillar of institutionalists is that individuals' conduct is shaped by relations of institutional nature, challenging the neoclassical tenet of a rational individual able to calculate everything (Hodgson 1993). This school of thought hinges on the concept of

*institutions* which, according to North (1990:3) are the rules of the game in a society or, more formally, are the humanly devised constraints and incentives - whether political, social or economic - that structure and shape human interactions, By regulating access and control rights over resources institutions provide for the fabric that frames individual strategies and actions within the larger societal setting. They do so by helping individuals form expectations about the others' conduct, thereby enabling co-ordination and cooperation, especially in economic activities, in collective action and in sustainable resource use (Swift, 1994; Haller, 2002).

Institutions are specific to a culture and a time; they are flexible and dynamic and evolve in response to changes and to the related costs and benefits they bear to their participants, deeply embedded as they are in power relations. Institutions can be formal - developed by the state or other 'official' authority - or informal, thus developed by local communities, where they are embedded in their culture (North, 1990; Ostrom, 1990; Ensminger, 1992, 1998; Haller, 2002). This distinction is nevertheless ambiguous, as institutional environments are often characterised by a 'pluralism' which accounts for the overlaying of local cultural norms and colonially imposed rules; customary, statutory and modern legislative frames; influences from religious dictates (e.g. the Sharia influences in most Muslim countries), geo-political dynamics (e.g. land policies developed under the Western or the Soviet model), and degrees of integration within the wider global frame (Nori and Taylor, 2007).

Different from institutions, *organizations* refer to the groups people form to achieve their goals. Organisations are the players of the game, constellations of individuals and groups bound by some common purpose, including state or community organisations such as those involved in upholding the law and executing public policy as well as economic organisations, such as the firm, the corporation and the household. Through organisation people structure their collective action to pursue shared objectives; these bodies operate within the framework - the rules and the constraints - provided by institutions (North, 1990; Swift, 1994).

The *institutional environment* includes institutions and organisations, representing the fundamental set of rules and related players, both formal (legislative) or informal (cultural), that govern production, exchange and distribution within a society. Institutions and organizations are the result of trade-offs between the benefits and the costs of co-operating and their interplay is critical in understanding how livelihood strategies are shaped and operate. *Institutional arrangements*, at a micro-level, are specific arrangements between parties to a contract, which govern the way the parties co-operate and/or compete. They are devised primarily for the purpose of reducing transaction costs (Williamson, 1994).

An important realm where Neo-Institutional economists associate and distantiate from Neoclassical ones is the relevance of societal values and norms in everyday life. According to Neoclassical economists these are relevant in shaping the goal of individuals' rational calculus (that is influencing the perception of what is to be preferred); while in the opinion of Neo-institutionalists these are also relevant in shaping the transaction between economic agents - thus opening the window to a new conceptualisation of economic exchanges, actors and commodities.

**Table 1.3 The different levels of Institutions**

<i>Level</i>	<i>Frequency (years)</i>	<i>Purpose</i>	<i>Relevance in the Puntland pastoral context</i>
Embeddedness: informal institutions, customs, traditions, norms, religion	10 <sup>2</sup> to 10 <sup>3</sup>		Islam
Institutional environment: formal rules of the game, esp. property	10 to 10 <sup>2</sup>	Get the institutional environment right	Clan, <i>xeer</i>
Governance: play of the game, esp. contracts	1 to 10	Get the governance structures right	Herd management Smallstock trade Milk marketing

Source: adapted from Williamson, 2000

While accepting the utility-maximization paradigm, NIE assert that socio-cultural values are to be critically considered in economic analyses as they shape not only the 'utility' variable, but also the way it is 'maximized'. NIEs main attention thus shifts thus from the neoclassical resource/budget constraints to the role institutions play in the analysis of 'individuals seeking to maximize their interests as they perceive them' (Furubotn and Richter, 1997:3). This represents in fact the main domain where the two schools start diverging. In the neoclassical vision institutions are perceived as mechanisms alternative to pure market competition, thus representing a friction (e.g. corruption) to the system, carrying limited (negative or negligible) consequences on the economic performance. According to NIEs on the other hand institutions are the backbone of economic exchanges, critical devices to enable marketing, due to their ability to reduce risk and the transaction costs associated with it. In this sense they represent a pivotal resource, rather than a negligible friction (Furubotn and Richter, 1997).

#### *The costs of transacting*

NIE gives thus high importance to information concerning the characteristics of the commodity or service exchanged as well as of the rights and behaviours of the economic players involved and related systems for negotiation, monitoring, incentive and sanctioning. These factors shape the transaction to a good degree because they are costly, and they must thus be accounted for. Contrary to the neoclassical vision, markets are neither complete nor perfect, exchange is not free and involves time and resources - and transaction costs addressing these matters are therefore introduced (North 1990; Williamson, 1994). Transaction costs are central to NIE, and define the degree of incompleteness and imperfection of markets, particularly of rural markets in developing countries (Ellis and Swift, 1988).

A related implication is that many potentially beneficial transactions simply do not take place, for example, if the cost of transacting is high in relation to the value of the transaction, then this is less likely to take place, as its benefits are outweighed by the associated costs. As there are gains to be realised from exchange, economic actors structure their relations to reduce the costs involved in such exchanging. Changes in the institutional environment are therefore instrumental to make economic exchanges feasible in an otherwise difficult environment. Stiglitz's (1974) analysis of sharecropping contracts represents one of the best known examples in this sense, showing how that kind of institutional arrangement was instrumental to tackle imperfections and incompleteness of



local markets / labour contracts - as it enabled redistributing risks, profits and incentives amongst the different involved agents. Economic developments are thus resulting from a process which is not merely guided by technological change but also by institutional changes, which are critical in reducing transaction costs (Ensminger, 1992). One cannot go with the other, and indeed institutional and organisational features play a non-negligible role in promoting technical progress itself (Platteau, 2000: xvi).

In this respect institutional economists maintain that they are complementary, rather than a substitute for, conventional economic analysis (Williamson, 1975)<sup>15</sup>, and that an analysis of production costs is to be supplemented with another concerning transaction ones. Considering the features of pastoral areas – where population is low and scattered and resource variability high – an enabling institutional environment is pivotal in managing uncertainty levels by regulating collective actions and reducing transactions costs.

Accepting transaction costs involves a number of relevant consequences, and the *rational choice model* – which left no room for incompleteness and imperfection – needs to account for the broader social structure framing the transaction. Issues of power, culture and ideology are to be considered within this model, which cannot be limited to utility maximization only in terms of individuals' preferences and resource scarcity. Overall, *bounded rationality* is now opposed to the neoclassical model of *rational choice*. *Bounded rationality* underscores the idea that individuals, who operate under imperfect information, have to sustain wider societal aspects (ideology and culture, which determine what people value) and are embedded in power relationships.

Together with an innovative perspective on the nature of economic agents and exchanges, another important implication of this paradigm is that resources, commodities and services have more than the two dimensions usually assumed by economists (price and quantity). The relationships existing between the economic agent and the involved resource/commodity/service and those established amongst the different involved agents give rise to institutional arrangements which represent a relevant component of the market analysis. Resource/commodity/service are therefore socially embedded in that they are also valued according to the meaning they hold within the society.

Neo-Institutional Economics are appreciated by social scientists as they challenge the neo-classical assumption about human behavior that people are exclusively self-regarding, an assumption which originates from the traditional separation between economics and society. This separation is no longer, and agents, transactions and commodities are all embedded in a series of relationships which are defined by the interface between market and society. NIEs rather focus their attention on the centrality of societal mechanisms in defining economic transactions (Ensminger, 1992; Bardhan and Ray, 2006; Quarles, 1999). The NIE gives adequate relevance to socio-cultural and organizational aspects, while still leaving important room for the dimension of individuals as economic actors. In fact, in the Somali context it is hard to distinguish a sharp borderline between individual interests, and those who belong to a sub-group within the local genealogical system, dominated by clan structures and corporate resource control. In this sense NIE has contributed to bring the social dimension into economic analysis. Economic agents are not autonomous beings, but rather situated in a societal context to which they respond; those social influences that represented disturbances to neoclassical economic analyses come to the foreground, and

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<sup>15</sup> As quoted in Swedberg and Granovetter, 1992:14

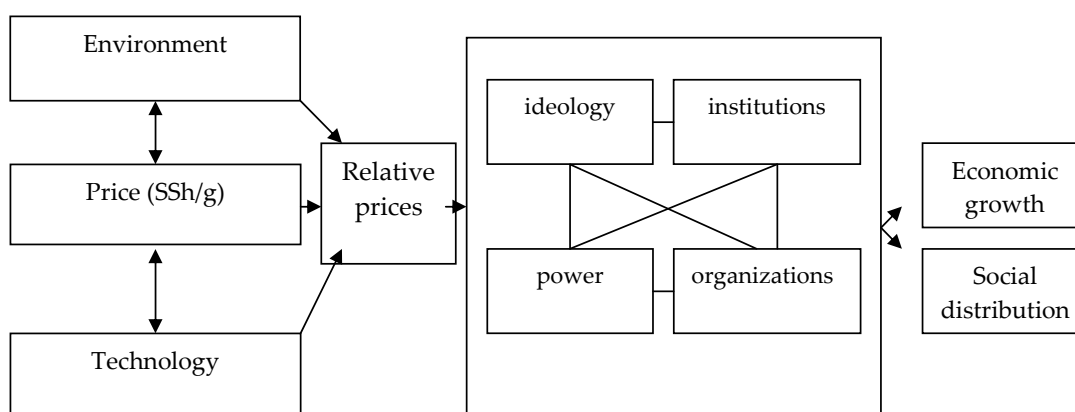
the economic exchange becomes consequently a multifaceted action (Swedberg and Granovetter, 1992). Agents, exchanges and resources are all inextricably embedded in the wider societal picture and the related defining institutions – which thus deserve adequate attention and understanding.

The concept of 'embeddedness' (Granovetter, 1985; Polanyi, 1992) materializes the effort to overcome the limitations of the dichotomous debate between economists' central concern for the market, and sociologists' centrality of the society. The previous dichotomy did not help addressing a proper conceptualisation of human agency; people were in fact 'undersocialised' by (neoclassical) economists, implying atomised / asocial individuals facing no social influence/constraint; on the other end sociologists tended to 'oversocialise' human agency, which almost does not exist *per-se*, as individual's decisions are governed by prevalent social values and norms. Granovetter (1985) ironically remarks that in both approaches human actors are conceived remotely from their relations. Instead actors do not behave or decide as atoms outside a social context, nor do they adhere slavishly to a script written for them by the particular intersection of social categories that they happen to occupy. Their attempts at purposive action are instead embedded in concrete, ongoing systems of social relations (ibidem: 487).

Granovetter's (1993) assessment of existing ethnographic literature showing the immense range of diverse attitudes towards economic activity clearly attests to the inadequacy of theories which do not give proper consideration to the specific socio-cultural context and the framing institutions. Economic actions take thus place within a defined socio-cultural context which influences them by shaping the nature of the embedding networks of relations and the related forms of knowledge, power and control. Economic exchanges are often not carried out between strangers but rather by individuals involved in long-term continuing relationships (see Granovetter, 1985; 1993; 1995). On these lines Geertz (1963) and Scott (1976) spoke of 'moral economy', implying that its objective was not utilitarian in merely neoclassical terms, but founded on a subsistence ethos where resources and risks were pooled so to guarantee everyone at least minimal provisioning. Common food and social securities constituted a society concern. Others went further in elaborating the embeddedness of economic behavior and the nature of institutions as social constructions of reality (Bourdieu, 1986; Granovetter, 1993; Platteau, 2000).

This new conceptualization of economic behavior provided an important theoretical lens to translate anthropological studies undertaken in pastoral areas into comprehensive societal pictures. Anthropologists (Evans-Pritchard, 1940; Gulliver, 1955; Lewis, 1960; Dupire, 1962; Dyson-Hudson, 1966; Spencer, 1965 - amongst others for the African continent) had in fact shown that inside pastoral societies there are mostly rules, norms and devices regulating who is allowed to use what kind of resource at what time and under what circumstances, and related regulatory agencies, such as monitoring and sanctioning boards (council of elders, priests, young men) which in different ways govern resource management (e.g. collect fees, impose contributions on members, lay down rules and punish deviant behaviour) (Platteau, 2000; Haller, 2002). In a way they described the existing institutional environment and provided some rationale for that.

Through this new analytical lens the complexity of such systems and the multifaceted-ness of the mechanisms regulating them were acknowledged, with pastoral management resulting in mosaics of diverse and coexisting sets of norms, rights and claims which dynamically regulate access to resources.



**Figure 1.2 Modelling change** (adapted from Ensminger, 1992)

All in all the institutional analysis provides an appropriate interface for dialogue and synergies between anthropological approaches (elements inside the box in the model above) and economicist ones (elements outside the box) (also refer to Bardhan and Roy, 2006). An institutional analysis greatly helps to shed light on analyzing livelihood strategies in their wider picture, and enables sociologists to gain a critical position in the development domain, where they have been for too long neglected by other more prominent disciplines (Ensminger 1992; Scoones, 1994).

#### *Institutions at work*

Livelihood approaches are situated within the long history of efforts to inject social considerations into economic approaches (Tsikata, 2003). Livelihoods indicate the ways people organise and act in order to meet their needs, at different levels; these are achieved through access to a range of resources which are combined and arranged in the pursuit of different strategies, including immediate and long term survival. The ability of individuals and families to construct a livelihood depends on their capacity to access specific resources / assets, which allow a range of possible strategies, each comprising a bundle of activities (Ellis, 1998; Bebbington, 1999; Tsikata, 2003). Resources shall not be only thought of as physical assets, but also non-material opportunities such as kin, friendship, networks, etc...<sup>16</sup>

Building on the works of Sen (1981, 2000) and Chambers (1987), access represents in this approach the most critical resource in the organisation of livelihoods (Ellis, 1998; Bebbington, 1999). People's ability to generate a livelihood or increase their assets depends on their access to productive resources and their ability to control and use them affectively (Berry, 1989:41). Analysing the mechanisms governing the access to these assets / resources within a given society is therefore critical to understand existing livelihoods and the embedding patterns of resource management, as this helps unravelling the connections between people's opportunities and the outcomes of different strategy combinations (Scoones, 1998). Livelihoods are therefore embedded in institutions which represent the critical interface framing resource access. An analysis of the range of embedding (formal

<sup>16</sup> Refer to Bourdieu, 1986; Ellis, 1998; Bebbington, 1999; Woodcock and Narayan, 2000 for a wider debate on these non-material assets.

and informal) organisational and institutional factors is thus central to an analysis of livelihood strategies and outcomes (Scoones, 1998; Hebinck, 2007). In a wider and more dynamic perspective institutions mediate people-environment relations and thus analysing institutions and their relationship to adaptation and change is a key aspect of understanding livelihoods (Leach *et al.*, 1997; Pelling and High, 2003).

Within this perspective a major area of academic interest is represented by the relationship between individuals and the societal mechanisms into which they are embedded - the so-called 'actors' and the 'structures'. The tensions existing between economic agents and institutions and the effective *room for manoeuvre* the former have become a central analytical concern (Long, 2001). The major contention is between, on the one hand, perspectives that emphasise the normative and structural aspects of organisations and their influence on social behaviour, leaving limited room for individuals to operate - given that they are embedded in a social context, and that their rationality is bounded (Uphoff, 1986; North, 1990; Ensminger, 1992). Such Structuralist approaches have been criticised for being too deterministic and based upon evolutionary or linear assumptions of development and social change.

In this context the Property Rights (PRs) school sees, in the institutional shift towards more exclusive forms of resource access, the pre-determined evolutionary path resulting from increased population pressure and resource scarcity (Boserup, 1965, 1981; Demsetz, 1967; Posner, 1980; Hayami and Ruttan, 1985 and others). The Property Rights vision has been criticised for endorsing a too simplistic and static vision that is embedded in a kind of linear progression that sees in the slow but inevitable privatization of rangelands the key to their future sustainability. Indeed in Boserup's vision pastoralism is perceived as an intermediary step in the evolutionary process which moves people from hunting and gathering towards intense crop cultivation, according to their density rate (1965). By giving an excessive attention to economic performance, PRs theorists tend to underestimate other important factors in people's decision making, such as social and cultural elements (refer to Ensminger, 1996). Similarly, PRs have been blamed for giving little consideration to longer-term trends (such as climate change and globalization) and political processes (urbanization, transport and communication developments) that are continuously remolding pastoral environments and societies.

On the other hand a distinct school of thought asserts that while providing an important cultural and social reference frame that drives people's behaviour and strategies, institutions do not necessarily determine them. Instead institutions are rules and regulations that provide individuals with a *room for manoeuvre* within which human agents are constantly arranging and re-arranging in order to improve their lives (Scott, 1985; Ostrom, 1990; Long 2001). Institutions are parts of a process of social negotiation, rather than fixed 'objects' or 'bounded social systems', and thus while shaping agents' behaviour, they are also shaped by individuals and organisations.

Giddens further looked into the complex linkages between actor and structure. These are deeply embedded into each other, dynamically linked and undergo mutual influences - as the latter is constituted according to the specific cultural context within which it operates, which is both constraining and enabling, and the former is continuously reproduced and transformed through actors' actions (Giddens, 1984; Long and Long, 1992). Structure is understood as the set of rules and resources that direct social life, and acquires meaning only when directly related to the notion of agency - which represents individuals'

capability to pursue their own project and exercise degrees of power, in many different forms (Giddens, 1984; Scott, 1985; Long and Long, 1992; Gerritsen, 2002). Not only do social systems shape the behaviour of individual human beings, they are permanently reshaped and reproduced by these individuals as well in the dynamic that structures rules and resources within a society. The capability of actors to induce structural change is referred to as 'agency' (Giddens, 1996; Scoones, 1998).

In this perspective achieving sustainable livelihoods is a negotiated process amongst diverse interests, roles and powers that might cooperate, compete or conflict in ways that are hardly predictable, as they involve a complexity of intertwined factors. Unveiling these 'social interfaces' requires a detailed investigation over the roles of different actors and the linkages and divisions amongst them, so to disentangle the socio-political complexity of the settings where these interact (Long 1989, 1992; Ensminger, 1992; Scoones and Thompson, 1994). According to Hebinck (2007) a key question here is whether (and to what extent) we attribute power to those social actors that create institutions, and who formulate and maintain the rules to which others feel bound, or whether agency should also be attributed to those with less power. We will see in the camel milk marketing case how actors that are supposedly powerless (i.e. women and occupational castes) in fact show important degrees and capacities to play with the institutional environment in order to develop their own livelihoods.

Two elements are critical within this perspective:

a) The historical dynamics of institutional trajectories, as institutions are cultural embodiments, reflecting the value system and historical antecedents of a society, which influence to a good degree the current institutional environment (Platteau, 2000). An historical analysis of the change affecting rules and norms that regulate resource control and management - such as those governing access to pastures and integration to markets - is thus reputedly important, especially in an environment recently exposed to drastic evolutions in the demographic, technological, economic and political domains. Institutional change shapes the way societies evolve through time and hence an institutional perspective provides a framework for examining the process of change (Berry, 1989; North, 1990; Ensminger, 1992).

b) The effectiveness of existing institutions, as this is key in enhancing and governing processes of sustainable (or unsustainable) development. A livelihood is reputed sustainable when it can cope with and recover from stresses and shocks, maintain or enhance its capabilities and assets, while not undermining the natural resource base (Chambers and Conway, 1992). These aspects are particularly relevant for pastoral systems which critically rely on their environments. For pastoralists an institutional environment that leaves room for continuous adaptability of livelihood strategies while caring for the regeneration of the natural resource base is a vital element for their future.

In the following chapters the social organisation of Somali pastoralism will be assessed, together with its consistency with the ecological setting upon which it rests, in terms of resource management patterns and livelihood strategies. Specific relevance is attributed to the dynamism of such organizational set up and the embedding institutions, which is critical to enable adapting to changing conditions. An assessment of the major events that have characterised the region in recent decades will help framing the historical evolution of societal dynamics, with major focus on processes of market integration and the rise and fall of centralised state governance in Somalia.

The emergence of camel milk marketing is deeply embedded in such dynamics as it is part of the wider market integration of local livelihoods as well as the important societal changes which have taken place in the aftermath of the civil strife. The shift of camel milk commoditization from a taboo to an important livelihood strategy in the region has been made possible by important reconfigurations of the institutional environment, with a new commodity, new actors and new mechanisms set in place to enable it. The meaning and implications this reconfiguration has on the mobilization of local resources, their conversion into products and the utilisation of the latter are then assessed. This is done in order to understand the development trajectory of pastoralism in this part of the world, as well as to judge about its potentials and limitations in a sustainable livelihoods perspective.

In order to disentangle these dynamics and thoroughly assess their relevance and implications the main research questions are as follows:

- 1) How to explain the evolutionary adaptability of pastoral systems against the recurrent claims about their inconsistency and unsustainability provided by so-defined 'expert' systems ?
- 2) What does the innovation of camel milk marketing represent to Somali pastoralism in terms of resource management and livelihood strategies?
- 3) Which are the important implications for its sustainability?

## **METHODOLOGICAL CONSIDERATIONS**

This chapter provides the framework wherein this work has developed, and explains how the research has been undertaken. The interest in the research subject started with fieldwork undertaken within the project 'Sustainable improvements of camel milk production and trade in NE Somalia', implemented by the Italian NGO consortium UNA/Africa '70, and funded by the European Commission Food Security budget line. Market surveys undertaken by the research in 2001 and 2002 provided the insights that further developed into the research proposal.

While undertaking that assignment, in fact, I was continuously puzzled by the way local society was evolving and the economy was developing in contrast to the dark image the whole country had gained internationally as a result of the collapse of its central state and the following civil strife. The local bio-physical environment appeared to be an insurmountable barrier within which to trade such a perishable and delicate product, produced in little amounts in scattered areas. Instead I daily witnessed dozens of colourful women selling milk throughout seasons in dusty urban markets, gaining an income to support their livelihood, while also providing an important outlet for pastoral producers as well as a source of healthy and nutritious food for urban households. Despite the visually compelling evidence I could hardly find this economic activity described in any so-called comprehensive official report of the region. I could not match the lively society and booming economy I was experiencing with the 'black hole' image Somalia was described as by external actors.

I decided therefore to further explore the social and economic aspects of camel milk marketing, in order to understand its overall meaning within the local society. This has in turn helped me - as a microscope - to analyze in more depth the organisation and the functioning of pastoral livelihoods which, as we will see, do not only critically rely on their natural resource base but even more on the complex and intriguing interactions in the social and financial domains.

### ***Setting the target***

Starting from the Puntland case, a comparative study of the different milk marketing systems in diverse areas of the Somali region was initially planned. This was later excluded as a time-consuming and risky activity, due to the worsening security conditions in parts of the region. Nevertheless, the research has tried to undertake a sub-regional perspective, looking at pastoralism within the Somali ecosystem. In this sense some understandings of camel milk marketing in NE Kenya and Somaliland have been used to assess the uniqueness of the Puntland system. Should further interest and opportunity arise with this respect, room exists to undertake a wider regional study and analysis of camel milk marketing in the different Somali-inhabited countries (Somaliland, Puntland, central and southern Somalia, NE Kenya, Ogaden region in Ethiopia, Djibouti), in order to assess the influence of the exposure to diverse institutional frame and markets.

A comparative approach was instead developed to assess the functioning of pastoral milk marketing vis-à-vis the more traditional and more extensively investigated trade of livestock in the Horn of Africa. As already highlighted by Kerven (1992), consistent amounts of information and analyses exist on livestock marketing in Sub-Saharan Africa, yet very little is known and understood about milk marketing and related networks and dynamics in pastoral environments, despite its critical and increasingly relevant role for local food security. Analysing camel milk marketing within the wider pastoral marketing frame was particularly relevant in shedding a critical light upon the diverse gender roles within the Somali pastoral society, and their degrees of complementary and conflict in a food security perspective.

Due to the multidisciplinary nature of the research subject and its implications, courses on sociological subjects have been undertaken at Wageningen University, so to complement my educational background in Tropical Agriculture acquired at the Università di Firenze. In this perspective Master courses in Rural Gender Studies, Governance, Livelihood and Resources, Future Livestock Systems, Sociology of Farming and Rural Life, Anthropology and Rural Development as well as PhD-level courses in Food Policy in an era of Globalisation, Socio-cultural Field Research Methods, Quality Food Chains, Land Rights and Tenure Security, Neo-Institutional Economics, Complex Bio-Social Interactions, together with the *Pastoralisme* module within the PARC (*Productions Animales en Régions Chaudes*) programme of CIRAD at Montpellier – have been undertaken.

### **Challenges to fieldwork in Somalia**

As it might be guessed, Somalia as a research environment presents specific aspects which in a way pose constraints to more usual methodological approaches. Main aspects affecting the research fieldwork are discussed hereby. The main teaching remains that undertaking some sort of pastoral resource management provides the reference framework for overtaking and adapting to local constraints and difficulties.

### ***Investigating pastoral communities***

Working in pastoral areas normally implies a degree of logistical difficulty, when compared to research carried out in more sedentary communities. First and foremost, issues of mobility, remoteness and dispersion characterise herding communities, so that fieldwork activities require accurate, though flexible, organisation and extended timing. The fluidity of boundaries and communities' dislocation add to this already complex picture, which has also to account for large migratory flows for both seasonal and drought-

related movements. In such context sampling and representativeness are relevant theoretical concepts but with a limited operational value.

Seasonality and the variability of the agro-ecological environment from one season and one year to another are critical factors when developing an appropriate research methodology, as households and herds move with unpredictable patterns, especially in the case of nomadic communities, and different groups can be found in different places at different times. As Chambers (1983) maintains the timing of the field work is thus critical to understand what can be investigated and what should be avoided at particular times. The event of a major drought is also critical in these considerations, as data and information collected before and after a drought might show quite opposite trends; conflict and insecurity might further affect people and livestock mobility under such conditions. An example in case is the lengthy drought that has affected the region from 2001 to 2004, which forced most herders to relocate their camels (and smallstocks) to other regions and areas. The animals that remained in the area went dry and only a few entered the reproductive cycle due to the limited availability of good pasture and water. This has meant that for two years camel milk traded in the region was limited. In face of milk scarcity though marketing in the bush continued and importantly contributed to support pastoral livelihoods during those difficult times.

Furthermore official data and statistics are scanty and often unreliable in pastoral contexts. Objective problems exist to undertake comprehensive surveys of population and livestock figures, due to the reasons highlighted above. Census data collections for people as well as for livestock are often biased, for a number of reasons including the fact that these have often been utilized – or perceived so – for taxation and/or vaccination campaigns: two practices towards which pastoralists mostly have a critical attitude. Admittedly, conducting surveys among people repeatedly shifting their location and markedly unwilling to allow outsiders the power of knowing their herd sizes is already a difficult task (Green and Jamal Vali, 1987:10). Records from market outlets suffer very much the same fate. Moreover, pastoral areas often lack data collection and analysis which are consistent in the long term. Lack of longitudinal analysis, for example, results in little strong evidence on the current status of pastoralism, thus affecting the understanding of the trends and processes influencing pastoral livelihood systems (Birch et al., 2001). Very detailed works, often from anthropologists, are available from specific periods (such as the case for Lewis on Somaliland in the 1960s), but surveys covering larger period of time are difficult to find.

Poor communication and transport infrastructure provide further constraints to the collection of information and data in pastoral areas. Access to the field requires adequate logistic support and financial resources. As discussed, overall research activities, development assistance and investments in pastoral areas have been decreasing at a steady rate during the last two decades. As a result, dynamic knowledge and lively discussions about pastoralism are nowadays resources seldom found in academic territories.

### ***Research in today's Somalia***

Apart from emergency and military operations, most of the research and development activities in Somalia have frozen since 1991, when the country became stateless. Despite the existence of forms of local governments at regional and local levels (especially in the northern portions of previous Somalia, Puntland and Somaliland), there is a limited formal institutional setting a researcher could refer to, implying that chances to get an official



counterpart and related institutional arrangements that could support research fieldwork are limited. Without this kind of institutional backing, securing access to the field in conditions enabling good research work is not always a simple task. Tentative collaboration with the Puntland Research Development Centre based in Garowe – a local NGO supported by Swedish cooperation funds - has been tried, but with limited effect due to their internal restructuring phase.

Furthermore, the lack of ‘professional’ researchers, together with the scanty and precarious income-generation opportunities existing in the area, made it difficult to employ research assistants who would be available immediately, but unavailable the next time – some would not even be present anymore in the area. This created discontinuities in the research work and had also implications on the time management of the fieldwork as new staff had to be introduced to the research almost every time. Field missions in the research areas were often short-lived for security reasons, and often embedded within the wider survey of the hosting organization.

Historically Puntland has not been an area of extensive research and investigation. Most colonial reports as well as academic studies have targeted the neighbouring regions of Somaliland and southern Somalia. Research efforts have addressed the collection and analysis of the limited existing materials through networking with international libraries and concerned stakeholders.

For the reasons discussed above census information over people and livestock in Somalia has never been reliable. Official livestock figures have been developed through rough statistical elaborations of a census survey undertaken in the mid-1970s (which was then in fact in the middle of a severe drought). These factors make it an almost impossible task to have a good estimation of the national herd (Green and Jamal Vali, 1987). On the other side population estimates are one of the most controversial and manipulated issues for authorities, agencies, and communities in the region due to their implications for international politics and development assistance/aid. Figures are highly contested and there are huge discrepancies (Nori, 2007c). Furthermore refugee fluxes<sup>17</sup>, migratory trends and the lack of official agreement upon boundaries (i.e. between Puntland and Somaliland) make available figures only relatively indicative. The difficulties of data collection in today’s Somalia are comprehensively discussed in Sardana et al., 2004.

In Somalia discussions of clan issues are extremely sensitive; for many years it was taboo even to mention the names of the Somali clans in public (Narbeth, 2001). For nearly a decade, the focus of attention on the conflict in Somalia has been overwhelmingly upon the negative aspects of the clan. Whatever its shortcomings and the contribution which it undoubtedly makes and has made to the perpetuation and entrenchment of some of the pernicious effects of tribalism, this organisational structure must be taken into account (Helander, 1986). Yet for outsiders, understanding the clan-based political culture and the importance of these agnatic kinship relationships represent the most challenging aspects of the Somali crisis (Doornbos and Markakis, 1994). Understanding the intricacies of the clan system remains though problematic for Somalis and non-Somalis alike.

Meeting with and talking to women and minority groups, critical stakeholders in the camel milk marketing, is not a simple task for a foreigner. Social and cultural matters do count in this context and reshape to a good extent the capacity to directly interfacing with relevant

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<sup>17</sup> It is estimated that refugee exodus concerned about 15% of the 1990s country population.

survey targets. This became particularly complicated at times in urban areas (especially Boosaso), while no major problem was faced in rural settings.

Furthermore security conditions in Somalia are quite volatile and depend very much on local dynamics concerning power, control, business, leadership and other related issues. It is therefore difficult to properly schedule the field trips, and it is even more difficult to respect agreed research programmes, as logistics must often be re-invented on the spot.

The current situation in Puntland is worsening in this respect, due to the renewed fight for power in Mogadishu and the related escalation of violence throughout the region. As a matter of fact none of the projects and programs with and through which I have been working is operational in Puntland anymore today.

### **Adapting the agenda**

The main working assumption started by recognizing and accepting these operational constraints and making the research work conform accordingly. As pastoral livelihoods are traditionally shaped by the uncertainties and risks that characterise rangelands agro-ecological dynamics (Scoones, 1994; Niamir-Fuller, 1999), the research methodology itself has been devised following pastoral 'guidelines', implying good degrees of opportunism, flexibility, networking and information sharing, so to make the best possible use of the limited resources available in an uncertain environment.

Drawing from pastoral strategies, an 'opportunistic behaviour' has been undertaken, and field work activities have been developed accordingly whenever conditions permitted. As to the original research proposal a collaborative network with organisations and agencies operating in Puntland has been developed, and fieldworking collated and merged with the activities of ongoing projects and programs. I thank the EC Marie Curie and CERES programs for having accepted and allowed this much needed flexibility.

Networking and information sharing have represented areas of consistent investments for the research. Participation in conferences and workshops, meeting with scholars, development practitioners and staff from operational agencies have provided vital opportunities to seeking access to the field as well as to verifying and consolidating research findings. In this respect participation in the Pastoralists Gatherings organised by Pastoralists Communication Initiative/OCHA in Ethiopia - Turmi in 2005 and Yabello in 2006 - have been of particular relevance to the development of an extensive network as well as to the framing of Puntland milk marketing system within the wider regional picture.

### ***Fields of dust***

Fieldwork activities targeted the different levels of camel milk marketing (CMM), from producers to collectors, from transporters to retailers, to consumers, in order to get a comprehensive understanding of the diverse perceptions of the involved stakeholders. Somali culture is traditionally an oral one, and case stories and semi-structured interviewing produced the best ways to unfold local narratives related to camel milk marketing and its contribution to local livelihoods. Participatory exercises, as well as statistical analysis of a number of questionnaires, were also developed to amass the reliable, integrated and comprehensive collection of data and information. The mix of more formal methodologies with anthropological or ethnographic based methods has enabled the understanding of the local perception and feelings about camel milk marketing, while

also providing opportunities to quantify respondents' perception for wider statistical analysis.

Practical investigations into the marketing of camel milk started with the participation in the 'Sustainable improvements of camel milk production and trade in NE Somalia' project, implemented by the Italian NGO consortium UNA/Africa '70. During those consultations, participatory rural appraisals and rural rapid appraisals (PRA/RRA<sup>18</sup>) methods have been conducted during field visits to grazing rangelands, mobile milk collection camps and urban markets. More specific methodologies have been further developed at the various levels of the marketing chain.

On the milk production side characterization surveys using ILRI's dairy project methodology were executed in August 2001 to gather more detailed and accurate animal production and marketing data. The survey involved meeting about 50 households in the four main NWSE directions within a radius of about 110 km around the town of Qardho (average distance 44.3 km). The mean distances of each surveyed household from an all weather road was 31.3 km and to a nearby village centre was 10.9 (UNA, 2003). These are important indicators concerning access to market and inputs services. A total of 210 households were surveyed in 39 villages of Qardho district. After verifying the data 191 households were used in the analysis. Further seasonal, longitudinal data was collected from selected villages during January, May, August and November 2002.

On the marketing side, initial surveys have involved extended utilisation of participatory practices: *seasonal diagrams* on different subjects to understand trends in milk supply and collection amounts; *time line data* that helped explaining the sequence of specific events which had a relevance to the CMM; *proportional piling* to estimate milk cost, profit and risk sharing amongst the stakeholders involved; *matrix ranking and scoring*, used to compare, for example, the relative importance of the diverse problems or benefits related to the marketing of camel milk. Due to the traditionally oral culture of the Somali society, the most intriguing and fruitful exercises have actually been semi-structured interviewing, the telling of case stories with specifically selected stakeholders (i.e. Hay Ganni, one of the two ladies that, reportedly, started the CMM system in Puntland in the early 1990s) and focus group discussions.

Further field activities have relied on development and implementation of semi-structured questionnaires, which helped framing the research questions while leaving room for the interviewee's concern, interests and priorities. Sets of semi-structured questionnaires were left to the recruited field assistants to be utilised in focus group and individual level discussions with herders. Overall more than 200 between Primary and Secondary Milk Collectors have been questioned in this way. Fieldwork activities have been constrained by the lengthy drought that has affected the region, drastically diminishing camel milk marketing operations. This led to an overall rescheduling of the whole research arrangements, reorganised on a part-time basis on a longer time frame.

In August 2006 a month of fieldwork was organised in collaboration with the NGO *Vétérinaires Sans Frontières Suisse* (hereafter referred as VSF), under their Puntland veterinarian program. That survey was assisted by the local NGO, *Hodmann*, and focused

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<sup>18</sup> For a comprehensive review of the development of RRA and PRA see Chambers (1993).

on the trading and transport networks related to the market of Qardho and Boosaso, through observations and semi-structured interviewing along the different steps of the marketing chain. A number of tailored questionnaires were then prepared and fielded by the assistant staff; in particular 46 herders, 89 urban and 50 rural milk collectors have been assessed in this way. A tentative study of the social networks behind the stakeholders of the camel milk marketing was started but soon aborted as the subject proved too sensitive and the logistics too difficult.

In January 2007 a 40-days field mission was organised within the *Save the Children UK* (hereafter referred to as SCF) and *Horn Relief* programs to support post-Tsunami recovery in the region. Fieldwork activities involved extensive reconnaissance tours of the Karkaar region on the Qardho – Bander Beyla - Haafun axis. The objective of the field work was a first-hand study of the feasibility and possible effectiveness of cash-based interventions. In order to get a comprehensive picture of the local livelihood systems the teams reviewed existing coping mechanisms and safety nets, and the potential of cash transfers having a positive or negative impact on these, as well as on existing social, political, and religious structures. Researchers employed qualitative and quantitative methods, including household, community, key-informant, and stakeholder questionnaires and discussions. A total of 254 households (of which 107 in Karkaar region), and about 158 petty traders (78 in Karkaar) have been interviewed.

The field study was conducted during *Jilaal* 2007. Due to logistical, resource, and practical concerns, the field study utilized a purposive sampling of pastoral, urban, and coastal communities. The focus of the investigation was on the vulnerability of different population groups as well as on the functioning of the marketing networks in the region. With close assistance from local authorities, researchers employed qualitative and quantitative methods, including questionnaires and discussions with households, local authorities and market stakeholder and key informant interviewing. The same year I had the chance to collaborate with another survey in the area, with the Nairobi office of the *World Food Program*. Despite the overall mission of the organisation, that opportunity was of interest to me as the main declared objective of the survey *was to assist the World Food Programme (WFP) in Somalia to shift its activities from relief to recovery and rehabilitation* (WFP, 2007:10), which was something highly needed in the Puntland context. My contribution focused mainly on demonstrating the functioning of pastoral livelihoods and the effectiveness of marketing networks in the area, through drafting the survey questionnaire format and providing a comprehensive bibliographical review of existing secondary data. My agenda was to contribute lifting WFP assistance out of food distribution, towards a more comprehensive cash-based approach in time of need, in favour of stakeholders who have a critical role in the pastoral economy, but are particularly exposed to various shocks.

Following WFP procedures, a random sampling strategy was used to select villages and households to provide statistical confidence at both the regional administrative level and the livelihood zone. In total, 1266 households were interviewed in 116 villages and water points across rural Puntland. The field work was conducted in April 2007, at the end of the *Jilaal*. The survey instruments included, amongst others, questions on the seasonality of income, food access, credit and shocks (WFP, 2007).

In January 2008, another mission of 25 days in Somaliland was conducted within the *IFAD NorthWestern Integrated Development Program* formulation stage. During that mission, it was possible to observe the milk marketing system in Somaliland, and similarities as well as

variations with the Puntland system assessed. The mission mainly consisted of observation journeys, analyses of area documentation, meetings with key pastoral stakeholders and semi-structured interviews.

As stated, variable agro-ecological conditions - seasonal climatic patterns and possible drought events - have always carried an important impact on the surveys results, due to the implications they have on the presence and consistency of households and herds as well as the dynamics of market pricing. Information and data gathered during the surveys were thus analysed in the perspective of the lengthy drought that affected the region from 2001 to 2004, with related impacts on herd production and reproduction dynamics.

#### *Shelves and desks*

Throughout the research a parallel activity has consisted of organising and participating in local stakeholders' meetings in Qardho, Bosasso, Garowe, Hargheisa and Nairobi, where a number of presentations were given to present and discuss surveys results. Moreover a number of lectures related to pastoral livelihoods and milk marketing in different institutes and universities has provided me with the opportunity to challenge my research subject within appropriate academic frames.

In-depth desk studies of secondary materials in order to capture historical records and contextual data have been carried out all over Europe. Collection and analysis of materials from geographical explorations, colonial reports, anthropological studies and development surveys were conducted in Florence at the Istituto Agronomico d'Oltremare. Other comprehensive readings of published and unpublished materials have been taking place at the Overseas Development Institute and the School of Oriental and African Studies in London, the African Studies Centre in Leiden, the Institute of Social Studies in Den Haag, the Leeuwenborch at Wageningen University and the library of the Food and Agriculture Organisation in Rome. Major sources of recent literature and reports have been the libraries of the United Nations Development Office for Somalia (UNDOS), the International Livestock Research Institute (ILRI) and Terra Nuova (an Italian NGO) in Nairobi.

A one-year collaboration with the EC-funded FAO-managed Food Security Assessment Unit for Somalia (FSAU) as a Pastoral Livelihoods Analyst has provided me with the opportunity to enjoy valuable exposure to the range of problems affecting Somali pastoralists, to access the field on a number of occasions and to establish good relationships with the Somali networks concerned with rural development. Baselines data and trends developed by FSAU and OCHA have been relevant tools in the analysis of pastoral livelihoods and market dynamics. Such extensive desk-work eventually provided the research with a large amount of secondary information, which importantly contributed to understand traditional livelihood systems in the region - including the evolution of camel milk marketing - in a comprehensive historical perspective.

Work experiences in other pastoral regions (from Mali to Tibet, from Palestine to Karamoja) have provided me the opportunity to undertake a comparative understanding of the Somali pastoral system and to appreciate its uniqueness. Teaching Development Sociology at the University of Florence in the Tropical Agriculture master degree for three years (2006-2009) proved to be a very effective opportunity to browse and digest the knowledge gathered during my fieldwork.

This process was also helped by the engagement to draw working documents on pastoral livelihoods for a number of international organisations. While enabling organising and systematizing knowledge on pastoralism, it also resulted in a fruitful effort to inform and stimulate civil society as well as governmental actors towards more adequate attention to the problems affecting pastoral regions. Such works have dealt with issues of:

- Conflict and security, with the International Institute for Sustainable Development and the IUCN Commission on Environmental, Economic and Social Policy: Nori M., Switzer J., Crawford A., 2005. *Herding on the Brink: Towards a Global Survey of Pastoral Communities and Conflict*. An Occasional Paper from the IUCN Commission on Environmental, Economic and Social Policy; Gland (Ch) <http://www.iisd.org/publications/pub.aspx?id=705>
- Land rights and access to natural resources, with the International Land Coalition: Nori M., 2006. *Mobile livelihoods, patchy resources and shifting rights: approaching pastoral territories*. Thematic paper for the International Land Coalition. Rome; <ftp://ext-ftp.fao.org/AG/Data/Upload/ANGR/DAD-Net/pastoralistpaper.pdf>
- Climate change and mobility, with the World Initiative for Sustainable Pastoralism: Nori M. and Davies J., 2007. *Change of wind or wind of change ? Climate change, adaptation and pastoralism*. Report from an electronic conference. World Initiative for Sustainable Pastoralism, Nairobi [www.iucn.org/WISP/publications](http://www.iucn.org/WISP/publications)
- Pastoral livelihoods vulnerability to current trends: Nori M., Taylor M., Sensi A., 2008. *Browsing on fences: pastoral land rights, livelihoods and adaptation to climate change*. International Institute for Environment and Development, Drylands Series #148, London <http://www.iied.org/pubs/display.php?o=12543IIED>
- Niche marketing of livestock products: Nori M., 2009. *The golden udder: Marketing milk from camels in Puntland, Somalia*. League for Pastoral Peoples, Endogenous Livestock Development and World Initiative for Sustainable Pastoralism, 2009. 'Adding value to livestock diversity: The promise of indigenous breeds for niche marketing'. LPP, Ober-Ramstadt. <http://www.fao.org/docrep/012/i1283e/i1283e03.pdf>
- Gender relationships in pastoral livelihoods: Nori M., 2010. *Along the milky way: marketing camel milk in Puntland, Somalia*. 'New avenues for pastoral development in Sub-Saharan Africa'. Special issue of the European Journal of Development Research, Bern.

## Chapter 2 - PUNTLAND, SOMALIA

This chapter introduces the setting in which the research has been taking place. The region of Puntland is located on the extreme northeast of the Horn of Africa, and it has been historically playing the role of gateway between Sub-Saharan Africa and the Arab, Asian, European and Indian worlds. Puntland agro-ecological and socio-cultural features are similar to those characterising most of the so-called Somali ecosystem and attest to the uniqueness of these territories.

While the country remains one of the poorest and most insecure in the world<sup>19</sup>, and Puntland stands as a “chronically food insecure” region (FSAU, 2007), important developing processes are also taking place in this part of the world. Through its main port, Boosaso, the Puntland economy is booming due to export trade, which is still dominated by livestock, but also high-value marine products and frankincense. Important changes are taking place in the region, at times reflecting the integration of the pastoral economy in global marketing systems) but also leading to the diversification of the local livelihood base and the growing importance of alternative sources of employment and income.

### Seasonal Livelihoods

Somali populated lands span the large tip of the Horn of Africa, including eastern Ethiopia, all of Somalia, southern portions of Djibouti, and north eastern Kenya. Biophysically this arid land includes stony deserts with low thorn scrub, riverine vegetation, extensive areas of bush vegetation and high-grass savannah (Lewis, 1992). Nomadic pastoralism is a primary economic and land use activity for the Somalis, with camel pastoralism predominant in the north, and cattle pastoralism based in the south of the region; these are always complemented by large flocks of sheep and goats, smallstocks, or *shoats*, as some Somali call them.

Located on the extreme Horn of Africa, Puntland borders the Indian Ocean on the East, Southeast and Northeast and the Red Sea (Gulf of Aden) on the North. On the West, it borders Somaliland and Ethiopian Somali Region (ESR). Puntland covers 212,510 km<sup>2</sup>, which is approximately one third of Somalia’s total geographical area and consists of seven regions according to the Puntland government, including the recently created Karkaar and Ayn. However, most official maps and documents show the pre-1990 five regions of Nugaal, Bari, Mudug, Sool and Sanaag. The latter are contested with Somaliland, as their population shares blood ties with Puntlanders Majerteen (they are from the same Daarod group), but they were incorporated in British-colonised Somaliland. As a result, a dispute exists between the NW and the NE Somali governments, both claiming rights to these regions.

The land is semi-arid with no perennial rivers, although freshwater natural springs characterise coastal areas. Puntland is made up of arid and semi-arid agro-climatic zones which experience high temperatures and low erratic rainfall. The overall climate is arid

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<sup>19</sup> In 1996 Somalia ranked 172 out of 174 countries on the UN Development Programme’s Human Development Index (HDI). Since then, Somalia has been excluded from ranking on the HDI due to lack of data.

tropical, with average daily temperatures range from 27°C to 37°C and average annual rainfall from 200 to 400 mm, with huge seasonal variations. Intense solar radiation and high evapo-transpiration rates provide for an arid environment with low productivity and high variability (refer to picture 2.2). Most fertile areas with valuable pastures are located in the Hawd region, in the high plateau of West of Mudug and Sool regions, in areas bordering Ethiopia, and in low Nugaal valley. Besides these areas, mountain ranges in Bari are the only areas where average temperatures are mild.



Picture 2.1 The Puntland region

Source: [www.puntlandgovt.com](http://www.puntlandgovt.com)

Note: regions of Ayn, Sool and Sanaag are contested by the Somaliland government.

Major vegetation cover in the area includes *Acacia spp.*, *Commiphora spp.*, *Boswellia spp.*, *Euphorbia spp.* and *Boscia minimifolia* and other short growing herbage. Frankincense trees grow in the mountainous areas of eastern Sanaag and in northern Karkaar and represent an important agricultural asset. The coast of Puntland also has rich marine resources, including salt mining and especially fisheries, which are being exploited by illegal foreign fishing trawlers as well as by fisher folks from Puntland. The region potentially has vast untapped oil deposits and other mineral resources.

The cycles of climate dominate the rhythm of socio-economic life, which is largely dependent on the natural vegetation growth. Rainfall is the most critical factor in much of Somali life, as it is both low and unreliable and access to water represents the key to local patterns of mobility and livelihood. Puntland in particular suffers a serious water deficit. Two or three consecutive failures of rain or very poor (single event?) rains lead to lower vegetation production on the natural range, with direct livelihood impacts. Droughts (*abbaar*) frequently lead to stress; in extreme cases, there may be massive livestock losses as lack of water and pasture also increase susceptibility to disease. This was clearly the case during the recent lengthy drought which has affected the region from 2001 to 2005. Rainless seasons have nevertheless always been part of the normal cycle of pastoral life all



over Somalia; Swift (1977) reported thirteen drought events only in the latest century. While wider ecological dynamics are difficult to assess, pastoralists' exposure to drought has changed in recent times. At other times, high rainfall leads to floods, outbreaks of water-borne disease and the breakdown of the transport system as the seasonal roads turn into mud-baths.

The Puntland population in 1997 still depended more on surface than on ground water. The number of functioning boreholes in the region is very low. Shallow wells are mainly found in the Nugaal, Dharoor and Mudug valleys, along coastal shores (Adduun), which are also rich in salty soils, and perennial springs in the areas of Iskushuban, Eyl and Boosaso. The Sool plateau with its critical pastures has a very deep water table, the same as in the Hawd zones. The difficult access to water made it a rainy season grazing areas where only camels could venture. Recent evolutions in the construction of cemented pools (*berkaad*), privately owned and managed, have changed these patterns of pastoral resource management. Development of larger and deeper public water infrastructure has also been constrained by the political problems of this contested area. Since the collapse of the state, improved water access in urban areas has been recorded, as a result of foreign aid, while rural areas are facing increasing scarcity (UNICEF, 2004; WFP, 2007).

**Table 2.1 Relevance of available water sources throughout the year**

Source:	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec
Shallow well	xx	xx	xxx	xxx	xxx	xxx	xxx	xx	xx	xxx	xxx	xxx
Borehole	xxx	xxx	xxx	xx	xx	xx	xxx	xxx	xxx	xxx	xxx	xxx
<i>Berkaad</i>	xx	x	x	xx	xxx	xx	xx	x	x	xx	xxx	xxx

Source: WFP, 2007

The four distinct seasons are similar to those in the rest of Somalia: two main rainy seasons, *Gu* (April–June) and *Deyr* (October–December) and two dry seasons, *Xagaa* (July–September) and *Jilaal* (January–March). *Gu* is the longer rainy season, when water tables rise, grazing is abundant and livestock reproduces profusely. On the contrary *Jilaal* is the long dry season, when humidity is at its lowest and vegetation dries.

The alternation of seasons corresponds with the reconstitution of biomass within the range as well as marine ecosystems, which in turn affect the social and economic behaviour of the human population. The rainfall, especially during poor seasons, is spatially uneven, falling over the rangeland in scattered patches in an unpredictable manner. Thus while there is tremendous biomass growth over the short explosive growing season, this growth is realised in a fluctuating, episodic, scattered mosaic (Umar and Baulch, 2007). It is precisely to capture and exploit this shifting resource that the nomadic lifestyle has developed, to track the rainfall where it falls, while maintaining home grounds where more stable water resources from deep wells or perennial rivers can be found.



Figure 2.1 Seasonal Calendar for the Sool and Sanaag areas in 2005

Source: FSAU, 2005

Rainy seasons are periods of relative food security and general economic growth. In urban centres, the impact of the rainy seasons on life includes greater supply of milk and other livestock products in the market, in the rural area it means households staying together, limited need for animals watering, improved dietary intake and high demand for non-livestock products. Conversely, *Jilaal* represents the harshest period for the population; grazing and water become scarcer for the livestock, which are forced to migrate in their search. When conditions are not extreme, herding migration tends to rotate within the same areas, within a transhumant pattern.

The climate is almost unbearably hot and humid during the *Xagaa* season along the Red Sea coast, but becomes more tolerable as one moves to the cooler highlands of the interior, with fresh winds blowing in from the ocean. Humidity along the Red Sea coast reaches 95%. This is the period when urban dwellers of the northern coastal cities, Boosaso and other towns, migrate to southern urban areas. The city of Qardho during the summer triples its population with temporary in-comers from Boosaso. Seasonality also regulates the coastal economy, as the monsoon winds govern access to the sea for fishing and trading purposes. During the main fishing season, there is an influx of fishing labourers from pastoral and urban areas, who move back inland during the off-season.

**Table 2.2 Features of deep dry and rainy seasons for Northern Somali pastoralists.**

<i>JILAAL</i>	<i>GU</i>
time of fighting and drought ( <i>ol iyo abbaar</i> )	time of peace and milk ( <i>nabad iyo cano</i> )
watering ( <i>aroor</i> )	good grazing ( <i>doog</i> )
	time of plenty ( <i>bashbas iyo barawaaqo</i> )
poor nutritional status	good human and animal nutritional status
herd split in functional sub-units	camels and shoats herder together
household move and live in separate units	extended household inhabit common grazing area
	religious activities
	time for elders meetings
water access restricted ('home' wells)	resources shared
	new stock born
	debts paid
relevance of close kin cooperation	marriage contracts concluded

Source: Bradbury, 1996

### Coping with Threats

Population figures of Puntland are contested and disparate between sources. Correct numbers are difficult to estimate due to the lack of official agreements upon boundaries and the highly mobile and scattered nature of pastoralists. Official statistics in Puntland State of Somalia state that the Puntland population is 2.4 million (2006); UNDP estimates in 2001 were about half that. It is estimated that 70% of the population are under the age of 30 with a rural population growth in marginal areas

estimated at 2.4 % (ibidem). Other demographic observations suggest that 25% of the population are children under 5 years and 1% above 65 years of age. An average household size of six is often quoted and used to calculate population size of settlements, although other estimations indicate that this is as high as 8.3. Although many Somalis exercise a polygamous lifestyle according to the laws of Islam, about 80% of the rural families are monogamous. Estimates of female-headed households range from 12% in rural settlements to 20% generally. According to FSAU baseline information between 30% and 37% of the population is poor, with no or few livestock and casual labour as their main source of livelihood (FSAU, 2007).

The vast majority of Puntlanders are Muslim and value Islamic practice and moral codes. The clan system is the basis of the Somali society and the entire community relies on the wisdom and experience of elders, who use customary laws to resolve dispute (WFP, 2007). Most of Puntland population is from the Daarod Clan family, Majerteen group. There are however other groups, from minority groups or casts, which suffer from conditions of social exclusion and marginalisation. These matters will be specifically tackled in the next chapter. The population of the region has increased greatly since the war because of displacements of consistent groups who fled from the southern parts of the country for security and economic reasons. Overall it is estimated that this exodus concerned about 15% of the population estimates in the 1990s. According to UNDP, there were, in 2006, an estimated 60,000 internally displaced people in the northeast, inhabiting major towns of the region, particularly Boosaso.

While the NE Somalia population remains predominantly pastoralist, livelihood patterns in recent times have been changing due to a number of factors, including the large and rapid increase in population (internal growth rate plus in-migration from the strife-torn southern part), issues related to central and local governance, infrastructure and services developments (such as the completion of the Galckayio to Boosaso tarmac road, the development of Boosaso port in the late 1980's and the expansion of mobile phone coverage), and the local capacity to translate in political terms the relative clan homogeneity of the area, thus ensuring relative stability and security.

Growing population figures and climatic events, such as prolonged droughts in the early 1970s, and mid 1980s have forced many pastoral households to seek employment on the coasts or in urban centres. Animal epidemics are a scourge that frequently affect local herds; the El Niño rains in 1997 triggered the outbreak of important diseases (i.e. Rift Valley Fever), which eventually led to the export bans imposed by Arabian countries, due to unchecked conditions on Somali animals. The conflict strife that has ended the Barre's regime experience is still affecting the southern portion of the country, inducing massive population displacement and relocation.

Between 2001 and 2005 Puntland has experienced a prolonged drought, compounded by other disastrous events, such as episodes of freeze accompanied by hail stones and the Tsunami flooding in December 2004. The drought weakened livestock which died in large number during the freeze, while the Tsunami destroyed boats and fishing gears. In two years, the bases of the two main local livelihoods were severely affected (WFP, 2007).



**Picture 2.2 The impact of the hail events during the long-standing drought.**

Source: PACE, 2005

As at times words do not suffice to describe the intensity of an event, this picture provides a practical idea of what the 2004 freeze and hail episode - at the height of a lengthy drought - has meant to local pastoralists.

**Table 2.3 List of main shocks that affected the area since 1991**

Year	Event	Effect
1991 to 1993	Civil War	Definitive collapse of the central government Famine conditions develop and widespread war takes hold between different warlords and their militias. Human losses and relocation
	UNISOM	UN Operation in Somalia launched
1994/ 1995	Conflict continues throughout Somalia	Rural livelihoods deteriorate Movements of disbanded refugees Failure of US-led military intervention 'Restore Hope' UNISOM forces withdraw
1997/ 1998	El Niño;	Flooding conditions in southern Somalia Loss of crop production Spreading of animal diseases (outbreak of RV fever)
1998	First livestock export ban	Livestock export ban imposed by Arab countries on animal health basis Collapse of livestock export
1999	Smallpox	Mortality of sheep and goats; export commerce reduced as traders rejected animals.
1999/ 2000	Regional drought	High mortality among shoats and no milk production, Shrinking livelihoods Feeding centres established
End 2000	Second and longer livestock export ban	60% drop in the price of a sheep (FSAU, 2002); Overall economic downtrend
2001	Conflict revival in southern	Humanitarian situations Refugee fluxes

	Somalia	
2001	Block on remittance systems ( <i>hawala</i> )	Temporary reduction of circulating money
2001 to 2005	A lengthy drought affects most of the region	Added to already poor rains since 2000 Weakening of livestock conditions and productivity Worsening livelihoods
2003	Health problems for small ruminants	High mortality among shoats, who suffered an unidentified drought-induced disease
October 2004	episodes of freeze accompanied by hails	The episode came at the height of the drought in parts of eastern Sool plateau, where most animals had been concentrated in search of pasture and water, leading to high death rates amongst livestock. Reported losses amounted to 80% for camel herds and 60% for small ruminants flocks. To give an idea of the uniqueness of this climatic event, no word exists in Somali to define 'hails'.
December 2004	The eastern coast ravaged by the Tsunami	Most coastal villages devastated, destroying assets and infrastructures, impacting the marine ecosystem and claiming lives. Fishing was seriously affected, both in terms of fish potentials and of communities' capacities.
2005/2006	Heightening War in the south	Widespread food insecurity in the south Severe drought and humanitarian crisis forced refugee population movements into Northeast. Pressure on limited resources and labour opportunities in the North
2006/2007	Health problems for camels	Camel herds affected by an unknown disease, called 'sudden death'
June 2007	Swarms of locusts	Swarms of locusts infest parts of Puntland destroying crops and other vegetation
2007/2008	War on terror	Puntland governance and security conditions deteriorate as local governments gets involved in the southern conflict US army bombards villages in central Somalia Kidnappings and killing rates increase Piracy episodes spread along Puntland coasts Many development assistance programs retire

Pastoralism, fishing and trading are the three main economic activities in Puntland, with important degrees of complementarity and interdependency. Other economic activities characterize specific areas, including frankincense collection and trade (northern Karkaar in particular is a main producer of this aromatic gum), salt mining (in Indian Ocean coastal areas, particularly Haafun), limited farming along the Golis Mountains of Sanaag, collection and sale of water, provision of building and other

materials. An extensive urban economy is also developing along the tarmac road network. The recent finalisation of a basic network of tarmac road has contributed to reshaping local landscapes and livelihoods. There is only one paved truck road in Puntland, the main arterial road that runs north/south from Boosaso to Garowe, from where it branches west to Hargheisa and continues south to Mogadishu through Galckayio. This road was completed just before the collapse of the state.

Significant increases in fixed settlements and an overall process of sedentarisation is reported even in more rural settings, where settlements are becoming more permanent (Nori and Gabrielle, 2007). This process is supported by the proliferation of *berkaads*. In addition to the control and sale of water rural villages become also important trading centres. Apart from their commercial role, where essential commodities can be exchanged, the growing demand for camel milk and smallstock meat in the urban centres maintains the economic and social bonds between nomadic hamlets and urban centres. Furthermore towns and villages provide pastoralists with important services, such as information and telecommunication facilities, which are critical in receiving and managing remittances from distant relatives.

Patterns of livelihood insist on a multi-based and dynamic economy, with different environments and spheres providing diverse options at different times. Members of the same household might move from one sector to another depending on opportunities and necessities, with the household economy becoming increasingly diversified. The diverse livelihood systems are strongly interlinked through market exchanges, credit systems, people mobility and social networks which all play critical roles in the transfer of critical livelihood resources from one group to another (spatially) and from one season to another (temporally).

People's mobility is related to the seasonality of economic activities, with the temporal transfer of household members from one livelihood system to another. For example, during a long dry season some household members might be sent with herds in search of grazing, while weaker members might reach urban relatives for support. Similarly, when the season is low on the coast, fishing people relocate to in-land herding areas. This mobility is so common and frequent that it is rare that households are completely together at any one point in time during the year.

Economic diversification occurs at a range of levels: for example, at the individual level, with a person having several occupations at different seasons/times; and amongst the members of a nuclear household, within the extended family, with some members moving to urban areas while other members maintain nomadic way of life and others work in fishing and trade in the coast. The system is set in a way that security accrues from the wide diversity of investment activities, not from one activity in and of itself (Gunn, 1990:244). To some extent it is imprecise to label a single household as 'urban' or 'pastoral' or 'coastal' since income can come to a single household from different sources (Nori and Gabrielle, 2007). Economic diversification is a response to the various fluctuations and risks each system faces and is the main strategy in buffering the seasonal limitations as well as the threats involved in sector specialisation. About half of the households surveyed by Save the Children in 2007 in Karkaar (n=107) reported the moving of some household members to different livelihood zones during the year, while almost all households interviewed report generating income from different sources throughout the year (ibidem).

The table below was devised during the Save the Children UK baseline study in Karkaar. It demonstrates some important characteristics of the interconnectivity between the livelihood systems.

**Table 2.4 The interconnectivity of livelihood systems**

Pastoral - Urban	<p>Urban centres provide market for livestock and livestock produce: milk, ghee, charcoal, firewood as well as a source of food and non-food items. Access to schooling, sources of credit and labour opportunities in bad years are also provided.</p> <p>Long-term resident urban households own livestock in rangeland areas close to the town</p> <p>Urban centre provides storage for skins, bulk cereal purchases etc</p> <p>Urban dwellers travel to pastoral areas for business, relaxation, send children to learn about the culture, to remind them of the benefits of urban life</p>
Urban – Coastal	<p>Provides market for fish, fishing equipment, source of food and non-food items</p> <p>Boosaso and Qardho provide schooling for children</p> <p>Households migrate to Qardho town in the <i>Xagaa</i></p> <p>Provides seasonal labour at coast and in towns</p> <p>Source of credit</p>
Coastal - Pastoral	<p>Pastoralist travel to the coast for the <i>Heys</i> rains</p> <p>Provides market for pastoral produce and source of food/non-food items</p> <p>Provides labour for skilled and unskilled pastoral fishermen</p> <p>Some coastal locations provide access to school and health care</p> <p>During bad years of drought – pastoralists in rural areas close to the coastal</p> <p>Fishing settlements provide for labour and self-employment</p>
Abroad	<p>Linkages with abroad can be ranked as urban, pastoral and coastal – with urban having the best connections with Somalis in the Diaspora and coastal the weaker connections.</p>

Source: MacAskill, 2006

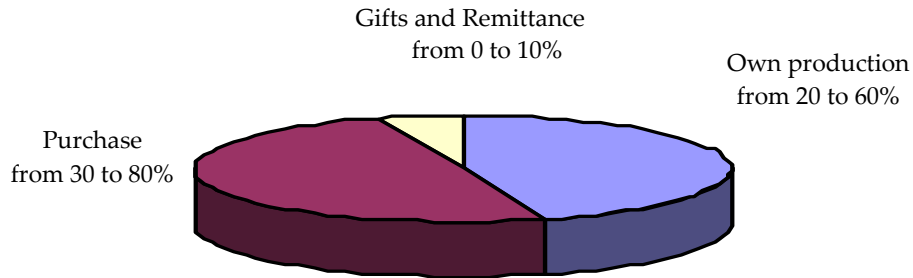
While this system shows outstanding degrees of resistance and resilience to punctual events, vulnerability levels rise when a drought or other setbacks strike the society for a long period. Lengthy droughts, in particular, negatively affect the pastoral and fishing economies; with the deepening of drought, incomes and food sources related to livestock as well as fisheries shrink, while price of staples, especially water, increases enormously, jeopardizing local financial capacities, and leaving both rural and urban communities with limited options. In this context the local ability to draw resources from external environments (i.e. remittance, international aid and illegal trade<sup>20</sup>) represents an important asset to cope with the recurrent threats affecting local livelihoods. Somali Diaspora remittances generally serve the purpose of financial assistance to members of the extended family. The system operates throughout the year and increases during a crisis, helping to extend local social support systems.

<sup>20</sup> Illegal trading and other trafficking might then become a primary activity in the aftermath of harsh periods, as the current piracy phenomenon seems to demonstrate.



### Pastoral commoditization

As it has happened in other pastoral regions, the integration of the Somali pastoral economy into market mechanisms has contributed to satisfying the needs of an increasing population that lives on a limited resource base. This occurs through generally favourable caloric terms of trade between animal and cereal products (Swift, 1986; Kerven, 1992; Zaal, 1999; Dietz et al., 2001). Today most Somali pastoral households depend on market exchanges to satisfy their primary needs. The following chart shows the relative importance of diverse food options for a middle pastoral household in a 'reference year'<sup>21</sup>.



**Figure 2.2 Options for accessing food for an average Somali pastoral household**

Source: FSAU, 2000

Depending on the seasons and the years, a pastoral group of 'average' socio-economic status directly produces about 40% of what it consumes while purchases the other half, mainly with the revenues generated from the marketing of livestock products (FSAU, 2000). These data are consistent with reports from central Somalia, a quite remote and isolated region, where 36.2% of the household calorific intake is directly derived from milk and meat (Abdullahi, 1993b). In a typical Puntland meal today pasta and rice are always present, and sweet and aromatised tea is the typical drink. Remittance from the outside Diaspora also provides an important livelihood source to many households, accounting for about 40% of all income for Boosaso dwellers (FSAU, 2000).

Such articulation with markets has important implications over the food security and the vulnerability of pastoralists, due to its relationship with their mobility, economic diversification and dietary patterns. In this sense market exchanges represent a determinant for subsistence, an option for socio-economic development as well as a further factor of livelihood risks, with different consequences on the diverse socio-economic, gender and age groups. While longer term analysis of terms of trade between livestock and cereals in pastoral environments is a highly debated matter (Swift, 1986; Zaal, 1999; Dietz et al., 2001 and Swift, 1979; Samatar, 1992 for the Somali context), there seems to be agreement over the negative impact of a prolonged state of crisis - caused by conflict, a drought or some disease outbreak - on these terms of trade, with direct consequences on pastoral livelihoods. Sen's analysis of the Sahel and Ethiopian droughts considers the market squeeze of pastoralists between decreasing livestock quality and related market value and soaring prices for food grains as a main factor triggering hunger in those situations (1981:162-166).

<sup>21</sup> For the terms middle, average Refer to the Food Economy terminology, which provides the methodological basis for the Food Security Analysis Unit (FSAU Somalia). Food Economy draws on Sen's principle of entitlement.

FSAU<sup>22</sup> data show that livestock-grain terms of trade are more erratic in the south (Belet Weyne, which is a cereal production area) compared to the north (Jijiga, which is not a cereal production area); a more secure environment seems thus strategic in stabilising supply of food grains, with positive effects on the whole society. While being exposed to factors beyond their control, such as drought events and cereal prices in international markets, pastoralists can nevertheless control some of the variables involved in market-related dynamics, such as security and transaction costs.

This integration of pastoral livelihoods into market mechanisms carries also important implications for their ecological sustainability. In a context where natural resources represent the basic productive asset, environmental health and productivity are essential for sustaining local livelihoods. Trends of growing population pressure and increasing commercialisation of livestock products carry important ecological implications. The World Bank claims that while livestock production and export will continue to dominate the economy and be the most important source of household income and economic growth for decades to come, it is uncertain whether its production can be sustained with the deterioration in grazing capacity of the rangelands (2005).

In the case for Puntland, in some areas, processes of privatization of key range resources are underway in support of commercial activities; however the protection and regeneration of the natural resource base still represent issues of utmost concern to the local population. While it is difficult to assess current environmental trends in the region, existing rules, regulations and enforcing bodies seem to be more effective than elsewhere in the region. The development of individual resource ownership in Puntland appears to be less pervasive than processes ongoing in other parts of the country, such as the deforestation for charcoal production (Gedo), the proliferation of private water points (Sool) and land fencing to produce fodder (Hawd).

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<sup>22</sup> [www.fsasomali.org](http://www.fsasomali.org)

## Chapter 3 - GOVERNING THE SOMALI RANGES

For the purpose of this work this chapter addresses the institutional environment that governs Somali rangelands, so to set the scene for understanding pastoral resource management in the region. Taking the work of Lewis in Somaliland (1961) as a main historical reference, the institutional picture specifically pertaining to Puntland is here depicted. The organisational structures and the principles backing institutional arrangements are assessed so to provide a comprehensive analytical perspective.

In order to enable the complex governance of ecosystems, pastoral societies have developed articulated institutions that facilitate the interfacing and negotiations between the different individual, group and societal interests, towards a consensus-based sharing of available resources. In this respect an institution is a complex of norms and behaviours that persist over time by serving some socially valued purposes, while an organization is a structure of recognized and accepted roles (Uphoff, 1986: 8-9). Through these concepts we will analyse practices of governance on Somali rangelands; this, as formulated by Mearns (1996), is the exercise of legitimate authority within a local group through endogenously evolved sets of rules.

Somalis have been defined at times as ‘capitalists to the core’ (Drysdale, 1993), ‘scientific socialists’ (Pestalozza, 1974), ‘democratic’ (Lewis, 1961), ‘fierce republicans’ (Burton, 1856), showing ‘a deep antipathy towards communism’ (Sadia Ahmed, 1999), though possibly the term ‘anarchists’ has been used by most. Their governance system has been defined as acephalous or ‘non-state’ society, whose historical social organisation is largely free from hierarchy and does not lead itself easily to the development of state structures (Biixi, 2001:82). Today Somalia represents the textbook case of state fragility (Bettoli and Ticci, 2009). In his well-known work of 1961 in Somaliland, anthropologist I.M. Lewis talked about a ‘pastoral democracy’, as democracy was the way he classified the system under analysis at those times amongst Somali pastoralists. Some fifty years later we would deem him correct in defining it democracy, as well as attaching that term to pastoral groups, whereas greener areas where farming and urban economies have a longer tradition in the Somali region are seen to suffer from different and less effective forms of governance.

Somalia is possibly<sup>23</sup> the only country of the region of the Horn of Africa where people share most of the attributes usually associated with nationhood, namely, to have a common language, to be associated with a certain territory, to share a common culture, history and tradition, are bound by common racial origin and practice the same religion. In short Somalis are physically and culturally rather homogeneous people (Touval, 1961). Despite this seemingly internal homogeneity, Somalia is the country that has enjoyed the shortest history of a central, common government. Despite the divisions which persist within the country, at regional level as well as amongst Somali Diaspora communities internationally, Somalis have developed very effective ways to regulate exchanges and flows of commodities, information, money and services from considerable distances in relatively short time. Understanding the institutional set up

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<sup>23</sup> Another case may be represented by Eritrea, though to a different extent.

embedding the Somali society is critical to understand which are the common rules and values Somalis share and which are the dividing lines amongst them.

The institutional environment is of particularly importance in pastoral societies, as it sets the rules and the mechanisms that regulate access to resources and provides the framework to tackle and solve conflicts. Such institutions are reportedly quite effective amongst Somali pastoralists (Swift, 1994) and are critical in defining their capacity to manage risk and vulnerability and the related degrees of physical, political and economic security (Bradbury, 1996). Two of the the critical concepts which shape the Somali (pastoral) society are: the principle of agnation within the clan dimension, the *tol* (which in Somali translates also 'to sew together'), and the framework defined by the customary rule, the *xeer*. It is through these two principles that relationships between individuals and groups are defined, what Somalis define as *reer* (people belonging to a same unit, cohabiting in a *kraal*). The dynamism and the effectiveness of the local institutional environment with respect to market relationships and commercial exchanges will be assessed in the next chapters.

### THE ORGANIZATIONAL STRUCTURE: The Clan

With regards to the pastoral nature of the society, local contiguity is not a significant principle of social cohesion and solidarity; these come rather through common genealogical affiliation (Farah, 1994). It is genealogy that determines the ideological frame, resource entitlements, labour division, rights, obligations and relative standing of persons and the exercise of authority (Gunn, 1990; Unruh, 1995). Power operates by temporary coalitions and alliances between lineages and their divisions, facilitated by diffusion of political authority, lack of stable and formally defined political roles, and virtual grouping of families (Samatar, 199; Doornbos, 1993; Unruh, 1995).

The Somali nation is structured on a kinship system of segmentary lineages which divide into subsidiary clans or lineage groups. The belief in common descent and traditional genealogies represents the backbone of the social Somali contract; descendance follows mostly patrilineal lines and defines the collective identity and responsibility of its members vis-à-vis the rest of society. The clan is the basic unit that associates population groups with a common descent; social relationships are defined in terms of kinship based on descent from a common ancestor, who in Somali oral history is considered an Arab *sheikh* who migrated to Somalia sometime in history. Due to the Sufi connotations of Sunni Islam practiced by Somalis, clan ancestors have translated into Muslim saints (Lewis, 1980:63)<sup>24</sup>.

The 8 to 10 million Somali population inhabiting the different portions of the Horn of Africa divides into six major clan families (Hawiye, Daarod, Issaq, Diir, Digil and Rahanweyne); each one is subdivided into six or more clans and each clan is subdivided into subclans and sub-subclans, all the way down to extended families. The first level of segmentation between the Samaale and Saab groups reflects a division in economic vocation between pastoralists and agro-pastoralists. The Samaale are primarily of nomadic origin and live throughout Somalia and in Ethiopia, Kenya, and Djibouti. The Saab consist of two clan families, the Digil and Rahanweyne, located primarily in southern Somalia, where they mix farming and herding and are more likely than the Samaale to be sedentary.

<sup>24</sup> refer to Touval (1963) for a deeper analysis of the historical origin of genealogical tribes.

### Ethnic Groups

#### Somalia's Clan Families and Major Subclans

Percent

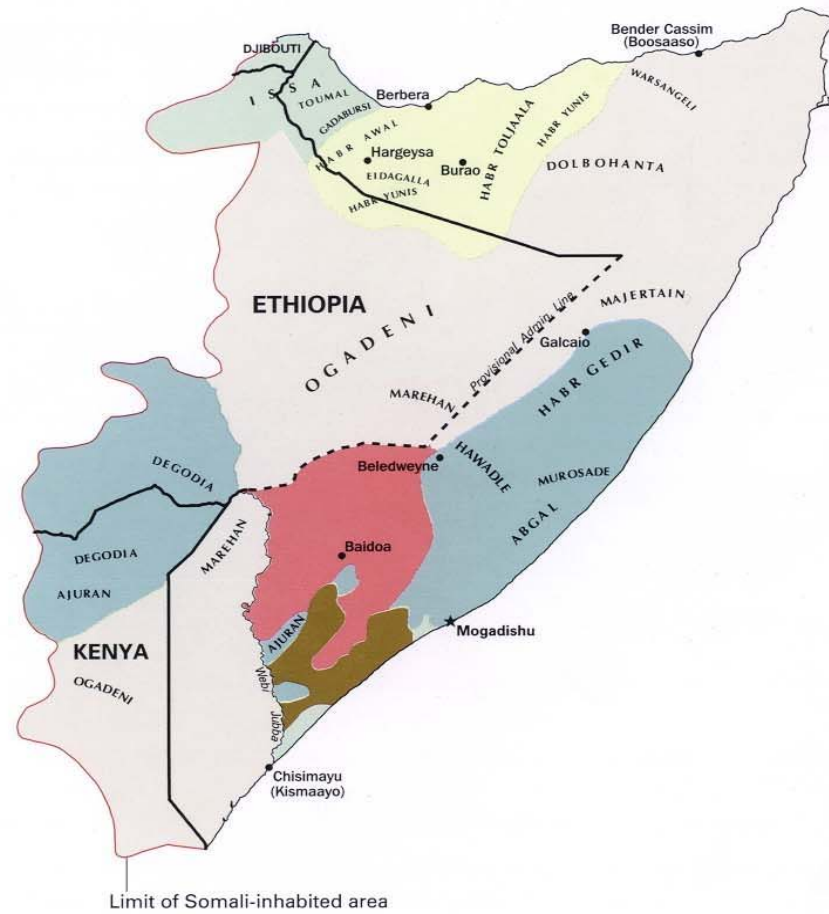
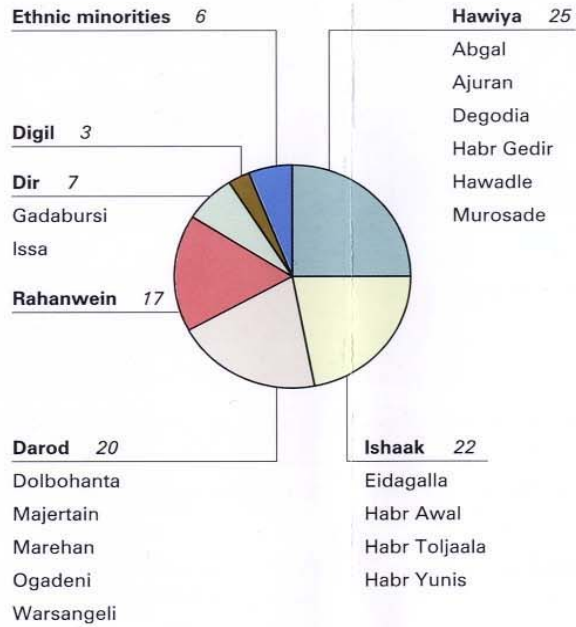
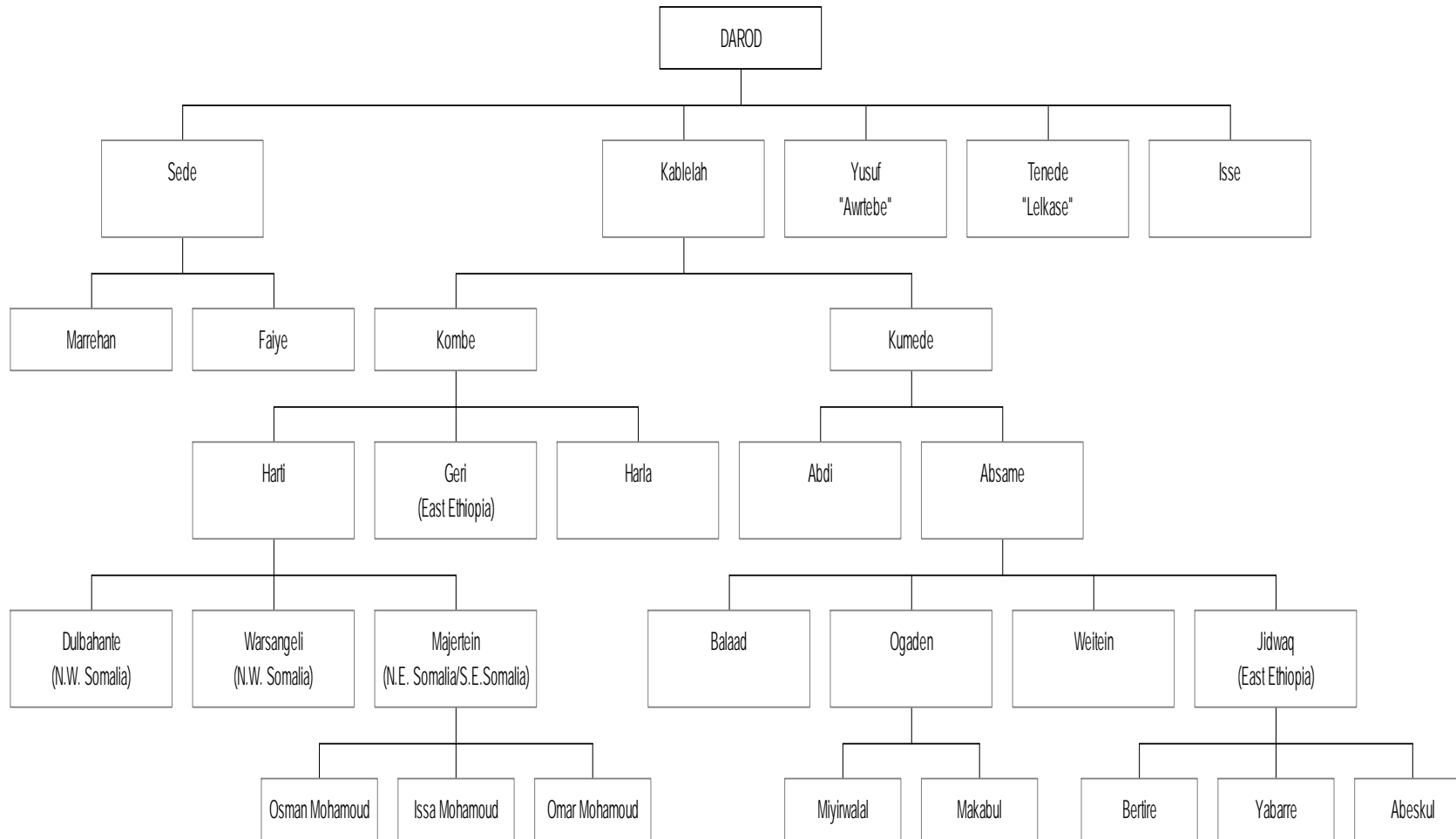


Figure 3.1 Population and land repartition of Somali clan groups



**Figure 3.2 The Daarod genealogical structure**

Source: Ambroso, 1994

Clanism is the Somali version of the wider issue of ethnicity or tribalism: it represents primordial cleavages and cultural fragmentation within society (Hussein, 1995). The clan is a community of agnatically related men; it marks the upper limit of corporate political action and has territorial ties. Clan structures serve as a source of great solidarity as well as conflict, as they combine forces for protection, access to resource, and political power (Kapteijns, 1992; Warsame, 1996).

Its organizational role is embedded in a specific ideology and adapts through time to diverse internal and external drivers of change. Although it might seem a stable and constant structure, if looked over a long time span, descent groups would be seen as proliferating, dwindling, splitting off, disappearing and by conquest, succession or shift of affiliation, constantly changing their relationships to places (Helland, 1980). By no means has the clan sub-division proceeded on parallel tracks, for each different unit and sub-unit has undergone specific development trajectories. Patrilinear rules govern descent and inheritance to a large extent, but in some cases this is more true at ideological than at genealogical level. Indications are in fact that at some points in the system matrilinear ties are used to link groups together in larger descent categories, in spite of the patrilinear rule (ibidem).

At more immediate time scales the Somali clan organization remains an unstable system. The nature of the clan is in fact that of a confederation of different lineage segments, which are inherently autonomous units whose relationships are characterized by temporary coalitions and alliances changing according to circumstances and prevalent conditions. The continuous shift of alliances in conjunction with migration of the production units excluded the development of stable territorial groups as well as of established political, economic and administrative institutions.

The kinship system is like a vast network stretching laterally (horizontally), to embrace everybody in any given local group; it also extends vertically to include the departed and those yet to be born. Similarly to other African societies it is part of the traditional education of Somali children to learn the genealogies of their descent. Being patrilineal, the Somalis count descent through the male line and young people are taught to memorise the entire genealogy of their descent from immediate father to founding one. In the Daarod family this can go up to recalling more than 30 generations. This genealogy also gives a sense of depth, historical belonging, and a sense of obligation to the genealogical line (Narbeth, 2001:62).

#### **BOX 3 – A password in the bush**

The Italian expression *salamelecchi* means *wasting time greeting each other*. In truth, when two Somali pastoralists meet in the bush, they start greeting each other with *Saalam Alekum* (from where originates the Italian term) and little by little, through discussion, they disclose each other's identity, with respect to the wider reference clan system. The degree of affiliation between the two people or the relationship between the groups to which they belong enable them to share and exchange information with each other to different levels. As it can be guessed, accessing timely and reliable information under such conditions is a critically important livelihood factor. Genealogical identity plays thus as a password, favouring or limiting access to important data.

Within this organisational structure somebody's identity changes from one situation to another, depending on what is at stake. The ever-shifting world of clan politics is captured in a saying popular among pastoralists '*Myself against my brother; my brother and I against my cousin; my cousin and I against the outsider*'<sup>25</sup>. A man might identify with his entire clan when its wells or grazing lands are threatened by another clan, but act on behalf of his own extended family in a feud within the clan over access to dry season reserves (Cassanelli, 1982:21). For this Somalis are known for their specific degrees of collectivism as well as individualism, being simultaneously gregarious and individualistic (Biixi, 2001), two dimensions which are complementary portions of the same social identity. Neighbouring people with different social structures, often recalled Somalis as '*each one his own sultan*' (Burton in the 1850s and the mission report from Drake Brockman in the early 1900s).

### ***Diya* paying group**

In practical terms the effective unit of social and political cooperation changes continuously. Within this series of concentric and interconnected circles, the most stable sub-unit is the lineage segment, consisting of close kinsmen who together pay and receive blood compensation in cases involving injuries or killing; this unit is named *diya*-paying group. It represents the strongest corporate unit within the political organization, with its members sharing the same civil and moral responsibility. The clan system lacks in fact a concept of individual culpability (Samatar, 1993; Helander, 1986; Unruh, 1995), as it would be effectively highly unlikely that a single person, household or a small group could raise and pay a hundred camels in case a homicide is perpetrated by one of its members.

*Diya* is the in-kind compensation that is due in case of wrongdoings. *Diya*-paying re-groups kin members who jointly pay and receive compensation for murder and other personal injury or wrongdoing. If somebody commits a crime, all members of his *diya*-paying group are involved in the compensation payment; similarly, if a member suffers some wrongdoing, they all engage in getting the compensation and sharing it. *Diya* members engage thus in the negotiation to settle some wrongdoing or in the conflict that might arise out of its revenge. Blood payments not compensated might keep pending for more than a generation, involving degrees of tension and feud amongst involved groups; this might involve limitations in accessing resources and sporadically lead to open clashes.

Crimes and wrongdoing are thus subject to payment fees; the system of redistribution of the payment quota is a function of the male members of the *diya*-paying group, with a sub-division between a more restricted/intimate group and more distant relatives. The size of a group determines its status, together with its wealth, often expressed in terms of camel holdings – which is directly related to the group capacity to pay *diya*. *Diya*-paying units can assemble a fighting strength of few hundred to a few thousand men supporting one another, involving a genealogical span between four to eight generations, united by a contractual alliance stipulating that they will pay and receive blood-compensation together (Ambroso, 1994; Farah, 1994). While the clan marks the highest limit of political cooperation the *diya* paying group represents the smallest. In the words of Samatar, the *diya* paying group was the anchor in a sea of ever-changing mutations (1988:31).

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<sup>25</sup> Recorded by Cassanelli, 1982 and also reported in Lewis, 1995



The *diya*-paying unit is thus a dynamic concept and its boundaries may change through time, due to processes of fusions and fission. The rationale of these dynamics is to define political units which are manageable (not too large) and effectively capable of defending the interest of its members (thus they shouldn't be too small) (Lewis, 1961).

Young boys and kinsmen living in urban areas and those who have migrated elsewhere are actively included in the *diya* group, which in many cases comprises members living in other continents, and thus involves an international dimension. Given the patrilinear nature of the clan organisational structure, attachment to this grouping is strictly related to men; women do not participate in the *diya*-group formation and do not contribute or receive proceeds from a *diya* compensation (PDRC, 2003). Some organizations utilise the named *qoora tiris* (counting of testicles) within groups as the most reliable system to estimate population figures in the area.

#### **BOX 4 - Blood money as a demographic assessment tool**

Elders of major clan groups are interviewed about the number of people that are to contribute if-and-in-case *diya* contribution is called for. The figures the elders provide are a rough estimation of the capable adult men belonging to that kinship group. Considering an average of 2 women for 1 man and household consistency of average 7 people, the overall population can be therefore estimated.

This system has been utilized to some degree of success by Horn Relief for emergency interventions which included distribution of goods and cash in Sool areas (Nori and Gabrielle, 2007). At much lower costs this method generated figures similar to those assessed by UNICEF through the polio vaccination campaign. While this system seems to apply among pastoralists, it might show flaws in urban and coastal environments, where higher portions of minority groups and displaced people are located.

People inhabiting Puntland belong to different groups from the Harti family, a branch of the Daarod clan family, the most numerous and territorially diffused tribal confederation (refer to Picture 3.2). It is mainly members of the Majerteen groups that inhabit the Somali northeastern region, including the Osman Mohamud, which represents the major group in Karkaar and the second biggest in Bari region, the Issa Mohamed, the major group in Nugaal region and the Omar Mohamed, the major group in Mudug region. The Warsengeli and the Dulbahante population groups found in neighboring Sanaag and Sool regions also originate from the Harti branch. Genealogical links within the wider Daarod frame exist also with the Ogaden group, who predominantly inhabit the Ethiopian Somali Region. The Harti family also comprises other smaller clans and minority groups. Due to the extension and the functioning of the clan system, most households from these groups have either members or relatives in the different pastoral, coastal and urban environments.

#### **The Xeer: A SET OF PRINCIPLES**

Parallel and complementary to the clan system, the *xeer* represents what in academic terms is defined as customary law or social contract. It combines Somali pastoral elements with dictates from Islamic jurisprudence in establishing individuals' reciprocal rights and obligations vis-à-vis natural resources and social relationships. *Xeer* offers the interpretative machinery both for the internal governance of a

community and for its relations with other Somali communities; it represents the set of rules and procedures that provide the backbone to the social, political and civil functioning of the Somali society (Kapteijns, 1995; Suvad Ibrahim Abdi, 2001; PDRC, 2003). According to PDRC (2003:26) many of the customary norms are in clear contradiction with both Sharia and secular law, thus showing *xeer* degrees of strength and cultural autonomy. According to Cerulli (1919) *xeer* resembles in many aspects pre-Islamic laws.

*Xeer* provides guidance for a) mediating conflicts that might take place within and amongst clan groups; b) organising the management of natural resource (e.g. seasonal access to pastures, labour to enhance availability of water); c) mitigating the effects of exceptional and extreme events (marriages, droughts, death) (Samatar, 1989). Its main objective is consequently to regulate the pace of living, to enhance redistribution of rights and duties and to avoid escalation of problems. More specifically the system is thus set to regulate tensions and violence by transferring the responsibility of individual behaviour to the higher societal level; that of the group the individual belongs to.

The structures and the power to have these rules enforced reside within the clan structure, as the *xeer* represents primarily the form of contract which binds individuals to their group. The lineage provides identity but they are also the channel for ownership, obligation and responsibility (Gunn, 1990:6). Ties of obligation and solidarity are critical in this sense as every individual is primarily responsible for his acts vis-à-vis his own group. While this accentuates the risk of escalating individual skirmishes to regional feuds, its aim is exactly to diffuse conflict, and to avoid its escalation. The founding principle of a *diya*-paying group is to honour the social contract without jeopardising the social and economic viability of the group itself and of its members (Helland, 1980: 204).

While the clan system, family lineages and the *diya*-grouping provide the organisational set up, the *xeer* represents the societal chart of the Somalis and the societal agreement between all citizens permeating all aspects of society. Together these two dimensions define the Somali institutional environment. It is the belonging to a *diya*-paying group that gives somebody a political and juridical status, as it is through its membership that he joins the societal contract: not as an individual, but as a member of an agnatic group. The non-adherence to its values and norms might lead not only to marginalisation, but even to loss of status within the society. This might apply for individuals within a group, or for a group within a clan.

*Xeer* imposes a number of governing principles that provide the regulatory framework for the Somali pastoral society. As pastoralism is highly reliant on the conditions of the natural resource base, governance mechanisms must ensure its proper utilisation for the whole community; issues of resource availability and accessibility are thus central to the Somali pastoral social contract. A main concern is hence on ensuring that range resources are utilised in ways that do not harm or compromise future availability. To some authors the continuous renegotiations over access to grazing resources and the related making and unmaking of agreements between clan units is an important factor in managing the natural resource base, preventing land degradation and guaranteeing long-term rangeland productivity (Samatar, 1989; Poulsen, 1990; Hijort af Ornas, 1993; Unruh, 1995a).

Access to these resources is also critical. In order to tackle the limitations and the variability of the natural resource endowment pastoralists must be able to move extensively through large territories and to access different pastoral resources - grazing lands in higher and lower zones, water points, salty areas, forest areas, transhumance routes, market corridors, urban consumers, trading ports, etc. - so to ensure the viability of their livelihoods. Prevalence of conflictive conditions touches the heart of pastoralism as, during difficult times (i.e. a long dry season), people and animals get stressed, and individual tensions and sporadic episodes might escalate into open and long lasting confrontations between the kin mates of the opponents, with dramatic consequences for the whole community. Peaceful relationships between the diverse groups are therefore critical in ensuring that pastoralism is viable and that pastoral communities can satisfy their needs and support their livelihoods. This explains the emphasis on conflict regulating and mitigating capacities, which is typical of all pastoral societies (Nori et al, 2005). As to Lewis (1955:196), customary procedure amongst the Somali cannot be divorced from war and feud.

### Resource Management

The *xeer* provides the framework under which pastoral resources are controlled and utilized. Clan territories are mapped out into distinct areas, on which a group has primary utilisation rights and protection duties. Practical management of pastoral resources and related mobility and access patterns hinge around the concept of *degaan*. *Degaan* is the territorial unit that serves to divide and define pastoral resources into operational sets: it can be translated as 'habitat' or ecosystem, land unit or niche (Barkhadle, 1993). It is an area of rangelands incorporating a set of critical pastoral resources characterized by specific ecological features: good pasture at rainy periods; water points for dry seasons; areas with salty soils; trees and shrubs for fuel wood provision; gums and resins for collection; wildlife products, including fruits and animals; and contingency drought enclosures - *xirmo abbaareed*. A number of biophysical studies have reported that *degaan* ecological classification is an effective example of Indigenous Technical Knowledge, as it shows outstanding technical skills and capacity to generate relevant information (Picchi Sermolli, 1957; FAO/UNESCO, 1971). Recent studies that applied modern technical devices to range resources classification found in the traditional *degaan* system a strong correlation between the two interpretations (Hashi, 1993; Print, 1999).

*Degaan* is identified with particular lineage groups by virtue of occupation, and delineated in terms of its geographical range and the historical and institutional arrangements for its use (ibidem; Samatar, 1994; Bradbury, 1996). As described by Lewis (1961), the *degaan* can be pictured in terms of concentric circles, with each circle at a wider level representing the *degaan* of a higher level of lineage segmentation within the Somali clan system (Touval, 1961; Barkhadle, 1993). The household units constantly insisting upon an area are recognized as customarily associated to that territory, and thus primarily responsible for and the main beneficiaries of its natural resources. Lineage descent and effective land occupancy define these rights and duties. These are nevertheless not exclusionary; other pastoralists can graze and water their animals, as surface water and pastures belong to all. The *xeer* provides in this sense migrating pastoral families the right of access to the use of rangeland, within certain limits.

Two main principles regulate the host utilisation of these resources, a) no permanent presence and b) no commercial exploitation:

- a) At the arrival of the rainy season, a hosted group might be asked to return to their homeland, so as to relieve the pressure on local pastures. Establishment of infrastructure, such as a well, a barn, a building or enclosures are not permitted to hosted groups as these would imply permanent residence.
- b) Commercial utilisation of local resources from encroachers is forbidden, such as cutting grass for fodder, collection of frankincense and fuelwood.

Other minor principles apply, such as holding larger ruminants further from settlements in order to leave areas for smallstock closer by, and other practical arrangements. Trees can be cut in case of need (shelter or fuelwood) but only to a certain rate/extent and green wood should not be used for fire. Other arrangements apply to ensure that the resource base is not over-stressed and preserved through time. Though land, in this way, is accessible to all, specific groups carry primary rights and responsibility over specific territories. Principles of reciprocity are critical in this context, and visiting groups are expected to host the others when conditions apply.

As access to water is the key to utilize rangelands during certain periods of the year, effective control over water points give the hosting groups the capacity to govern the use of rangelands. Traditionally complex sets of rights regulate access to water points in dry periods, which have been often disregarded by external interventions. By drilling boreholes and digging reservoirs 'livestock' development programs implemented by national and international agencies effectively opened access to surrounding rangelands to anybody as those investments did not fall under the existing institutional framework. It becomes understandable in this context why 'development' water schemes – which their unclear property rights - have been a primary target of looting and destruction under civil strife in Somalia (Little, 2003; Nori et al. 2007).

Ongoing integration into market dynamics provides important challenges to the existing institutional setting. In an increasingly commercial livestock rearing environment the relationships between communal, corporate and individual interests change, with contradictions and conflicts increasing accordingly. As a fundamental example, should a sheep be raised for market purposes, its grazing would imply commercial, rather than survival orientation, and would thus challenge the existing land rights arrangements. The same applies to water, which is being commoditized to different extents.

### **Compensation**

Measures to redress wrongdoings and compensation for injury or death represent the core body of the *xeer* regulations, which define standard parameters, although room for negotiation and margins for arrangements exist. In principle the life of a man is worth 100 camel heads, while that of a woman 50. Each unit of a man's body is priced by a certain number of camels. Interestingly, emasculation is equivalent to homicide, and entails the same level of compensation (Lewis, 1955). The social position of the victim and his/her prestige within society are relevant in defining the compensation. For example, local leaders or well respected people are normally worth more than average standards, and negotiations to get the compensation are less difficult (cfr. Lewis, 1961:188).

Specific relationships exist also between the consistency of the blood compensation payment (i.e. number of animals) and the structural distance between the groups. Often, the further the distance between two groups, the higher the correspondent amount. Genealogical distance is often proportional also to physical distance. Lewis (1961:188) believes this was a disincentive to engage in conflict with groups of further distance within the genealogical structure and of relatively weaker ties.

*Xeer* implementing procedures and reference terms might change from a group to another, depending on specific conditions. As an example, farming communities inhabiting SW Somaliland (Gebiley and Awdal zones) would consider payments for wrongdoings in cereals, rather than in camels. Although the *diyya* concept is deeply embedded within the local society, effective payments are often obtained through long negotiations and at times through forms of conflict or related threats.

Despite their zeal for Islam, the *xeer* generally does not include forms of physical punishment which are found in the Sharia. Somalis, for example, are unwilling to adopt flogging, amputation, or stoning, which are in contrast to their tradition (PDRC, 2003); 'an eye-for-an-eye' solution would not be convenient for any feuding part. In contrast to Islamic dictates, the *xeer* emphasis is more on the terms of collective pacification, rather than on the personal punishment (Cerulli, 1919)<sup>26</sup>. This was also a domain of confrontation with the Barre government, which was eventually forced to drop the individual punishment law a few years after its promulgation (1971-75) as it faced strong public resistance, especially in pastoral areas. Apart from its emphasis on people security, *xeer* also provides a framework for ensuring property rights in the Somali society. Property, such as livestock, wells, houses and even fixed real estate in towns are not registered with any authority, but are owned through community sanctioned systems (Umar and Baulch, 2007). All property in pastoralist areas – from livestock to barrels to jerry-cans - is owned and held in systems recognised and guaranteed by mutual enrolment into the clan systems and customary law (Umar and Baulch, 2007:19).

Arrangements within the *xeer* also cover trade and commercial transactions, as it provides important marketing principles, such as the prohibition of selling unhealthy animals (the purchaser has the right to return it to the previous owner if the animal is found sick); similarly, milk sold as pure (*aano*) while it has been diluted with water (*garòr*) can also be returned to the seller. Rules exist also prohibiting the sale of 'futures' – e.g. a calf cannot be sold until it is given birth (Cucinotta, 1921:253), although there are indications that nowadays livestock traders also buy rights to ownership of unborn animals (*uurjiif*) from pastoralists with pregnant sheep (Umar and Baulch, 2007:40). *Xeer* principles govern transactions at different levels. Intermediaries and middlemen act within the framework provided by the *xeer*, and elders might be called in to enforce agreements made by the traders, to arbitrate when differences are irreconcilable and to ensure that compensation payments are made.

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<sup>26</sup> Although it must be reported that recently Islamic courts ruling in parts of southern and central Somalia following encroachment of Islamist movements have been adopting these practices in some cases – maybe an indication of dissolved governance capacities.

## Decision Making

Despite the strictly ascriptive identity structure defined through the clan system, decision-making amongst Somalis is a highly participatory process, which relies on selection of representing elders and consensus-based agreements. The place where decisions are taken are the councils (*shiir*), where selected participants take part and a consensus must be achieved on the final decision. The criteria to participate are to be an adult free man from the same kin. 'Adult' in this sense means 'autonomous producer', thus in Puntland this translates into men looking after camels. Women and non-free men (meaning those not belonging to major clans) are thus excluded from formal political decision-making. It is during these consultations that the *xeer* is interpreted and applied on a case by case basis. No decision is taken if consensus amongst participants is not reached. This applies to disputes within as well as between groups.

When it comes to a conflict between two groups, the *xeer* provides them with the principles and the instruments that should enable a 'gentlemen agreement', through meeting between representatives selected from two sides. 'Clan representatives' attending the *shiir* (councils) are selected on a case by case basis, according also to their competency over the disputed matter. Through the analysis of the problem and the reference made to previous cases, *shiir* participants must reach a consensus over the resolution. Once agreed this resolution (*gar*) becomes formalised in what is named *guddoon*, which becomes the law that regulates that dispute. *Shiirs* within the same group can also be organised to govern internal matters, such as the management of a water point, or alliances and agreements with other groups (WSP, 2001). What characterizes the *diya* payment group as a specific entity with political and juridical implications is in fact the existence and the application of internal sanctions within the group, based upon the decision and advice of the ruling elders. Willingness to respect the decision and to reach a solution between parties is nevertheless paramount, as no authority is embedded with the power to enforce its decisions (Ambroso, 1994). Council of elders are in fact the places where collective decisions are taken, although they lack the power to enforce those decisions. Group consistency and related fighting strength within the lineage system might play an important role in accepting and respecting decisions taken by a *shiir*.

Leadership is an essential element within the system, as leaders are those that oversee and negotiate; they should thus be capable of reaching consensus within their constituency. Local leaders also represent the internal authority and have to ensure that *xeer* arrangements are duly considered and applied. In this framework subsidiarity is an important feature, and higher level authorities intervene when lower levels are not able to tackle the matter of contention. Within a specific group the elders titled to lead and exercise governance are named *isimo*, and are assisted in their tasks by ordinary elders of the different sub-groups. *Isimo* elders receive the decisions (reached through consensus) by clan /group elders, ratify and formalise it, and then delegate the local elders for its implementation and follow up (cfr. Biixi, 2001). *Isimo* often reside in areas which are of critical relevance to their group. This principle is the basis of the recent development of settlements which characterises the Puntland region today. When an *isimo* member dies, its successor is chosen by all adult male members of his clan amongst his line of direct male ascendants. Other criteria associated to the selection are wisdom, bravery, prestige, social networking, and religious *aurea* –

although admittedly age and lineage descent are most relevant factors (Colucci, 1921: 398). The selection process involves thus elements of democracy (a choice is to be made together) with ascriptive terms (the one chosen must belong to a specific lineage group).

In this system of fragmented hierarchies, the *boqor* himself might be called in to decide the setting aside of a land which is being degraded in case utilising groups cannot find an agreement. Amongst the Daarod the relevance of a clan leader - named *boqor* (somewhere *garad*) literally meaning 'belt' - is traditionally more relevant than amongst other clans (Lewis, 1955; Battera, 1995). The Harti *boqor* originates from the Majerteen family, directly descendant from Mohamed Suleiman (refer to picture 3.2). Osman Mohamed Suleiman was the *boqor* with whom the Italians negotiated the establishment of the protectorate in 1889. Historically the position of *boqor* also involved some holy dimensions, which had relations with its religious role. The *boqor* is assisted by advising elders in taking decisions and traditionally is a representative figure exercising authority only through the council which he convenes (Lewis, 1955). He represents more of a guide, rather than a hierarchical authority. Without going too much in detail, there is a hierarchy of leadership roles according to the different segmentary levels, and the processes of fission and fusion which have taken place within the diverse groups. Whereas until beginning of 1900 one *boqor* existed for the whole Majerteen population, nowadays the three main Majerteen groups have each one their own *boqor*. While direct descent is not the rule for elders (the son replacing the father), it applies for the levels of *boqor* and sultan.

### Gender Dimensions

Traditional Somali leadership processes are an exclusively male domain. Women do not participate in the *shiir*, they are not numbered among the titled elders, and are not counted among 'kinsmen' in the traditional enumeration of clan membership (*qoora tiris*) (Biixi, 2001). Apparently women do not formally exist within the decision-making system, though their absence from formal political institutions is partly balanced by their considerable informal political influence in their communities and households in a number of critical activities (refer to Horowitz and Jokwar, 1992, for a detailed assessment of women's effective decision-making in pastoral context). This condition seems to be due more to the patriarchal nature of the traditional Somali society, rather than to Islam teachings or religious prohibition (ibidem; Kaptejins, 1995).

Building relationships and establishing alliances with other groups is strategic among Somali pastoralists, as this extends the outreach of one group, enhancing its capacities to access resources and exchanges, thus broadening its livelihood resource base. Marriage plays a role of primary importance with this respect. Establishing blood ties enables forging an alliance that might facilitate inter-group bindings, thus facilitating their interactions; '*If we have people in common it is easier to sit and talk*', stated once an elder in Dhuudo<sup>27</sup>.

This is a main reason exogamous marriage is an institution that is integral to ensuring the viability of the pastoral enterprise through the widening of reciprocal networks and maximization of labour resources (Joeques and Pointing, 1991). The *diya*-paying group hinges on lineage descendants, who are conceived through patrilineal lines and

<sup>27</sup> Also refer to Lewis, 1955 who quotes Burton, Guillain, Cerulli, Cucinotta, Ferrand.

the exogamy rule implies that the wife for a member of a lineage is normally sought from another lineage. Hence marriage is preferentially directed outside the close circle of agnatic kin<sup>28</sup>. Marriage comes then to represent the locus of the biological and social reproduction of society, and serves to build subsidiary sources of social and quasi-political ties (Kapteijns, 1995). The role of exogamy allows the segmentary lineage to constantly expand, by binding together people from different groups in taking and sharing risks (Gunn, 1990). There are a number of reasons behind this rule, and significant implications as well. The main aim of these intermarriage mechanisms is the opportunity to establish long-lasting engagements with other groups, not so much to do business together or become more powerful than other groups, but rather to favour opportunities to engage in a dialogue to negotiate resource access or conflict resolution should the conditions impose<sup>29</sup>. As an example in case, in the Sheekh peace conference to bring back peace in Somaliland between two main warring sub-clans, the Issa Muse and the Habar Yunis, agreed to exchange fifty women, to become wives, equally representing their two clans (Farah and Lewis, 1993)

Material exchanges involved in intermarriage involve a number of practical implications as well as social values and symbolic meanings. Dowry exchange of animals (mostly camels and once also horses) serve on the one hand to strengthen the group's herd by diversifying its genetic base, while on the other hand it further consolidates the affinal ties between the two groups (*xidid*), through their materialisation in herds that are generated by this union. It is interesting to note that when a marriage is contracted, women are also entitled to some animals (*meher*), which she would get in case of divorce or husband's death. The *meher* is normally calculated in camel terms, but paid effectively in an equivalent of sheep and goats (Warsame, 2001); this indicates that camels are the standard measure for everything and that their ownership is not associated with women.

Within the clan framework a woman represents thus the natural interface between two groups, as she originates from a group and gets attached to another one through marriage. Her father and brothers will belong to a group, while her husband and sons belong to another one. Women so become a significant bearer of social capitals in that she represents to both communities the rights and duties of reciprocal sharing (Kapteijns, 1992). Somali pastoral women enjoy thus a double status, one defined by her agnatic or blood ties (*dhalasho*), while the other results from the marriage relationships, thus pertaining to her juridical rights (*dha'hdin*). Her identity becomes as a result thus somehow ambiguous as she is responsible for the reproduction of the primary unit of a lineage without effectively be part of it (Kapteijns, 1992; UNIFEM, 1998).

This ambiguity is reflected in the properties and rights attributed to women. Women cannot be entitled to main capital assets; they do not own personally large ruminants, horses, buildings, vessels and frankincense plantations (in the south their land rights are limited). In the Somali culture women are thus not entitled to camels. In case of divorce or her husband's death, the compensation will be calculated in camels but effectively paid in smallstock (Warsame, 2001). This is not in line with Sharia principles, which grant women fair inheritance rights, and differs to a large extent

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<sup>28</sup> Lewis, 1998:76, quoted in PDRC, 2003

<sup>29</sup> As reported during a discussion with elders in the nearby of Bander Beyla



from the system analysed for another important camel society, the Tuareg, where women are recognized as having specific livestock ownership rights over camels (Oxby, 1987; Worley, 1988). In addition, in case of *diya* payment, both her father's as well as her husband's groups will be called in to contribute.

Women 'ambiguous kinship ties' (UNIFEM, 1998) and their 'double clan connections' (Warsame, 1996) are critical assets in peace building processes. Their status enables women free movement and makes them the perfect messengers in volatile situations; their affiliation to different groups provide them with the links and the concern to engage in conflict resolution and reconciliation practices (Asha Hagi Elmi et al., 2000; PDRC, 2003). During the recent conflict their role as inter-group bridging agency has made possible dialogue between warring factions. In Mogadishu for example, committees of women are leading NGOs and other groups promoting reconciliation, and have organized committees to improve health and education across conflict borders (WSP, 2001). More in general, also due to their non-combatant role, women are critical in rebuilding the Somali social fabric, establishing neighborhood relationships and forming associations and organizations based on joint interests and reciprocal support, which are vital for local livelihoods (Gardner and El Bushra, 2004; Helander, 2005).

While mediation and negotiations are men's tasks, women are involved in important 'behind the scenes' activities, facilitating the bringing together of warring clans for peace talks (Warsame, 1996:51). Somali men and women are set to play diversified and complementary roles, with women tailoring inter-group, horizontal and bridging links, as opposed to men, who follow kin/clan intra-group dynamics that are vertical and binding.

### Minority Groups

Minority groups – in a manner similar to women - have their roles and rights associated to their marginality within the clan organisational structure. People from the *Tumaal*, *Midgaan* and *Yibir* groups do not originate from the Somali clan families, and are defined as 'occupational castes', *sab* or *bon* in Somali (Anten et al., 2001). They represent about 1% of the overall population; their identity is based on their occupation/profession and they lack recognised territorial, genealogical or ethnic foundations. They are ethnically inter-mixed and in fact the only element in common they share is their social positions and a shared destiny. The legend goes that their ancestor was found in the bush by the Somali patron tribe, thus acknowledging their supposed inferiority and their dependence from main groups (Lewis, 1955; Cerulli, 1959). They are defined as 'those without brothers', meaning that they are without agnatic kin, and thus lack the true wealth within local society. Low castes are dislocated in small villages and settlements all over the region, where their skills provide useful services to the overall population. Their territorial presence is thus opposite to that of majority Somalis, which are found in large homogenous groups in limited geographical niches. Their attachment to urban environments and their need to source livelihoods alternative to pastoralism provided them with higher-than-average educational rates.

Occupational castes are skilled in specific craftsmanship considered impure by the majority, and have a reputation for witchcraft and magic. *Midgaan* traditionally engaged in leather tannery but were also known as hunters (men) and infibulators

(women). *Tumaal* were the blacksmiths with the special task to produce weapons. *Yibir* were jesters and sorcerers. Similarly to the Tuareg and Maure societies, minority groups have been driven to various economic specialisations outside livestock herding (UN-EUE, 2001). Their magical power represents most probably their response to their marginal status and their difficulty to defend themselves with force owing to their small numbers (Lewis, 1981; Ambroso, 1994). Through time these professions have changed and evolved for a large number of these people, although their social marginalisation endures to an extent.

In this sense they are quite close to the *Roma* of western and central Europe and in fact in Djibouti they are often referred to as "*Les Gitanes*". Furthermore, the link between metallurgy (also traditionally practised by some *Roma*-related groups) and stigma and sorcery is deeply ingrained in many African and European cultures and can be traced as far back as Greek mythology (Ambroso, 1994 - who also quotes Greek mythology to explain why blacksmiths and specially skilled groups were often outcasted, in order to limit their movement and prevent them from spreading their knowledge to enemy tribes<sup>30</sup>). Similar situations of marginality and social exclusion of such occupational groups can also be found in neighbouring regions (i.e. Ethiopia, where the blacksmithing Guraghe are traditionally discriminated). *Yibir* particularly consider themselves of Israelite origin, and as such associated to the Ethiopian Felasha.

Occupational castes are dispersed among the other Somali tribes and are attached to them in a client-patron relationship, with these groups performing certain services for the 'noble' tribes, in exchange for protection (Touval, 1961; Lewis, 1992). None of the low-caste clans pay the *diyya* independently, but this is up to the clan/group they are associated to, and with which they share their services and skills, and sometimes even part of their retributions. As much as it applies for women, their rights to claim compensation for injury or other cases, is limited, and *diyya* payment for members of these groups is 50% of what is for a member of a Somali clan family.

Despite their attachment ties, intermarriage is not allowed between these groups and the patron tribes, although exceptions exist, particularly amongst the Majerteen. Conventional paths to upward social mobility are not open to them and they are excluded from the councils of elders, although among the Majerteen, manumission can be also be granted by the Sultan in which case full rights to nobility and equality with noble Somali are acquired (Cerulli, 1919; McAskill, 2005). It goes without saying that lower-caste people traditionally cannot own large ruminants, only smallstock (Anten et al., 2001); apart from cultural norms, sustainable ownership of large ruminants implies a social capital to adequately access pastoral resources that these groups do not display.

According to Cerulli (1919:24-28), the lower status accredited to these minority groups could not have originated within the Islamic institutions, as the *Khoran* specifically prohibits such socio-cultural division, as 'brotherhood solidarity is to be professed

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<sup>30</sup> Robert Graves in his classical book on Greek mythology (1955, 1992) wrote that the Greek Smith-god *Hephestos* (*Vulcanus* for the Latins) was lame and ugly and something of an outcast in the *Pantheon* of the gods. He further stressed the link between the emergence of metallurgy in the Bronze Age, magic and the fact that smithing groups were often held in quasi-captivity to prevent them from spreading the knowledge to enemy tribes (Ambroso, 1994: 13).

amongst all muslims' (Sura XLIX, 10-12)<sup>31</sup>. Similarly Siiad Barre made efforts to challenge the discrimination suffered by low castes and indeed some minority people occupied relevant offices in the government. Furthermore during the regime people from these groups were employed by politicians as drivers, bodyguards and spies; with no independent clan base or status of their own, such appointees could be trusted to carry out orders (Anten et al., 2001: 120). These groups have severely suffered from the impact of the civil war, and fled in large numbers to northern, more secure areas (Anten et al., 2001). During the field work many people reported the in-migration of people from these groups into Puntland, where they had apparently less problems, and accepted mechanisms exist to integrate them within the wider societal frame. UN Human Development report in 2001 counted approximately 10,000 *Midgaan* from southern regions living in displaced camps in Puntland.

### Social Support

Social arrangements traditionally represent a strong and important asset in pastoral societies; these serve to regulate savings, investments and risk taking activities, enabling common resource management and providing safety nets in times of crisis. In the Puntland context, social support mechanisms show a high degree of reciprocity, with livestock playing a prominent role. The relative genealogic homogeneity of inhabiting groups facilitates specific forms of binding, bridging and networking capacities (similar to Woodcock and Narayan's definition of social capital, 2000). The form of assistance might vary from one area to another and from one period to another. In order to provide a framework to analyze potential accessibility a general distinction can be made between general and specific support. General support is based on the general behaviour of the culture and religious dictate with the aim to provide support to those most vulnerable, such as the poorest, families with elder members and female-headed households. Specific support is provided during times of deep hardship – such as a prolonged crisis, i.e. a drought, a disease outbreak or conflict - to those that fall into need.

Despite difficulties in disentangling the different dimensions, a tentative description is made here to classify local social support systems locally operating. I suggest three main classifying criteria that relate to:

1. Religious assistance,
2. Community relationships,
3. Kinship ties.

**1) Religious assistance** (*Zakat and Sadaqa*): Islam encourages people to support each other; in particular, complex codified systems exist to induce "better off" groups to assist "poorer" households. Religious-based assistance does not involve direct relationship between provider and recipient but serves to redistribute wealth and balance social-economic stratification and diminish potential social conflict.

**2) Community relationship** (*Kaalo, Xooloqoys, Maal, Gadiid/Cellis*): within a group of people existing within the same area social support exists due to friendship or

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<sup>31</sup> The explanation for their lower status goes that the components of these groups could eat wastes of animal slaughtering (intestines, head and the hooves, what is terms as 'dead meat'), which are highly disgusting to Muslims. Consumers of such rests are defined as impure (*nagiaasa*), and thus classified as socially inferior.

neighbourhood ties. Households in need might ask support from neighbours. This support is related to the conditions of a household vis-à-vis its neighbours; it does not only apply at times of crisis but represents a reciprocal agreement between households through which those in need receive attention and support. It specifically applies to 'demographically' poor households (female-headed households, elders, orphans and others). Access to this type of support is related to 'belonging' in the community and often implies residential rights. Households or people arrived recently in an areas might be targeted only to a limited degree.

**3) Kinship ties** (*Maag, Qaraan, Irmansi, Maalsin*) are important for Somalis, no matter the geographical closeness between members of a group. During the recent drought crisis, some people reported receiving assistance from remote relatives they had never met. This assistance is mainly in the form of animals, often lactating or burden camels, or milk. Animals and other assets circulate regularly within a group, often from the better-off to poorer strata, but this depends on the capacities of the former and the degree of need of the latter. Restocking mechanisms within the *diya*-paying group are widespread; kin mates provide the unlucky household in need (*cayd*) with small and large ruminants to put it back on the pastoral track. Burden camels are critical in this process, as a pastoral household can only be mobile if provided with burden camels. Horn Relief and Oxfam contributed to restocking some pastoral household in 1997 by just providing them a pair of burden camels; these enables the *cayd* household to regain its pastoral dimension, attracting eventually other animals from kin mates and thus stimulating appropriate restocking.

Apart from more general religious-based support which many could access in case of need, data from the SCF 2007 survey respondents (n=132) clearly indicate the strength of kinship-based support (59%), versus neighbourhood (23%). Also notable is the relative difference between social support received by minority respondents (44%) versus female headed households respondent (70%). When conditions get increasingly difficult and resources limited, access to social support becomes more selective; at those times kinship and family ties become increasingly relevant forms of access.

### **RULES WITHOUT RULERS**

The institutional set up that characterises the Somali pastoral society relies on a sophisticated social system tailored to manage the degrees of mobility and flexibility needed to utilise marginal ecological conditions adequately (Spooner, 1973; Samatar, 1988). The decentralised political structure of Somali pastoralists reflects the fragmented nature of their production base and the continuous tension between individual and group interests that traditionally pervades their governance systems.

The fluid leadership and political structures, the variable social groupings, the extensive and binding kinship systems provide the enabling environment for individual decision-making within a common reference frame that aims at collectively sharing risks and responsibilities. Herding in such environments necessitates in fact good degrees of autonomy in caring for the animals, while collective action is important in managing the wider pastoral resource base and also to get protection against misfortune and insecurity through group-based insurance mechanisms (Hohne, 2006). The Somali political ecology has thus played an important role in preventing the development of less segmented and more centralised institutional alternatives (Meeker, 1989).

Influenced and remoulded by Islamic and western dictates the clan organizational structure and the *xeer* regulations gained new prominence in the stateless environment, contributing critically to establishing governance mechanisms in the northern pastoral areas (PDRC, 2003; Hohne, 2006). Despite its apparent rigidity the clan organizational structure allows for marginal groups, such as women and occupational castes to take up responsibilities and functions important to local livelihoods. *Xeer* provides a framework for negotiations rather than predefined solutions to be hierarchically imposed, and consensus and common agreement seem the only ways to enforce social contracts in these environments, as otherwise the costs of monitoring and sanctioning would be too high, as the Barre experience showed (Ostrom, 1990).

Ongoing changes taking place in society contribute to challenges facing the existing institutional environment, from private appropriation of range resources (water points, enclosures, settlements), to proliferation of weapons, from shifts in grazing patterns due to widespread insecurity, to politicisation of clan alliances and market integration of the local economy. Evolutions of camel milk marketing and its implications are part of these challenges.



## Chapter 4 – A GLOBAL EXPOSURE

In this chapter the exposure of northern Somalia to the wider, global society will be assessed in an historical perspective. For the purpose of this work, main areas of interest concern the economic, social and political influences related to the articulation of the local society with international markets and the statutory governance system.

A main distinctive aspect of Somali pastoralism is that of a camel-herding society with extended and longstanding exposure to regional and international cross-cultural exchanges and patterns of trade - not a common feature for most pastoral societies in Sub-Saharan Africa (i.e. Fulani, Maasai, Oromo, Afar, Dinka, Nuer, etc...). Caravan trading has instead characterised the economy of herding societies in other world regions (i.e. Tuareg, Bedouins, Kurds, Mongolians, Kuchi, and Tibetans). This feature is mainly due to the geographical position of the Somali region, not only in terms of having the second largest coastline in the African continent (about 3.000 km), but also due to its strategic positioning, at the interface between the Middle East oil areas, the Indian Ocean trade routes, the Red Sea maritime corridor and Sub-Saharan Africa, at the heart of the political divide between the western world, the Eastern bloc and the Arab states (Gunn, 1990).

Puntland is mentioned in ancient Arabian and Chinese travellers' records, as a place well endowed with precious gums, resins and other wild products. The land of Punt was so named (god land) after the frankincense exported to ancient Egypt long before Christ (cfr. travel reports of Ibn Battuta and Ferrand), and records exist about the trade between the ports of Berbera, Zeyla and Alula and the Greek and Roman empires in the 1st century<sup>32</sup>. Earlier than the 10th century a network of small ports existed dotted the NE coast, including places such as Bander Beyla and Hobyo, through which different corners of the globe were reached. To the West, Zeyla, a Somaliland coastal town with ancient prestige, was 'the gate of Islam' for the first important religious colonization of the African continent.

Links and exchanges with the wider, international society have taken different shapes and followed different patterns. While Somalis were largely in control of inland trading in northern Somalia, in southern Somalia it was reportedly Arab and Swahili traders that ventured into inland ranges to explore and develop markets (Ugolini, 1987). These north-south diversities between trade patterns and political encroachments have grown wider with the different colonial experiences that have scrambled the region during the 19<sup>th</sup> century and have characterised to a large extent its short-lived post-colonial state experience. In recent decades the world has witnessed the rise and fall of the idea of a central state governing Somali rangelands. Since 1991 the territories of Somalia are lacking a central government, representing the longest case of statelessness in the modern era. Since then different outcomes with regard to security and economic production have held in different parts of the country; alternative forms of governance have notably developed in the northern areas where pastoralism is predominant.

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<sup>32</sup> See *The Periplus of the Erythrean Sea* quoted in Schoff, 1995.

## PRECOLONIAL ECONOMY

Historical records trace the beginning of the Somali pastoral society about two millennia ago (Lewis, 1966). Some scholars believe in their southern expansion at the expense of the Galla populations who inhabited the region and were forced to move towards what are now Ethiopian and Kenyan lowlands (Lewis, 1955); others believe in the opposite, that they were originally from NE Kenya and SE Ethiopia and further expanded northwards (Meeker, 1989).

Through time the Somali northern coastal areas have developed into regional hubs, with Puntland and Somaliland becoming the critical interfaces between the Abyssinian inlands and the Arabian and eastern worlds, through caravan trading. In the 19th century Burton (1856) described Berbera as the 'great emporium of East Africa.' Its annual fair lasted from October to April, when the monsoon made navigation possible on the Indian Ocean. During those months the town was a 'Babel' where over 20,000 traders from Abyssinia, Harar and Guraghe meet those from Arabia, Persia, India, and Somali and Ethiopian products were exchanged for Indian goods, especially rice and cloth (Swift, 1977; Gunn, 1990). These exchanges had a seasonal characterisation due to their reliance on monsoon winds and were largely in the hands of Indian merchants, except for the relatively small livestock exports which were mostly controlled by the Somalis, since the Indians, for religious reasons, would not deal in animals (Swift, 1979). Foreign traders often limited their presence to coastal towns, utilising Somali networks to source and market their commodities.

Import of grains from Ethiopia was also key in ensuring population demands (Gunn, 1990). Within its subsistence framework the pastoral economy was nonetheless not entirely self-sufficient, and trade was an essential mechanism to procure products necessary for consumption, and pastoralists indeed bartered their products for grain and clothing (Swift, 1977; Samatar, 1989). While the slave trade was undoubtedly part of the story, north Somalia exported principally hides and wild products (frankincense, myrrh, gums, ivory, ostrich feathers, wax) collected by the nomads. Exports from Zeyla between 1807 and 1810 also included 6000 pots of clarified butter or ghee annually (Cerulli, 1957; Pankhurst, 1965); production of ghee may have been inherited from Indian merchants and utilised milk from cattle and smallstocks, due to the low fat content of camel milk (V. Cagnolati, pers. comm.).

Export of live animals was not substantial although slow but constant pressures to increase it were being set. Already in 1511 Jemma imported meat from Zeyla and Berbera (Pires, 1944 – quoted in Swift, 1979: 448). In the 1840s the north-east Majerteen coasts exported about 15,000 sheep and goats annually (Pankhurst, 1965); Berbera in 1875 exported about 65,000 small ruminant heads; trade of hides and skins and of ghee were also on the increase. This trade in pastoral products was seriously set back by the Rinderpest epizootic and subsequent famine in the 1880s, which followed periods of lengthy droughts. In those same years though the British colonial presence in the region provided an important push towards livestock off take to the international markets.

### *Caravan Trading*

In such a context with an extended territory, controlled by a segmented structure lacking a central authority, an institutionalised form to safeguard and ensure caravan



trade evolved from the lineage-based political structure. Camel capacity to adapt to and move through these harsh lands was particularly important within this frame for transport purposes. The leader/owner of the caravan had to engage into a relationship with the clan group that had control of the territories he would have passed through. An *abbaan*<sup>33</sup> or protector was selected within this group; upon payment of his services this character would have provided protection to the caravan, and held responsibility for its goods and the lives of the people moving with it. Lewis (1962:370) describes in detail the movement of trade caravans from Dulbahante areas to Berbera port; along the two existing routes the Dulbahante caravans had to enter into 'patronage relationship' with about three clans with whom relationships were variable.

Through the *abbaan* thus the clan 'adopted' the foreign merchants, with the double function of securing trade and facilitating transactions. Through the contract established with the *abbaan* the trader was acquiring 1) access through the *abbaan's* territory, 2) the *abbaan's* capacities to mobilize territorial control and military forces in case of attack to his caravan, and, most importantly, 3) he got the whole lineage of the *abbaan* assuming full responsibility over his goods vis-à-vis other groups. In case something would have happened to the caravan, in fact, this would have represented an offence to the whole lineage of the *abbaan*, and the whole system of retaliation and repayment would have thus become operative accordingly. In such way the trader embedded himself within the local lineage grouping, enjoying the material and symbolic features associated to the clan components.

The commission received by the *abbaan* (and indirectly by his lineage) was based on the merchandise quantity and value. Swift (1979) reports that the *abbaan* was generally paid 1% of the value of sales and purchases, although the amount paid varied with the particular contract, and could rise quite high. Ugolini (1987) reports that the fee could have amounted to 5 to 25% of the trader profit; one *abbaan* was paid the equivalent of £ 600 at current exchange rates (Umar and Baulch, 2007). Several currencies were being used simultaneously, including Indian rupees, Maria Theresa dollars, Spanish reals, as well as barter items that were valued in cloth and beads. Women were also involved in trade, apparently because they were considered neutral in clan feuds (Cecchi, 1886). The passage of wealthy caravans through the territory of several potentially hostile nomad clans was thus made possible through this institutional arrangement, which had apparently been established at an early date – as it was described already by Ibn Battuta during his visit in 1330 (Swift, 1977:449).

Most travellers recall that foreign traders often awaited loaded caravans in the coastal towns (Burton, 1856). Travelling, sourcing and securing commodities delivery was all a Somali affair, managed through customary rules and mechanisms. Guillain (1857) reported similar mechanisms, based on the same principles and characters, in the north east, where, nevertheless, the transaction function was more important, as security was more closely maintained by the clans (Gunn, 1990: 70); Somali inhabitants of the coast acted as brokers for Arab traders, taking the merchandise by camels to the nomads of the interior and bringing back gums and other products for the traders. Arrangements permitting commerce in the Somali ecosystem were deeply rooted into the existing clan system. It was not only an issue of compensation to secure the

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<sup>33</sup> As noted by Lewis (1965), this term might be derived from *abba*, father, as it is still used in Ethiopia.

caravan access and move through the *abbaan* clan territories, but was also an issue of trust and prestige to ensure its passage would have been harmless. Lewis (1965) recalls how betrayed traders would have used poetry to spread the news about the unreliability or the incapacity of a group to maintain its deal, in a way similar to that reported by Geertz about the ways traders exchanged experiences and networked information on the reliability of local intermediaries in different Mediterranean ports (1978).

On the other side of the trading chain, limited information exists concerning the sourcing and collection of pastoral products, including wild fruits, from inland areas. Some reports indicate that traders would normally follow herders in their moves, establish temporary camps in seasonal grazing areas and exchange staples with pastoral products, more likely at dry times, when pastoralists' own production was not enough to satisfy their needs (Cerulli, 1957; Lewis, 1981). Within this context, animal skins became a kind of local currency in the bartering between herders and traders; sale of young lambs and kids at birth time during wet season was a popular way of writing off debts contracted during the dry seasons by herders.

In the case of livestock trading a specific system was in place, as animals can move independently and they have marks and codes which make them more traceable in case of stealing. Groups of herders would have organized themselves and charged a member with trekking the saleable animals to the markets; as Burton indicates pastoralists brought their own products to the port (1856). By those times, livestock market demand was low, so quantities involved in this trading were nevertheless limited. By the 19<sup>th</sup> century, in some places, the trade had adopted advanced commercial practices including credit, interest, advance payment, fixed payment and delivery dates (Swift, 1976:450); credit systems thus existed and debts could be extended for months. It is likely that these transactions have been facilitated by a basic knowledge of Arabic and accounting learnt in the many Khoranic schools reported throughout the territory in the late 19<sup>th</sup> century (Biixi, 2001).

## COLONIAL PENETRATION

Before the middle of the 19<sup>th</sup> century the northern Somali pastoral society was thus largely subsistence oriented, although already somehow exposed to wider commercial exchanges through its coastal towns and with the grain-producing areas in the west and the south of the region (Kapteijns, 1995). The British penetration into this part of the world in the 1800s provided an important push to the incorporation of this region within the wider economic environment. Once the Suez channel was opened in 1869, the British army which had sat in Aden since 1839 became vital to secure trade through the channel. The interest for the strategic geographical position of the Somali coasts was then supplemented by the opportunity to supply animals to satisfy the consumption needs of the garrisons in Aden. After the set back due to the Rinderpest epizootic in the 1880s, livestock trade started a prominent and constant growth. Despite British insistence on 'interfering as little as possible with the customs of the people, and to have them administer their own internal affairs' (Samatar, 1988:31; Dornbos, 1993), the increasing demand for livestock proved to be an important move towards the articulation of the Somali pastoral economy into the regional mercantile system. From there onwards Somali pastoralists gradually became permanently and inextricably involved in - and dependent on - market exchange for the reproduction of their society (Kapteijns, 1995:252).

Through time this process provoked indeed major societal changes, through the expansion of the commercial infrastructure deep into the regional pastoral system, which had been inaccessible to such trade before (Samatar, 1985; Samatar et al., 1988). Three major domains are to be addressed in order to understand the changes that livestock commoditization triggered during the last century and the challenges that slowly but inexorably contributed to reshaping Somali pastoralism (Swift, 1977; Samatar, 1989; Kapteijns, 1995):

- The shifts in the pastoral production patterns, which led to increased livestock population and reshaped herds composition, without really enhancing land and labour productivity, which carried important consequences on the overall pastoralists' vulnerability to drought events;
- The emergence of a network of villages and markets, with limited population but increasingly critical roles in the provision of services to the evolving commerce;
- The socio-economic stratification, with the emergence of an elite of traders, who carved out their intermediary role between pastoral producers and foreign traders and started a process of appropriation and privatisation of critical range resources.

In the aftermath of the Second World War, colonial efforts to enhance commercial livestock off-take became more prominent. Development of road networks, marketing facilities export infrastructures (ports, holding grounds, etc...) and the equipment of stock routes with water facilities enabled a constant increase of animals traded, and the overcoming of seasonal monsoon limitations with the use of engine-powered and larger freight ships (Konczacki, 1978). These evolutions in the northeast were slower than those in north-western and southern Somalia, and utilisation of small sea ports and carrying dhows remained prominent in Puntland.

Parallel to such livestock marketing efforts external technical assistance and financial investments addressed veterinary services and water availability on the rangelands, in order to enhance livestock productivity. Water schemes enabled opening up distant rangelands and seasonal pastures to exploitation particularly for cattle and sheep, which are less vulnerable to water deficits and more demanded in international markets. Between 1953 and 1960, 109 wells were dug, another 132 drilled, plus a number of soil reservoirs established throughout (ibidem). Furthermore private (individual and corporate) investments of livestock traders and returning Somali migrants willing to invest locally were used to establish a vast network of *berkaads*, particularly in areas where water drilling was not feasible. *Berkaad* are cemented reservoirs where water rains can be harvested and stored for local use or to be trucked elsewhere; their development started in the 1950s and it is likely the idea was taken from schemes existing in Sudan at that time (Foerch, 2003).

*Berkaads* represented the first individually owned sources of water on the Somali rangelands, and indeed triggered important socio-economic processes, such as the settling in the Hawd region and more commercial forms of herding; a growing sheep presence in local flocks was in fact reported in the Sool plateau as well as in the Nugaal and Daroor valleys, which were previously used only by camels during certain times due to the structural water scarcity (ILO, 1976). In the southern ranges estimations are that overall potential for livestock rearing augmented about 700.000

cattle heads (Konczacki, 1978). The first *berkaad* constructed in Bari region is believed to have been in Unuun village (Qandala District) in 1959, followed by the villages of Raako (Qardho District) in 1960; nowadays most middle income groups in northern Somalia own a *berkaad* (PDRC, 2004).

The increase in water supplies was paralleled by improvements in veterinary care, notably in the exposure and resistance to problems of Rinderpest (with the successful JP15 campaign) and Trypanosomiasis. Today, water and veterinary drugs represent the fastest growing part of household expenditure among herding household in times of drought (PDRC, 2003). The rapid growth in livestock numbers obtained through investments in water points and veterinary services indeed translated into higher commercial off-take rates, but failed to positively affect range productivity, driving the system towards forms of unsustainability (Swift, 1977).

Another factor reflecting as well as inducing the growing commercialization of the pastoral economy was the emergence of a network of villages and markets, and an increasing differentiation between different wealth groups and between urban and rural populations (Samatar, 1989; Doornbos, 1993). Through these networks in fact the livestock merchants, foreign traders, colonial administrators, and other actors could weave their commercial webs by residing in the main urban areas; the way foreign traders did before. In northern Somalia the coverage and extension of inland rural towns and trade posts was limited with most centres seasonal and at times transitory, while coastal cities with effective sea ports - Djibouti, Zeyla, Berbera, Bander Beyla, Hobyo and Bander Kassim<sup>34</sup> - become important centres for trade and cultural exchange, as will be analysed later. Where conditions were favourable, some forms of farming were also developed (i.e. in Gebiley and Awdal mainly for sorghum, but also oasis areas around Boosaso for gardening) and secondary products such as eggs, vegetables, ghee and milk would have also been brought from the surrounding countryside to villages and towns for sale. In the south the process of urbanization was more intense, and indeed spurred the widening of a rural-urban differentiation on one side and of a south-north divide on the other (ibidem).

The developing new middle class started the appropriation of communal pastures through development of *berkaad* and enclosures and the control of colonial investments. Concepts such as public and private resource ownership were to be introduced in a setting where control was in the hands of local clans; this was especially the case with water, where *berkaads* controlled by individual families or state-managed boreholes challenged the overall management patterns by reshaping access to critical pastoral resources. When a *berkaad* is built by a private owner, his relatives settle around it to protect the facility and sell the water; villages grew up around the *berkaad* and became trading centres for the nomadic population (PDRC, 2004). Overall, while the customary system was challenged, an alternative institutional setting that would have looked after the sustainable utilization and reproduction of pastoral resources had not yet developed.

This process eventually enhanced pastoralists' vulnerability to market prices, together with their exposure to climatic vagaries (ILO, 1976). The declining terms of trade for pastoralists (as described by Swift, 1979) and the related socio-economic stratification

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<sup>34</sup> Bander Kassim is the former name of Boosaso.

(Aronson, 1980), further weakened the pastoral system. In the early 1950s, while sheep export figures were increasing at a 20% yearly rate due to the trade boom with the Middle East, a severe drought claimed about 80% of the stock in NW Somalia, and 7.000 refugees had to be assisted by the UK administration (Annual Report on the Administration of British Somaliland, quoted in Gunn, 1990). The drought events (and their repercussions) that devastated the region in the early 1970s and mid 1980s suggest that commercial expansion had been paralleled by increasing vulnerability of the pastoral livelihoods.

Opportunities for women within the emerging set up were very limited, either in state services or in the urban economic scene (Kapteijns, 1992). The colonial state never considered women significant to its economic objective of generating income to cover the costs of running the protectorate. This was true even for rural women, in spite of the fact that the main export item (and thus the main source of income from import and export dues) consisted of sheep and goats, whose husbandry was to a large extent the work of women! (ibidem: 223).

### *The Thorny Horn*

The Somali region has been an important playfield for different geo-political competitions, from the colonial times, to the Cold War era. This is an important factor that contributed heavily to shape the history of these lands. Encroaching external powers divided the country according to perceptions and interests which were different from those of Somalis in general. This was a matter of particular concern for pastoralists whose territorial repartition accounts for agro-ecological differences, as diverse range resources are needed at different times. Herds move from coastal areas to areas far inland as the rains start, and move back at the onset of the dry seasons; major clan divides follow this kind of rationale. The colonial repartition of Somali territories followed a different rationale, with inland ranges detached from coastal areas and administered by different entities, such as the vital pastures of the Hawd plateau which were handed to Ethiopia by the mid 1950s.

Exposure to and relationships with the Arab society had also some influence on the forms of local governance. This was nevertheless a quite recent process, as while Islamic influences could be found on Somali coastal towns, it was not until the late 19<sup>th</sup> century that Islam began to be especially important among the camel herding Somalis as a religious movement (Meeker, 1989:154). Indeed Puntland was the portion of the Somali region most exposed to these processes. As the Arab world was getting experienced with more centralised systems of governance, similar processes were reshaping the Majerteen society, which was leaning towards higher degrees of centralisation, relatively to the Somali context. In the opinion of Battera in the Majerteen region a process was set to move from an acephalous society to a kind of statehood (1995); a process that evolved from the local customary institutional set up, with hierarchical positions and leadership roles losing their religious *aurea* and becoming increasingly involved in power issues.

While this process might have been instrumental to better face the encroaching colonialists (the Italians in the Puntland case), it triggered forms of competition within clan segments, particularly concerning the control and share of trade benefits. As commerce of livestock became prominent in the region, these competing claims developed further, until the group of Bah Yaaquub, from the Ismaan Maxamuud

Suleiman lineage of the Majerteen family, established the character of a sultan, different from the reigning *boqor*. As Puntland was still under the *boqor* rule, - who used to reside in Bander Beyla and is now in Qardho - the new sultan established himself in Hobyo, south along the coast, in the territory of another clan, the Hawiya. The fact the two formal political leaders of a predominant pastoral society had established themselves in coastal towns highlights the relevance of trade dynamics in the local political manoeuvring.

The Hobyo sultanate represented quite distinctive tracts from the traditional *boqor* system, and indeed it challenged the customary institutional setting in a number of ways. Its adherence to the clan structure was relatively limited: a Daarod sultan was ruling over an area which was mainly inhabited by Hawiya people, from another clan family. Administrative and advising roles (*naib*) were given on basis of individual capacities or merit rather than on kin affiliation. Sharia law replaced the customary *xeer* as the main institutional reference, with the establishment of Islamic courts. In a number of ways it resembled the evolving pre-statutory forms of governance that characterised the Arab societies of those times (Battera, 1995). This process historically coincided with another major event that challenged the regional set up, the encroaching presence of the Italians, who had chosen the eastern portion of the Somali region for their colonial adventure. As it was for the British on the NW side, the Italians too were quite fearful of the untameable pastoralists inhabiting those rangelands, and felt they had little capacity to control those areas. Following the British example<sup>35</sup>, the Italians opted for indirect rule through local leaders (*ibidem*). Italian support of the Hobyo sultanate became instrumental in co-opting an important local leadership while also weakening the overall Majerteen constituency, thus taking advantage of local internal tensions between different clan segments, using the typical '*divide et impera*' tactic of the late 19<sup>th</sup> century. Eventually the two NE Somalia sultanates became Italian protectorates, at least in principle, as they became the scene of considerable unrest during the early 1900s.

In their encroachment the Italians received support also from the British, who were increasingly nervous about the rebel movement led by Sayyid Maxamed Abdille Xasan, the 'Mad Mullah', who with his reckless Dervishes challenged colonial power in the Horn of Africa from 1899 until 1920. The relationship between the 'Mad Mullah' and the Majerteen was that of an ambiguous and volatile alliance where periods of collaborations were followed by harsh confrontations. The inability of the Italians to protect the territories they were colonizing was noted, unfavourably, by local populations (Caraci, 1927).

Despite the final defeat of the Mad Mullah and his eventual death, political unrest remained thus a salient character of the Italian colonization of Somali territories, where the establishment of governmental authority and administration throughout the territory was never well received by the tribes (Touval, 1961:71). Similarly, the Italian political evolutions towards fascist rule, and the related racial laws and forced labour doctrine, were not appreciated by the tribes. Until 1925 the Italians had established a colony in southern Somalia where more articulated institutions had been evolving (Doornbos, 1993), while the north remained ruled through the form of protectorate

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<sup>35</sup> This is different from the French approach, although to large degrees these approaches would have converged to similar governance hybrids.

that had been negotiated with the two sultanates of Majerteen and Hobyo. This choice resulted from considerations related to the effective colonial capacity to control and rule over the northern arid areas; the Italian presence in northern Somalia was overall very limited and most administrative tasks were undertaken from elsewhere.

This situation lasted until 1925 when, under the fascist rule, the Italians decided to extend their direct control over the northern protectorates; a war lasted until 1928, when, through a blockade of local ports (thus impeding the import-export trade) the NE territories were finally subject to a stronger Italian rule. Within the agreed frame the *boqor* and the sultan received a salary from the Italian administration, in exchange for their fidelity. Community elders and traditional leaders were converted into salaried civil servants; leaders who resisted were often replaced with those more consenting (Biixin, 2001:81). This obviously created resentment and anger amongst local communities vis-à-vis their leaders, contributing to weakening the local institutional frame. It is not by chance that the Majerteen had played a prominent role in the Somali Youth League and the related claims for independence afterwards. These dynamics mainly touched the coastal towns which were more exposed to these political changes, while in remote rural areas customary rules and practices remained largely prominent.

The growing integration into regional and international trade networks was thus paralleled by the increasing influence of wider geo-political processes, which significantly contributed to reshaping the local institutional environment. The co-optation of local leaders weakened systems of endogenous governance and the overall societal fabric. The crisis of local institutions got further aggravated with the independence of the country (1961) and the establishment of a modern Western-style government, based in Mogadishu. This process inexorably led to the politicization of the clan system and the formalisation of the deep fragmentation of the Somali society, with the 61 parties participating to the 1967 elections representing the interests of diverse lineage sub-groupings (Battera, 1995: 182). Despite their relevance to the social and economic fabric of Somalia pastoralists found themselves marginalised within the newly established set up (Doornbos, 1993).

### **INDEPENDENT SOMALIA ?**

One of the main features of the independent republic of Somalia, which was established in 1961, was the high level of direct state involvement in most sectors of the economy and the expansion and politicization of the state bureaucratic machinery, with its enormous and growing running costs. This democratic experience was limited to less than a decade, ending in 1969, and was characterised by increasing instability which led to a substantial standstill in development. The race for power and for controlling the increasing resources injected by the international community was dramatic. The clan segmentary system converted into party establishment and parliamentary representation, leaving little room for effective democratic rule; the parliamentary regime was charged with corruption, incapability and overall ineffectiveness (Gunn, 1990). Unsurprisingly, the institutional divide showed soon its limits, as the statutory democratic system, where the majority rules, is based on principles that differ from those of consensus-achieving mechanisms that regulated local politics. Furthermore, a centralised decision-making system had little capacity to

deal with the problems arising from the localised circumstances characterising pastoral systems<sup>36</sup>.

In 1969 Gen. Maxamed Siad Barre seized power through a coup d'état, known as a 'bloodless revolution'. He remained in power until 1991, when the growing civil conflict provoked the collapse of the State infrastructure and ravaged the country, contributing to a humanitarian crisis. Siad Barre utilised scientific socialism as the institutional framework to establish a 'modern Somalia' by challenging the clan societal structuring that was at the foundation of the *archaic* institutional environment. In his first phase he tried to replace tribal particularism with national solidarity; this eventually escalated into pan-nationalism, and with the aim to unify all Somalis living on the Horn of Africa under one government he went into conflict with Kenya and Ethiopia. The Ogaden war against a shuttered Ethiopia was to mark a new era for Somalis, but turned instead into the beginning of the end of a central government.

The regime followed the modernization agenda defined by the AFIS – the Italian Trusteeship Administration - set by the UN in the 1950s to steer the independence process. Consistent formal efforts were devoted to change the institutional set up by making tribal affiliation a socio-political taboo. Payment of *diyya* and collective responsibility systems were abolished and individual punishment established instead, with the *shuur* to be replaced by the district council. According to Doornbos the intent was clearly to administer the pastoral districts and to limit politics to towns (1993:113). These decisions faced strong public resistance, especially amongst the pastoral population and were dropped a few years after their promulgation (1971-75).

Indeed a new social contract was to be developed: any Somali citizen had the right to live and work wherever he/she chose and preferred, irrespective of his/her particular clan or lineage affiliation. Within this framework, gender roles, religious identity and social grouping were all put under discussion. An important effort to eliminate discriminatory provisions in the legal system and to upgrade the legal status of women was the promulgation of the Family Law in 1975, what was defined as State Feminism (UNIFEM, 1998). This Law provided options for equal legal rights to women and men and opened the door for enhancing women representation in the public sphere and participation in the civil administration. The 1978 Constitution eventually established equal rights and duties for women and men, also in workers' rights, including equal salary. Although these efforts inspired by Barre's 'scientific socialism' rhetoric remained mainly formal and affected only a minority of women, often educated and urban-based, they brought consistent socio-economic changes in the Somali society. Women were increasingly granted an education and technical skills different from their household duties and given tasks within the army and the administrative bodies. Options were set for further challenges in this direction. Siad Barre even tried to emancipate minority groups and some Tumaal, Midgaan and Yibir members were co-opted into regime offices.

In its modernizing impetus, governmental policies to develop pastoral areas involved sedentarisation schemes (launched in 1974) and land nationalisation (1975). This was in line with Menghistu's and Nyerere's policies to 'praise villagization as a way to

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<sup>36</sup> Refer to the work of Evans Pritchard (1940) concerning the Nuer society with this respect.



rehabilitate (the) nomad society' (as quoted in Scott, 1998:248)<sup>37</sup>. More than 30.000 students were deployed in the campaign to educate the nomads in order to undercut lineage loyalties and bridge the rural/urban divide (Salih, 1991; Abdullah, 1995). Rangelands were nationalised and their management attached to National Range Agencies and cooperatives. The new land tenure law nationalized the common rangelands and led to increased privatisation and nullification of customary treaties between pastoralists over rangeland management. Though the law made private ownership of rangelands illegal, private enclosures for cooperative ranching were allowed, effectively paving the way to turn thousands of square kilometres of formerly public rangelands under private control. (Prior, 1994; Bradbury, 1996; Gaani et al., 2002:19).

Large externally-funded programs were set in place in the south (with the US-International Cooperation Administration), the centre (through the German agency GTZ) and in the north (mainly with funds from Kuwait). By mid 1980s the proportion of State Development Plans allocated to Agriculture and Livestock sectors amounted to about 15%. All these efforts had very limited effects on productivity levels, though they contributed to undermine existing resource control patterns and governance structures through shifts in land rights regimes and the development of water points. A closer look into funds invested in pastoral areas point to the dominant purpose of intensifying market penetration of the sector, rather than enhancing its production capacities (Swift, 1979; Samatar, 1988).

The State-controlled Agricultural Development Corporation (ADC) was given responsibility for all intra-Somalia commerce in grains and other food stuffs. Banks and most large commercial establishments were nationalised. A very brief attempt was made to regularise the livestock trade, through the Livestock Development Agency (established in 1975) but this was quickly discontinued and left in private hands (Gunn, 1990:151). Government incapability of imposing its control over livestock trade - the major foreign exchange earning sector - contributed significantly to undermining its own financial sustainability (Samatar, 1988). Customary institutions persisted in some other spheres of trade, and were indeed more effective in ensuring business transactions than those instituted by the state (for example, this was the case for frankincense).

A lengthy drought in the early 1970s devastated large portions of the country, claiming tens of thousands of lives. The amount of casualties and refugees was immense and in northern Somalia livestock losses amounted to about 6 million smallstock heads, more than 50.000 camels, and about 300.000 people seeking refuge from drought stricken areas (Gunn, 1990). Though the catastrophe had a regional dimension, it is likely that the re-structuring the pastoral system had gone through in previous decades played an important role in augmenting the exposure of Somali pastoralists to such phenomenon.

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<sup>37</sup> It is interesting to note that this line of thought inspired contrasting experiences, such as those that took place in the Soviet Union, during the Chinese revolution and in the US, notably in the Tennessee Valley Authority - and was eventually praised by the World Bank as well.

The costs involved in controlling Somali lands and ensuring the rule of State law proved to be a hard task, and playing the *abbaan* for all<sup>38</sup> became a taxing exercise, especially in the northern parts of the country. The country did not offer the resource conditions for supporting adequate state budgeting through fiscal imposition. The marginality of its territories – dispersed lands with low population density – allowed limited fiscal leverage, while it involved huge costs in policing and servicing the population. Both the Italian and the British colonial governments had relied on subsidies from their respective metropolises to balance the accounts (Samatar, 1988:36). The regime thus sought international support and the foreign assistance and development aid granted from different sides, which represented critical state resources, had no equal on the African continent.

Independent Somalia was hence never that independent, as it was always through the support of the international community that the central government survived. Together with the Soviet Union in a first phase and the US after the Ogaden war, many European countries – including Italy, Great Britain, Germany and Scandinavian countries – provided Siad Barre the much needed technical and financial foreign assistance that prolonged the life of his regime. The United Nations and the World Bank also carved their role in this transnational topography of power, which include also relevant regional powers such as Ethiopia and Libya, which have played a critical role in the rise, fall, and lack of replacement of the Barre regime. Del Boca (1993) describes the murky Italian involvement in support of Barre and reveals its military, political and financial contributions (also refer to. Achtner, 1993). The journalists Ilaria Alpi and Miran Hrovatin paid with lives to uncover these goings on, in 1994. All these facts led Gettleman (2009) to state that during the last three decades Somalia has been the cemetery of foreign politics mistakes.

Despite the immense financial resources the government could source from the international environment, the costs of its policies soon became too high. Siad Barre's attitude, that opposed rather than collaborated with the customary systems in place, made military expenditure the major component of the Somali budget and continued to increase over many years. When in 1977 political relationships with the USSR were broken, Somalia was the Soviet Union's major customer in Africa for armaments (Gunn, 1990:150). By the early 1980s, Somalia had the lowest GNP, the lowest physical quality of life index, the lowest per capita public education expenditure, the highest infant mortality per 1,000 live births and the highest per capita military expenditure in the region (Miller, 1981:4). The pattern did not change much in the 1980s when American assistance replaced Soviets in the region.

**Table 4.1 Somalia government military expenditures (in mil US \$)**

Years	1975	1976	1977	1978	1979	1980	1981
Defence budget	25.6	25.5	25.9	37.1	39.6	41.6	43.0

Source: Samatar, 1988

The defeat in the Ogaden war struck at the heart of the social contract between the Somali population and the regime and determined to a large extent the fate of the

<sup>38</sup> Lewis, 1962:371

central government. According to Laitin (1985), the cohesion and ardour the Barre revolution had inspired came to an end as people realised that customary institutions were not effective anymore (thus the severe impact of the drought), while the modern ones did not work either (thus the defeat in the war). In this context the costs of controlling and policing the country rose constantly, while the effectiveness of these actions diminished drastically. Military expenses grew steadily while investments in rural sectors dropped. The state was at war with most of its people where playing the *abbaan* with guns was never likely to be the solution and a military control of Somali territories without shared institutional arrangements proved a costly and ineffective strategy.

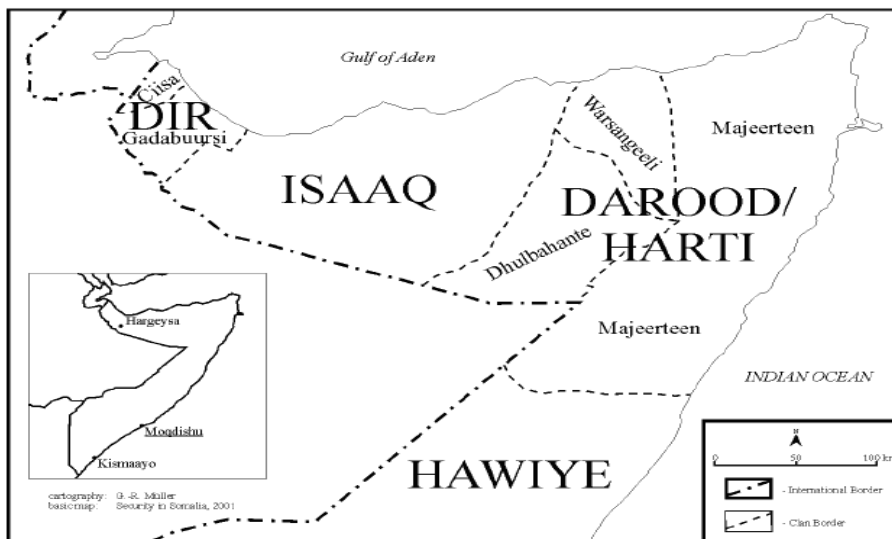
Massive hostility against state structures grew, leading to a drift towards pursuing personal or corporate interests (Gunn, 1990). In response, Barre brought back the *divide et impera* strategy and the clan ideology, by allying with some clans to fight against the insurgent ones. Worsening the situation, the restructuring of political power under clan segmentary lines further undermined the new as well as the traditional institutional environments, with state resources becoming a matter of contention amongst the different clans (Hohne, 2006). Despite State structures having never been able to fully seize the (most) lucrative export trade of smallstock, land grabs, assistance from the international community, public investments and other legislative and administrative practices represented areas of huge financial gain for the diverse clan groupings. They became domains of conflicting interests and clashes played out within the State. Groups closer to the regime tried to encroach onto lands traditionally associated to other clans and related clashes erupted (PDRRC, 2003). Remarkably these areas, namely those in Mudug and in Gedo are still the most volatile, in terms of clashes between rival pastoral factions (cfr. FSAU reports). The incapacity of solving these disputes at community level and the failure of the government to protect access to critical range resources further served to demonstrate that recent institutional reshaping had not improved conditions for pastoralists but rather made it more complicated.

### *One, Two, Many Somalias*

With its control over most the country already heavily challenged during the '80s, the Siid Barre regime eventually collapsed in 1991; together with the dictator, the idea itself of a central state was chased out of the country. Up to 2009, the record is of 14 failed efforts to set up a new central Somali government. Since then, the different portions of what was previously the territory of Somalia have undergone different and often unique socio-economic development trajectories; broadly speaking, most southern Somali regions have remained embroiled in widespread conflict and insecurity while the northerner portions have been more able to advance in socio-economic terms and to follow a development pattern tailored upon their resources and capacities.

This is not to say that northern Somalia – namely the regions of Somaliland and Puntland - does not face problems related to food and social insecurities, but the degree of these problems and the capacities to tackle them are considerably different from those characterizing the southern parts of the country. The issue of governance stays at the center of this diversity, as the effective functioning of local institutions and regulatory practices is the major asset differentiating the northern pastoral portions of the country from the rest of the country.

The reason for this diversified setting between southern and northern Somalia is rooted in the bio-physical and socio-economic features of the two portions as well as in recent political processes (Doornbos, 1993). Differently from the south, Somaliland and Puntland are mainly drylands whose utilization is limited by water availability. Pastoralism is often the only practical way to eke out a living in such environments, which attracted little attention from external/colonial interests (Samatar, 1989) and received limited concern and investments from the post-colonial central government<sup>39</sup>. Also for these reasons northern portions have maintained until recently a relatively homogenous composition in clan terms, due to limited in-migration processes - although homogeneity is an ambiguous definition for the segmented Somali system. This situation is more applicable to Puntland, while in Somaliland two main clan families, the Isaaq and the Diir, co-exist with relationships that at time are deeply conflictive.



**Figure 4.1** Clan divisions in northern Somalia.

Source: Hohne, 2006

The effectiveness of a centralised control throughout Somali territories has always been weak and difficult, especially in the inland ranges. Colonizing power such as Britain, Italy and Ethiopia have tried different strategies to bring Somali herders under their control, by bribing their elders, building them roads, fighting their leaders or enrolling them in the colonial army. While all these efforts inexorably failed, they often drained large financial commitments. Samatar describes how heavily, continuously and inexorably the British military engagement to tame Somaliland herders drew from the colonial finances (1989). The same applied to the Italians in the NE.

The colonial tactic of playing the divide-and-rule game to weaken the local social fabric and allow for some form of control proved costly not only to the colonial coffers but also to the future of the Somali society. Having become mere instruments of the ruling governments most traditional leaders had lost the confidence and respect of

<sup>39</sup> Main infrastructure investments in Puntland were undertaken in the late 1980s, with the development of Boosaso port and the completion of the tarmac road leading to Galckayio.

their people. Their co-optation into the government machinery got even deeper during the Siad Barre dictatorship (WSP, 2001). Briberies and weaponry undermined customary practices of negotiation and agreements and stretched traditional dispute-resolution mechanisms. Clan - once a system to interface with other group so to share resources and livelihood risks - converted into a structure that enhanced competition, and was instrumental in seeking power through lineage affiliation (Battera, 1995:183).

Barre's inability to satisfy the demands of various groups in society was compounded by its incapacity to gather all Somalis under a common objective. Once its 'scientific socialism' ideological pillar faded (as the Russians and the Cubans themselves condemned Barre to defeat against the Ethiopian Derg army), Barre replaced clanism as his ideology and ventured into a period of autocratic and tyrannical rulership, which led himself and the whole country in a down ward conflict spiral. The tribalisation of the central authority manipulated clan rivalries in an escalating competition that eventually brought a collapse of the overall societal infrastructure, to the extent that today the existence of a common sense of identity does not provide anymore a sufficient basis for the construction of a viable and legitimate state in most of the country (Clapham, 2001).

Indeed ongoing evolutions of the civil strife in southern Somalia through the continuing manipulation of clan-based guerrilla movements appear to confirm this.

As this was the situation in most Somalia, the case for Puntland was somehow different. Far from the locus of power, marginal to state interventions and little divided between themselves, the Majerteen society was able to effectively manage internal tensions and maintain peace and security to good degrees. Instead local elders were amongst the most prompt and active in mobilising military support against the central Siad Barre regime, through the Somali Salvation Democratic Front (SSDF). This case applies similarly to Somaliland where the uprising Somali National Movement represented large portions of the local populations. In broad terms and with notable exceptions clan groupings in northern Somalia were more concerned in fighting against the central government rather than fighting against each other or over resources.

Northern pastoral Somalia was generally spared the worst violence of the civil war and the UN-led Restore Hope military mission did not have to intervene there. Moreover past and present attempts of Islamic fundamentalist groups to seize control of these areas have faced strong reactions from the local society. In Puntland for example, militant Islamists tried to profit from the unstable situation in the aftermath of the central state collapse but the strong reaction from local communities dissipated that menace (IRIN reports). The same applied in more recent times in Somaliland, where some minor Islamist groups have been challenging the local government through terrorist actions aimed at creating insecurity and putting down Somaliland's name. In both cases local structures and practices of governance have shown so far the capability to face and chase the fundamentalist threat.

### **Failed State Or Revived Society?**

In the Somali context, Little rightly questions whether it makes sense to talk of a failed state or whether it would be more pertinent to question whether a meaningful state ever existed (2003). For most Somali herders and farmers, services, facilities and investments were minimal, reliance on judicial means of dispute settlement was

nominal, and support for the established leadership was almost non-existent (ibidem:14). The state was an entity that extracted some local resources and was punitive at times, but could not be counted on to govern daily affairs (ibidem:16; Samatar, 1989). In particular, *the increasing political marginalization of pastoralists [contributed to] sowing some of the most potent seeds of disunity and conflict* (Doornbos, 1993:117).

Different to what happened in other African societies (such as Liberia or Uganda – refer to Zartman, 1995), apart from the initial period following civil war, state disappearance was not characterized by the simultaneous collapse of the underpinning societal infrastructure. The shift of the locus of power to urban-based political and bureaucratic bourgeoisie attested to its complete detachment from the governed constituency (Doornbos, 1993). In this sense the collapse of the central state could be interpreted as the capacity of the civil / pastoral society to dismantle the structures of central control, re-establish its own structures, authority, law and political order and take back the control over society once delegated to, or grabbed by, the state.

As assessed in the northern pastoral regions, and in Puntland specifically, the situation following the civil strife that led to the dissolution and disappearance of central government institutions was less dramatic than in other parts of the country. Major devastation and killings were avoided in these areas<sup>40</sup> and instead major economic activities were soon revived. In Puntland the limited existing facilities and infrastructure, such as the power plants in Boosaso and Qardho, but also the Boosaso port and the Galckayio-Boosaso highway suffered little damage, and this was mainly due to poor maintenance.

During the transitional period that elapsed after the collapse of the central government to the establishment of a regional state, Puntland had been under the effective management of local traditional leaders. Indeed, in the absence of functional political leadership, the *Isimo* and prominent elders of each community and kin group have stepped in to administer internal matters and regulate inter-clan relations using the customary law, *xeer* (Farah, 2001:20). In late 1997 NE Somalia was entering a phase of political transition. The failure of several national reconciliation efforts, popular desire for an environment more conducive to peace and prosperity and disenchantment with lacklustre United Nations and donor engagement in Somalia, all conspired to provide the impetus for political change (WSP, 2001: 20).

The general feeling among people was that after more than a hundred years of government rule, without the consent of and the accountability to the people, Somalis had no rights on their own but only obligations of loyalty and obedience to the authorities (Biixi, 2001). In the aftermath of the dissolution of Barre's regime the main concern amongst people was the provision of an enabling environment for socio-economic development. Little compromise would have been accepted on government imposed oppression and lack of accountability.

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<sup>40</sup> With the notable exception of events such as the bombing of Hargheisa, undertaken by the Government air forces in 1989.

Through a series of consultations amongst local leaders, a Constitutional Conference was called from May to August 1998. On 23 July 1998 the autonomous 'Puntland State of Somalia' was proclaimed, under the presidency of Colonel Abdullahi Yusuf Axmed, a former military man, who had opposed Siad Barre during the 1980s. A nine member cabinet was appointed in August 1998, and a 69-member parliament was inaugurated one month later, in the new capital Garowe. Even within the 'modern' administrative set up, the traditional systems based on representation by elders remains firmly in place, and the Constitution assigns them important roles. The formation of the Puntland government in 1998 has by no means eclipsed the role of this traditional leadership and the current constitution assigns them the important role of supporting and checking the new administration (WSP, 2000:29). In order to restore formal order and law, the new Puntland state installed a police force, which mainly integrated the former militia members into the newly formed security forces.

On the NW side, Somaliland had undertaken a more articulated process, partially inspired by the British legacy. After a series of peace meetings, where peace-marriages between conflicting groups accompanied religious ceremonies in ensuring the traditional trust-enhancing mechanisms within the wider community<sup>41</sup>, a new Constitutional chart (*Axdi Qaran*) was eventually drafted and signed by the Conference of the Somaliland Communities in 1993 in Borama. This was followed by the first Somaliland Constitution which was adopted at the conference of the Somaliland Communities in Hargeisa in February 1997. The new setting includes a council of elders (*guurti*) as a second chamber of the national assembly, to complement and control the activities of the Parliament; a form of 'consociational democracy' that somewhat resembles the Swiss model based on combined principles of merit and proportionality (Hussein and Ford, 1998).

Differently from Puntland, defined as a region within a wider federal Somalia, Somaliland claims independence and shows no interest in the reconstitution of a central Somali state. Interestingly, the colonial boundaries have now become an issue of contention, as a pending matter between Puntland and Somaliland relates to the control over the regions of Sool and Sanaag bordering the two states. The inhabiting groups are affiliated to the Daarod clan – Warsengeli and Dulbahante - but the territories are located within the boundaries of the previous British colony. This episode highlights how different forms and claims of identity exist nowadays in the Somali ecosystem.

Despite the limited economic and employment opportunities Puntland offered and the still uncertain political climate, the relative stability of the area attracted the influx of large numbers of people from war-torn southern regions (WSP, 2001; Nori and Gabrielle, 2007). Majerteen business people that had moved to the south to exploit the once-thriving southern economy came back to Puntland. Also traders and professionals from other groups moved northward. Altogether an impressive number of non-Majerteen people migrated to the north east; many female-headed households who had lost their adult men, skilled traders and technicians who had lost families and assets in the south, public servants, administrators and bureaucrats of the previous

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<sup>41</sup> Reference is made to the peace meeting in Sheikh (1992) when the Somaliland constituency was under discussion where peace-marriages took place between the Habar Yunis and the Issa Musse.

government, and educated professionals all came to north east to seek for shelter and a livelihood, bringing along skills and experiences which proved important to the revival of the regional economy. Indeed, after years of Majerteen out-migration, the collapse of the central government helped increasing the human resource base of the north east (Farah, 2001:23; Nori and Gabrielle, 2007). The recently established basic infrastructure and facilities such as the port of Boosaso and the tarmac road cutting through Puntland contributed significantly to this process. A number of simple technological developments greatly facilitated basic commercial services, such as transport and communication. HF radios and mobile phones have developed at a fast rate (by the end 2007 it was easier and cheaper to call Europe with a mobile phone from Qardho than it was from Nairobi).

The private sector boomed in this environment. Telecommunications, transport, construction works, fishery, hotels, and trade facilities proved particularly attractive for investments. This also enabled the processing of animal products to develop, with an important slaughterhouse for export in Galckayio, a factory for tanning hides and skins in Boosaso, and a milk processing plant in Qardho (funded by the EC through the Italian NGO Africa '70). Public sector technical capacities remained very low, to either invest in critical sectors or supervise the whole development process.

In such a context a number of facilities and services have been undertaken and developed by a so called 'civil society', which includes mostly formalised networks of individuals, intellectuals, professionals, businesspeople, women and local politicians (Helander, 2005). In his survey in the late 1990s, Helander reported that average school enrolment rate of children in Puntland<sup>42</sup> (about 40%) had not dropped since the collapse of the central state in 1991. This resulted from the intense work of groups of parents, businessmen and local NGOs and probably concerned mostly khoranic schools (ibidem). In most northern areas the health and veterinary systems also developed to degrees which are not comparable to those of Barre's times. The *Human Development Report 2001 - Somalia* observes that there are today more primary schools in the country than in the late 1980s, and the private sector has been effective also in the provision of water and electricity (UNDP, 2001).

As these processes evolved under a very limited guidance and planning capacities from public bodies the sustainability of their results vary to a good extent from one sector to another. In some places communal and public assets have been appropriated and commercialized by powerful elites or external encroachers. This is the case, for example, of the fishing sector, where reported decreases in fishing stocks and increases of environmental degradation (along the NE coasts) are clear indicators of ineffective governance systems (UNEP, 2005). On the contrary, other sectors where local people had longer standing experience could thrive and benefit in the new environment; the frankincense sector has reportedly improved its productive and commercial capacities since the collapse of the state-led (Frankincense and Gums Development and Sales) agency, and the revival of kin-based control and management structures<sup>43</sup>.

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<sup>42</sup> Not including the contested regions of Sool and Sanaag.

<sup>43</sup> For a better and in-depth understanding of these mechanisms and the whole frankincense and gum sector, refer to the comprehensive work of Farah Ahmed Yussuf (1994).



## FEDERAL PASTORALISTS

Somali pastoralists have not benefited from centralised forms of governments whose efforts and investments had little to do with improving their livelihoods. Rural development initiatives in colonial and post-colonial periods have only touched the pastoral production system to a limited extent and have been mainly directed towards increasing the return of external investments (Doornbos, 1993). The British were interested in intensifying livestock market off-take. Italians directed their efforts towards their own banana, cotton and sugar industries and Soviet support went directly to the establishment of state farms. All in all, these efforts had very little to do with the majority of pastoralists and peasants (Samatar, 1988). A clear lesson to be drawn from the Somalia experience is that any national government that tries to control and exploit pastoralists without serving their needs will prove unsustainable in the long term, as the costs associated with this policing will increase proportionally with the state incapacity to control and tax its citizens.

Northeast Somalia has followed a specific trajectory within this process, with its extreme ecological conditions on one side and its peculiar exposure to the international dimension on the other. The relative clan homogeneity that characterizes the Majerteen society and the related institutional strength have represented critical assets in containing the encroachment of colonial and post-colonial interests, in re-establishing peace and security once the Somali central government had collapsed, and in inhibiting and limiting the role of Islamist movements in the region more recently.

The traditional longstanding capacity of Somalis to live in societies with rules but without rulers<sup>44</sup> has been revived in political processes ongoing in Somaliland and Puntland, where different power levels play specific and complementary roles in governing the local society. While the consultative and advising role of traditional elders (both religious and secular) has been formalized to an extent, women leaders and organizations have been playing a critical part in the establishment of peaceful conditions, while also increasingly contributing to the local economy. Groups of professionals, businessmen and intellectuals have all played a role in reviving basic services and infrastructure and in ensuring forms of control and conflict resolution at local level (Helander, 2005).

These represent important examples of institutional settings supporting existing structures and practices, building upon a blend of traditional leadership, laws and customs together with modern systems of governance. These systems are currently projecting and integrating the Somali pastoral society within the regional and global context (Menkhaus and Prendergast, 1995), but might also inspire alternative and more credible solutions for other regions which are in search of effective governance systems, particularly where a mutually beneficial productive relationship between the state and pastoralists has yet to be found (see Samatar, 1989:11). In such a context the current success of Islamist preachers stay in their capacity to impose security without taxation and basic administration without the burden of a government (Gettleman, 2009:42).

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<sup>44</sup> Also cfr. Lewis, 1961

Doornbos suggests that Somalia is a country for which any standard institutional package is by definition inadequate. Somalia's special features require unorthodox and original thinking about what might be appropriate institutional solutions in a largely pastoral context (1993:118). The challenge of bringing Somali territories under a central control depends on the ability to shift from a territorial state, defined by colonially created boundaries, to a trading state, defined by the control over internationally marketable resources. This change in perspective is needed to enable the generating of the resources needed to sustain such an effort and to change the nature and value of territoriality in the modern global system (Clapham, 2001). Supporting trade regulations and market integration through principles of subsidiarity and confederation of pastoral groups would be critical to ensure this process positively affects pastoralists, by serving their needs and not merely reaping their resources (WSP, 2001). What is required is possibly a passage from government to governance, using the definition of Mearns (1996), meaning a shift from the formal exercise of control, through law and coercion, over a community by a constituted state - to the exercise of legitimate authority within a local group through endogenously evolved sets of rules. This process has to begin with and progress by accepting and supporting ongoing processes of local institutional building in Somaliland and Puntland.

## Chapter 5 - BOOM AND BANS: THE LIVESTOCK ECONOMY

In this chapter the process of integration of the Somali pastoral economy into regional and international mercantile systems is assessed. Specific relevance is given to the evolutions of livestock trade, a major driving force of this process, which have contributed to reorganising the Somali economy and territory to a great extent. An analysis of the processes by which changes in livestock trading take place and the concurrent changing institutional arrangements provides an important framework for understanding local socio-economic developments.

The Somali economy is based on nomadic pastoralism, which provides the main livelihood source to more than 70% of the population and whereby livestock exports constitute approximately 80% of foreign exchange earnings. Livestock has been the backbone of the Somali economy in the past and will continue to play an important role in the development of the economy in the future (JNA, 2007). The economic value of pastoralism is greater in the drier portions of Northern Somalia.

Economic exchanges with the wider society have traditionally played important roles in local livelihood patterns; import-export activities and patterns of remittances contribute significantly to the regional economy and few would argue that their value is higher today than when a central government was in place (World Bank, 2005). Somalis are known to have a longstanding familiarity with money; coins dating from the fifteenth century have been found in the ruined sites of early Muslim trade centres in Northern Somaliland (Lewis, 1962). Today about eight different currencies are used in the Somali region, and Somali dealers can be found in frontier towns of most east and southern African countries, acting as an intermediary for money transfer, currency exchange and smuggling.

As a result of the country's poorly endowed natural resource base and its strategic geographical setting, the Somali lands have witnessed important commodity flows through history. Early explorers of the region already noted that the natives of the country were essentially involved in commerce (Burton, 1856: xxix), and that the country itself was not only a source of raw materials, but also an emporium (Birds, 1934: 199)<sup>45</sup>. The presence of seasonal monsoons in the Indian Ocean has been instrumental in the development of far-reaching and regular exchange with the Arabian as well as the Indian worlds along these coasts.

A total of about 25 small ports (named as *makhir*) enabled trading in North Somalia by the beginning of the 20th century, often as outlets of specific individual clans (Gunn, 1990); these have been critical drivers in the cultural crossover and global integration of the whole Somali society. Arab traders utilised Majerteen networks and ports for their trade of slaves and ivory coming from the inland, for skins, hides, precious gums, ghee and ostrich feathers produced in the Somali region as well as other products such as ebony and gold from elsewhere in the continent (Cerulli, 1919; Puccioni, 1937;

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<sup>45</sup> Both quoted in Gunn, 1990:53

Lewis, 1962). Through time, livestock products gained importance in relative as well as absolute terms in these transactions; wildlife products and slaves decreased constantly, hides, skins and ghee remained important until the mid 1900s, after which they also declined rapidly. Livestock was becoming the major commodity, exchanged in international markets for grains and other major staples.

Other economic sectors such as mining and irrigated agriculture never developed to such an extent as to overshadow the importance of livestock trade in Somalia. The centrality livestock trade had achieved within the pastoral economy was specifically felt during the Second World War, when the conflict between the British and the Italians led to a prolonged halt of such trade activities with destructive repercussions on local livelihoods and the overall food security in the region. However the sustained growth in livestock exports that had been almost constant since the end of the 19th century suddenly accelerated in the mid-1950s following the oil boom that dramatically expanded market opportunities for animal products in the Arabian Peninsula (Swift, 1979: 451).

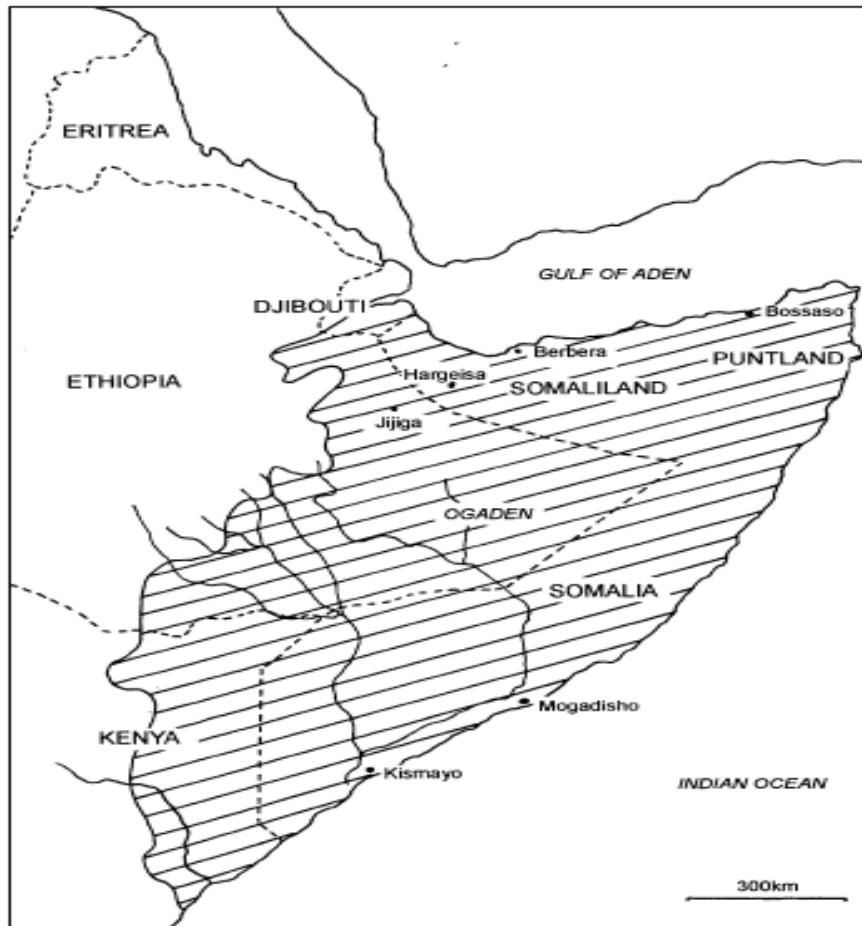
This gradual but steady increase of livestock export trade triggered a reorganisation of the commercial infrastructure, with new opportunities and risks which critically contributed to reshape the livelihoods of local pastoralists. While the previous chapter has looked at the wider historical picture, in this chapter the focus is on the evolutions of livestock trading and an analysis of the environment that enabled such evolutions.

## THE SOMALI ECOSYSTEM

Agro-ecological conditions constrain production and exchange patterns in Somali areas. In order to adapt to and develop in these environments, Somali pastoral livelihoods traditionally rely upon mobility, information networks and market integration (Swift, 1979). Rearing and marketing livestock and related products is the key to survival for these communities, with the diverse animals embodying different economic functions and social roles. These livelihood strategies take place at a regional level without major consideration for borders and frontiers; cross-border networks allow for extensive links that facilitate the regional movement of information and commodities. Somali pastoral communities sharing the same cultural features, livelihood patterns and ecological conditions are in fact scattered among the four countries in the Horn of Africa (Ethiopia, Kenya, Somalia and Djibouti), in what has been defined as the Somali ecosystem. In spite of political divisions the lands inhabited and exploited by Somali pastoralists form a single economic and ecological unit (Lyons, 1994).

This '**Somali ecosystem**' is suggestive not only of the similar ecological conditions but also of a *continuum* pattern that characterises the man-made networks and relations that make these populations integrated and interdependent. As already explained, the wide coastal area has favoured huge degrees of exchange and cultural crossover with distant and diverse cultures and environments. The large Somali diaspora, and the relevance of international remittance and import-export dynamics to the local economy, attest to this exposure to the wider global setting. While acknowledging that a broad perspective is therefore needed to properly tackle ongoing trends in the Somali society, a regional approach is undertaken by this research, following the example of Cassanelli (1982). The Somali ecosystem concept serves this aim, and provides fruitful working tools to specifically assess Somali pastoralism.

In order to account for the diverse ecological and socio-political features of this ecosystem, different 'corridors' can be said to exist, through which the Somalis themselves operate. We will define 'corridors' as those territorial patterns through which complementary and two-way movements of livestock, people, goods and money often take place, and in which communication networks exist at the regional scale. In many instances they develop from the Somalia coast to inland areas of Somalia/Somaliland and the Somali regions in Ethiopia and NE Kenya. They serve thus to interlink the coastal areas and - through the ports - the international arena, with the seemingly isolated inner drylands. By allowing continuous exchanges between pastoral products, imported goods and the interrelated flows, these corridors serve the different needs and activities of groups living under different environmental settings (Nori and Majid, 2002).

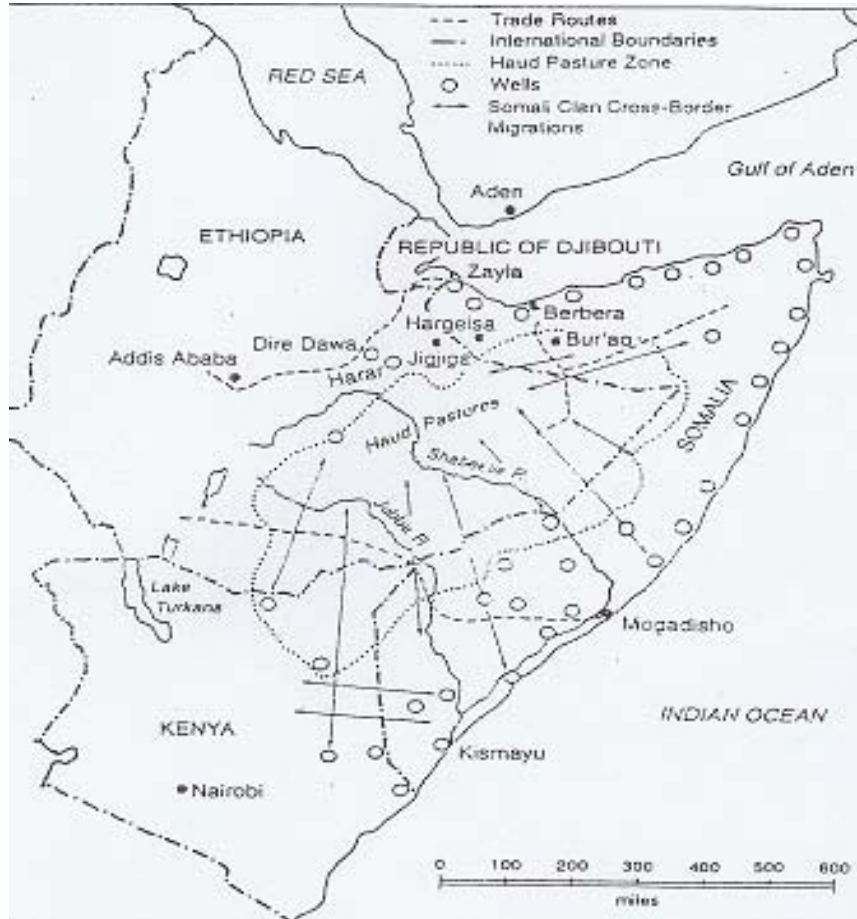


**Figure 5.1 The Somali ecosystem**

Source: Catley, 1999

A corridor is composed of the interaction between a hard and a soft component - a physical and a social infrastructure - which are both critical to ensure its functioning. The physical asset that has been developed to support corridor flows is mainly represented by the dotted web of market centres, settlements, towns and ports, which represent the knots of virtual networks waded through the Somali ecosystem. Other

critical infrastructures are the trek routes, the water points and the grazing reserves that enable the movement of animals and caravans over long distances in difficult terrains and climatic conditions. The institutional setting that complements such infrastructure is critical as well, as it regulates access and utilisation to resources, controls and secures movements and transactions, and provides the enabling environment for such flows and exchanges to happen.



**Figure 5.2 Corridor routes crosscutting the Somali ecosystem**

Source: Doornbos, 1993

### Rural – Urban Networks

The evolving towns and trading posts within this ecosystem represent an extension of the pastoral way of life, with a structural continuity between the two. Traditionally the relationships between the rural and urban environments have been critical to enhance integration of different livelihood systems, to maximize the use of limited and variable resources, and as a way to buffer difficult times and minimize livelihood risks. In fact, as noted by Warsame (1996:41) *unlike many other pastoralists in other parts of the world, there is a close link between Somali pastoralists and their urban affiliates; (...) in most cases the line separating the two is very thin and sometimes overlapping.* In fact there are very few urban families who do not have a close family member and some livestock in the nomadic areas. The degeneration of these rural-urban ties through the detachment of

urban environments due to their incorporation into the state machinery is at the heart of the failure of the state experience and the civil strife (Doornbos, 1993).

Urban environments represent important trading centres for pastoralists, where local products can be exchanged for imported staples and remittances can be managed. During the *Jilaal* season and at times of drought urban affiliates are of utmost relevance for the coping of pastoralists, through various forms of assistance, from hosting herders' children, to sending money and food (refer to Nori et Gabrielle, 2007 for more information on this). Similarly, urban families send some members (especially children) to pastoral affiliates during the rainy times to benefit from the surplus milk and improve nutrition. Herren (1992) defines this as 'milk tourism', which is still an important practice in Puntland; nowadays most Boosaso residents move to Qardho to enjoy the cooler climate and the easier milk accessibility during *Xagaa* times. Milk gifts are often sent from rural to urban relatives. For pastoralists, milk thus represents a critical asset to maintain and develop ties with urban affiliates, which could be critical in times of need.

The development of the dotted web of urban outposts that characterises Somali lands developed by the end of the 19<sup>th</sup> century, when the pace of trade exchanges accelerated. Modern towns in northern pastoral Somalia have developed from market posts and villages established at the points of intersection of main caravan routes. These were often located on the boundaries between hostile groups, where the abbaan would pass over his charges to the other one (Lewis, 1955:78; Gunn, 1990). The first step in such a process was often the establishment of a teashop somewhere, and this eventually evolved into a centre for information and exchanges, and the meeting point where the merchants, through agents (*dilaal*), and the herders arranged sales. These places served in turn as collection points for inland products for export as well as for marketing of imported products; distance between these places was estimated at about forty miles as an average (Cerulli, 1957; Gunn, 1990). Apart from some exceptions, such as Harar, most inland towns were definitely temporary settlements, limited in population, and often with a seasonal dimension as monsoon winds, dhows and goods were all moving together.

The socio-political fabric of these developing centres remained pastoral, with the urban population showing little degrees of civic identity or residential solidarity beyond their lineage allegiance. Personal relationships and contractual agreements amongst dwellers repeated the pattern found in pastoral areas, based on agnatic ties and lineage affiliation. Despite their apparent group heterogeneity urban environments remained characterised by clan territoriality. This segmented nature of rural settlements is still a main feature of northern Somali towns, villages and urbanised areas, where distinct lineages inhabit specific neighbourhoods. In important inland cities such as Burao and Galckayio, which originated from the union of two confined sub-cities, tensions between competing lineage groups represent a characteristic feature. In Boosaso, where a number of refugees and traders from different lineages have gathered for various reasons, different markets exist for the diverse clan groupings.

In the development of market centres, settlements and towns, coastal cities increasingly played a dominant role. Negotiations and contracting took place there, where foreign and local traders, colonial administrators, and other actors could reside

and weave their commercial webs. Panhkrust (1965) reports that in the 1840s two thirds of the Somali population of Berbera were *abbaan*, playing the critical intermediary role for commodities involved in import and export trade, excluding livestock. The increasing relevance of livestock trading triggered the evolution of a network of small dotted ports into a few large ones. This contributed to reshape territorial patterns, from a fan-shaped top to a more dendritic system (as pictured by Gunn, 1990:56) - what I define as corridors. Coastal cities with important seaports such as Djibouti, Zeyla and Hobyo naturally became important reference centres for trade and cultural exchange for the people of the whole of the Horn of Africa. These were the sites where new culture, religion, technologies and practices were exchanged between the outside world and the pastoral interiors. In turn, the inland regions impacted on coastal cities, supplying export produce and demanding the imported goods that drove the commerce (Umar and Baulch, 2007:16).

During the last decade a more intense process of sedentarisation and rural settlement has been taking place in the northern Somali regions, as a result of both an overall population increase due to internal growth and in-migration from surrounding insecure regions, and important changes in the regional economy. Overall, in Puntland, this process could be said to have followed three main paths:

- further evolution of existing urban centres along the Galckayio – Boosaso tarmac road, including minor and major centres along the route;
- development of small villages in the coastal areas, mainly related to the increasing relevance of fishing activities as well as the huge international aid resources the Tsunami episode attracted<sup>46</sup>;
- localised settlements in pastoral areas, often around trading posts and associated with the establishment of water harvesting infrastructure (ponds or *berkaad*).

The driving forces of this process have hence been many: from refugee flows to remittance reinvestments (*berkaad* and house construction) and from livelihood diversification (through fishing) to foreign aid. All in all these evolutions reflect as well as generate further market-integration of the Somali pastoral society. These evolutions seem nevertheless to respond to the need for specific sub-groups and *reer* to secure control of the territory through more continuous physical presence (Nori and Gabrielle, 2007). In some cases it is also a way for minorities / smaller groups to define their political space vis-à-vis the majority ruling group (e.g. the Ismahelios group in Bixiin). This has also implications on their business, as the settlement becomes a relevant place for transactions. While the extended web of towns, settlements, villages and trading posts provided the physical infrastructure to trade-related developments, in a context of vast areas and scattered human presence, an institutional environment enabling movement, exchange and transactions developed accordingly.

## THE CORRIDORS

In operational terms corridors can be described as a set of parallel conveyor belts that take out local (pastoral) products and bring in consumer goods. Livestock and other

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<sup>46</sup> The case of Haafun, where two hospitals and a completely new village have been built with Tsunami funds for few hundred households is indicative in this respect. Other examples include the number of coastal villages that got connected through roads to the rest of the region. During the SCF survey an old woman in the area of Bander Beyla told me that the main impact the Tsunami has had on her was that she had discovered the existence of tomatoes !



commodities flow along specific corridors into and out of the region. Corridors are based upon ecological conditions and the resulting economic specialization of an area, so that corridors in northern Somali regions deal with smallstocks and imported stuff, while in southern Somalia grain corridors (i.e. from riverine areas), cattle corridors (towards Kenyan markets), food relief corridors (depending on where a crisis happens) exist. While the preferred trading routes within and between these corridors are determined by factors such as relative distances to the port, availability of transport facilities and prices offered to traders along the route, the corridors are primarily defined by clan networks, as these represent the only alternative in an environment where modern legal mechanisms and formal financial infrastructure are absent (Umar and Baulch, 2007). The pastoral institutional set up provides thus the enabling environment for commerce in these environments.

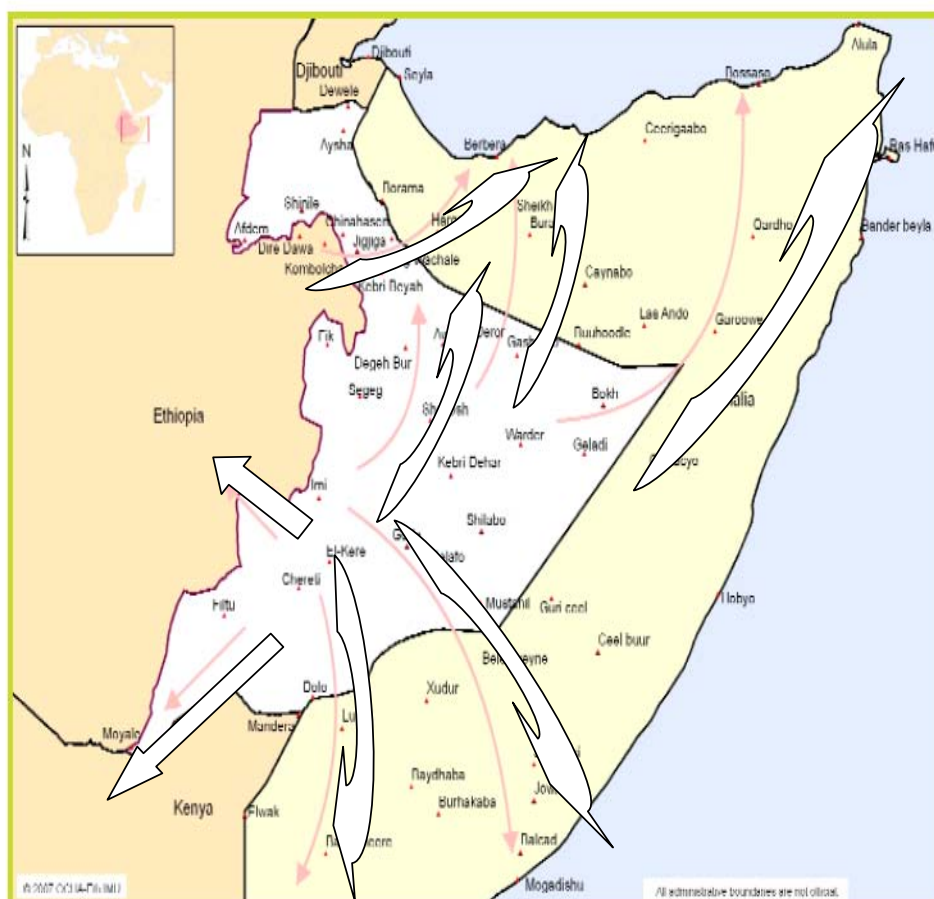
Major corridors transcutting the Somali ecosystem are:

- a) Issa: Shinille (ESR) – Djibouti – Awdal (Somaliland)
- b) Issaq: Jijiga – Hartisheikh – Hargeisa – Berbera
- c) **(Daarod) Ogaden-Majerteen: Warder (ESR) – Puntland (Somalia)**
- d) (Daarod) Ogaden – Marehan/Majerteen: Garissa (NE Kenya) – Gedo – Juba – Kismayo
- e) Garre: Liben (ESR) – Wajjir – Lower/Middle Juba – Merka
- f) Ogaden – Hawiye: Gode – Belet Weyn – Mogadishu

**BOX 5 – The Berbera-Jijiga corridor** (excerpt from Nori and Majid, 2002)

A corridor where this trading function has developed recently is the Berbera/Hargheisa – Hartisheikh / Jijiga one. The port and airport of Berbera and Hargheisa respectively act as conduits for imported items from the Gulf States and the export of livestock and *qaat* to some of those same States. The market-shed for both the imported and the exported goods are Somali groups inhabiting different parts of the region and also terminal Ethiopian markets. Somaliland itself is evolving into a commercial hub for the inner lands of the Horn of Africa, with its high levels of livestock export trading and import of whatever, mainly from Dubai. Electronic goods are smuggled through camel caravans to Djibouti and inside Ethiopia. The number of refugee camps on the border as well as the close proximity and relative peace of Jijiga, the regional capital of Ethiopian Somali Region, and Hargheisa, are major contributory factors to the level of inter-connection in this corridor.

As to the nature and the economic specialisation of northern Somali territories, institutional developments along through these corridors have mainly addressed the commercialisation of livestock. The area of this thesis mainly crosses through corridor C, which utilizes Boosaso as its main sea port. Traditional groups that utilise this corridor are related to the Majerteen group that controls Puntland, the Dulbahante and the Warsengeli (from the same Harti group), while the Ogaden and Marehan groups inhabiting portions of central Somalia and the Ethiopian Somali Region are still within the Daarod clan family, though have looser ties with the Majerteen (cfr. Figure 3.2).



**Figure 5.3 Map of Somali livestock trading routes**

Source: Umar and Baulch, 2007

Formatted: Not Highlight

A range of different livestock markets exist today in the region, with diverse degrees of scale and specialisation, dealing with different grades and species of livestock. Some market chains might deal exclusively with export livestock, mostly for Arab countries (predominantly male smallstocks) or Kenya (including cattle), others for local consumption, herd restocking, or for fattening purposes.

#### *Physical security*

The first core issue with regards to trade corridors is the management of risks and uncertainties that livestock is exposed to in the different domains, from production to sourcing and supply, movement and transport. Political insecurity - involving clan rivalries, disputes with neighbouring groups and land users, and conflict and skirmishes with regional governments – adds to an ecological context where production performance is structurally limited and highly variable. Two main areas of concern are to be considered in moving animals from production to export areas; a) the maintenance of good physical conditions for the animals, meaning good access to quality grazing and water, and b) security of the trade, thus avoiding that animals are stolen. Given the fact that pastoral trade involves crossing borders between different clan boundaries and diverse countries, arrangements are to be continuously negotiated between those moving the animals and those controlling the territory.

In order to keep animals healthy while on the move continuous access to quality graze and water is needed, which is to be obtained through negotiations. Limited availability of or accessibility to such resources can have dramatic consequences on the traded animals; the most frequent case is for water, whose limited availability during certain seasons can be compounded by access made difficult by conflict and enmities between groups. Even when there are no hostilities the goodwill of a clan is necessary to allow passage to trek livestock, as customary grazing regulations hold the key to access vital resources such as water and pasture (ibidem).

Right of passage through territories is also to be negotiated, and related arrangements might change from one portion to another of the region - accounting for a number of factors, from alliances and/or enmities between specific groups, to security threats in southern Somalia, to tight government control on the Ethiopian rangelands. Crossing through the Somali-inhabited regions of Kenya and Ethiopia is a risky task as repressive measures might include confiscation of animals by Governmental authorities. It is through the intervention of respected elders and clan leaders that problems with other groups and administration officers can be avoided (through appropriate information circulation) and resolved (through negotiations) (Umar and Baulch, 2007).

It is uncommon that pastoralists and large traders go themselves to livestock markets. Once herders used to organise and sell their animals through collective action, by sending some of the group with the animals directly to the main market. However, sectoral intensification and specialisation have given rise to a more sophisticated network of actors involved in trading livestock. Some herders located close to villages might go themselves directly to the market, or utilise vehicle transport. More often animals are collected by intermediaries in the bush. In any case from the time the animals leave the flock a number of intermediations and transactions take place before they are actually exported and sold in terminal markets.

The livestock trade system currently relies on a set of characters which are in charge of supplying animals and bring them in good and safe condition to export terminals - much like the *abbaan* did a hundred years before with the trade caravan. By the late 1980s Samatar identified at least seven different individuals, excluding the producer, making a claim on each head of exported livestock before it is shipped out of the country, in what was defined as 'over-circulation' (Samatar et al., 1988:81). Main intermediating characters relate to the town-based merchants, a broker supplying animals (*dilaal*), middlemen mobilising producers, collecting and concentrating animals (*jebileh*), and hired drovers (*sawaaqi*). A number of speculators (*gedisly*) are also included. These intermediaries are individuals of respectable standing within their clan and use their linkages to fulfil their tasks; again, these agreements are not a matter of individual interest, as they involve the effort and the interest of a whole group, whose members benefit from the redistributed sharing.

*Dilaal* is a transaction facilitator, acting as middleman between sellers and buyers. Found in every livestock sales-yard he represents the link between the rural populace and the market system. He has a working knowledge of the quality of animals and is able to tell the current value of stock. He witnesses the agreement between the purchaser and the seller, takes part in the price negotiation, ensures that conditions and pricing of animals are fair, ensures that the agreed price is paid (his role is to

facilitate and certify the validity of such agreement). Each group also has its *dilaal* at market centres to ensure their pastoralists receive fair compensation as well as that the name of the group does not get a bad reputation. In this respect it is said that the *dilaal* is the “ambassador” of his clan in the market (Umar and Baulch, 2007:26). He is paid a service commission fee, about 4 to 5 % of the sale price for his transaction role (Abdullahi, 1993).

*Sawaaqi* are trekkers who move animals on foot between sales-yards. They have good relations with clan elders and can therefore take responsibility for the feeding and safety of the animals when moving them through their territories. Depending on relationships and capabilities, contracts between the trader and the *sawaaq* involve crossing different clan territories, or hand the animals to others *sawaaqi*; the remuneration is negotiated accordingly.

More recently a new character has developed along this chain. The concentration of Somali livestock exports during the *mowsin* period meant that a large and increasing number of animals had to be collected in a specific time window from thousands of scattered herds. This was a task the *dilaal-sawaaqi* system could accomplish only to a limited extent. As a result, a new arrangement saw the creation of a further intermediary role, the *jeebleh*. These are medium to small-scale traders with limited capital and their main role is to mobilise herders and collect their animals in line with market trends. They source animals from bush and primary markets until they have enough to trek or truck them to bigger markets, where they will be handed to larger networks. *Jeebleh* keep risk and costs low by moving the animals within their clan areas, with all related advantages concerning access to water and pasture and the protection of kin mates.

As exports soared and the process of livestock marketing became increasingly complex, the roles and the responsibilities of these different agents along the chain underwent major changes (Kapteijns, 1995). While initially Somalis only constituted the foot-soldiers of this trade they have now gained almost complete control of both the export and import trade chains (Hoben et al., 1983; Samatar et al., 1988). Relationships between producers and traders strengthened accordingly, enabling the development of an informal indigenous credit system.

**Table 5.1 Evolutionary steps in the livestock trading chain**

Characters	Period	Factor
Herders collectively organised	Mid 1880	Limited market articulation Low scale livestock trading
<i>Dilaal – Sawaaqi</i>	Early 1920s	Expansion of trade Somalis taking control of the whole chain
+ <i>Jeebleh</i>	Since 1950s	Increasing relevance on <i>Haj</i> market demand Many animals in a limited time ( <i>mowsin</i> )

#### *Financial arrangements*

The second main theme of trade corridors is the centrality of trust and inter-personal relationships in financial arrangements. Information and responsibilities flow thus through the web of relationships established between the different intermediating characters, who all refer to and rely on the clan organisation - the local institutional

setting - which provides the enabling environment to reduce uncertainty to acceptable degrees. Investing in the social infrastructure represents an effective system to reduce the transaction costs involved in ensuring good body conditions and the safety of traded animals. These relationships are governed by a number of arrangements, with credit playing an important role. Most transactions are in fact virtual, as payments will occur once the animals have been sold in terminal markets.

The producers in remote areas give out stock on credit to the *jeebleh*; while receiving a partial compensation on the spot, it takes months before the producer eventually receives remuneration for the full value of his animals. In this way producers carry a large part of the risk involved in trading, and they also do not know how much their animals will be effectively valued in the market. They simply trust their fellow kinsmen, who took their animals to market, to obtain the highest possible price. The relations between the traders within and across the clan divides, and between traders and their customers, are governed by trust (Umar and Baulch 2007:19). Trust relationships forms an integral part of the marketing arrangements; trust and credit go hand in hand, as one generates the other, and both are critical in establishing commercial relationships in this environment (Samatar et al., 1998).

Colonial and independent governments increasingly tried to regularise this trade, introducing various technical and administrative measures and controls. They failed however, as the customary system proved too strong in managing local stakeholders' interests, security and related transaction costs. According to a number of authors the intensification and specialisation process led through time to an increased stratification of the Somali society, with traders and the urban wealthy class manipulating kinship ties to exploit their rural mates (Burton, 1856; Kapteijns, 1995). Swift (1979) and Aronson (1980) detected, in the decreasing terms of trade for pastoral producers in local markets, the indications of these exploitative relationships accelerating class formation through the proletarianisation of pastoralists and the creation of an urban elite (Samatar et al., 1988; Gunn, 1990; Doornbos, 1993).

#### *Infrastructure and facilities*

The third main component of corridors is the increased investment in infrastructure and facilities aimed at enhancing the circulation of goods as well as information. Expansion in import-export figures and the growing relevance of the northern ports has induced a number of investments in developing the physical infrastructure of the region. In the late 1980s, with efforts from the Italian and the Chinese Cooperation offices, the tarmac road connecting Boosaso to Mogadishu through Galckayio was completed, thus improving considerably road transportation and triggering private investments in livestock trucking and also enabling bringing food and a wide variety of consumer goods to inland populations. Similarly, the development of the Boosaso port infrastructure facilitated to a large extent the transportation and trade of animals, enabling the utilisation of big ships which replaced the more traditional dhows. This limited but important infrastructure base has triggered complementary private investments which has induced technological and institutional innovations, particularly in the communication and financial systems.

Timely coordination between different actors who may be hundreds of kilometres distant is essential in moving animals and reducing related expenses; the timing of the animals arrival to the seaport is critical to reduce costs for services including watering,

hay provision, and use of pens. Good communication is thus vital and recently developed mobile phone networks have enabled traders and intermediaries to track prices and sales, keep in touch with their partners and to coordinate procurement, goods orders, transport organisation and financial transactions (Umar and Baulch, 2007:20). Complementary to the expansion of mobile phone coverage, in remote bush areas where telephone coverage is low, a widespread network of HF radio-call systems (*fonio*) covers most inhabited areas of the Horn, with HF stations and operators found in every small settlement and accessible at cost-effective prices.

Another major innovation has concerned the financial sector, as cash-based transactions have increased in importance where barter trade (livestock for food and other essential commodities) used to be dominant. *Hawala* (money transfer agents) can nowadays wire large amounts of money across the world within minutes using modern phones, the internet and the trust system of the clan. These systems are widespread and reliable, and used by traders but also by simple households (Nori and Gabrielle, 2007). Established to enable diaspora people in the Middle East and western countries to send money to their country mates, the system is now fully a part of the commercial transactions, reducing risks and costs associated with such movements. Traders can make arrangements with the *hawala* to pick up money at the port, inland or across the sea in Yemen or the Gulf, and travel without carrying money.

Money wiring companies have grown very fast over the last fifteen years, and have acquired a large skilled manpower and capital base as well as expanded franchises and branches. Companies like the Dahab-Shill, Mustaqbal, Amal, and Kaha have built impressive bank-like physical and institutional structures with a presence in many countries in every continent of the world. The largest of the Somali *hawala*, Al-Barakat, was closed down after September 11th 2001 when the United States authorities realised the potential for misuse by money launderers of a system in which millions of dollars were being sent rapidly around the world without the usual written records (Umar and Baulch, 2007:20).

#### **BOX 6 – Information and remittance flows**

It is nowadays possible to send a message or some money in almost real time anywhere in Somalia, utilising only the family name, clan and the location area of the recipient. *Fonio* operators in every village, and within the various parts of large towns are familiar with the names and clan membership of resident families. They have out-runners who send the message to the person being contacted through their member clan networks (Umar and Baulch, 2007). The same applies for money transferring within the highly skilled remittance system that funnels huge amounts of money daily into the Somali bushes. Money is transferred to and from small villages, using only the name of the individual and their clan to identify them. This same trust system and its clan network are utilised by large traders to undertake and control their business.

As communications and money transfer businesses prosper and grow, they pick up and adapt modern systems to suit their own structures. Stiff competition between companies ensures that the costs of services are very low. Initially every major clan had its own communications and money transfer company, but nowadays financial considerations prevail and traders and users shop around for better services and lower costs (*ibidem*).



Finally, important investments have been made enhancing the quality and value added to Somali pastoral livestock. Modern animal health screening facilities developed in Djibouti and Berbera in order to improve disease monitoring standards and reduce the vulnerability to Middle Eastern import bans, a major risk factor in the region. Modern abattoirs, that produce and export chilled meat, have been expanding in both Somalia and Ethiopia in order to circumvent the vulnerability of live animals to import bans. This offers an important new marketing outlet in a sub-region where local markets are limited. In Somalia, abattoirs are located in Burao, Galckayio, Beled Weyn and Mogadishu. The combined annual exports have varied between 100,000 and 200,000 heads of sheep and goats, since 2006, with a much greater potential if all facilities are working simultaneously (Majid, 2009)

## BEYOND THE CONFLICT

The civil strife that took place following the disappearance of the central state authority, the damages to major trade infrastructure in the south and the spiralling insecurity in parts of the region have consistently impacted on livestock trade dynamics. Two consequences are of particular importance to our analysis. First, most export trade was relocated to the northern ports, as the southern facilities in Mogadishu and Kisimayu were rendered inaccessible by clan rivalries. Second – and perhaps more importantly – Arab countries posed repeated livestock bans to livestock exports on the basis of threats coming from unchecked animal health conditions. Ultimately, these factors contributed to reshape livestock trade and have triggered women's involvement in business.

### *Women at markets*

As explained above, livestock export trade, the engine of the local market economy, is thus in the hands of clan networks; once Somali traders took control also of the leading export roles<sup>47</sup> neither the colonial nor the independent governments have been able to encroach into this critical business. Livestock trading is operated chiefly by men and women's involvement in the export ventures is traditionally limited. Women would face difficulties in competing in the larger more profitable Saudi markets, and concentrate rather on less lucrative local markets, such as the slaughter market that produces meat for local consumption.

Overall, women's effective presence in the livestock export trade market is limited and the consistency of their business reduced (about 3 to 6 % of traded livestock), although in some areas a limited number of women are beginning to establish themselves as traders, representing a significant innovation in the Somali context and in the booming livestock sector (SCPD, 2000:40; Umar and Baulch, 2007). Cases are moreover reported about women playing important roles in livestock marketing in specific contexts. According to Warsame (1996), women have been key actors in livestock trading during the times of the civil strife in Somaliland, in the first half of the 1990s, when it was too difficult for the men to travel due to the insecurity related to the conflict. Women could make use of their double clan links as a facilitating factor to move through corridors and access markets and trading routes. In the Ethiopian Somali region, Umar and Baulch (2007) report a high female participation in animal transactions through the Berbera and Boosaso export routes, due to the high insecurity that characterises these

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<sup>47</sup> This was reportedly at the times of the World War II, profiting for the difficulties foreign merchants were facing due to the conflict situation (Hoben et al., 1983).

areas. These cases seem to confirm that in safe times it is men controlling livestock trade, while women become important at times of insecurity, when men's mobility is limited and their networks confined to clan boundaries. In these cases women 'ambiguous' clan identity (UNIFEM, 1998) enables them to avoid been associated to a specific group thus facilitating their movements. Women play a kind of bridging role between different groups and territories, at times when men's capacities are limited by lack of peace and security.

Also in Puntland women have some limited role in trading smallstocks; these are mainly the animals that herders pay to write off the debts they have contracted towards women petty traders in purchasing imported staples during the dry seasons or at drought times. These animals are transported with the same local pick-ups that carry milk and supply local consumption markets. Overall, what is remarkable is the increasing presence of women in a number of important and remunerating businesses; apart from minor portions of livestock trade, women are in control of local petty trading, the lucrative *qaat* trade, some import-export activities, hotels and others. Their presence in the formal economic sphere is no doubt growing day by day (Warsame, 2001).

Some men tend to understate this process, by deriding women's willingness to do hard works and to take low profits. Others are scared by this evolution; as a man stated in Gebiley one day '*women are controlling us*', explaining that women earn the money men should, while keeping them quiet by providing *qaat*. Most indicate the reasons for women success is their lower overheads, as they are not burdened by extensive clan-based obligations. However, reported limiting factors for women's involvement in market businesses include limited financial and managerial skills, attachment to household-related tasks and overspending of their returns for household's needs, fewer sources of direct financing, limited access to educational opportunities and scarce managerial and book-keeping skills (cf. also WSP, 2001). Women tend to reinvest their profits in jewellery and urban properties, as their control over these does not fall under clan restrictions (as it would be for camels). Women's weaker position in the clan organisational structure thus critically influences their capacity to connect to markets as well as to reinvest their profits.

#### *A Tale of Two Towns*

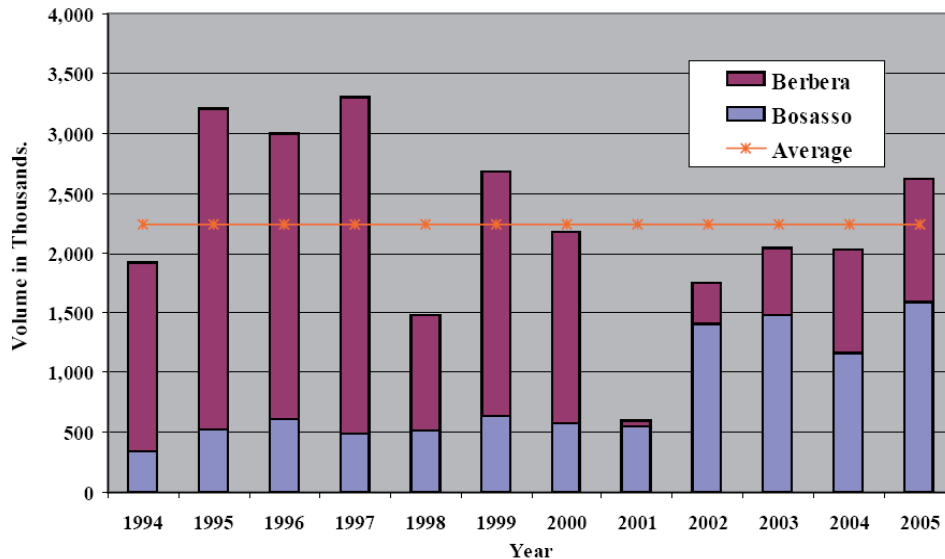
During the 1950s the booming oil-based economy in Arabian countries translated into important increases in the demand for animal products. In Saudi Arabia in particular, millions of Muslim pilgrims started convening to Mecca, where the slaughtering of kids and lambs is a ritual sacrifice. By the mid-1950s Saudi Arabia alone was the recipient of more than 90% of Somalia's livestock export (about half a million head), while Somali exports accounted for over 80% of Saudi imports; a close interdependency was then established. In 2005 Saudi Arabia received (directly or indirectly) more than 90% of all the sheep and goat exported from Northern Somalia.

The political problems and the civil strife that have characterised Somalia since the mid 1980s carried important consequences on the livestock export trade dynamics. From 1988 to 1991 the trade was completely disrupted, and the consequences were deeply felt by the pastoral population whose purchasing power diminished while the availability of imported foodstuffs shrank. The implosion of the central government and the collapse of the civilian infrastructure in southern Somalia are the main reasons



behind the relocation of most livestock trade to the northern ports of Berbera and Boosaso, which suffered relatively little from the civil strife. Furthermore the lack of a central state authority and of governmental (veterinary) control and servicing were major reasons to justify the repeated livestock export bans from Arabian countries.

Somalia's long-standing history of live animal exports to the Arabian Gulf states through its natural ports has experienced a series of trade embargos due to suspicions and actual cases of diseases like Rift Valley Fever, *Peste des Petits ruminants* (PPR) and Rinderpest. Recently two consecutive export bans have adversely affected the income and livelihoods of pastoralist families and the national economy in general. The effects of the first ban imposed by the Kingdom of Saudi Arabia in February 1998, and the second one, initially imposed by all countries from the Arabian Peninsula in September 2000, are clearly visible in Figures 5.1 and 5.2. The total number of TLU exported in 1998 was halved, compared to the previous year. The damage provoked by the second ban was even greater, as this was initially enforced by all Arab countries, blocking any opportunity to circumvent it. In both cases, the threat of importing Rift Valley Fever infection from the Horn of Africa through live animals, due to the lack of animal health controls and inspecting bodies and thus the country's inability to certify the animal health status<sup>48</sup>, was cited as the reason for the imposition of the ban (IFAD, 2008).



**Figure 5.4 Export of smallstocks from Northern Somalia: 1994 to 2005**

Source: FSAU, 2005

According to the FAO Food Security Assessment Unit for Somalia the ban led to a collapse in demand and a dramatic fall in the price of animals (FSAU, 2007). As a proxy indication, Holleman's assessment for Somaliland in 2002 recorded a 60% drop in the price of a sheep - from US\$ 25 to US\$ 10 - in Berbera. The estimated economic losses for the Somaliland livestock industry due to the bans have been calculated at US\$ 109 million for the first ban of sixteen months, and at US\$ 326 million for the first

<sup>48</sup> As requested by the OIE. Although there is no doubt that a mere technical reason applies when it comes to animal health certification, it might have applied also for the previous 10 years.

28 months for the second ban, which was still outstanding at the time of the report (Holleman, 2002).

**Table 5.2 Income lost due to the Livestock Export ban for Somaliland**

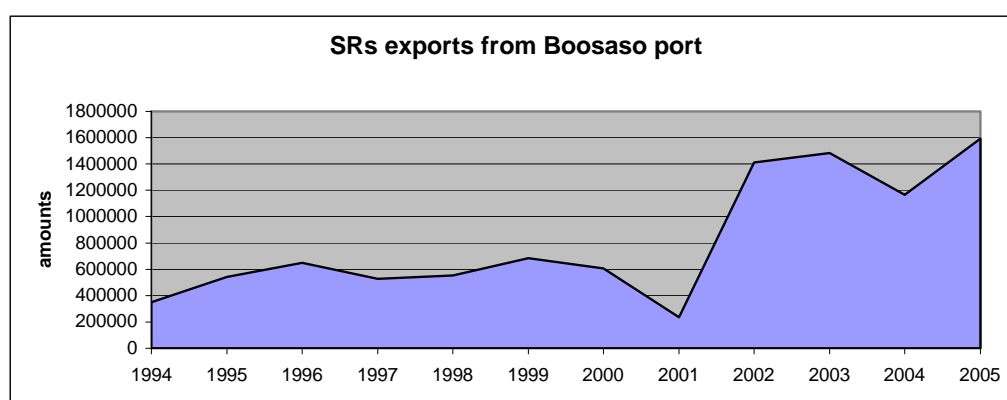
Description	1998-1999 Livestock Export Ban		Second Livestock export ban <i>First 28 months</i> (Sept. 2000 to Dec. 2002)	
	Loss of Export (Heads)	Estimated Saudi landed value (US\$)*	Loss of Export (Heads)	Estimated Saudi landed value (US\$)
Sheep and Goats	2,442,127	103,790,398	5,793,877	246,239,773
Cattle (Surplus)	(33,235)	(16,949,850)	90,789	46,302,390
Camels	44,484	22,686,840	66,315	33,820,650
<i>Total</i>	<i>2,453,376</i>	<i>109,527,388</i>	<i>5,950,981</i>	<i>326,362,813</i>

\* Note: Calculated at average 1997 landed price of livestock imported from Puntland/Somalia as reported in Saudi trade statistics.

Source: Holleman, 2002

Nowadays Berbera and Boosaso have become the two major ports for livestock export in the Horn of Africa, followed by Djibouti; prior to the livestock bans of 1998 and 2000, smallstock exported from these two ports totalled about 3.5 million animals, of which 96% were sheep and goats (FSAU, 2005). About half of the livestock exported through Boosaso consist of animals trucked from southern Somalia and eastern Ethiopia. The others are moved on hoof from local markets.

In this context Puntland's economic recovery owes a great deal to the livestock trade; due to the above mentioned reasons the region has recently witnessed a fast and acute growth in smallstock export activities. In 2001 it was estimated that exports of livestock contributed 80% of foreign currency, over 40% of the GDP and 60% employment opportunities to the economy of Northeast Somali (UNA, 2001). These figures have gone even higher since then, due to a relative decline for the competing port of Berbera, related to degrees of insecurity, increased taxation and its utmost dependence on the Saudi Arabian market, compared to Boosaso.



**Figure 5.5 Boosaso livestock export figures: 1994 to 2005**

Source: UNCTAD, 2005

The virtuous circle of this trade is that the income generated through livestock export enables the import of much needed staples; on their way back from Gulf countries livestock export vessels return loaded with main import staples, from rice to sugar, to non-food items which are nowadays important elements within the economy, diet and lifestyle of Somali households. Contractual arrangements exist in the recipient countries to convert the income generated through livestock sales in these commodities. By financing imports, livestock exports play an important economic role in helping to stabilize inflation and the US Dollar exchange rate, and contributing to the purchasing power of an important portion of the population. In fact, the local market changes that have occurred since the second livestock export ban was imposed suggest that livestock exports are indeed one of the major determinants of exchange rates, inflation, and trade (FSAU, 2007). Furthermore the income generated through livestock export trade provides key revenue for public administration, and contributes to the development of the secondary and tertiary sectors. In particular militias of the Puntland governments are paid through the revenues generated from the port taxes, which are thus critical in ensuring security monitoring and control in the region<sup>49</sup>.

Arab countries have been major recipients of Somali livestock in recent decades, particularly Saudi Arabia in the period from before Ramadan and up to the end of the *Haj al Khedir* (about two months, and known as *mowsin*); more than half of the animals exported from Northern Somalia, either directly or indirectly (i.e. through Yemen), are traded during these two months of the year to one specific location. Although to a lesser degree compared to its twin port of Berbera, livestock export from Boosaso also relies to a good extent on pilgrims' smallstock demand for the *Haj* ritual slaughtering. This dependency involves spatial and temporal dimensions and plays unfavourably vis-à-vis local producers. The chart below confirms the high concentration (more than 50%) of livestock export sales during the 2007 *mowsin*.

Local population and authorities are well aware and concerned about the degrees of vulnerability implicit in this dependency. Efforts have been taken in recent years at different levels (including by international agencies) to diversify the local economy in both the production and the commercial domains. In this respect investments in the livestock sector have been made to forge new commercial routes for livestock trading, involving Gulf countries but also Libya and Egypt, especially for the export of camels; some slaughtering schemes have been developed (chiefly the one in Galckayio) so that animal meat can be airlifted to UAE; a processing factory for tanning hides and skins has been established in Boosaso; and efforts are being made to enhance cross-border trade towards Kenyan markets.

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<sup>49</sup> By April 2009 the Puntland government has been asked by the International community to contribute curbing the piracy activities along the Eastern Somali coasts.



**Figure 5.6 Export figures from Boosaso port, 2007**

Source: FSAU, 2007

At a country level, development of alternative production and livelihood systems have also appeared wherever conditions allow, such as fishing in coastal areas, farming in Sanaag areas and salt mining in Karkaar. Export of high-value marine products and frankincense are today important to the regional economy. Local immigration and urbanization have also contributed to this process, by providing huge and skilled manpower (such as in farming, fishing and mechanics), while the fast rise of semi-urban and urban populations in Boosaso, Qardho and Garowe has provided a new and important demand for animal products.

Changes are nevertheless taking place at different levels in society, as reported by these different examples. Forms of detachment from the kin-group are being reported amongst younger businessmen involved in livestock trading. At least in the financial domain they seem increasingly interested in getting backed by business people who do not belong to their same kin group, but maybe friends or well known people with whom they do not share blood ties, so to avoid the continuously revolving of his profits into the extended family (L. Ciabbarri, pers. comm.)<sup>50</sup>. Helander reported another point, that the ruling bodies of larger commercial enterprises are with few exceptions composed of completely unrelated people. This is meant to ensure that no one with corporate function favours his or her own clan (Helander, 2005:197). A third reported trend visible at the macro-economic regional picture is that the export of livestock and the procurement of imported goods (grains, sugar, cloths, etc...) are getting increasingly detached one from the other, possibly due to the diminished reliability of livestock export since the recent outstanding bans.

### TIES AND ROPES

The fast developments of the livestock trading activities have reshaped pastoral territories, their resource management patterns and their institutional environment, carrying important consequences for local livelihood patterns. The growth in livestock trade has proceeded parallel to the drop in the export of other pastoral and wildlife

<sup>50</sup> This situation is similar to that reported by Berry (1989).

products, from ghee and hides to ivory and feathers, thus making by large livestock the primary exchanged pastoral commodity. Today the livestock export business extends to the whole Somali ecosystem, involving millions of people and animals. Diverse studies exist addressing these dynamics in different parts of the region: Terra Nuova (2008) for Somaliland, Abdullahi (1993) for central Somalia, Little (2004) for Southern Somalia and NE Kenya (2000, 2003, 2004, 2005), Umar and Baulch (2007) for the Ethiopian Somali region. Despite differences in time and space parameters, the principles governing these enterprises show a high degree of consistency.

Although to a higher degree of complexity, present day traders operate through the same patterns used by the long-ranging caravans of their ancestors, mostly along the same trading routes and through mechanisms linking commercial relationships and blood ties to offset the risks and costs of moving commodities in a highly uncertain environment. These patterns hinge around trust and related arrangements, which are institutionally regulated. These are the pillars that allow traded animals to be properly grazed and watered and to move safely to export markets, ensure quality control and fairness in the transaction, and provide, through credit, the financial infrastructure to support this commerce and sustain the overall flow of information and money in the region.

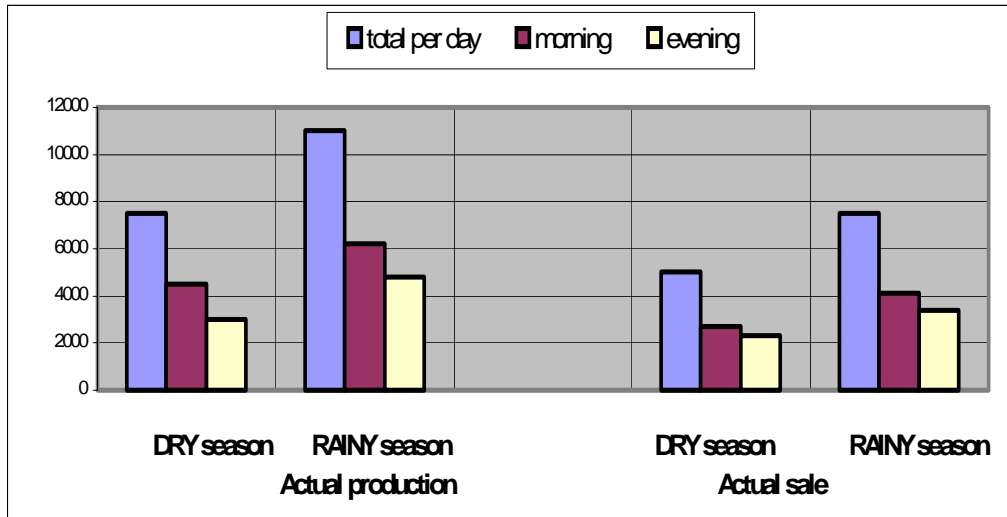
Nevertheless mechanisms set in place to ensure secure business through clan-based guarantee and insurance arrangements seem to increasingly represent a main constraint to sectoral developments (Umar and Baulch, 2007). The highly dynamic environment characterising the global livestock trade requires in fact degrees of flexibility which the current system does not seem to provide; the clan-based nature of involved relationships makes shifting from a corridor to another a risky venture involving high transaction cost and little overall control, posing severe limits to the volume and value of trade (*ibidem*).

The recent intensification and specialisation of livestock trading that is fuelling the local economy suffer from its high dependency on one peculiar market at a specific time of the year, an important factor enhancing the vulnerability of local livelihoods to market dynamics. The relevant price oscillation characterising livestock trade and the price squeeze Somali pastoralists have undergone as a result of protracted export bans (about 30%) represent important indicators of such vulnerability. Moreover export-oriented livestock trading has impacted on the overall pastoral resource management patterns. Individual water schemes and fenced areas indicate important processes in the appropriation of critical range resources; reports from different parts of the region indicate that herd composition has changed in response to market incentives, with market preference for sheep and cattle contributing to reshaping local herds resulting in more drought-susceptible species, and thus enhancing pastoralists vulnerability to climatic patterns (Aronson, 1980; Al Najim and Briggs, 1992; Holleman, 2002; Umar and Baulch, 2007). This is the case along border areas where cattle have increased at the expense of camels (Gedo region) and is also the case for sheep herders of the Haded group, in Sanaag, and for coastal herders in central provinces (Mudug and Galgadud). The huge toll animals have paid to recent drought events, especially in Awdal and Gedo during recent minor drought episodes, but also in Puntland during the recent lengthy drought, are relevant indicators with this respect. It is in this context that camel milk marketing has developed in recent times, as the next chapter will address.



## Chapter 6 - ALONG THE MILKY WAY

Across the Somali ecosystem many thousands litres of camel milk are produced on a daily basis, and transported and commercialised through networks that link small kiosks, restaurants and shops in the main cities via long transport routes to the desert hinterlands. In 1998 it was estimated that the amount of commercialised camel milk in Puntland reached about 8000 litres per day during the rainy seasons. It is likely that today figures are even higher.



**Figure 6.1** Estimations of camel milk production and sale in Puntland in 1998 in the dry and rainy seasons (litres/day)

Source: Farah, 1998

Developments in the port city of Boosaso have represented a major trigger to the camel milk marketing evolution in Puntland. The port city of Boosaso is the commercial capital of Puntland, inhabited by a large and increasing population with generally good income levels. Its urban setting is surrounded by semi-desert, mountainous rangelands (about 50 mm/y rainfall mean); the rocky nature of the soils provides a further difficulty for camels, which move on delicate hoofs. The local 'livestock revolution' (cf. Delgado et al., 1999) has generated a demand for animal proteins that can scarcely be satisfied by neighbouring districts. As a result, most of the milk that is consumed in Boosaso has to come from relatively remote areas, such as Qardho, Burtinle, Jalaam areas in Mudug and Sool and Hawd plateaux and Nugaal Valley; some production areas might be as far as 600 km from the terminal markets (WSP, 1998). This makes the camel milk market in Puntland unique compared to other areas which do not have such a high unmet demand for milk. However, camel milk marketing is also developing to different extents in other parts of the Somali ecosystem (the Ogaden, northeastern Kenya and Somaliland).

**Table 6.1 Estimations of camel milk flows in the market of Boosaso in 2001**

Overall daily marketed milk	Boosaso market
Average supply	6 to 8000 galaan/day
Milk type	60% of this is Camel milk, Proportions of sour or fresh milk depend on the seasons
Highest peak ( <i>Gu</i> )	10 to 12000 galaan/day
Lowest peak ( <i>Jilaal</i> )	3 to 4000 galaan/day
Milk origin	Fresh milk - Qardho Sour milk - Jalaam area Seasonal influxes from Iskushuban and Sherbi areas
Involved urban market agents	140-200 according to season

Source: UNA, 2001

Herd management and production of camel milk is a highly complex system and human capacities and social relations are both important to make the best use of a limited and variable natural resource base. Human capacities mostly refer to the knowledge skills and the intense labour required to control and exploit range resources. On the social relations side, the circulation of people, livestock and milk at different levels provides the material frame for webs of reciprocity and risk sharing networks, which tailor the enabling environment for opportunistic resource tracking.

The marketing of camel milk is highly embedded in the local societal set up and institutional mechanisms. As will be analysed, the relationship between gender and market roles is quite significant to understand the camel milk market and the transformation milk undergoes while it moves through the network. All players include a mark-up in the milk price for the task they undertake in the system with the associated risks, costs and benefits. These are seasonally differentiated for the different agents. Although the value of milk is expressed in terms of cash, many actual transactions take place either on a credit basis or in the form of bartering, in exchange for food or non-food commodities. Other goods are in fact complementary and inversely traded through the CMM network, in order to satisfy pastoral needs for non-animal products as well as to increase the overall benefit for the marketing agents.

The ways pastoral resources are circulated, converted into valuable products such as milk, and as such utilised are assessed in detail in this chapter, as are the institutional arrangements that underpin these processes. An institutional analysis of the production and commercialisation of camel milk in Puntland is believed to provide an important insight into the changes affecting a pastoral society increasingly integrated into the wider market environment. This analysis also contains the relevant elements concerning the sustainability of such processes, from economic, social and ecological viewpoints.



## HERD MANAGEMENT

Livestock contributes 80% of foreign currency, over 40% of the GDP and 60% of employment opportunities to the economy of Puntland (JNA, 2007).

**Table 6.2 Estimated livestock population, national and regional herds (early 2000s)**

Livestock	Somalia*	Northeast Somalia**
Goats	16.075.804	7.327.666
Sheep	10.825.540	3.725.227
Camels	6.244.270	1.272.298
Cattle	4.581.270	350.968
Total TLU	/	12.676.160

Sources: \*TNEA, 2004 \*\*UNA, 2003

The data in the tables below represent official indications from the Ministry of Livestock and Forest Resources (MLFR) of Somalia (1989) and from the Ministry of National Planning and Coordination of Puntland (2004). Data contained in the tables below is subject to variations dictated by climatic conditions, security issues and shifts in resources access. Though recent data on livestock population in Somalia is not available (the last official survey was undertaken in 1989), there is a general acceptance that total livestock population may have increased in the last decade due to population expansion (and despite conflict and droughts), though ownership per households might be declining over the years (FSAU, 2001).

**Table 6.3 Livestock distribution in the area (1989 - in '000 heads)**

Region	Camels	Cattle	Sheep	Goats	TLU (250kg live weight)
Bari	277.76	17.62	1754.68	796.16	546.944
Nugaal	179.39	14.10	277.96	2729.23	491.383
Mudug	890.55	404.17	1416.08	3574.66	1712.960
Sanaag*	237.25	86.96	1895.92	865.01	582.913
Togdher/Sool*	370.35	51.69	1143.01	1109.93	636.989

**Table 6.4 Annual milk production in the area (1989 - in million litres)**

Region	Camels	Cattle	Sheep	Goats	Total
Bari	38.58	1.81	51.27	24.84	116.48
Nugaal	1.45	24.91	8.12	85.07	119.55
Mudug	41.54	123.69	41.38	111.42	318.02
Sanaag*	8.94	32.95	55.40	26.96	124.25
Togdher/Sool*	5.31	51.44	33.40	34.60	124.74

\* The regions of Sanaag and Sool have been added to these figures, as they constitute grazing areas accessed in normal rotational patterns for Puntland pastoralists, due to kinship relations with the Warsengeli and Dulbahante groups.

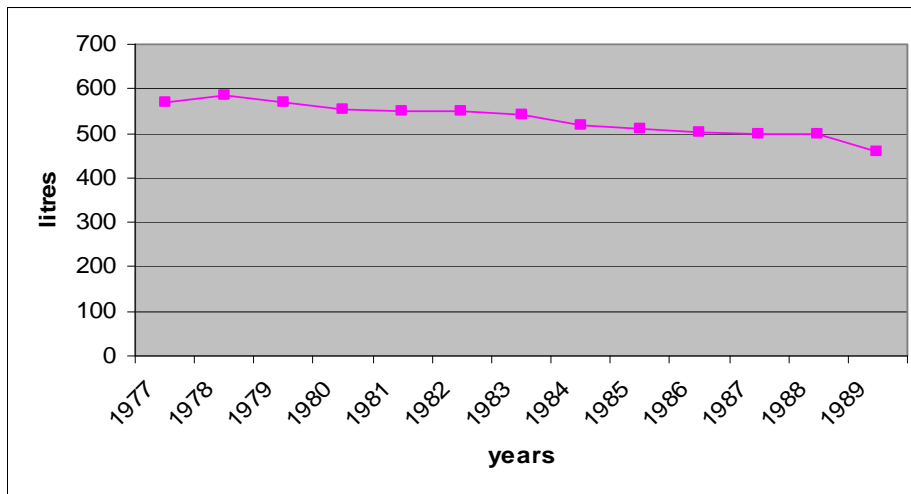
Source: official census of the Ministry of Livestock and Forest Resources in 1989

**Table 6.5 Estimates for 1999 livestock population in north-eastern Somalia**

Type of animal	Annual growth rate	1999 Population
Camels	1.1%	1.475.292
Cattle	1.2%	434.096
Sheep	1.7%	6.335.388
Goats	3%	12.461.952

Source: Puntland in Figure, 2004.

Interestingly, while human population figures have largely increased through time, especially since the 1990s, livestock population and productivity have not evolved at the same pace. An important outcome of such process is that milk becomes an increasingly rare good in the region, and its value changes accordingly.



**Figure 6.2 Trends in nomadic milk per capita 1977 – 1989 (lt/capita/year)**

Source: Samatar, 1991

Traditionally, livestock production, trade and marketing in the Somali ecosystem are continuously threatened by several factors (refer to Table 2.3). While pastoralists may seem equipped to tackle most of these matters and the related structural uncertainty they generate, they critically require an enabling environment to make their strategies work effectively (Nori and Davies, 2007). This did not seem the case for Somalia under the Barre regime, as discussed previously. According to the Joint Needs Assessment recently undertaken by a number of international organizations, this does not seem to be the case neither nowadays, as *the limited capacity to enforce sector policies and regulatory frameworks, lack of specialized public and private support institutions, dearth of specialized human resources, paucity of reliable data on animal health and production, and the very limited capacity to add value to products of animal origin, have all contributed to the increasingly reduced importance, in terms of GDP and households' livelihoods, of the livestock sector in Puntland* (JNA, 2007:x).

Large and small ruminants play distinct and complementary roles in Somali pastoralism, in terms of drought tolerance, vegetation use, supply of services and products (milk, meat, transport) and socio-cultural values (prestige, investment,

income). Local sayings say '(...) *with cattle and goats one pays creditors, but with camels one keeps an insurance for life*' (quoted in Abokor, 1987) and '*camels are permanent wealth while sheep and goats are food*' (quoted in Farah, 1994: 29); '*beware, only camels are real wealth*' (quoted in Abokor, 1987). Goats and sheep are in fact the dominant species currently raised in Puntland, but camels represent the main source of wealth and social prestige. Camels are perceived as life-saving assets as they resist harsh ecological extremes, while also embodying prestige and key social roles, such as compensation for dowry (*yarad*) and blood payment (*diya*).

Camel importance arises primarily from its reliability in providing milk and meat for the household under any conditions, and its use as a beast of burden for transporting milk to the market, water from wells, and household's belongings when families move to new areas, including the *aqaal* (the mobile house). Without pack camels households become immobile and unable to remain pastoral<sup>51</sup>. Somalis thus appreciate camels for their capacity to produce continuously throughout the year, their hardiness and resistance to extreme conditions, and their extensive mobility, which allows them on the one hand to carry around all these assets, and on the other, to track and use scattered and remote resources.

*Together with their critical role for subsistence – due to continuous and constant milk production – camels are also regarded as a medium for most aspects of cultural, social and political life. At the birth of a child the father proclaims one of the family stocks – often a female – belonging to the new member, in order to introduce him/her to life. Most exchanges among groups and marriage dowries imply female camels, so as to create long lasting and fruitful ties. Seemingly, diya payment is reckoned in numbers of female camels. This symbolizes a marriage contract and parallels the exchange of women between clans as part of a peace agreement (Bradbury, 1996:x). Small ruminants on the other hand are appreciated for the (relative) simplicity of their management, their rapid reproductive rates as well as their ability to generate cash for the household needs. Bibliographic indications reported that in the recent past about 20 camels or 70 to 80 small ruminants were needed to sustain a pastoral household in Somalia (Lewis, 1955; Dahl and Hjort, 1976).*

Choosing which animal to herd depends mainly on ecological factors, combined with household capacities, socio-cultural values and norms as well as market factors. Most pastoralists keep a mixture of livestock, in order to minimize risk and diversify production. Herding multiple species is an adaptive strategy which reduces risk and extends the overall milk supply (Sadler et al., 2009:13). The combination of large and small ruminants provides for multi-species herds that better exploit the different ecological niches; camels and goats browse on shrubs and small trees while sheep (and cattle) graze on grass. Other important ecological factors include animals' tolerance to drought, the prevalence of diseases, and the available vegetation. A number of socio-economic factors are also taken account of in the herd composition, such as household

<sup>51</sup> WFP assessment in 2006 recognised that households with pack camels tend to be more food secure. The rationale for this is reflected in the following case. In the aftermath of the recent drought the NGO Horn Relief decided to purchase and to give a pair of pack camels to targeted pastoral households, as part of a strategy aimed at enhancing their capacity to remain mobile. The strategy showed successful as the targeted households could claim livestock from their kin mates on the basis that through pack camels their mobility was ensured, and thus the animals would have been worth giving. The presence of camel thus attracted smallstock from the extended family members.

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labour force and subsistence needs for milk and meat, as well as available transport, income and market-related factors.

Camels are precious as they are capable of year-long milk production irrespective of season but their management necessitates extensive and continuous mobility as forage and salt resources are scarce in these environments, requiring continuous and intense efforts (Elmi, 1989). Camels naturally graze in loose groups, moving slowly through an area, and selecting feed from a variety of forages - mainly from a number of *Acacia* and *Commiphora* species and other short growing herbage. However, the scarce and sparse availability of these forages force camels to be continuously on the move in order to meet the dry matter requirements (Wilson, 1984). Moreover camel capacity to stay without water for long periods requires extended movements and intense labour at times of watering, when a single camel might swallow 80-200 litres of water at a time, depending on a number of factors including the season, the grazing available, the watering frequency, and so on. In the dry periods of the year, watering is the most laborious of all the activities of the camel herders.

### **Herd movements**

The general herd movement follows a seasonal pattern that hinges upon the physiological needs of the animals, the availability of range resources and their effective accessibility. The limiting ecological factors within this strategy are represented by a) accessible water during the dry seasons and b) the quality of pastures during the rainy ones. Other factors are nevertheless of critical importance, such as the presence of problems related to animal health. In order to limit parasite infestation and to integrate the diet of their camels with important mineral complements, at the end of the rainy seasons herders drive the camels to areas known to have salty halophytic plants along the *wadis* where the water table is high. At other times some pastoralists report providing salt with rainwater. Herd movements in search of these resources take place within a territory with defined *degaan* boundaries and resources which are deeply embedded in rights and claims from the diverse inhabiting groups (refer to Chapter 3). The ecological availability of these resources is thus deeply inter-related with their effective accessibility, involving a different socio-political domain.

*The rangelands were traditionally managed as a common resource. But while pastoralists in principle had open access to all communal grazing lands, in practice certain wells and grazing areas were associated with particular lineages. People of other clans were only allowed to use those wells or grazing at times of acute scarcity, when conflicts over pastoral resources were more frequent (Lewis, 1961). There was a common understanding that elders in a particular area had some authority over resource use. But this authority was usually only exercised at times of distress. This customary communal system functioned well by providing equitable access to grazing land and water, as well as clear rights and obligations for their members. In the words of an elder from Oodweyne each community was responsible for the well-being of its land (Gaani et al., 2002:17).*

As a general pattern, transhumance in Puntland involves herds and households moving to deep interior grazing areas in the Dharoor depression, the Sool plateau and the Nugaal valley, at the beginning of the main rainy season (*Gu*). About a third of the households interviewed reported remaining throughout the year on the plateau, while most herding units return to the coastal belt at the onset of the long dry season (*Jilaal*).

This strategy serves a number of purposes as, along the eastern flank of the region herds can profit from the grazing generated by the *heys*, rains that shower the coastal belt around November, and they can also approach the shallow wells along the shores that will provide for good freshwater sources throughout the long dry season.

The concentration of many families in one area at any particular time largely depends on the availability of water and pasture. Once *Gu* rains have come and grazing is plentiful families disperse widely. These are the times household members stay together, though small and large ruminants might be grazed in different areas during the day; the water-content of green pasture during rainy seasons suffices to satisfy animals' needs and milk flows in good amounts. The consistency of *Deyr* rains defines the length of time household members stay together with their animals on inland ranges.

When range resources become scarcer or long dry periods occur, the household and the herds are divided according to the different ecological requirements of camels and smallstocks which necessitate specialised management practices. These are the times herders manipulate their herds to suit existing environmental conditions, family needs and labour availability, for herding to maximise livestock productivity to the best of their ability. Members of the same lineage or social group usually migrate together in the direction dictated by the needs of their livestock (Elmi, 1989:4). Camels are mostly divided in several satellite herds (*hoorweyn*), as reported by 60.2% of pastoralists (n=191). These herds are driven by family boys to distant forage areas along the coastal belt, where shallow wells can easily provide for watering needs. These boys subsist mainly on milk and wild foodstuffs during these months, and barter portions of their milk for non-livestock products in primary milk collection camps.

On the other hand the burden camels and some lactating females (*nugul*) are joined with the smallstocks in accompanying the rest of the household in the vicinity of its group home wells, within the *degaan* boundaries. The herd division during the harsh season might also take account of the animals' conditions, with strong animals taken to remote areas while the weak ones are kept near the camp. Another strategy includes a sub-division of the female herd during the breeding period (about a month and a half), between those with higher or lower chances of getting pregnant, so that different mating services can apply, with the two herds then merged again after the breeding season (Kenyanjui, Nori and Younan, 2003). This management involving herd separation is less common in southern Somalia (cfr. Herren, 1990); this is probably due to a more diversified environmental and economic base, which implies a different labour allocation to herding tasks. In the north, the husband typically commutes between the camel camp and the household hamlet.

In this period the level of harmony or conflict among various units in the pastoral economy is an important factor which affects the movement and concentration of households and herds in the different areas (Samatar, 1988); problems in these domains leading to conflict or insecurity have the potential to prevent some pastoral groups from accessing key resources (water, pasture or salty areas) and limit their mobility, thus also impacting on market routes access and on the availability of transport facilities.

**Table 6.6 Browsing areas for Qardho transhumant herds.**

Season	Browsing area	Notes
<i>Gu</i>	Eastern Sanaag	Transport problems for waterlogged areas
<i>Xagaa</i>	Sool (Nugaal valley)	Good for presence of Halophytic plants
<i>Deyr</i>	Move towards Coastal areas (Iyaax)	If rains are not good then move to SWest
<i>Jilaal</i>	Coastal areas (Deex and Adduun)	Importance of accessing shallow wells Transport problems for milk due to distances

While it is clear that these movements change and are reshaped according to climatic variations, these east-west seasonal moves represent the general pattern. Movements in Somaliland follow a similar rationale, although along a north-south axis (Hunt, 1954; Lewis, 1961).

Field interviews have provided contradictory information over the management of milking animals during the *Jilaal* season. Indications from the data collected would suggest that milking camels are present in both the household as well as the satellite herds (*hoorweyn* and *nugul*). The fact that during this time both men and women are involved in the delivery of marketable milk to primary collection points (cfr. Table 6.8) indicates that an important number of milking animals is present in both herds. This is further reinforced by the data about joint delivery of camel and goat milk at primary collection points, which attest to the co-presence of a good number of milking camels together with smallstocks during the dry times. As a result Somali pastoral households rely generally on three different camel herd units at different times: the *hoorweyn*, the *nugul* and the set of animals dispersed amongst the herds of kin, which they can claim at times of need. This strategy seems to diverge from past herd management, when all milking camels were normally sent afar with herding boys to maximize their re/productivity, while at the same time preserving critical pastures around the home wells for the smallstocks. Such innovations in herd management reflect a wider trend assessed at a regional scale, with the herd and the household divided during certain times of the year so to enhance their access to different resources (Scoones and Adwera, 2009). In this new setting herd mobility becomes even more important. While on the one hand CMM contributes to reshaping herd management, on the other the concern of PMCs for tracking consistent amounts of camel milk represents an important incentive for herding boys to move their *horoweyn* herd to remote pastures.

### **Herding Households**

As explained in chapter 1, this thesis has evolved through and drawn upon a number of different surveys implemented by different organisations. This section describes and analyses pastoral households and household dynamics based on the UNA survey. The UNA survey involved meeting about 50 herding households in the four main North West -South East directions, on a radius of about 110 km around the town of Qardho (average distance 44.3 km). The survey lasted from 2001 to 2003. A total of 210 households were surveyed in 39 villages of Qardho district. After analysing the data 191 households were considered good enough to be used in the analysis. Of these 196 surveyed camel owners only 2 were women. The mean distances of the households

surveyed from an all weather road was 31.3 km, and the distance to a nearby village centre was 10.9 km; these are important indicators concerning access to market and inputs services. A possible bias of this survey was in that looking for large and distant camel herds, a sort of socio-economic differentiation might have been undertaken, thus excluding households with only small ruminants as well as those with few camels roaming closer to urban environments.

Almost all the men and women in the rural households interviewed during the SCF survey (totalling n=254) mentioned that they drew on multiple sources of income throughout the year. While livestock sales are unsurprisingly the most prominent asset, milk sales represent an increasingly important alternative to generate an income throughout the year for pastoral households in the region: 73% households report selling milk in both wet seasons. Pastoral households cite small ruminants (54%) and camel (42%) as the main sources of income, the former mainly through sale of animals, while for camels mainly through sale of milk (n=191). The sale of goat milk and the meat of camels are also reported though to a very limited extent.

In coastal and urban areas livestock ownership decreases but still remains relevant: approximately 25% of respondents in coastal areas own one form of livestock asset whereas in 'more' urban areas, approximately 60% of respondents own one or more livestock asset. Fishing and related activities represent an important source of income for 33% of interviewed households, especially in *Jilaal* and *Deyr* season, whereas petty trading represents a critical livelihood asset for about 16% of respondents, mostly owned and managed at family level. Most households reported having members generating an income in coastal, urban, and pastoral areas at different times. In fact, it is inaccurate to label a single household as 'urban' or 'pastoral' or 'coastal' since income can be generated from different sources. Amongst poorer households casual labour plays an important income-generating role (19% of the income generated in a year). These are clear indications of a mixed asset base and resource circulation amongst the diverse livelihood units. This economic diversification represents a skilled strategy to exploit the different available resources as much as a way to continuously redistribute efforts and risks.

About a third of the herding families (34.7%) reported being polygamous, the majority 45.9% monogamous, and 12.8% single/unmarried. These figures are higher than those reported at national level (refer to chapter 2), indicating that polygamy is associated with wealth, which goes with larger herd sizes. 53.7% of the people met have attended Khoranic school, and only 18.3% had received formal (primary or secondary) education. 97% are descendants from Majerteen group and all the people met profess following Islam. The average age of household head was 45.9 years, with the men being on average 46 years and their wives normally about 6.5 years younger. This data indicate that adult men are to be found in proximity of their herds, at least during the *period the* survey was conducted. Starting full herding activities is at a young age, about 17 years. The average household size is 7.6 persons, with about 2 parental adults, 1.3 dependent children, 1.7 school going children, 1.9 young adults with the remaining being elderly relatives. These figures have been further confirmed by the WFP survey (2007), which also identified at about 35% the average figure for female-headed households in the region.

**Table 6.7 Average household composition (n=191)**

Age group (yrs)	Mean no. per HH	S.D	Range	n (HH with >0)
0 – 7	2.2	1.3	1 – 7	111 (56.6%)
8 – 14	2.3	1.3	1 – 9	142 (72.4%)
15 – 22	2.5	1.4	1 – 9	146 (74.5%)
23 – 45	2.5	0.5	1 – 9	152 (77.6%)
46 – 65	1.2	0.5	1 – 3	74 (37.8%)
> 65	1.2	0.4	1 – 2	23 (11.7%)

Source: UNA, 2003

The relationships between pastoralists and livestock involve a biological dimension which translates into social dynamics (Horowitz, and Jokwar, 1992). The physiological necessities and the productive potentials of camels and smallstocks imply certain levels of differentiation as well as specialisation in their management. Roles and responsibilities are shaped in pastoral societies along gender and age lines, which reflect the institutional mechanisms regulating the control of these animals and the use of their products (Dahl, 1987). The clan dimension provides a regulatory framework for the management and control over pastoral resources, setting the scene for men and women to play distinct social and economic roles that are complementary.

Herding and caring for livestock is considered arduous work and imposes upon the family a division of labour. Each household member has specific tasks to perform. Camel herding requires moving to remote rangelands far from the family hut. The browsing, water, salty and other pastoral resources that make up the requirements of a camel are found in different territories, over which bundles of rights and claims co-exist and conflict. Camel watering is less frequent but much more labour intensive compared to that of smallstock, as a camel might drink several dozens litres of water per time. Furthermore camels are watered at points where control rights are often to be negotiated with other groups. During the surveys, it was reported that most conflicts break out or escalate due to disputes arising at watering points amongst camel herders, specifically at *Jilaal*. Having to wait too long to water someone's camels or being overtaken during the queuing at a water point is a main source of problems, not only due to camels getting impatient, or herders getting tired; it is the whole clan identity that is brought into the arena when a herd goes watering.

Camel management is a trade-off between the need to maintain a high enough labour force to herd and a low enough population to be fed from the herds' production: kin relations ensures that these fluctuations occur without groups flying off irretrievably in all directions (Gunn, 1990:34). Livestock and herding boys from different households of the same *diya* paying group can move together, with their fathers paying regular check up visits. Young male members (*sahan*) are sent in advance to scout (*gehar*) potential grazing territories before herd and household units move; a meeting of the elders is called and a final decision taken as to when and how to move to the new place. Men are also responsible for fencing the nomadic hamlet, watering animals from the deep dry season wells, building up thorn enclosures (*xero*) and providing leadership and protection for the household (Warsame, 2001; Gaani et al., 2002). Elders often reside in villages and settlements, from where they perform



political and other roles including information gathering and decision-making over natural resource management and mitigation of possible conflicts. Herdsmen come together not only to exploit natural resources better, but to protect themselves against misfortune and insecurity (Elmi, 1989:37).

Different management patterns are needed for smallstock, which necessitate continuous but low intensity labour to look after the flock. Distance from the household hut is limited, and it is up to children to attend to the sheep and goats and to women to milk them. During *Jilaal* small ruminants are watered at home wells, which are typically in the territory controlled by the group. During that critical period a household and its flock are often found in its *degaan*, while camels are taken far away, also to preserve the *degaan* grazing resources.

Only 8.7% of the pastoral men reported hiring casual labourers (*qowsaar*), meaning that herding activities are mainly undertaken with labour from either the household or the lineage. In southern Somalia this figure is much higher, indicating a wider social stratification among pastoralists (FSAU, 2001) in the southern part of the country. On the other hand Warsame (2001) indicates that this practice is decreasing in Somaliland as young herders from poor families prefer looking for casual employment in urban environments. Performing communal tasks is a common practice, with 32% of respondents belonging to some type of community group, whose main activities might range from livestock watering in dry seasons to the digging of water reservoirs.

**Table 6.8 Main person responsible for livestock related activity (n = 191)**

	n resp.nts	Adult males	Adult females	Any adult	children	laborers
Grazing female camel herd	185	97.3	0.5	1.1	0.0	1.1
Grazing male camel herd	183	64.5	4.9	11.5	18.6	0.5
Grazing sheep and goats	169	0.6	84.6	5.9	7.7	1.2
Milking goats	168	3.6	92.9	3.6	0	0
Milking camels	180	95.6	2.8	1.7	0	0
Veterinary cares	162	93.2	1.2	3.1	0	2.5
Fetching/watering animals	182	94.0	1.1	3.8	0	1.1
Marketing livestock	182	97.8	0.5	1.6	0	0
Marketing milk	177	20.9	49.7	28.2	1.1	0

Source: author's work with UNA, 2003

While it must be acknowledged that these figures might change according to specific household and seasonal labour force availability, they nevertheless indicate a definite pattern in household tasks associated with livestock rearing, and a clear division of labour along age and gender lines. Camel rearing is a task almost exclusive (97.3%) carried out by the household's own adult males, and this includes grazing, watering,

looking after their health and milking. Similarly, according to what is reported for the Beja of the Sudan (Hjort, 1989), women are not permitted to milk camels. Men are also in charge of all livestock marketing, which is mainly restricted to small ruminants.

Women normally look after small ruminants (84.6%) with support from young children and milk the goats (92.9%). The marketing of camel milk is predominantly done by women. In fact adult males are only involved in the marketing of milk during the *Jilaal* season when they migrate afar with milking camels. Interestingly and significantly, camel herding, up to its milking, belongs to the domain of men. The reverse applies for small ruminants. As we will see below, this dichotomy carries a number of important implications for resource management and household power structures.

### Herd Structure

As already highlighted in chapter 1 and further addressed by Dahl and Hjort (1976), stock surveys in pastoral areas are unreliable. A number of factors contribute, from technical constraints to cultural attitudes, from the dispersal of the herds to pastoralists' lack of confidence in external actors counting/census activities, to the impact of climatic conditions. As an example, WFP (2007) reports that 15% of Puntland households rearing camels while 57% of households claim pastoralism as a way of life.

**Table 6.9 Household/ herd labour division**

CAMEL	Group	SMALLSTOCK
	children, both sexes	Look after lambs and kids
	Young girls	Herding shoats
	Wife	Responsible for smallstock Milking and dairy management
Herding camels Milking them	Young boys	
Responsible for camel herd	Husband	

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Problems might have been generated by the way in which these data have been collected (as admitted in the report). When the survey was fielded at the end of the *Jilaal*, most longer-trekking camel herds were likely to be on the eastern coastal areas, where few samples were taken. Moreover, data comparison between different studies on camel herds is difficult as inconsistencies can be due to the overall environmental conditions and specifically to the different timing related to a drought event, which might have reshaped the herd structure. Tentative comparisons with studies undertaken during the 1980s in southern Somalia by the EPOS program of Uppsala University (cfr. Hjort af Ornas, 1993) have nevertheless been tried here.

From here onwards the data generated from the stock survey undertaken through the UNA milk project in 2003 will be presented and discussed, as these form the basis of our analysis of herd management. These data have been collected from about 200 herds met at different distances in different directions from Qardho and further complemented with seasonal, longitudinal assessments in selected villages (Kenyanjui et al., 2003).

Table 6.10 Average flock size (n=191)

	Heads owned per household	Heads reared but not owned	Total	Ratio not-owned/ Tot
Goats	230	46.6	276.6	0.17
Sheep	162.1	32.2	194.3	0.16
Cattle	14.9	14.6	29.5	0.49
Donkeys	3.5	3.2	6.7	0.47

Source: UNA, 2003

From table 6.10, about one sixth of the reared sheep and goats belong to another household from the extended family. In addition, animals from one flock are divided into different flocks as a way of reducing and redistributing risks amongst a number of kin affiliated households. The same applies, to an even higher degree, for larger animals. Cattle are not very widespread in the region, while donkeys are an important though often overlooked resource in this context, as they are critical assets to cover daily household transportation needs (e.g. water, sick people). The above figures might nevertheless conceal the chance that somebody is herding the animals of his kin stockowner under some form of herding labour contract. Small ruminants and donkeys are the property of the individual household, their grazing and watering being in the hands of the household woman, assisted by children.

Milk from sheep is reportedly not utilized fresh, although it is used mixed with other milk to produce ghee. Poorer households might utilize it as fresh milk, but would not be willing to report it, due to its associated socio-cultural features. The consumption of sheep milk is in fact culturally looked down upon, possibly due to its high fat content, which makes it poorly appreciated in such hot environments. The selection of local sheep breeds seems indeed not to incorporate milk productivity. Milk from goats is widely appreciated and utilized, mainly for household needs (e.g. for children), but also for marketing purposes. The productivity of each individual goat is small, but together the daily milk yield is significant. Overall production is good at rainy seasons while limited during dry periods. Goat milking is done by women, who are also in control of the milk utilization.

Amongst small ruminants it is interesting to note that despite lambs having better marketing opportunities, the goat/sheep rate is about 1.4 (1.4 goats to 1 sheep; table 6.10), indicating on the one hand that Puntland environments are more fit for hardy animals such as goats, and on the other, that milk production is more important than that of meat. The higher rate of goats to sheep might also be due to their drought resistance. Despite the control women hold on small ruminants, when it comes to marketing of sheep and goats it is the men who undertake it. The situation changes to some degree concerning camels and their management<sup>52</sup>.

The tables below show that on average camel herd sizes is 72.3 animals, 53.1 of them females and 19.2 males. Camel herd structures are female dominated, as also observed in other pastoral areas (Dahl and Hjort, 1976). Unfortunately, no data is available from the survey on the different classes of wealth ranking, as that investigation was too

<sup>52</sup> A *calf* is the term used for the offspring of an animal species until it is weaned. A *heifer* is a young female before she has had her first calf.

complex to be carried out within project resources. Data from FSAU (2002a) exists on these matters, though their reliability should be checked.

Amongst the northern pastoral groups, camel ownership starts at the birth of a child. The father gives his son a young or newly born female camel and other animals as the base of his future herd. This is known as tying a 'naval knot' locally known as *xudun* that establishes a strong bond between father and son and becomes the nucleus of the son's herd (Elmi, 1989; Kenyanjui et al., 2003). The child also receives animals from his close relatives (elder brothers, uncles, etc) which complement those of the father through time; as he grows, his herd also grows. Natural breeding of the initial (inherited) nucleus makes up the bulk of a herd; it is likely that animals that have entered the herd some time ago are now classified as such, thus hiding possible wider circulation rates. The tables show a mean of 9.8 females and 2.3 males acquired through inheritance mechanisms. Apart from *xudun* other important mechanisms exist to redistribute camels within a group. Between groups of a different kin exchanges also take place, in the form of dowry and bride wealth (*yarad*), at marriage, where up to a maximum of 12 camels could be handed out; alternatively camels are paid out or received as compensation for killings, injuries or wrongdoings (*diya*).

Exchange of livestock within and between groups is a common practice to spread risks and build supportive relationships (Elmi, 1989:37). Daughters also inherit livestock from their parents; in accordance with Islamic law they might receive half of what the male gets. Only camels though are not usually given to females; at the ceremony when livestock are divided amongst close relatives, women turn over their share of camels to their brothers or to their nearest male kin (Warsame, 1996: 6, 57). If we exclude the rate of internal growth of the herd, about 18% of the camels have joined the herd through these mechanisms. About 5% of camels kept within the herd are actually owned by another kin mate; higher figures have been found for small ruminants (Table 10). This divergence might be explained by the different rights and claims attached to small and large ruminants, according to their different functions and values. For camels, the boundary between different claimants can be very thin; animals are often lent on long-term contracts and use rights (i.e. utilizing the produced milk) might be more relevant than formal ownership, which in the last analysis falls within the clan.

Social arrangements exist for sharing rights over animals in order to balance economic risks, develop social bonds, redistribute wealth and reallocate labour within a group (cfr. also Schlee 1994 on Northern Kenya pastoralists). A number of different mechanisms exist to ensure circulation within a clan group, often based on lending mechanisms from the better off to poorer strata; but this depends on the capacities of the former, the degree of need of the latter and the specific ties between households. Mechanisms to lend livestock (particularly milking camels) in case a kin mate is in need are common and various, the main ones include a) *wagaal nag*, helping close relatives restart by providing reproductive as well as pack animals, b) *aduud*, the restocking of livestock; c) *irmaansi*, the loan (or permanent gift) of a wet (milking) animal for a period of a several months; and d) *amaa*, credit, repaid when the opportunity arises (cfr. also Elmi, 1989 and Narbeth, 2001).

**Table 6.11 Mean female camels herd size for age classes**

<i>Total females</i>	Inherited from kins	Reared in herd	Kept	Bought	Dowry	Compen sation	Gifts
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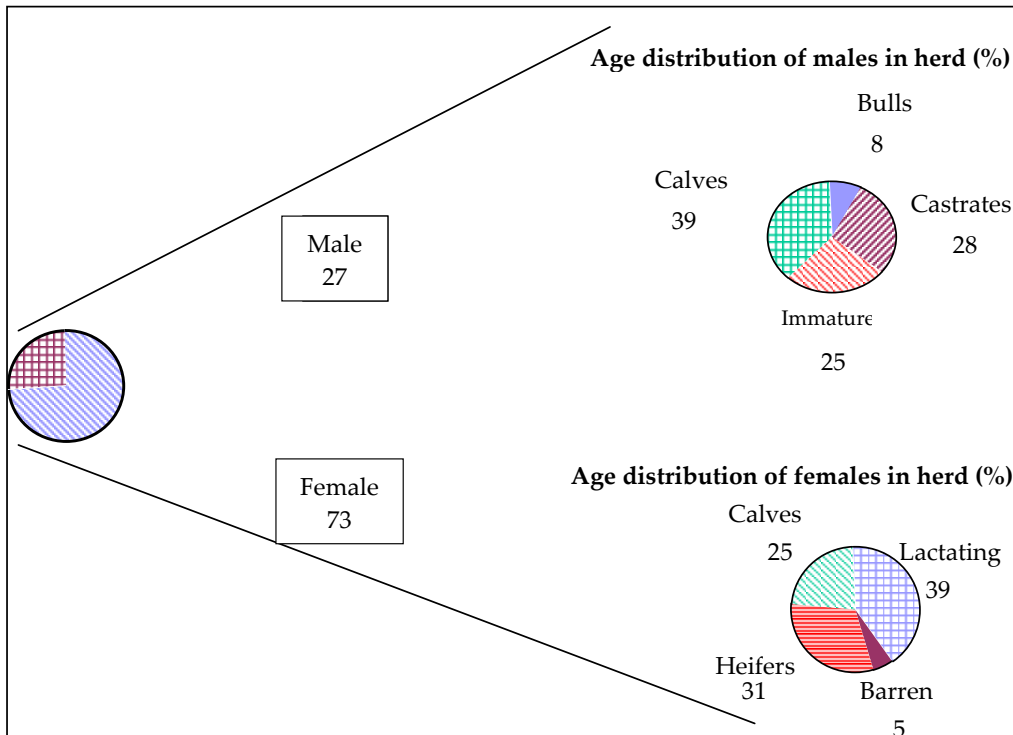
Mean	53.1	9.8	34.2	3.2	3.8	1.4	0.4	0.4
n	10.135	1798	7161	603	295	130	36	112
Herds	191	191	191	191	191	191	191	191
<b>Lactating</b>								
Mean	20.9	2.6	15.9	1.2	0.8	0.2	0.1	0.1
n	4029	720	2759	276	156	47	28	43
<b>Barren</b>								
Mean	2.9	1	1.3	0.3	0.1	0.1	0	0.1
n	522	248	169	50	13	20	0	22
<b>Heifers</b>								
Mean	16.1	1.7	13.4	0.5	0.3	0.2	0	0
n	3093	441	2442	104	59	34	0	13
<b>Calves</b>								
Mean	13.0	1.5	10.2	0.7	0.3	0.2	0	0.1
n	2491	389	1791	173	67	29	8	34

Source: UNA, 2003

**Table 6.12 Mean male camels herd size for age classes**

<i>Total males</i>		Inherited from kins	Reared in herd	Kept	Bought	Dowry	Compensation	Gifts
Mean	19.2	2.3	14.9	0.9	0.8	0.1	0.1	0.1
n	3660	435	2853	163	147	26	24	10
Herds	191	191	191	191	191	191	191	191
<b>Bulls</b>								
Mean	1.6	0.3	1.2	0	0	0	0	0
n	307	59	238	4	4	0	0	2
<b>Castrated</b>								
Mean	5.3	0.5	4.4	0.2	0.2	0	0	0
n	1013	93	837	35	43	0	0	4
<b>Immature</b>								
Mean	4.8	0.5	3.7	0.3	0.2	0.1	0	0
n	910	98	699	63	39	10	0	0
<b>Calves</b>								
Mean	7.5	1	5.7	0.3	0.3	0.1	0.1	0
n	1430	185	1079	61	61	16	24	4

Source: UNA, 2003



**Figure 6.3 Camel herd structure by % age group for males and females**

Source: UNA, 2003

Similar mechanisms can be found in other herding societies, such as the Touareg or the Berbers (cfr. IFAD, 2005; Gertel and Breuer, 2007). These apply particularly to camels and often these contracts account for milk needs on one side and request for herding manpower on the other. As an elder stated once *'it is not so important whom the camel belongs to, important is that it produces milk'*.

Figure 6.3 above shows that currently lactating animals constitute a large part of the female herd (about 40%), while another 30% is composed of heifers. Calves make up 25% of the female herd and dry camel cows only 5%. Pregnant camels are to be found in this latest class as well as amongst those in the first class, as they can be still be milked for some weeks after mating (although produce relatively little).

The low proportion of males in a herd indicates a high culling rate for young male camels. Immature males between one and six years of age and suckling or unweaned males under one year constitute 25% and 39% of the male herd respectively. Males with undesirable characteristics (offspring with low milk productivity was mentioned amongst these) are castrated and are kept as pack animals for the transportation of the household belongings and water. These are on average 5.3 per herd or 28% of the males. Breeding bulls were on average 1.6 per herd giving a bull: cow ratio of 1:33. In cases where the female to bull ratio is high, some females are not serviced causing long calving intervals in the herd. The breeding bulls have been used for a mean of 6.5 years with a range of 2 to 15 years. Camel owners are aware that prolonged use of one breeding bull in the herd could result in reduced mating capacity over time and inbreeding. Bulls mature at the age of 7 years, while females are physiologically mature

for service at the age of 6 years. This makes 12 years of age the critical time to replace or exchange a bull in the herd.

These strategies, together with the high rate of lactating animals attest to the centrality of milk production in camel herd management. In pastoral economies in fact both animals' reproductive success and humans' nutritional status depend on the quantity and regularity with which milk is produced (Horowitz and Jokwar, 1992:15). According to Baxter a normally functioning subsistence pastoral economy principally produces milk (1991:162).

### **Herd off take**

This milk bias is reinforced by the limited sale of camels to consumption markets. According to Farah (1994: 29), camels are rarely brought to the market; a USAID report in 1979 indicated an annual off take of 5% for Somalia, including both domestic consumption and export. Only a small amount was acquired through marketing. A total of 242 animals were recorded as being sold or slaughtered during 2002. Of these 60% were females and 40% males. The breakdown by age shows that of the 242 camels sold, 144 (59%) were older females and heifers. The herders were asked about the state of the females sold and 86% said they were dry (not lactating), 7% said pregnant and another 7% lactating. Of the males sold 43% were bulls with an equal number of young males and castrates. Somalis normally do not buy she camels at the market, but rather directly from the owner of a camel whose pedigree is known. Few calves are sold of either sex.

Cash need was reportedly the main reason for selling camels. This is also reflected in the timing of these sales, which for 36% occurred in the *Jilaal* season, 27% in the *Xagaa*, 26% in *Gu* and only 12% in *Deyr*. The sale of camels relates to cash needs in the dry season for families to be able to buy water, complementary food stuffs and drugs. Sales during *Gu* season are also high (26%), probably due to the need to write off debts outstanding from the long dry *Jilaal*. However, recently market opportunities for camel sales are increasingly considered (especially export to Libya and Saudi Arabia), yet figures are low as compared to the trade of small ruminants. Concerning death rates, a total of 170 camels had died with 31% of them being adult females, 32% equal proportions of male and female calves, 14% heifers, 11% males, 9% immature, and 3% castrates. The main causes of camel death were reported as disease in 56% of cases, and predation by hyenas for 22% of camels. Other causes included old age, injury, drought, theft and sheer negligence. Predation of castrates is common as they are usually hobbled (tied at the feet) to prevent them from wandering far but susceptible to attacks while for the females predation may occur during migration in search of pasture.

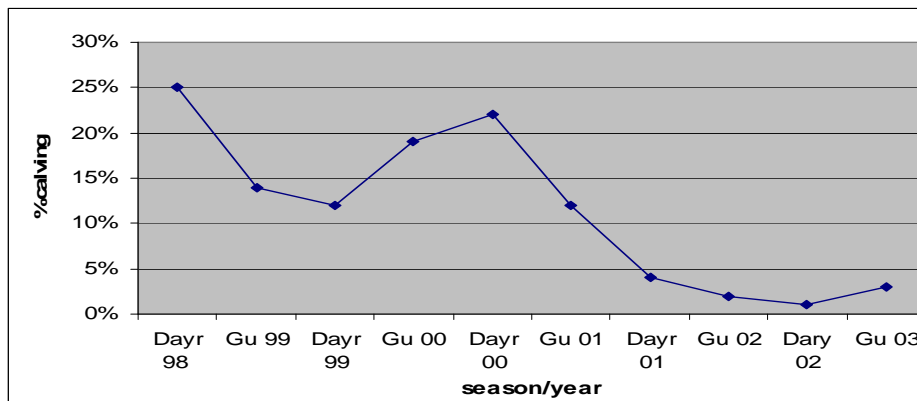
The female-based herd structure, the high slaughter rate for young males and herd separation management patterns indicate a clear focus on maximizing camel milk productivity while also accounting for growth in small ruminants stock. Camel milk therefore represents a product of primary importance in this context. It is hard to perceive of any camel production as primarily meant to supply meat for the market given the long intervals between camel births (Hussein Mohamed Ali, 1989). This is in line with historical information about herd management amongst East African pastoralists (Elmi, 1989; Herren, 1990). Within this context, Majerteen diet preference for milk products is traditionally higher compared to other Somali groups (Puccioni, 1937:91), and the current relevance of camel milk as a main source of income has been

emphasized many times during the research work. Milk production is appreciated in its capacity to ensure covering of daily household requirements a) during the different seasons and b) continuously through different years. The overall relevance of keeping a large camel herd as a precautionary measure against drought nevertheless should not be overlooked in this rationale.

### Milk production

Puntland camels are all from Northern Somalia, and include mainly breeds from the a) *Coastal* type (also named Bari) but also from b) *Guban* camels, from the mountain plateau, and c) *Hawd* camels – of Nugaal and Mudug regions and adjacent regions of Ethiopia. Breeding maturity for female camels is reached at about the age of 4 to 5 years; the average calving interval was recorded as two and a half years. Pregnancy is normally about 12 to 13 months, and lactation lasts for another year or more, after which she will be serviced again. Camels ideally become pregnant in one of the wet seasons, either *Gu* or *Deyr* seasons - when animal's conditions are at their best - and therefore give birth in the corresponding wet season of the following year. The active breeding period is 45 days within the wet season and this is when herders select females ready for servicing, and let them run around with the bull to improve chances of conception. A large majority of herders reported using their own bull for servicing. Should the female camel not get pregnant, she continues to be milked, with significant milk productivity for another 6 months. Overall 18 months after delivery, milk production will drop consistently (cfr. also Dahl and Hjort, 1976; Hjort af Ornas, 1993). In an average herd a difference thus exists between a) effective lactating camels (within one year after delivery, the time a calf gets weaned), and b) currently milked animals - which also include females that failed to get pregnant.

Herren (1990) reported for south Somalia a proportion of lactating camels of 15 - 22% (n=54) within a herd. In 2001, the UNA survey found that milked camels in NE Somalia constituted about 28% of the total herd (n=191). Data collected in 2006 (VSF; n=46) indicate a dramatic increase in the incidence of milking animals then, at about 60%. The dynamics generated by the lengthy drought (2001-2005) are most likely behind these results, as this has somehow impacted upon overall herd consistency; with 2006 double the average camel deliveries indicating restored environmental conditions and balancing previous skipped calving seasons. During the 2003 UNA survey, camel owners in the study area reported in fact that 97.4 % of camels were not pregnant as the previous wet seasons, *Gu* and *Deyr* had failed; a figure which is also backed by other sources.





**Figure 6.4 Camel Calving Rate in the years of 1998-2003**

Source: FSAU, 2002a

Off-spring figures indicate a predominance of 60.3% female and the rest male; reportedly a number of male calves get slaughtered at birth, this being the main reason behind the high male/female discrepancy. During the fieldwork the accuracy of daily individual or herd milk yield estimates from camel owner could not be assessed. It is likely that whereas inconsistencies might affect the reported amounts consumed in the household, estimations of quantities of milk delivered to collection points were more reliable, as these were measured in galaan at delivery (1 galaan equals 0.75 litres).

Pastoralists estimated that camels produce an average of about 3.6 *galaans* (2.7 litres) of milk per day in the long wet season *Gu*, accounting for morning and evening milk and excluding the milk that goes to the calf. In the early short dry season, *Xagaa*, the average daily production is 3.25 *galaans* (2.5 litres) but it drops to 2.6 *galaans* (2 litres) as the dry season progresses. In the short wet season, *Deyr*, an average daily production of 4 *galaans* (3 litres) is recorded in the early season but reduces to 3.25 *galaans*. In the long dry season of *Jilaal* the average daily production was estimated to be 1.3 *galaan* (about 1 litre), with a maximum production possible of 2.6 *galaans* (2 litres) if conditions are good. Herren (1990) has reported similar figures from South Somalia with the potential yield of 600 –700 litres per annum per female camel. These data are also consistent with those expressed in Dahl and Hjort, where the UNA survey data would fall between the higher levels registered in southern Somalia and the lower ones recorded from Afar pastoralists (1976:184-9).

The calf management was recorded for each herd. No significant differences were seen in the management of female and male calves. Calves are allowed to suckle colostrum milk freely for the first 7 – 10 days. After that they are allowed to suckle twice a day so to enable milking, as camel dams only let down milk if the udder is stimulated by the calf. Morning amounts are limited, as it is mainly evening milk used to feed the calf. Overall milk suckling lasts on average 19.36 months before calf weaning takes place. Decisions over the lactation length are important as a prolonged lactation length prevents pregnancy, thus delaying the reproductive cycle (Elmi, 1989).

**Table 6.13 Milk yield parameters as estimated from data collected from the survey sample**

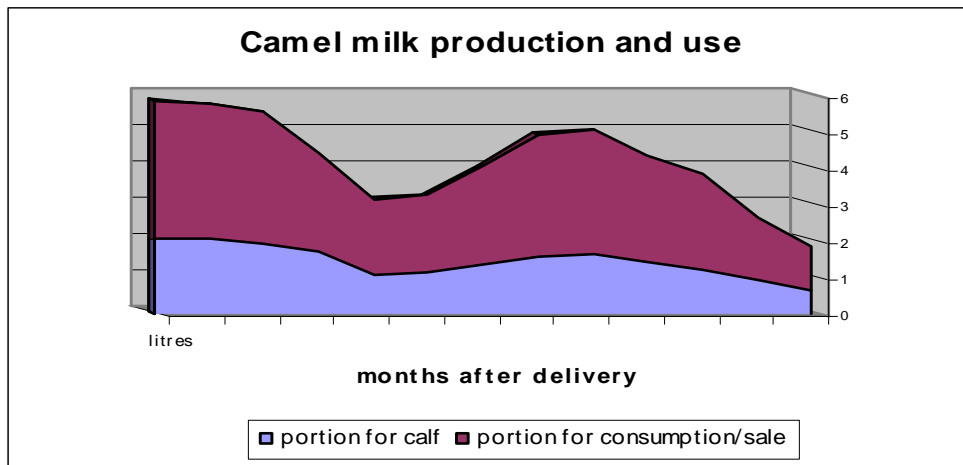
Season	Total days	Daily average production (galaan)		Total average yield per lactation (lt/year)	
		Minimum	Maximum	Minimum	Maximum
<b>Gu</b>	90	3.25	3.9	225	270
<b>Xagaa</b>	91	2.66	3.25	182	228
<b>Deyr</b>	92	3.25	3.9	230	276
<b>Jilaal</b>	92	1.33	2.66	92	184
<b>Total/lactation (lts/y)</b>	365	-	-	729	957.5

Source: UNA, 2003

Daily and seasonal milk production is determined by a combination of factors affecting the individual dam, although rainfall patterns and related forage conditions

seem to represent major determinants. Also, it can be stated that milk production is not necessarily consequential to rainfall patterns. Pregnancy for camels lasts about one year and can be inhibited by serious drought conditions; this implies that between the end of a lengthy drought and the onset of new camel milk production a long period elapses, as pasture and animals' conditions must be restored to enable pregnancy. In the herds surveyed in 2006 (n=46) the range of the calving interval was about 46 months, a clear indication of the skipped breeding seasons due to the lengthy drought conditions. Other important factors influencing daily milk production appear to be the seasons, the access to pasture and its condition, the stage of lactation, the calving rates and the (health) conditions of the calf and the dam. The herders reported on average milking camels for up to 19.1 months. Many females that do not become pregnant after the first year of calving are continuously milked until the next season even though the milk production has reduced drastically.

Figure 6.5 Average milk yield of a female camel after delivery (in lts.)



Source: CRDP, 1998

Note: Camels deliver during either in the *Gu* or in the *Deyr* rainy seasons

Literature on camel milking in Somalia has documented that camels are milked twice a day, in the morning and evening (Hussein, 1984; Elmi, 1989). Camel owners concurred that the frequency of milking was positively correlated to the total daily herd and individual milk production. In the study area, milking depends on stage of lactation and the season (the latter determines forage availability). In the wet seasons of *Gu* and *Deyr*, herders usually milk camels twice a day, morning and evening. However when the forage is at its peak, camels in early lactation are milked three times a day, morning, evening and midnight. Herren (1990) reported a 25% increase in milk production where camels are milked three times a day compared to those being milked once.

In the early periods of the dry seasons, *Xagaa* and *Jilaal*, following a good wet season camels are still milked twice a day, but as the dry season progresses milking is strictly done once a day. A peculiarity of lactating camels is that they only provide milk in the presence of the calf. In case the offspring has died or has been culled, herders keep and show the treated skin to stimulate milk secretion from the mother's udder. Milking frequency and consistency also depends on the timing of the delivery. The first six

months are the most critical for calf growth, and thus a proportionally lower percentage is milked. Milk quality also changes accordingly through time; in the first 4 months following the delivery milk is known as *subag* (butter), as it is rich in fat content, from 4 to 8 months is named *soor* (food), as it still might suffice to feed a person for the day, while from 8 months onwards it becomes *sun* (poison) meaning that water content is high and nutritional value low (Elmi, 1989). All these elements are to be mastered by men, who are those responsible for camel milking.

### Milk utilisation

Due to its specific features, camel milk traditionally represents the staple food of Somali pastoral households and is a nutritional supplement for the increasing urban population. The importance of livestock milk to pastoral survival was first documented by social anthropologists in their research among African pastoralists in the 1950s and 1960s (Stenning 1959; Dupire 1963; Sadler et al., 2008:12). Milk's importance for survival amongst East African pastoralists is also due to the double rainfall seasons that allow year-round milking – compared to their Sahelo-Sudanic mates (Western and Finch, 1984; Sadler et al.:12). Its income generation role is quite recent as it was usually exchanged as a gift to establish and maintain family ties and social support mechanisms. In some areas of the Horn of Africa the sale of camel milk is still taboo (e.g. parts of Tigray). Previously reported experiences of its commercialisation in Somalia relate to the late 1980s, when camel milk marketing networks were established in southern Somalia to serve urban demands from the capital, Mogadishu (refer to Herren, 1990). As a result of the civil strife that remoulded the Somali socio-economic fabric, camel milk has increasingly become a marketable commodity in other parts of the region and related trade has developed accordingly.

Camels show outstanding features compared to other dairy animals; a camel's lactating period is longer than that of cows; milk is produced even under dry conditions and to some extent milk preserves its qualities under harsh climatic extremes, thus providing options for transport and processing in drylands environments. Traditionally, camel milk was the main staple for most household members for several months; camel milk is thus the full diet in the Somali culture: *a mouthful of camel milk keeps you going for half-a-day* (Abokor, 1987: 4). Milk gifts are traditionally important in strengthening rural-urban ties of a group's member households; on many occasions milk gifts from a pastoral relative were a pretext to visit a wealthy kinsman in the town in order to seek assistance (Farah, 1994:24).

The nutritional value of camel milk is widely acknowledged. Compared to cow's milk it has higher protein and lactose levels, lower sugar content and is richer in minerals (including sodium, potassium, magnesium and possibly iodine if it was present in the camel's diet) and in vitamins (especially B and C and A complexes – of which it is the almost exclusive source for the local population). Fat content is lower in camel than cattle milk, thus reducing cholesterol levels by about 40% (Wernery, 2003). Milk contains vitamin A. As a consequence, camel milk is especially utilised in the diet of children, the sick and elderly persons (Sadler et al., 2009). Increasingly, the therapeutic properties of camel milk are also recognised. More generally, it is regarded as an energy-giving product for convalescents. Any children who drink hygienic camel milk are healthier than those who do not. The diet of urban dwellers, comprising limited

availability of milk from camels, is considered as poor and associated to physical weakness.

Risks from TB and Brucella transmission are lower than with other types of milk. A number of practices and myths are associated with its nutritional and medicinal virtues (refer to Farah, 1994). It is reputed to be anti-bacterial, anti-cancerous and anti-diabetic; its consumption boosts the immune system against infections and allergies and provides relief from some diseases such as peptic ulcers and skin cancers. It is good for children, elderly and sick people and is also used in treating diseases like hypertension, blood pressure, malaria, gastric cancer, and malnutrition. It is used in hospitals in some Arab countries (e.g. UAE) to treat TB and HIV/AIDS-related problems. In Kazakhstan camel milk is reportedly utilised as an adjunct to chemotherapy for some cancers, especially those of the digestive tract. With the consumption of 0.5 lt of camel milk per day, the insulin demand decreased in diabetic patients and glycaemia was better balanced (Guakhar and Bernand, 2004).

In a survey in the area of Jijiga in the Ethiopian Somali region most respondents reported preferring camel milk to that of other animals because they believe that camel milk has medicinal value, high nutritional quality, is easily digestible, whitens a tea more than other milk types (it has twice as much whitening concentration compared with other milk types), and lasts longer. Respondents in the same survey (97.5 and 85% for Babilie and Kebribeyah, respectively) acknowledged the medicinal value of camel milk (Mehari et al., 2006). This finding is in agreement with those of Yagil (1982), Knoes *et al.* (1986), Tezera (1998) and Alemayehu (2001).

Fresh camel milk (*dhay*) conserves better than milk from other animals, probably due to its high Vitamin C content (antioxidant properties). However, overall processing of camel milk to further prolong its shelf life and store rainy season surpluses has historically proven a difficult task. Through time milk from camels undergoes natural fermentation into sour milk locally known as *Susaac* and *Karur* (very sour). This is still appreciated by local consumers partly as it further decreases health risks for humans. The fermented milk for home consumption is kept in traditional containers (*haruub*) smoked with charcoal to reduce bacterial load. A third of household units interviewed report marketing 7.8 *galaans*/day of fermented milk. This data might be influenced by the timing of the survey, as milk processing represents a more relevant strategy when milk surplus is higher, in the wet season.

Cheese making is not effective due to the low caseine content of camel milk. A number of legends exist on this subject, changing from one culture to another, but all focusing on the mystery over the effective existence of camel cheese. In recent years efforts in this direction have enabled industrial cheese making from camel milk in Mauritania ([www.tiviski.com](http://www.tiviski.com)), and other experiences are also reported worldwide. French CIRAD has developed a product, *Camifloc*, which favours the curdling process. Historical documentation reports that surplus milk during the rainy seasons was transformed into rancid butter and sold for export, as far as Zanzibar (Lewis, 1955; Burton, 1856) but it seems unlikely that ghee was produced with milk from camel. Goats and cattle were the main source of extraction of home made ghee; the skimmed milk from goat is called *qaab* while that from the cattle is termed *ciir*. Milk from sheep might also be used with this respect, but there seems to be reticence in reporting its overall utilisation as it seems associated to conditions of socio-economic indigence.

In the past, nomadic herders used to practise some rudimentary conservation method for the camel milk, keeping the milk for long periods until separation occurred into liquid and a more solid component; the latter was filtered and stored in a leather-made container known as *sibraar*. The 'condensed' milk was dried in the sun and later kept in closed sacks; it was kept aside during the wet season and preserved for the dry season when there was acute shortage of milk. When such need occurs the dried milk was melted with water and results in tasty milk (UNA, 1998).

Concerning the utilisation of milk, the household is faced with a number of diverse daily options:

- a) a portion is left to calf/kid suckling; this milk is capitalized in live animal weight and spurs herd growth;
- b) a portion is directly utilised within the household to secure the nutritional requirements of its members, including the herders;
- c) a portion is handed to members of the extended family and/or the other kin or neighbour groups as a form of saving and insurance;
- d) a portion is brought to primary collection points for sale purposes, to generate an income that could be then reinvested in either household (e.g. staple food, clothes) or herd needs (e.g. water, vet inputs).

The decision-making process that takes place within the household over the utilization of milk needs to balance a number of economic and social aspects which are critical in dealing with the unpredictable climatic and economic conditions that characterize the local set up. The herder must therefore balance his immediate and long-term needs when milking. A balance is to be struck between sufficient quantities to sustain calves as well as the household members. Off-take that deprives calves, though benefiting the pastoralist in the short-term, will impair herd replacement and growth rate in the long-term. This competition becomes more severe during dry seasons, when because milk yields decline and other food sources are thus to be sought (Western and Finch, 1986). Exchanging milk to procure more energy dense grains or other starchy food is an important pastoral strategy to fulfil caloric needs, and is practiced widely, from the mountains of the Hindu Kush to the deserts of Sudan (Nori, 2004; Sadler et al., 2008).

According to the UNA survey, the nomadic household on average consumes 7.3 *galaans* of milk, gives 3.6 *galaans* to extended family, 3.9 goes to the herder, and a minority ferments a few *galaans*, particularly during the wet periods. Evening milk is also used for household needs, though to a minor extent. Despite the high diet dependency on imported staples, the main food for the young boys attending the camels – the herders - remains milk for most of the year.

Internal household milk consumption is divided in three classes: 25% to the herders (the household members that look after the animals), 50% to the nuclear family and the remaining 25% to the extended family. The continuous redistribution of milk products within an extended family is widely practiced in pastoral environments (Talle, 1988; Horowitz and Jokwar, 1992). The milk for household and market uses is mainly the morning one. Evening milk is mostly utilised for lactating calf and to a good extent also for the herder's dinner.

**Table 6.14 Reported daily use of camel milk per household (in *galaan*) (n=191)**

	Consumed internally HH	Handed to extended family	To Herders	Processed within HH (fermented or made ghee)
Morning milk	7.3	3.6	3.9	5.0
n	186	174	178	67
Evening milk	6.3	2.9	4.0	5.8
n	86	50	98	25

Source: UNA, 2003

These figures are consistent with those of CIRAD (2002), which finds 55% of the milk is consumed by the calf. From a nutritional viewpoint a person needs about 1.8 litres to cover daily nutritional needs and about 3.5, litres to cover the daily caloric requirements (ibidem).

Milk for sale is delivered to primary milk collection camps (PMC) at the mobile camps in grazing areas, where they are sold or exchanged for food stuffs, such as cereals, sugar, tobacco, and clothing items. The sale of processed milk products is rarely reported. The primary collector receives both camel and goat milk which is delivered from an average of 8.9 km away. It is apparent that even though primary collectors follow the herds to pasture, camp movement and location tends to consider the location of milk collection points. Most herders interviewed in 2006 have joined the CMM through their milk sales in the late 1990s, probably when political stability and related security levels improved.

Most herders report selling mainly morning milk and a few sold evening milk, as seen by the number of households (n) reporting in the tables 6.14 and 6.15. Average amounts sold were higher in the wet season with means of 33.1 *galaans* camel milk in the *Gu* season and 33.5 *galaans* in the *Deyr*. This decreased to 22.4 *galaans* in *Xagaa* and 18.2 *galaans* in the *Jilaal*. Data from *Jilaal* 2006 VSF survey indicate figures which are about half of those indicated by herders in 2001. Inconsistencies also exist with data for Figure 6.1 concerning the proportion of evening milk sold. The lengthy drought that affected the region from 2001 to 2004 seems the most consistent explanation for such a drop in milk production and marketing levels. Another element that might have affected this data is the fact that the 2003 UNA survey was undertaken mostly during the wet seasons, while the 2006 VSF survey took place during the *Jilaal*, when herds are separated and milking camels divided in different units.

**Table 6.15 Amounts of camel milk sold by season to PMCs (galaan/day)**

season	<i>Gu</i>	<i>Xagaa</i>	<i>Deyr</i>	<i>Jilaal</i>
Morning milk	33.1	22.4	33.5	18.2
n	191	190	187	186
Evening milk	22.4	13.9	18.7	11.7
n	28	18	27	14

Source: UNA, 2003

**Table 6.16 Amounts of goat milk sold by season to PMCs (galaan/day)**

season	<i>Gu</i>	<i>Xagaa</i>	<i>Deyr</i>	<i>Jilaal</i>
Morning milk	19.8	9.9	19.8	7.5
n	130	119	132	98
Evening milk	12.1	5.1	12.4	4.0
n	17	18	18	13

Source: UNA, 2003

Almost all herders met around the areas of Qardho sell their milk to milk collectors. While this data is somehow biased by the sampling criteria it shows a good degree of integration into local CMM networks. Most of the herders I met along the coast during *Jilaal* 2007 also stated they sell their milk, especially during wet seasons. 54.5% report difficulties in accessing marketing opportunities during some seasons; reasons provided include poor price, unreliable buyers and lack of transport.

Figures attest that proportionally, most yielded milk is sold or exchanged through the market during the dry season, provided that milk prices are competitive with the non-livestock staples needed by pastoralists. The WFP survey (2007:36) indicates that there are a high number of livestock sellers and livestock product sellers that have a "Very Poor" milk consumption profile. Warsame (1996) also report that the poorer the family, the higher the interest in utilising the limited milk as an income source. This pattern has also been noted amongst other pastoral groups (Holden et al., 1991). The explanation is that those having milk in limited quantities mainly sell it at critical times. The income-generating role of milk is therefore more important than its nutritional aspects amongst poorer strata. Water has been often reported as the major constraint to local livelihoods and some traders claim that pastoralists would not sell most of their milk during the dry periods if water were not to be purchased.

**Table 6.17 Comprehensive analysis of CM management within the household**

(lt/day)	MILK YIELDED		UTILISATION OF MILK				RATE	
	Camel prod. rate	Daily herd production	Internal HH	Ext. family	Herd-ers	Market*	Proces-sed	% mkt/yield
WET	3.6	75.6				33.3	0.7	0.42
average	2.75	57.75	50%	25%	25%	26.8	0.3	
DRY	2.1	44.1				20.0	0	0.45

NOTES: All figures in galaan (= 0.75 lt)

n= 196 HH; average lactating camel /HH = 21 heads

average prod. Rate 4.2 considered over four seasons, with a 0.2 decrease due to *Jilaal* length

average HH use 14.8 calculated without considering home processing amounts, which is reported by only a third of familie; differences in % is equalled by non-respondents

Data discrepancies and inconsistencies might be attributed to the diverse perception, interpretation and translation over milk from day and night milking, wet and dry seasons, camel and goat production.

- actual sale figures for 2006 correspond to about 1/2 of those reported in 2003 for the reasons discussed above.

### MILK MARKETING

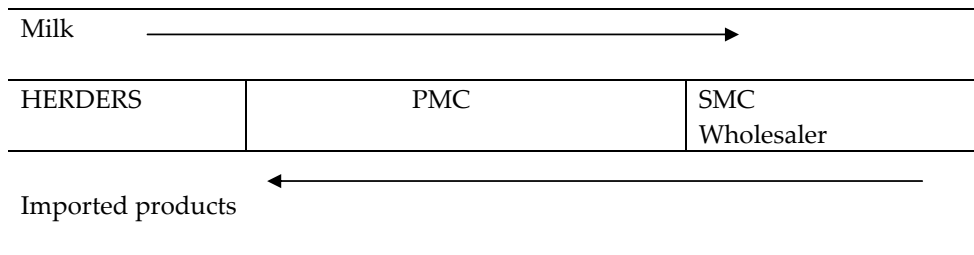
A number of diverse systems exist in Puntland to market milk. In broad terms these CMM systems can be classified in three main groups:

- 1) networks headed by women milk collectors,
- 2) companies manned by transport men,
- 3) companies organized around milk processing factories.

These companies and networks are structured and function in quite different ways and target diverse market niches. Women-headed networks are organised from the milk collection side, and hire transport companies to deliver their milk from bush areas to urban terminal markets. The companies manned by men are organised around the transport function, and contract herders from time to time to get their milk supplied; they specifically serve the huge demand of Boosaso market as they can hardly compete with women in other local markets. The two existing processing companies represent a quite recent development in the region; they focus on the quality of the milk products, targeting a better-off clientele with an interest in potential export opportunities. The most important and effective networks in the region are those controlled by women, which can be said to control about 90% of locally marketed milk. In NE Kenya women networks are reported to handle about 75% of marketed camel milk (from Isiolo) (SNV, 2008).

These networks provide an important source of employment and income to a significant portion of population and represent an increasingly relevant interface between pastoralists and the market economy; it is through these networks that pastoral households obtain direct access to, and procure, the staples relevant to their livelihoods, such as cereals, water, sugar, drugs, tea and others, but also clothes, shoes, condiments, etc...

**Table 6.18 Reverse flow of milk and imported commodities**



As a result, these networks are of the utmost importance for the food security of the local population and for the evolution of local livelihood strategies. Given their particular relevance within the local context, this research focuses on these women-led milk marketing networks. The extension and intensity of these women trading networks facilitate pastoralists' access to marketing. Overall market accessibility in the study area is relatively good; even in remote pastoral areas and even during droughts, most respondents are able to access markets quite frequently without major difficulties.



During the SCF survey about 84% of all interviewed households reported that they have access to more than just one commercial area (with markets / *suuk*, camps / *kaame*, or shops / *dukaa*, *kabar*) for more than one season during the year. If we exclude remote and dislocated communities, such as Bixiin, the average time to reach a commercial area is around 3 hours during *Jilaal*, while it comes down to an average of 2.5 hours at *Gu* times. Even during the drought times, the weighted average of households able to access commercial areas reaches around 75% (Nori and Gabrielle, 2007).

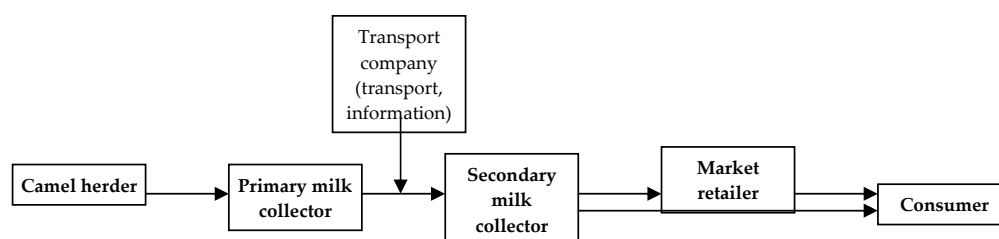
**Table 6.19 Market Access and other dynamics in Karkaar region (n=107)**

Access to at least one market/shop/camp	98% of respondents
Access to more than one market/shop/camp	83.7% of respondents
Average time to reach market	3.2 hours (2.5 in Gu)
Weekly visits to market/shop/camp	90% of respondents
Biweekly or more visits to market/shop/camp	55% of respondents
Access to market during 2001-2004 drought	75% of respondents

Source: SFC, 2007

### Female Networks

A number of different agents are involved in the functioning of women-headed camel milk marketing networks, playing distinct and complementary roles in time and space and experiencing risks and benefits differently from this enterprise. Primary Milk Collectors (PMC, *kaameley* in Somali) are women located in mobile camps who follow seasonal pastoral transhumance in order to collect fresh milk from surrounding herders on a daily basis. Collected milk is then sent to Secondary Milk Collectors (SMC, *aanoley*) based in the recipient town markets, who daily receive milk and distribute it to market retailers. Men-managed transport companies are hired by women collectors to transfer milk and related information and goods across rangelands. In order to analyse the motivations and the conduct of these different actors the nature of these relationships and the arrangements governing them are assessed in the following.



**Figure 6.6 The chain of actors involved in camel milk marketing**

Most collectors deal with a different range of available milk and milk products depending on the season; camel, goat milk, ghee and also cow milk at times. During *Jilaal* and in dry periods it is nevertheless milk from camel that is of utmost importance for their economy. Milk transporters are the lifeblood of the system, enabling continuous exchange between rural and urban environments; distances covered daily

through rangelands by marketed milk may surpass a hundred kilometres, triggering the incoming of imported staples, water and other important goods. However, the networks constituted by women milk collectors represent the backbone of CMM; their origin and the relationships established between primary and secondary milk collectors are embedded in a number of societal values and norms which critically contribute to defining the enabling environment for CMM.

The average age of respondent women milk collectors is 37.4 years, ranging from a minimal of 26 to a maximum of 56 (SCF survey, n=158). The age of PMC located in remoter bush areas is lower compared to those located closer to the main road network. Through time those amongst the first to initiate CMM in the bush have slowly moved towards more comfortable positions, such as along the main routes or the tarmac road, while *'it is up to the younger ones, those with few or no children, to be located in the remote bush'*<sup>53</sup>. A similar trend, linking age with positions along the marketing chain was reported by Little in southern Somalia (1994).

16% of the SMC women have arrived recently to Qardho from other parts of the country, as a strategy to cope with either civil war or inter-clan conflict. Reasons for undertaking the milk marketing business mainly relate to its ease and simplicity; it provides for an effective, accessible and profitable source of income which does not require high capital investment or specialist knowledge skills. These features are critical as most interviewed milk collectors (89%) have not enjoyed the opportunity to get formal education, while 11% have gone to formal schooling with only 5% up to the secondary level. Most women have been only exposed to the Khoranic school system, which is quite established in the region (as much as in other pastoral regions), where they have received basic education in Khoranic dictates, Somali language and, to a lesser extent, accountancy; reportedly they know *'only how to write and read their names'*. Direct access to investment capital is also limited for Somali women, although opportunities might exist.

According to local interviews, for most women, no other alternative to work and generate an income exist in the region. The majority of interviewed SMC used to stay at home before getting engaged with CMM, while 15% undertook nomadic tasks in the bush before coming to town to sell milk, and 20% were involved in other forms of trade, often tea or vegetables. Most interviewed PMC state they have not had previous work experience other than looking after the household or the flock. Some stated *'milk is the only thing we know about'*.

**Table 6.20 Previous activity reported by milk collectors (n=158)**

	Mkt seller	housewife	nomadic	restaurant	other
SMC	20	59	15	3	3
PMC		84	16		

Note: for PMC the difference between housewife and nomadic is negligible, as it is likely these meant the same things.

Source: author's work on SCF survey, 2007

<sup>53</sup> Hay Ganni, field interview in Yaka

The rate of female-headed households involved in the CMM is about 44%, which is higher than the reported average for the region (about 35%, WFP report). This seems to confirm UNA indications that milk collectors are mostly widowed or divorced women that are the breadwinners for the family (1998:15). Another 11% of interviewed SMC reported an unemployed husband, which further increases the consistency of bread-winning women within CMM networks and attest to its relevance as an income-generation activity for vulnerable households. This comparatively high rate of single women working as milk collectors in the CMM is explained by the fact that the allocation of time and labour better suits their conditions, compared to other forms of business, which are more demanding.

No direct correlation seems to exist between the marital status of the SMC and their previous work experience. A question thus remain as to whether the rate of households headed by women is higher-than-average amongst milk collectors because a) single women turn to CMM to generate an income for their household, or because b) women that have acquired some economic independence through CMM are more capable of divorcing their husband. Indications from field interviews would confirm both hypotheses, and in general describe CMM as a mechanism that has enhanced women's position within the local societal setting.

### *Milk Transactions*



Primary milk collectors (PMC) move from one place to another tracking and following milking herds, so as to collect and supply milk to urban-based SMC. They are based either in small rural settlements or in mobile camps, where they receive fresh morning milk from herders:

- rural settlements are residential areas along major tracks where herders daily carry their milk to the PMC,
- mobile camps are established when herds move further (especially during dry seasons) and therefore PMC follow them.

While milk and other pastoral products flow towards urban dwellers, imported goods are made available to the interior and coastal populations through the milk collectors' networks. In this respect milk marketing is therefore closely intertwined with bush petty trading, representing a critical source of livelihood for many Puntland households. As reported PMCs not only depend on milk trade mark-up, but also gain simultaneously from the commodities they sell to herders. PMCs assert that the bulk of their profit is made by one business (milk sales) or the other (sales of good to herders) depending on the seasons. During lengthy dry seasons and prolonged conditions of economic hardship, these petty traders have the capacity to bear and buffer the short-term financial difficulties of their clients, through a complex system of credit.

PMCs represent the critical joints in the Somali pastoral commercial webs, through which exchanges between urban, rural and coastal environments are constantly undertaken. They interface with a) pastoralists, who provide them with the precious milk and are the clients for their commodities, b) Secondary Milk Collectors, their urban partners in the milk marketing, and c) wholesalers in urban centres, who

provide them with the imported goods for sale in the bush. They also link directly to d) transport companies, who are hired to transport milk from the bush to the towns. These relationships are continuously remoulded from one season to another, hinging on a set of longstanding principles, such as trust relations and credit mechanisms.

**Table 6.21 Relationships existing between PMC and other stakeholders**

PMC	NATURE	TIES	CREDIT
Herders	Mostly economic	Short to medium terms	xx
Drivers	Economic	Medium term	
SMCs	Business friendship	Long term	x
Wholesaler	Mostly economic	Variable	xx

Source: author's work on SCF survey, 2007



**Picture 6.1 Primary Milk Collecting camp**



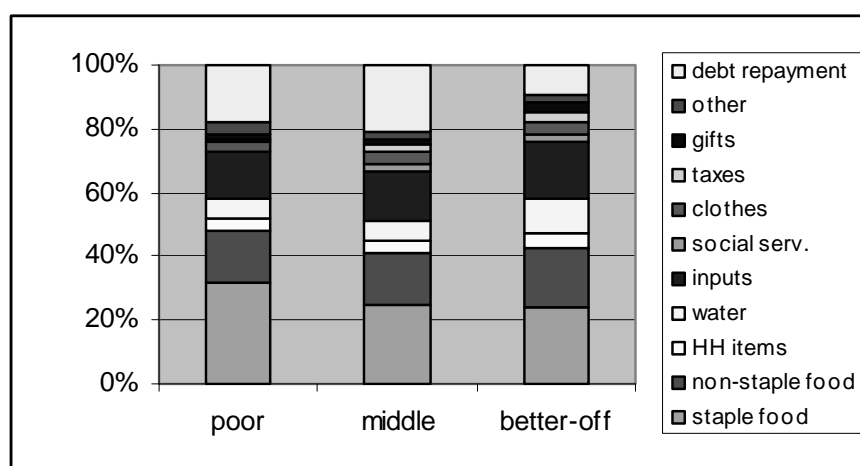
Herders manage the movement of their animals to make the best use of available resources. Camel milking takes place more than once in a day, as previously discussed. Morning milk is carried to PMC areas in plastic containers - previously used for oil from some food aid programme or commercial brands; the average distance covered by walking is 8.9 km. PMCs check and measure the milk and collect it in plastic jerry-cans, which are kept in the shade and then sent to SMC. In herding camps milk is stored in traditional containers (*haruub*) which are daily treated with charcoal for hygienic purposes, as this supposedly kills germs. This practice provides the typical smoky taste to milk. PMCs have their own skilled techniques to sterilize the jerry-can plastic containers through specific stones, using very

limited amounts of water. Most of them require their SMC partners to send back the containers cleaned, as water is a very scarce commodity in the bush.



**Pictures 6.2 and 6.3 Herding boys watering camels and carrying milk to collection camp**

Herders sell their milk to PMC and usually purchase staples and goods in exchange. Below are some indications of the commodities purchased by herders through CMM networks and a tentative identification of related expenditures.



**Figure 6.7 Categorized expenditure of herding household by wealth group**

Source: FSAU, 2005

**Table 6.22 Minimum monthly expenditures for a poor household in 2003**

Water for household use	2 drums of water @ \$3 per drum	\$ 6.0
Food	2 bags of cereal @ \$16 per bag	\$ 32.0
Sugar	¼ kg / day (7.5 kg/m) @ \$ 0.5/kg	\$ 4.0
Oil	1.3 litres/m @ 0.65 \$/lt	\$ 0.8
Water for livestock (est. 30 shoats)	2.5 drum @ \$ 3 per drum	\$ 7.5
Monthly minimum expenditure		\$ 5.3

Plus: other basic expenditure: Transport for livestock to migrate to where rains have fallen; drugs for humans, drugs for livestock

Source: OCHA Inter-Agency Assessment, 2003 (Sool-Sanaag Regions)

The extension and the consistency of these webs also vary according to the season; as a rule of thumb each PMC serves about 8 to 20 herding households, in both purchasing their milk and providing them imported goods - although *'in a good season one PMC could be served/visited by up to 30 to 40 herders'*<sup>54</sup>. Different from the other relationships along the chain, those between PMCs and herders could be of different nature and varying engagement term; the mobility of both PMCs and herds force these ties to remain loose and flexible.

The milk price is the same for everyone, no matter whether it is a relative, a longer standing client or a newcomer. Differences exist instead in the form of payment, as the payment to longer standing clients, better off herders and relatives can be postponed, while the commercial engagement is cleared on the spot in the other cases. At market sites, camel milk fetches different prices as fresh (*day*), slightly sour (*suusaac*) or deeply sour (*karuur*). As no cold chain exists in the market and processing opportunities are

<sup>54</sup> Hay Ganni, field interview in Yaka

limited, the conditions milk is delivered as well as the timing of its sale are critical for its pricing.

While money is always mentioned in these transactions, its presence is almost virtual. Milk value is always monetised, but its payment is often made in kind, directly with products such as rice, flour, tea and sugar (the most reported), but also clothes, shoes, kerosene, and other consumer products. Overall about 67.4% payments in the bush are made in form of cash, and 22.6 % as bartering with food and clothing. The ratio of these exchanges varies consistently from one season to another: data from the surveys indicate that almost no PMC pays in kind at *Gu*, when a proportion of milk is sold as a payment for debts contracted during the *Jilaal*. At *Xagaa* and *Deyr* in kind payment is reported by a tiny minority (10% and 6% respectively); inversely at *Jilaal* in kind payment/bartering is reported by a majority, about 60% of the respondents (n=60). MC also reportedly trade honey, hides and skins and at times also animals (those handed out by herders to pay outstanding debts).

Also, in the livestock trade, exchange in barter terms is normal, and increasing in the Ethiopian markets where food availability is more of a problem. The system is named '*gadbadda iyo neefka*' (literally *the sack* – of food- *and the head* – of smallstock; cfr. SCPD, 2000), indicating that the herder normally receives payment in ratios of rice and sugar.

**Table 6.23 Prevalence of payment forms as reported by Primary Milk Collectors (n=78)**

	<i>Gu</i>	<i>Xagaa</i>	<i>Deyr</i>	<i>Jilaal</i>
Credit provision	No	52%	18%	85%
In-kind payment	Debt recover	10%	6%	60%

Source: author' data in SCF survey, 2007



Milk is then conveyed to transport companies which are hired for its delivery to SMCs in urban markets. In turn, drivers from these companies run throughout the day, each day of each season, to carry milk from production areas to consumers markets and, inversely, to carry commodities from urban stores and markets to rural consumers (pastoralists as well as PMCs). The typical means of transportation for these purposes are Toyota pick-ups, which perform very well in rural areas. For the milk traded to Boosaso market, Toyota A/C Mark II cars are used to deliver milk from Qardho (inter-urban transport) along the tarmac road. At least six companies operate from Qardho, but during good rainy seasons the number increases. Transport companies keep records of commodities flow and drivers have notebooks filled with quantities and prices.



**Picture 6.4 and 6.5 Transport Companies collecting milk at a primary camp**

Typically transport companies operate with at least three cars, each driver staying overnight in the bush for one or two nights. The driver usually makes a long trip touching the different sites according to trajectories negotiated with PMCs. During these trips he delivers the water and imported commodities to PMCs and collects back milk from them, before moving towards the gathering points with his colleagues, where the cars from the same company meet and the driver returning to town collects the milk from the other two cars. The transport from the site of milking to the collection points and finally to the market can take 9-10 hours or even more. Clearly risks, costs and profits increase with distance, with an overall impact on milk pricing. According to the SCF survey each car serves about 10 / 12 PMCs.

Drivers thus play a critical role in ensuring timing delivery and milk products quality. They have to drive as fast as they can in such harsh environments, in order to ensure that milk does not get spoiled. Their task is delicate as a single mistake might affect the whole produce quality and thus their pricing. Although in fact most camel milk products can still be consumed when partially fermented, their market price deteriorates with their conditions. The role of transport companies is a critical one not only in carrying milk and delivering products and goods, but also in enabling continuous circulation of people as well as of information (such as rainfall and range conditions, market prices, animal disease spreading, insecurity and other facts that are important to local livelihoods).

In most cases (85%) the car belongs to the drivers themselves; they have informally joined their efforts and work collectively in an organised form (Company) to serve the needs of the milk marketing network. A large portion, about 62% in Qardho, of these transport people are from the Midgaan minority group (n=14). This figure is definitely much higher than the average portion of this minority group within the local population (refer to chapter 3). The position of the Midgaan within the local societal setting seems to be the main reason behind these figures. The Midgaan hold in fact particular human and financial capacities but are unable to capitalise these assets



through the local mostly traditional form, such as investing in camel herds. Motorised transportation has thus become their specialised niche and their main source of livelihood and investment.

Secondary Milk Collectors are women based in the final market, either in Qardho, in Garowe or in Boosaso. They receive the milk daily sent by PMC and sell it directly or, more often, they distribute it to market retailers. At the end of the day they collect the milk money and send it through the same milk supply route. At times SMC are also in charge of supplying imported commodities to their PMC partners. SMC together with retailers include their mark-up profit in the final price to consumers. As an average each SMC is served by 2.35 PMCs, who do not normally change from one season to another and remain the reference suppliers throughout the year. SMCs keep the milk in jerry-cans or store it in *haruubs*. The empty containers go back to PMCs together with the recovery cost and the relative income statement, through the same supply route.

**Table 6.24 Nature of relationships between PMC and SMC (n=100)**

	<b>business</b>	<b>friendship</b>	<b>kin affiliated</b>
<b>%</b>	5,7	62,8	31,4

Source: author' data in VSF survey, 2006

The table above depicts SCF survey results on the relationship between primary and secondary milk collectors. Overall, the relevance of family ties is quite limited (less than a third), and definitely not predominant. A deeper analysis of this data through interviewing with milk collectors reveals that family ties (often of sisterhood) between primary and secondary collectors might be relevant for newcomers in the first stages of attachment to the marketing, whereas these become proportionally less relevant in the longer term. Relations among women collectors are mainly based on mutual business interest though most of these links started on family/kin affiliation (UNA 2001, field report). Friendship is the most chosen definition for their relationship with the other side of milk collection, entailing that human and business interests coincide in the arrangement. According to SMCs (n=68) they meet with PMC about every week (7.25 days as an average). Interestingly, when the relationship involves familiar ties, such as where PMC and SMC are sisters, the timespan between these meetings tend to be longer, at every two weeks up to a month. Cases also exist of milk collectors partnering in milk marketing who have hardly met: as a lady once stated in Awlidaaglay "*We only know names of each other though we don't know the faces*".



**Picture 6.6 and 6.7 Secondary Milk Collectors in Qardho**

For the sake of understanding the recent evolutions of pastoral trade and milk marketing in the region, we can differentiate between Milk Collectors involved in the system before and after the 2001-2004 drought. A distinction can be said to exist between the SMC selling milk within the Qardho market facilities, provided in 2003 by the UNA milk project in collaboration with local administration and those operating in the wider surroundings and thus operating in worse environmental conditions and at slightly lower prices. As the survey confirmed, the latter are clearly the late comers, less integrated and often with a nomadic background. They have a higher degree - about three times more - of direct family relationship with their respective PMC, compared to those installed inside the market.

As a result of the drought conditions many women have either lost their animals or broken the relationship with their husband and had thus come to town and changed their lifestyle. They have nevertheless kept their nomadic links and invested in them. They have established commercial networks with their sisters, who are still nomadic, and who supply them daily milk from the rangelands. This case further serves to confirm that initially the milk market business starts through family ties between primary and secondary collectors, so that family resources are pooled and jointly invested. As the network becomes extended these arrangements change in nature, and family ties become less relevant and trust is generated through fair commercial relationships, as will also be analyzed for the credit system.

Similar mechanisms regulate the relationships between milk collectors and the traders and wholesalers who provide them with the commodities sold against milk. In



most cases the CMM business was started through a loan from a relative who undertakes some import trading, often located in Boosaso. For Primary Milk Collectors, 40% of respondents have started their business through sale of family assets or relatives' support, while 34% of them started through credit afforded by the wholesaler, often with some kin ties (n=32). The start-up loan (of limited value) would commonly be in the form of goods that the milk collector would have marketed in the bush in exchange for the pastoral milk. Nowadays a large majority (87.5%) of the relationships between PMCs and wholesalers are market-based, with only a minority (10%) referring to that as kin-based. According to Hay Ganni '*family ties had been important in the beginning to get the first commodities to start the business, but today my commercial network is much more intricate*'.

Most PMCs (almost 70%) rely on in-kind credit mechanisms with their wholesalers; they receive the goods and pay them back when these have been sold. Establishment of self-help groups and revolving funds amongst petty trading women has also been reported in different places (for example, in Daryeel in Beyla and Keda in Rabo Raaxo). It is important to acknowledge the high interest traders have in the extension and functioning of marketing networks, as these represent the most effective way for their goods to access remote rural populations (which represent about 65% of people in Karkaar).

The following table summarizes data gathered from 6 different PMC sites, involving 71 herds, for the *Deyr* season of 2006 (collected in July 2006). These data represent a good estimation of average figures along the CMM chain in Karkaar in the aftermath of the lengthy drought.

**Table 6.25 Estimation of average amounts of people and milk involved in CMM; Qardho district, *Deyr* 2006**

<i>Agents</i>	<i>Herders</i>	<i>PMC</i>	<i>Transport Companies</i>	<i>SMC in Qardho</i>
Herders				
PMC	10 herds each ; milk from about 100 herds	150 PMCs		
Transport Companies		3 cars * 10 PMC each	6 companies @ 3 cars	
SMC in Qardho		2,35 PMCs for each SMC	About 10 SMC per company	About 65 SMC
MILK x unit ( <i>galaan</i> )	10	100	3000	235 each

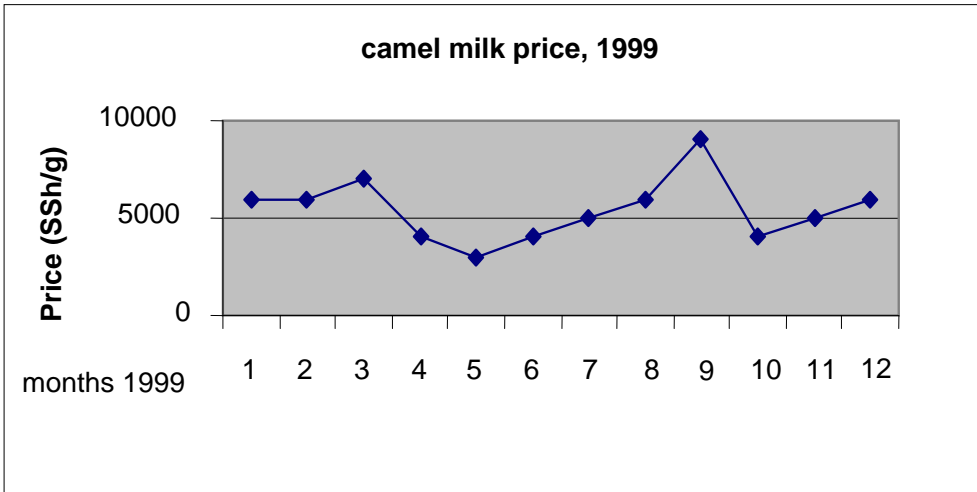
Source: author's fieldwork with VSF, July 2006

It has to be noted that the CMM system existing in Puntland is unique and different from those described for Southern Somalia (Herren, 1992; Little, 1994) and for Somaliland (Warsame, 1996; Vetaid, 2007), while it shows some similarity to the system existing in NE Kenya (Isiolo, Garissa), assessed to a limited degree by SNV (2008). Similarities exist instead with the system marketing fruits and vegetables from

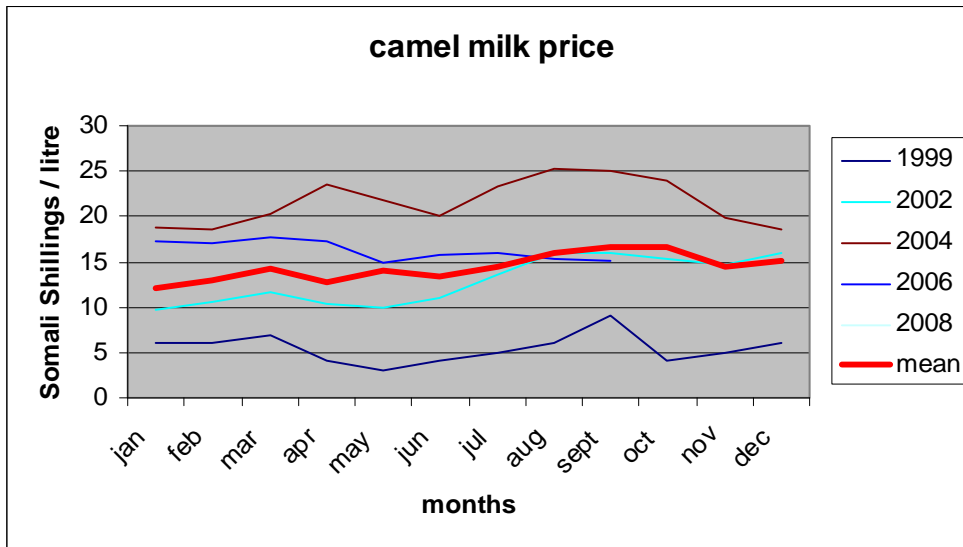
eastern Ethiopia and southern Somalia to Puntland, which is reportedly managed through a network of women established in Galckayio (Ahmed, 2001).

**Seasonality**

Despite camels producing milk throughout the year seasonality is an important feature of milk marketing as milk supply changes drastically from the dry to the wet seasons, with consequent price fluctuations. Milk quality, as well as problems related to milk collection and transport, also shows major seasonal changes affecting the overall system. The following charts attest to the seasonality of camel milk pricing.

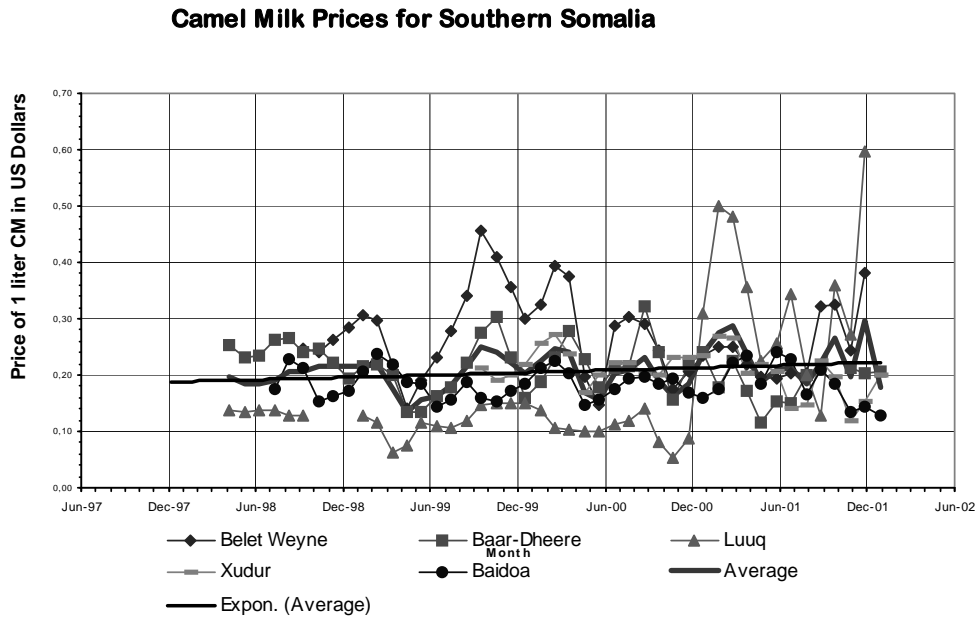


**Figure 6.8 Price of Camel milk at Boosaso market in 1999** (with 1 US\$ about 19.000 SoSh)  
 Source: UNA, 1999



**Figure 6.9 Variations in camel milk pricing in Boosaso market; years 1999 to 2007.**  
 Source: interpolated data from different sources

Figure 6.10 reports CM price for five markets in southern Somalia, where insecurity and volatile political conditions contribute to the fluctuation in milk price from one place and from one period to another.

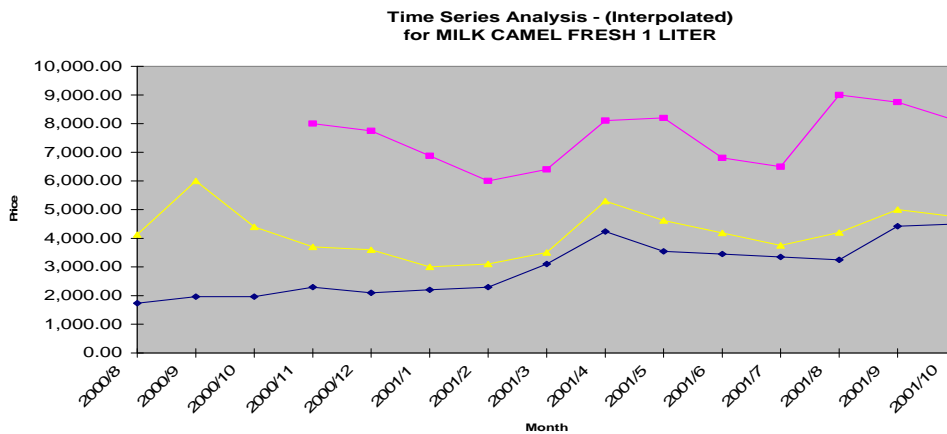


**Figure 6.10 Seasonality of CM Pricing in different markets of southern Somalia**

Source: FSAU, 2000

Note: in June 2002 1 US dollar was worth about 22,500 Somali Shillings (SoSh)

Looking at the supply records reported by some milk transport companies and other indications collected during the SCF survey it can be assumed that milk supply fluctuation between the two peaks in *Gu* and *Jilaal* seasons is about 1/2 for the Qardho market and 1/3 for the Boosaso market (also refer to Figure 6.1).



**Figure 6.11 Price of camel milk in three distinct markets (from top): Boosaso, Garowe, Puntland capital, and Baidoa, in Southern Somalia. (2000-2001)**

Source: FSAU, 2001

Overall, risks, costs and benefits related to milk marketing are differentiated through the different seasons for the diverse milk marketing agents, as the tables below show. During dry seasons overall milk supplies are lower, distances further, and milk preserving capacities shorter due to the harsh climate. These are the times when the relevance of camel milk increases as other animals stop producing and their milk spoils easily. During these seasons herds move according to available and accessible pasture and water resources. PMC follow herders and keep in touch with transporters that can reach them to take milk and bring imported staples and sometimes even water to the camps.

**Table 6.26 Differentiated seasonal preference for the diverse milk marketing agents**

	Herders	PMC	Drivers	SMC
<i>Gu</i>	+++	+	+++	
<i>Xagaa</i>	+	++		++
<i>Deyr</i>	++	+	++	
<i>Jilaal</i>	++	+++		+++
@ Drought	+++	+		

The table above shows the complementarity of seasonal preference between milk collectors, transport companies and herding households. Herders highlight the fact CMM plays three critical roles in their livelihoods, as it 1) provides a reliable and daily source of income, 2) enables them to access imported commodities year round, and 3) expands the set of coping mechanisms during difficult times. Reportedly, apart from the important cash it generates daily, marketing milk represents the opportunity to be in connection with the wider market network. This is particularly important during rainy periods, when the herders' surplus milk would otherwise spoil, but more specifically during the long dry seasons, when their financial capacities are very low while their needs increase tremendously. In prolonged dry periods, the credit system they can engage with through women milk collectors represents, for pastoralists, a main asset to cope with worsening animal conditions as well as the growing prices of imported staples.

Pastoralists carefully consider economic trade offs before selling their milk in dry periods, although they are often limited in their choice by the immediate household and herd needs (e.g. the purchase of water). A case study in the Ogaden – a traditionally food insecure area in the Somali ecosystem – shows that the sale of livestock milk products generates more than 80% of the income needed to satisfy basic needs among pastoral households in dry periods (while it contributes about 40% during the rainy season, when milk is in surplus) (Abdullahi Hussein, 1999).

For PMC it is clear that during rainy seasons their economic benefit related to milk marketing is limited, especially compared to the work required: *'milk is a lot and profit margin little; we work a lot for limited money'*. On the other hand the sale of imported staples to herders, the other important and complementary source of income for PMCs, is a relatively important economic activity during *Gu* and *Deyr* seasons, when pastoralists' purchasing power is higher: *'we gain little or some time nothing from the sale of the milk; sometimes we sell it at the producers price and the transport cost. We mainly gain from the sale retail trade in the field by selling items that are needed by the herders'* (UNA, 1998). In the aftermath of the recent drought, pastoralists tended to re-balance their

household economies, and prefer handing out their milk to write off contracted debts rather than venturing in to further purchases, as reported by some herders. Some PMCs stated that during rainy seasons they remain in the business to keep the connection with herders - the producers of their primary commodity but also the consumers of the imported staples they bring to the bush – and possibly to recover the money from the goods they had lent.

Transporters claim limited own benefit in the milk marketing activity during the dry periods, when milk amounts are limited, distances further and environmental conditions harsher; despite the problems rains and waterlogged conditions then, they see their direct convenience in the wet seasons, when they transport consistent amounts of milk and money flows on both sides. During dry times when herds are far from towns, costs for transport companies increase steadily with higher demand for fuel and higher risks along longer routes. During times of drought their economic benefit is reportedly very limited, but *'the marketing has to be undertaken in order to maintain good relations with the herders/producers for the more convenient (wet) seasons'*.

Similarly to PMCs, SMCs have a preference for dry periods, when they manage lower milk quantities with higher values per unit. An indicator of this is that SMC in Qardho milk market who calculate their net profit from milk marketing at rainy seasons in terms of *'getting free milk'*, as they put it, meaning that once all costs are recovered the benefits merely consist of some milk *galaans* for her family. Differently from their PMC mates, SMCs mainly gain their income from the sale of milk solely, with no or limited supplementary income generated from the sale of other commodities. Some SMC might be involved in supplying PMC in the bush with staples or water, but to a limited extent. Overall, the income generated by SMCs through CMM can be said to be lower from that earned by their bush PMC partners, though associated with lower responsibility.

**Table 6.27 Seasonal factors influencing perception of the different marketing agents**

	<i>GU</i>	<i>XAGAA</i>	<i>DEYR</i>	<i>JILAAL</i>
<b>Herders</b>	Sell surplus milk to pay back debts; good purchasing power		Sell surplus milk High purchasing power	Herders in need, purchasing staples from PMC
<i>interface</i>	<i>Only cash transaction (and debt recover)</i>	<i>10% in-kind transaction/barter</i>	<i>6% in-kind transaction/barter</i>	<i>60% in-kind transaction/barter plus on-credit</i>
<b>PMC</b>	Price low, profit margin limited; debts repayment	Milk is limited and price increases	Price low, profit margin limited. Gains from sales to herders	Milk is limited and price increases
<b>Drivers</b>	Problems to access some areas	High transport costs	Problems to access some areas	High transport costs
<b>SMC</b>	Get 'free' milk	Economic gain	Get 'free' milk	Economic gain
<b>Mkt. retailers</b>	Market gain due to quantity	Market gain due to price	Market gain due to quantity	Market gain due to price

Source: fieldwork interviews and PRA exercises with stakeholders

Marketing Agent	Camel milk Price (SoSh/g)	Mark up /price share
Herder / Producer	4,000	55%
Primary Milk Collector	4,600	8,5 %
Transport Company	5,800	17 %*
Secondary Milk Collector	6,800	14 %
Retailer	7,200	5,5%

Figure 6.12 CM price building & percentage for the different agents; Qardho, Deyr 2006

Source: author's field survey with VSF

Table 6.28 Estim. average daily income for the different milk marketing agents, Gu 2001

Agent	Milk amounts dealt with (galaan/day)	Profit per galaan (SoSh/g)	Daily income (in U\$D/day)	CM final market price
Pastoralists	10 g/d	4000	~ 2,1 U\$D	4,000
PMC	100 g/d	600	~ 3,1 U\$D	4,600
Transport Co.	3000 g/d	1200	*~ 18,9 U\$D	5,800
SMC	235 g/d	1000	~ 14,8 U\$D	6,800
Mkt. retailers	25 g/d	400	~ 0,5 U\$D	7,200

Source: author's participation to UNA survey fieldwork, 2003

Note: SoSh/U\$D exchange rate = 19.000

Table 6.29 Seasonal average cash profit for the different agents, 2006 (SoSh/g)

So/Sh	Herder	PMC	Transport*	SMC	Others	Mkt. Price Qardho
Gu	4000	0.300	1.000	1.000	0.200	6.500
Xagaa	6000	1.000	1.400	1.500	0.300	10.200
Deyr	4000	0.600	1.200	1.200	0.200	7.200
Jilaal	7000	1.200	1.400	1.600	0.300	11.500

Source: author's participation to SCF survey

\*Note: for transporters, operating costs should be deducted to get the real economic benefit



One important point of information that can be extrapolated by the comparison of tables 29 and 30 is that drought has considerably changed CMM price dynamics. Vet Aid data from the Somali Pastoral Dairy Development Project (SPDDP) report similar figures to the milk market monitoring in Gu 2007, from 7 milk camps supplying Burao, with producers' receiving about 47% of the final market price (Vet Aid, 2007).

### Information system

Information circulating amongst CMM agents relates to three main areas:

- The prices in the consumers market
- The need and price of imported commodities
- The origin and quality of collected milk.

A number of effective ways to obtain information and cross-check market data exist for marketing agents inhabiting the Somali rangelands. During the SCF survey women milk collectors have indicated that, 1) the HF radio network and 2) the frequent transport services operating in the area, as the major source of information concerning marketing. From time to time PMCs themselves go to towns and urban areas to directly meet with their SMC partners as well as with the wholesalers that supply them with imported staples. Although some SMCs report information problems, in practice most admit that '*information flow in anyway and things are generally known*'. It is likely that the existing opportunities to cross-check information and data deter misconduct at different levels of the CMM chain; opportunities for cheating are thus limited and highly risky.

PMCs communicate in a number of different ways to SMC or people based in towns/cities. The most common is represented by small plastic invoices carved from plastic bags, inside which bits of what-is-needed are wrapped (salt, tea, sugar, tobacco, etc...). Empty boxes of medicines might be attached, to inform about some health problems, for humans as well as for animals. Often messages are also attached, with writing and figures; women who cannot write on their own are assisted by their sons or by the drivers. Despite their often limited formal educational level, most MCs state they face no problems in accountancy. It is likely that some basic accountancy knowledge has been gained through the Khoranic school attendance.

For what concerns milk quality, things are different, as milk quality might change as this is moving through the chain. At PMC sites, CM quality is checked at delivery through a number of indicators, such as colour, density, etc... Most PMCs taste milk when it is brought to them, before mixing it in jerry-cans with other milks; they say it is not so much the quality that is examined, but rather the condition of the milk, which can have degraded from fresh to levels of fermentation and spoilage, with implications for its sale price. Milk supplied by producers with long established arrangements is often accepted without tasting. It is likely that this implies good degree of trust between the PMC and the herder, and this would be jeopardised by delivering poor-quality milk from one side or by tasting it publicly in front of the provider from the other. A further way of reducing risks associated to CM quality is to put milk from untrusted people or new clients in a specific jerrican, without mixing it with milk from trusted and well known people. It is then delivered to SMC in separated containers, with specific indications. According to Hay Ganni: *If milk delivered by somebody is repeatedly of bad quality, you would normally drop that person from your list. If nevertheless*

*that person is from a poor household which might be facing problems, you would tend to give him another chance to bring good quality milk next time.*

Reported adulterations include mixing with the previous evening's milk or milk from different animals, the addition of water, the presence of colostrum or milk from a sick animal. Admittedly, the higher risk for milk quality is that good milk and poor quality milk are mixed together. Along women networks, differently from those managed by men, milk origin and supplier could nevertheless be traced back throughout the CMM chain to a good degree, as the jerry-cans which transport it have specific marks, brands and signs that codify them and enable the MCs to always keep track of their milk. While men can always recognise their camels amongst hundreds, the same applies for women and milk jerry-cans. This is important because, in the case that milk should be sold at lower price or thrown away due to its quality, a PMC knows how to recover her loss. This system carries important potential implications in the utilisation of CMM networks for monitoring and checking animal health and identifying areas where a disease is spreading, provided it can be detected through milk analysis.

When it comes to the information related to the milk transport, as poems traditionally exist to praise good producing camels, similarly songs exist praising the fast-but-careful driving capacities of milk transporters. Most importantly, songs exist among milk collectors making jokes about slow drivers who are responsible for lowering the price of their products. These recall to some extent the songs traders had over *abbaan* some decades ago, putting their reputation at stake.

### **Credit systems**

Credit systems (*daayn* in Somali) characterize many Muslim societies; they are of specific relevance in environments where seasonality is high, and play a particularly critical role in Somalia, where no state institution exists to support vulnerable and poor groups during times of need. Credit represents the backbone of economic transactions in the region. It works as a type of delayed payment that enables flexible transfers through time and thus helps buffering the seasonal fluctuation that characterises the different livelihood systems. Credit systems characterise almost all economic transactions in the region, from those involving livestock and milk, to those regulating access to and exploitation of frankincense and fishing resources. In pastoral marketing credit has a longstanding relevance, since the ancient trading of livestock; merchants provide credit on next years' production to engage in longer term relationships with producing herders, enabling them to purchase food during the dry season. Inversely, herders have to wait for months before receiving the money from the animals they have consigned to some intermediaries for export trade. Already in the early 1990s, during the dry season pastoralists (used to) come into Garowe and receive credit from merchants on the condition that they promised to pay it back in the form of livestock during the next raining season (Samatar, 1994:231).

PMC business relationships centre on credit systems, both with their client herders and the traders that supply them with marketable goods. According to the SCF survey in Karkaar, 63% of bush women traders acquire imported commodities on credit basis from wholesalers and all of them provide some system of credit to their clients, although with seasonal variations. As we have seen, limited initial capital needed is a major reason for most milk collectors to enter the business. Along these same lines, during long, dry periods herders acquire through credit what is needed to satisfy basic

household and herd needs and pay back to PMCs when they sell an animal or when rains come and milk flows in markets; in a way they purchase on the promise to share future incomes. Already Talle (1988) assessed the degree of indebtedness of Maasai pastoral women during the dry seasons (to purchase staples and water), debts they paid off when milk became more abundant.

Credit in these environments serves thus to facilitate a number of transactions which would be otherwise difficult to undertake. Given the seasonality of production patterns, the fluctuation of market dynamics and the extreme livelihood conditions of herders at certain times, the credit system provides them with the financial backing to access staple foods, water and transport for livestock any time of the year. On the other hand credit is also instrumental to market agents, as petty traders could not operate without credit, and traders could not establish effective commercial networks.

The system works as an incentive enhancing market accessibility while at the same time also providing adequate financial support in times of crisis. In this sense credit is vital to CMM exchanges, as it enables continuing the functioning of the market even when milk is scarce but when producers' needs are on the increase. In a way credit helps the redistribution and sharing of the economic risk of operating under such conditions amongst the different actors involved. Together with remittance and social support systems, credit therefore represents an important factor to buffer local vulnerability (SCF, 2007). Formally no interest rate is charged on a credit according to Islamic rules although in practice a deeper analysis of price dynamics reveals a slightly different picture, and repayments might in fact carry some charges.

In principle credit is open and accessible to all, however, during a prolonged time of stress, access to credit reduces considerably. When resources shrink, competition for credit increases and access becomes more selective. Trust is by far the most important factor influencing a trader's decision to provide credit in these times. The credit system in fact hinges on trust. Trust and credit go hand in hand, as one generates the other, and both are critical in establishing commercial relationships in this environment. While trust was given by only 56% of the respondents as the reason to offer credit, lack of trust was reported as the reason to stop giving credit during times of stress for 95% of the respondent traders (n= 32). Relative or kinship and asset ownership represent other important factors in deciding credit lines. Presence of assets or of labour force, kinship ties and 'residential rights' play a role in keeping people within the credit system, as they indicate household repayment capacities.

**Table 6.30 Credit accessibility in different areas/groups (n=254)**

<b>Respondent group</b>	<b>Percentage having accessed credit recently</b>
Pastoral Area households	87%
Urban Area households	83%
Coastal Area households	80%
Minority households	67%
Female headed households	88%
Other households	90%

Source: survey undertaken with SCF, 2007

The table above depicts credit accessibility for different areas and groups in Karkaar region in the aftermath of the drought, when almost everybody was in dire need. Access to credit in pastoral areas is slightly higher than coastal or urban areas; this might indicate that livestock ownership is recognised as a major source of collateral for credit, which is not the case in formal credit systems elsewhere. In coastal areas high levels were explained by the capacity to generate a quick income for households with a good labour force. While herders typically repay debts through the sale of their products (livestock or milk), fishing communities and households relying on frankincense collection are often caught in patron-client relationships, where they are provided with food and working tools in advance by Yemeni boat owners of frankincense landlords, which have to be paid for at fishing / harvest times. These groups seem to be much more exposed to exploitative arrangements than herders (cf. Farah, 1994 for frankincense collectors, and Mc Askill, 2006 for fishing groups).

Economically poor people are often reported as the first to fall through the credit 'net'. Lack of assets in most cases (67% of respondents) is the greatest deterrent to credit access. Others quickly sidelined are households lacking extended family ties or with a short history in the area ('residential rights'). Belonging to a large clan represents an important guarantee to credit providers, as in one way or another some of the relatives might take over one's repayment capacity (SCF, 2007). But as we said trust is also an important component; for CMM agents previous experiences and records constitute an important reference in providing credit to someone. In times of dire need, then, herding households should look for PMC or traders whom they know to get credit opportunities. The options can be numerous, as herders interact with a number of PMC/traders during their seasonal moves.

The 2007 WFP survey indicated that the highest level of debts is reported during the *Jilaal* (and secondarily in the *Xagaa*), when animals conditions are poor and both food secure and food insecure households alike tend to buy food stock on credit. By the end of *Jilaal* 2007 about 38% of Puntland people relied on credit to directly access food. Debt repayments occur during the *Gu* and to a greater extent in the *Deyr* (ibidem). Pastoralists participating in CMM tend to show higher repayment rates during *Gu* seasons when milk production is at its highest. Debts may accumulate over several years. Traders in Karkaar sites reported extending credit lines of up to 140 US\$ with an average credit of about 25 US\$. Though the drought did cause debt levels to soar and some traders were forced to close, in the study areas approximately 65% of traders responded they were able to continue operating despite very poor sales and stretched credit lines.

Thanks to the credit system, the performance of the camel milk marketing network has been quite outstanding during the lengthy drought that has afflicted the region from 2001 to 2004 (with about six out of eight rainy seasons far below average). In 2003, overall milk production was negligible, as even camels fertility rates collapsed after the first year and a half of serious drought conditions, with consistent drops in calving and milking rates. Despite the limited quantities of milk still available most of the milk market infrastructure remained in place. Data from the SCF survey indicate that most rural households could still have quite good access to markets even in 2005, as reported by 75% of respondents (n=107) (refer to table 6.19). From the traders side (n=33), 53% of women remained in business even during the drought, 28.5% started after the drought, and only 17.8% faced serious financial problems that induced them

to temporarily shut down. The 2006 VSF survey reported similar figures, with 51% of PMC still remaining in the milk marketing business, while 19 shifted to mainly meat and vegetables sales or teashops, and only 12% stopped their petty trading activities (n=90). In early 2007, in the aftermath of the lengthy drought, when camels were getting back into delivering and lactating, still 40% of bush petty traders were somehow able to sell milk, despite its overall limited availability (n=32). Interestingly, men-led milk sale companies, such as Waaiel, Mandeeq and Wanaag, could not source marketable quantities of milk and thus diversified their business into other activities, as reported by their managers.

**Table 6.31 PMC capacity to remain in the CMM despite the drought**

year	Still involved in CMM	Stopped or shifted
2005	53%	17.8%
2006	51%	31%
2007	40%	

Source: author's data within VSF and SCF surveys

As reported during the field surveys most women milk collectors and traders remained in the CMM business in order to supply imported staples to pastoral areas, often on a credit basis as saleable milk was very limited. During such harsh time the CMM infrastructure has represented a vital asset for pastoral communities inhabiting the region, as pastoralists could still get access to the critical staples without necessarily undertake distress livestock sales (which have nevertheless occurred to a large extent).

Apart from personal benefits, one main concern expressed by most stakeholders met along the CMM chain is 'to support pastoralists', who represent in most cases the large majority of their relatives. A milk collector girl in Dhuudo, who has undertaken CMM just after the drought said: *I started this business to help my relatives that live in the bush.* Dantho, who works with WFP and who used to be a CMM driver stated 'In every season the diverse actors of the CMM chain make different efforts; you have to sacrifice for your client (the milk collector) not to suffer. We are on the same boat we should share every difficulty'.

Overall, the 2001-2004 drought has reshaped the camel milk marketing system to a large extent, by challenging its financial resilience and capacity to survive even with very limited amounts of milk circulating. On the other hand the drought has also provided new labour force to the system, as a number of women that have recently joined CMM have reportedly left rangelands in large numbers having lost their viable herd during the drought. Eventually, the drought has further pushed pastoral livelihoods integration into the market economy, as those who had good relationships with market stakeholders (milk collectors / petty traders and wholesalers) have, according to anecdotal reports, been able to overcome drought times better than those who did not. In this respect credit mechanisms that maintain pastoralists' purchasing power and food entitlement during difficult times, in the event of a crisis, represent a most effective device to support pastoral livelihoods. This system also enables rapid economic recovery once dire times are over, thus enabling the pastoral economy to continue tracking the environment (Swift, 1994).

## Two stories

In the aftermath of the recent drought I met with a PMC in the surroundings of Qardho, who gave me some insights concerning bush trading, including milk, and the related credit system. The family of Asli Shire Deri (45) from Sanjilbo (60 Km East from Qardho) is composed of 9 members. Some rotate in taking care of the livestock and the *berkaad*. Two of her daughters help her with the trading and the shop keeping. She started petty trading in the beginning of the 1990s when her household sold some of the animals to obtain the initial financial resources. Nowadays she receives commodities on loan basis from Ali Safi (a trader) that she pays back when goods are sold. She exchanges and communicates with Xaadiyo Said (the SMC) through the transportation system which reaches her daily in every season; she sends her messages written on paper by her sons or by the transport driver in his booklet. Obviously milk sale towards Qardho and Boosaso is a main component of her trading activities, but she also engages in reverse trading, so that she gains from the two businesses. She also serves tea at her camp which is part of her income. Apart from supplying her with milk, herders might also pay with hides and skins and by directly handing over a smallstock at times. Sometimes, especially in dry seasons, they might also pay with honey.

Credit normally follows seasonal cycles, with herders purchasing on credit during the dry periods and paying back during the rainy seasons, when livestock production peaks. The smallstock she receives in payment contributes to her flock; her household will sell them when the price is high. During the rainy season milk flows in large quantities, herders have therefore enough money to also purchase shoes and clothes, whereas during the dry season, and especially during the *Jilaal*, food and water are in highest demands. Those are the times when she gives credit to the herders who are known to her, and whom she knows have animals. 'Trust' and 'asset' are the words she uses; family or clan ties are given less importance.

She can give goods for a value up to 300.000 SoSh per household on credit basis, but when that threshold is reached the household must sell one of its animals to pay her back and start another round. Otherwise the household could receive goods on promises of selling to her its future milk production. The household that surpasses the threshold is taken off from the credit beneficiaries until it clears its debt. Related disputes are normally resolved locally, either directly or through extended families interactions. Some wealthier relatives might help the household that has lost its livestock and is unable to replenish its debts. Asli says she could request the intervention of traditional Islamic courts in case of default, though she has not done so despite the many defaulters of the last drought.

At the onset of *Jilaal* 2007 I had the chance to meet with one of the two women who according to local information have started the CMM business in 1991. She has therefore been a pioneer in engaging in and developing the current scale of transport and trading of milk and related products in the region. Hay Ganni stays in the pleasant restaurant Fatxul Khayr in Yaka. She is the owner and the manager of the venture, which has become an important reference point for people in transit along the route that links Boosaso to Garowe, the commercial capital of Puntland to the administrative one. She prepares and serves food and drinks to her clients, mainly men. Most clients after the meal go to the back of the restaurant, where her three

daughters manage the sale of camel milk. CM is sold either in plastic bags or in jerry-cans, depending on the purchased quantity. She says she manages about 300 litres of fresh camel milk everyday.

As she reports, before 1991 only little milk could be found in local markets, including Qardho, and fresh milk could hardly be found in Boosaso at those times. Milk sale was a seasonal activity undertaken by few pastoralists passing through or residing closer to town areas. These were often poor herding households who did not move far from settlements. Urban development in the region was very limited (Boosaso hosted less than 10.000 inhabitants before its port completion), transport and communication facilities and servicing were poorly developed. As the story goes, two couples always composed of a woman and a man, organised the first effective network of camel milk from far bush areas to growing urban centres. She started together with Farah Kereh, who owned a small pick up and helped in transportation. Her first milk collection camp was Yebagil, some 60 km south of Qardho, where they brought the milk for sale. The other lady's camp was in Gholey. In Qardho, she knew a lady who had a small shop. They were not relatives but familiar with each other from before. They agreed to start the venture and to share the revenues accordingly: *'I gave her some share of my profit'* she stated. They would usually have kept the daily income one day each, rather than sharing it every day.

At rainy seasons she moved to Pragakol (about 3,5 hours from Qardho) and during the dry season she would have gone to Ismadakar (8-9 hours from Qardho). She knew she could have sourced good amounts of milk in those areas during dry seasons; she would have changed milk suppliers from a period to another, which was not a major problem. She started with a loan from her family, which was used to purchase the first commodities she gave to herders in exchange for the milk she would have then commercialised. She now receives loans and gets credit from a number of traders and wholesalers, who are not necessarily relatives: *'business and family do not always go along together'*. She stated a tension exists between the economic interest of selling products and the social components of such marketing, where relatives and needy ones should deserve specific attention.

As they started the business Farah had some problems accessing milk on his own, so they agreed he would just be responsible for its transportation. In Yebagil, the transport fee was 500 SoSh/g, but changed from one season to another; the payment of transport services was her responsibility though, in accordance with the SMC, as the overall costs would have been deducted from the total income. After a while Farah decided to drop the business as he was not interested anymore. The same happened to the other woman in Gholey, whose mate also left the business. After a few trials with other drivers they then met and decided to ask for milk transportation from the bush to the city markets to some Midgaan entrepreneurs who owned cars and use to travel along the ranges.

According to her experience, a very limited number of people have gone bankrupt or financially failed through CMM. Some businesses might have been interrupted for one or more seasons, especially at times of drought; others might have jumped into more lucrative businesses, often evolved from reinvesting their CMM savings, such as tea shops and small restaurants, as the case is for her. Before leaving she reminded me that I had already interviewed her, back in 2001 during the UNA milk project, in

which she had participated. Indeed we went through the pictures I had from that mission and she was able to recognize herself selling milk along the main road in a humble hut.



Pictures 6.8 and 6.9 Hay Ganni business in 2001 and in 2007

### Men Systems

As stated, apart from women-managed networks, other systems exist in Puntland to supply milk to main urban areas. As it is difficult for networks managed by men to compete with those controlled by women, the former are mainly concerned with supply of milk to Boosaso, where demand is large and local production negligible. A few networks manned by men and centred on milk transportation or processing are in place; some provide milk seasonally from Jalaam and Burtinle areas (deep in the southern Mudug region), which arrives at markets in sour/fermented conditions due to the long distances involved. Others bring fresh milk from close-by Saanag and Iskushuban areas. These are more structured companies, which tend to work throughout most of the year. Some private individuals also exist who undertake milk marketing activities on seasonal basis. The number of these agents could not be assessed.

One of the main companies which sell milk to Boosaso for most of the year is named Waaial and is based in Qardho. Waaial managers started as drivers within women-led networks and decided to set up their own company in 1999, as they saw an interesting business opportunity in supplying fresh camel milk to Boosaso. They belong to mainly Majerteen fractions and own the cars collectively (they pooled resources to purchase them) and link directly to herders in production areas<sup>55</sup> mainly the Sool plateau and the Nugaal valley, through some local middlemen (excluding the role of women collectors). They negotiate and agree on milk collection and pricing at the beginning of a period with specific clan groups, and engage in its commercialisation in Boosaso. These contracts are often limited to the season/period herders stay in that area.

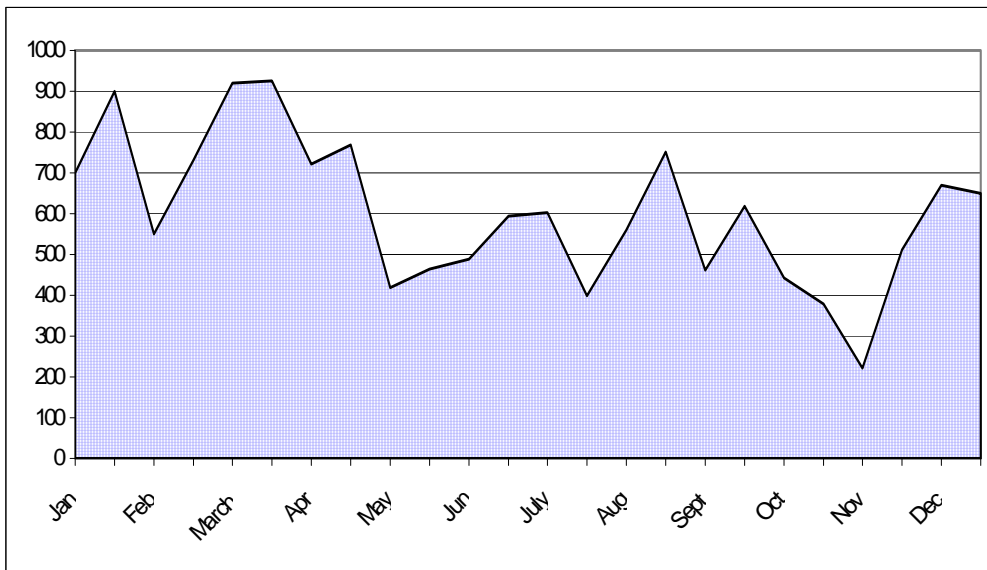
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<sup>55</sup> During the 2006 survey these were five men located in bush areas surrounding the village of Sunjif, in Nugaal valley



According to Ahmed, one of the managers of Waaiel, they tend to go to collect milk in areas where their kins are grazing their animals. During some periods their kin might be too far or production too low, so they have to find other producers to provide them with milk for marketing. When this happens they look for good herds in not-too-far areas, discuss with herders and elders, then sit and make agreements. They have established networks of pick-up cars running in the bush collecting milk from the groups with whom arrangements have been finalised. This milk is then brought to Qardho, where it is transferred into bigger jerry-cans and put together on Toyota cars with air conditioning to Boosaso. The trip now is on tarmac road and more sophisticated devices can be applied to preserve milk quality. At times, drivers contracted for sub-transport on connecting dirt roads interface directly with local herders, if they belong to the same group. More often discussions and negotiations with elders are needed to negotiate the commercial arrangements.

At the terminal market some retailing women wait for the car in different market locations. A main reference woman exists for each main market; she is in charge of distributing milk to the different retailers and collects the money back by the end of the day. All these ladies, employed by Waaiel, receive a weekly salary, which does not depend on the milk amounts sold. During most of the year Waaiel is able to provide fresh milk to Boosaso markets, with an average of 500/600 galaan per day (about 400 litres). Reportedly their benefits and gains fluctuate consistently from one period to another; when the dry season encroaches and Waaiel interest for milk supply grows, the problems of acquiring more milk increase, as herds move in a scattered way and different groups intermingle in different areas. At times, when their quantities are limited they also directly purchase milk from women networks and bring it to Boosaso. During dry periods distances might raise consistently when herd stay to coastal areas or in the deep Ethiopian ranges. A threshold is established, after which the business is no longer viable.



**Figure 6.14 FCM supply from Waaiel Company to Boosaso market, year 2000**  
(galaan/d)  
Source: fieldwork with UNA

As can be noted from the above chart the amounts commercialised by Waaiel are inversely proportional to the effective availability of milk. Milk amounts peak during the first months of the year, during the local dry season *Jilaal*, when milk price is high as its overall availability is scarce. This is the time Waaiel is more concerned with its supply and sale, showing the mere profit orientation of the company. Proportionally, women networks collect and sell much larger quantities of milk during the rainy season despite their limited convenience at those times. During the recent lengthy drought Waaiel company admittedly had problems in sourcing milk and shifted its operations to other businesses. Initially they ventured into sale of staples and water to herding households; after some time they had to stop as they had huge pending credits, and no more running finances<sup>56</sup>.

Moreover two other man-managed companies are operational in Puntland. Their specificity is that they are organized around a central processing unit: one, Mandeeg, is based in Qardho and the other, Wanaag, in Garowe. Similar plants have been reported in Somaliland and NE Kenya. Up to 2007, the processing consisted of a partial pasteurization at about 70°C, which enables longer shelf life of the fresh camel milk. Milk processed in this way in the plants is then transported to and sold in large urban environments. They have their own way to supply milk through privately owned herds or contracts with herders in nearby areas to the town. When milk quantities supplied in these ways do not suffice, they might purchase milk directly at the market from women networks.

Mandeeg was established in the town of Qardho through the initiative of the Italian NGO UNA/Africa 70 with funds from the EC food security budgetline; despite its initial community-based approach it is now managed by a single person, Mohamed Nuur, who is also the manager of the Qardho Hospital. Wanaag results from the effort of an entrepreneurial family that has invested its capitals in purchasing and establishing the hardware (the processing plant) in Garowe. It has not been possible to properly assess the effective capacity of these companies as these started operations at the onset of the recent lengthy drought; the plants capacity approximates nevertheless 500 lt/day. An interesting potential no doubt exists to establish export of processed milk to Arab countries. Such trade could supplement those already in place related to *qaat* and slaughtered meat, which are frequently airlifted from main Puntland cities to Arab states.

As strikingly reported from Wanaag managers<sup>57</sup>, the major constraint to their business is on the consumption side. He stated that it was better for them to sell their milk in Somaliland cities (Buraq, mainly, but also Hargheisa at times) rather than in Puntland. As the story goes, in Boosaso they suffer from others' competition but, most importantly, they have to bear some form of 'discrimination'; as to Abdirakim local people prefer not to purchase milk 'made in Garowe', which is an area whose reigning sub-clan is in the minority in Boosaso (the Issa Mohamud). For the same reasons they have even fewer chances of selling their products in Galckayio. Their belonging to a specific group does not have any importance in Somaliland cities, where the reigning group is a different one. What is certain is that by the time of the VSF survey Wanaag had more sale problems than Mandeeg, despite very similar pricing and quality.

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<sup>56</sup> Interview with Ahmed, from Waaiel.

<sup>57</sup> Abdi Rashid and Abdi Rakim.

These different supply chains are to a large extent complementary rather than in competition. Different systems have stimulated institutional and technical improvements at different levels of the CMM chain, so in one way or another have all contributed to development of the sector. Due to the high demand for CM in urban environments, the big challenge is in fact to collect and convey as much CM as possible throughout the year. In this sense men and women networks in the rural areas have enough room to opt for collaboration rather than competition. Women-led networks mainly serve inland and closer urban areas (such as Qardho and Garowe, but also Boosaso), while men-led enterprise concentrate on Boosaso, which represents an important outlet due to its booming port economy and the lack of milk production in its desert surroundings. Milk processors mainly sell their milk in large urban settings and think about possible export opportunities.

This complementarity is clearly expressed by the evolving relationships between Waaiel and women CMM networks. Initially Waaiel people and cars were utilised by some women networks to bring milk from the bush to the town of Qardho. They then decided to set up their own business and source milk on their own. They have nevertheless kept good relationships with the women CMM networks and often purchase milk from them when they are unable to source enough milk through contractual arrangements. Women have also gained from this relationship, not only for the initial servicing but from the period purchase of their milk. It is thanks to Waaiel that women CMM networks centred in Qardho have themselves started to approach and supply milk to Boosaso markets, while initially they only focused on Qardho consumers. Accessing Boosaso has represented a major trigger in the region to the development of the CMM sector, given the number of people and quantity of money that circulate in that city.

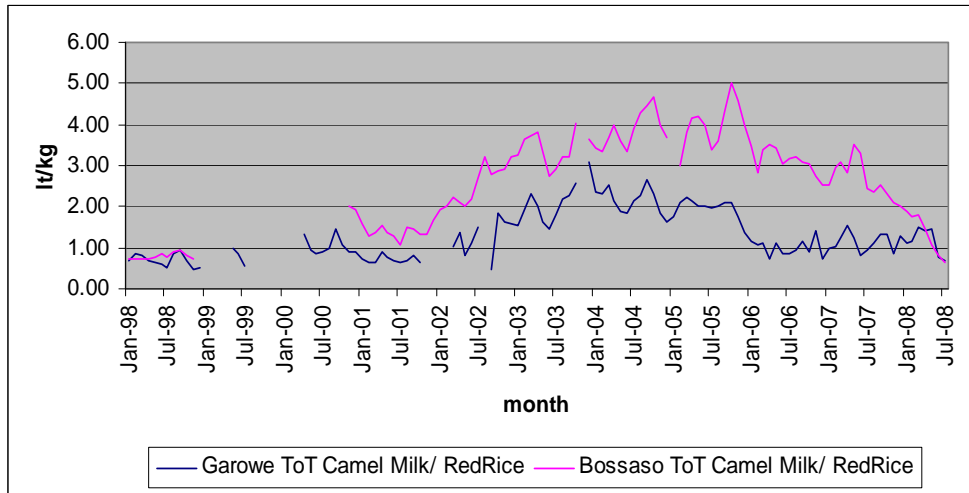
## **ASSESSING PASTORAL MARKETS**

Data from UNA milk (2001 - 2003) field surveys in Qardho has been compared with databases produced by FSAU from 2001 to 2007 for the markets of Boosaso and Garowe.

Comprehensive analysis and comparison of market data is made difficult, by, amongst others, three main factors:

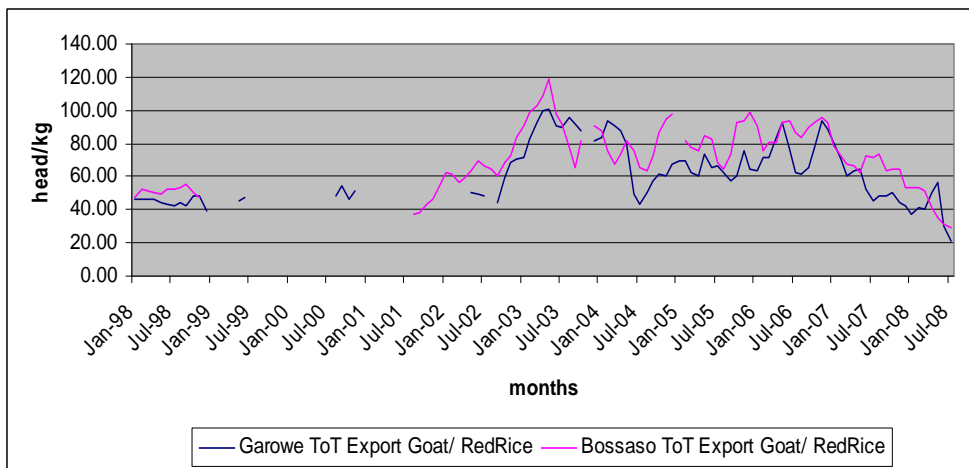
- 1) Strong climatic variability makes it difficult to compare one month/season to another on an interannual basis and also from one place to another. Rains might start earlier in one area, thus lowering milk prices, while surrounding areas are still dry;
- 2) Each market shed has specific reference production and supply areas, which might suffer at times from diverse supply problems. Areas surrounding Boosaso are too dry to produce milk, and thus Boosaso's high demand is satisfied by milk coming from different areas, often very remote one to another; price in Boosaso could thus vary from one day to another for a number of uncontrollable reasons.
- 3) Not only do clouds and animals move, but also people. Internal seasonal transhumance is a traditional pattern in Puntland, since living conditions in Boosaso becomes unbearable during the hot and windy season in Xagaa. Most family members tend to move to inland areas, especially Qardho. Better access to quality milk is also a reason for these moves, which indeed further complicate comprehensive comparison between different markets data.

In addition, a fair analysis of market trends in such variable and dynamic environments would necessitate data availability for extended periods. A proper analysis of market dynamics requires at least data spanning decades for comparative purposes – which cannot be the case for the CMM under analysis, which started only recently. Some major indications have nevertheless been grasped from available data, and an overall evolution in the CMM system has been depicted accordingly. While in the early years milk supply was quite irregular and fluctuations were high from one week to another, nowadays traders and consumers report that supply still changes according to rainfall patterns, but fluctuating trends have become more regular, despite the difficult times this marketing has gone through during the 2001-2004 drought.



**Figure 6.15 Terms of Trade camel milk to red rice, Puntland - 1998-2008**

Source: FSAU, 2008; UNA, 2003



**Figure 6.16 Terms of Trade export goat to red rice, Puntland - 1998-2008**

Source: FSAU, 2008; UNA, 2003

Overall, the data from the UNA surveys is consistent with that of FSAU; direct correlation is difficult as FSAU only started official data collection for camel milk in

Boosaso by the end of 2000, whereas UNA projects were able to trace data from Waaiel company from mid 1999 to about mid 2001 and other small time windows in 2006. Nevertheless trend comparisons indicate consistent similarities, both with Boosaso and Garowe markets. The figures considered refer to retail prices in urban markets, thus they have limited reference to what pastoral household effectively face in bush markets. This is also a main reason why figures are generally higher for Boosaso. With these elements in mind, a tentative analysis of the terms of trade characterising local pastoral products vis-à-vis main imported staples is introduced (see Figures above).

The sale of livestock products is a vital strategy for pastoral household to access increasingly important imported staples. Dietary diversification is an important strategy to improve overall nutritional standards (FSAU, 2007). Indeed, variations in the terms of trade characterising these exchanges occur at different scales and seem to be influenced by a number of factors over which herders have limited control, such as droughts or export bans. In the span of the assessed decade, two main elements that can be grasped are 1) the relative similarity of the trends characterising TOTs involving smallstock and camel milk, and 2) the high impact drought has had on both. What is of interest for our analysis is precisely the fact that camel milk can be thus associated as a commodity with an export level value, despite it is commercialised in local markets.





## Chapter 7 – MILK AND MONEY

Despite the rich body of scientific data attesting to pastoralists' rationality and recognizing their productive strategies as an effective adaptation to difficult and often hostile biophysical and political environments, much contemporary thinking about pastoral developments is still informed more by myths than facts (Horowitz and Jokwar, 1992:50). Among the most prominent of the ill-stated assumptions about pastoral production systems stands Hardin's 'tragedy of the commons' prediction, which is definitely opposite to what has been assessed for Somali rangelands, where neither the rangelands are open-access resources, nor livestock is an individually-owned asset. A set of rules and roles exists to govern pastoral resource management.

An in-depth assessment of the mechanisms governing the ways people mobilize resources, convert them into products and use these products reveals the rather complex and sophisticated existing institutional environment. This is of particular interest as it has implications for the sustainability of market integration of this pastoral society – a critical issue for pastoral groups all over the world. The commercialization of milk and dairy products is treated here as a further step into the process of incorporation of pastoral economies into markets, and exposure to the rules governing market developments (price formation, transaction costs, etc...). This chapter analyses the interactions between the different levels of rights and claims that characterize the access, control and utilization of pastoral resources in the Somali pastoral setting. This analysis paves the way to understand the implications of the institutional reshaping which is reflected and generated by evolving patterns of camel milk marketing vis-à-vis patterns of sustainable development.

The relationships between pastoralists and livestock involve a biological dimension which translates into social dynamics (*ibidem*). The physiological necessities and the productive potential of camels and smallstock imply certain levels of differentiation as well as specialisation in their management. Roles and responsibilities are shaped in pastoral societies along gender and age lines, which reflect the institutional mechanisms regulating the control of these animals and the use of their products (Dahl, 1987). The clan dimension provides a regulatory framework for the management and control over pastoral resources, setting the scene for men and women to play distinct social and economic roles that are complementary.

In general two main domains define camel milk:

- 1) The resource dimension enabling its production – rangeland and herd – which are controlled by clan-related mechanisms and as such managed by men, whose corporate identity is strong;
- 2) The social network dimension facilitating milk commercialization; these networks are transversal to clan boundaries and are managed by women who are in control of milk as a commodity.

### **Camel as an asset**

Amongst Somali pastoralists livestock represents both the means of production and the basis of wealth and prestige; different animals contribute differently to household subsistence in the short and long terms (Talle, 1988). Camels belong to clansmen,

recognised as members of larger corporate units; they are seen as part of the general claims of a *diya* paying group, and as such their ownership rights are restricted: camels belong to men, not women, with group rights prevailing over individual ones (Horowitz and Jokwar, 1992; Samatar, 1994; Farah, 1994; Warsame, 1996). Smallstock on the other hand are conceived as animals owned and controlled by the household, who has absolute rights over them. This can also be noticed in the different branding of the animals. All camels of a particular patrilineal kinship group are in some senses regarded as common property and marked with one single brand (Hussein Mohamed Ali, 1984; Farah, 1994).

Camels are an important factor in shaping the institutional environment, representing the most direct link of individual pastoralists to their clan grouping and as such are the interface between the individual and the collective dimensions. Somalis not only live upon camels, but their life is defined in camel standards, in a society that is governed by a 'camel ideology' (Meeker (1989). Wealth in Somali terms (*hoolo*) is based on livestock ownership, traditionally camels and horses; similarly different dimensions of the *xeer* institutional arrangements refer to camels as the measure of things. In Somali poems, songs and riddles, camels are compared to the most beautiful women, the most precious jewels and the finest weapons (Abokor, 1987). To raise camels on Somali rangelands one needs good technical knowledge and skills, as well as important socio-political investments and capacities. Camel ownership thus represents, in such context, a prime indicator of wealth, in material and non-material terms.

The higher the number of camels you have, the more your opinion within the council will be relevant, as these indicate your proven skills and power. Through compensation and dowry mechanisms, camels enable addressing wrongdoings but can also serve to forge and strengthen political alliances. Somali marriage and fighting are inter-related in as much as those units which exhibit the greatest degree of internal cohesion in fighting also show the greatest degree of exogamy (Lewis, 1955:112). Holding camels is central to mechanisms regulating conflict resolution and alliance building; the *xeer* demonstrates the critical links between social and material wealth, and the ways one translates into the other. It also shows the limited claiming capacity of lower ranking groups and the relative position of women within the clan system.

The gender dimension is deeply embedded in the wider institutional set up, with the dual role of animals reflected in the sexual division of labour and the entitlements to and control over livestock as assets (Joeke and Pointing, 1991). Women's rights, roles and responsibilities over livestock differ consistently from those of their male mates, and their social networks are transversal to those based on clan affiliation pertinent to men. Camels are the main clan corporate asset and the most direct link of individual pastoralists to their clan. As expressed during the survey, individuals own them, but they constitute part of the joint stock-wealth handed down the community of clansmen; they are seen as joint stock-wealth and part of the general claims of a *diya* paying group, and as such their ownership rights are restricted, as group rights prevail over individual ones (Lewis, 1961; Samatar, 1994). A man has over his camels primary but not absolute ownership rights. This is also the reason why the circulation of camels (and milk) between and among different groups is crucial. Camels continuously move in and out of individual herds and is regulated by social institutions such as heritage, bride wealth but also by blood compensation and restocking. All these pertain to the higher level of the clan sphere/organisation. Apart from the relevance in reviving



genetic diversity within the herd and thus decreasing the risk of inbreeding, these exchanges embody the cementing of important political ties at inter-group level. Society is governed by a 'camel ideology', and camels belong to clansmen that are recognised as members of larger corporate units (Horowitz and Jokwar, 1992). Somali define themselves as 'camel people' in order to symbolise the symbiotic relationship between them and their camels.

### **Milk as a Use Value**

As assessed, herd management and production of camel milk is a highly sophisticated system hinging on human as well as social assets in order to make the best use of a limited and variable natural resource base. Important degrees of circulation of labour, camels and milk within the extended family are important features of such a system. Figures from the UNA survey attest to the relevance of lactating camels and their milk held in existing social support systems amongst members of a kin group - as shown by the important circulation of camels (tables 6.11 and 6.12) and their milk (table 6.15). 24.5% of herded camels are derived from either the father or some other relative and significantly most of these are females. 25% of the yielded milk is daily handed to members of the extended family. Camel milk holds thus an important social dimension, as if it was not commercialised that same milk would circulate within the extended family/ kin group, who then retain some claims on its utilization.

Continuous redistribution of camels and labour represent a key strategy to tackle the risky nature of the environment, while also maximizing utilization of existing resources (Elmi, 1989). This information is backed by the data gathered through the VSF 2006 field survey (n=45), where most herds diverged only to a limited extent from the average consistency, and no direct relationship could be established between the age of a herder and the size of his herd consistency. Lineage redistribution or other forms of collective circulation are supplemented with systems of individual loans of camels. The herd which is managed by one household typically belongs to a variety of owners (Hussein Mohamed Ali, 1984:16; Dahl, 1979). Within this framework each camel herd is likely to have a specific set of rights and claims within the larger clan frame.

In this framework a number of different options to utilize milk are possible:

- Milk can be used for the calves, in order to spur their health and growth. This strategy can apply in a variety of conditions, often aimed at increasing the herd size (e.g. restocking, trade, dowry formation, etc...);
- Milk can be used to feed the pastoral household members, either as a staple or for specific purposes (e.g. camel milk is also used as a treatment for sick people);
- Milk can be handed out to members of the larger family or given as a gift to (urban) relatives, so to strengthen existing ties and safety nets, contributing to enhance the household capacity for requesting support at times of need;
- Milk can be given to herders to enhance their body conditions and as an incentive for their labour activities;
- Milk can be directly marketed, either fresh, sour or processed into ghee so to purchase imported commodities or to pay back outstanding debts contracted during harsh times;
- Milk can be also marketed to purchase inputs important for camel production, such as water or veterinary materials.

These diverse uses intertwine and compete depending on the specific household (i.e. stage in the development cycle, labour availability), location (i.e. available range resources), time (i.e. season), ranking (i.e. relative wealth) and other factors.

Milk production and utilization are thus deeply embedded in the institutional environment governing Somali pastoralism. Milk results from the mobilization of natural resources whose control is in the hands of men and their access regulated through clan-related mechanisms. Camel herd management is a men's task, up to its milking, a critical step in controlling the milk amount devoted to the reproduction of the herd. Once milk is extracted from the animal, its control goes nevertheless under the household woman, the 'milk manager' who is in charge of the reproduction of the household (Dahl, 1979).

### **Milk as an Exchange Value**

When it comes to marketing, a set of important distinctive elements characterises commodities generated through the management of flocks and herds, namely camel milk and smallstock. While both commodities contribute to the market integration of the pastoral economy, the mechanisms behind the trading of these products differ substantially:

1. In the first place, milk has always been produced for internal consumption; only limited seasonal surpluses were processed and marketed; meat is seldom utilized for direct consumption in pastoral households.
2. Secondly, smallstock is often sold at specific peak periods, either for direct cash needs that cannot be postponed or for good price conditions (e.g. the *mowsin* period leading to Haj) – thus with a seasonal marketing pattern. Camel milk is marketed throughout the year, representing a more continuous source of income.
3. Thirdly, camel milk remains within the region to satisfy the demand of local, urban dwellers, while smallstock enters into international trade networks and serves the demand of Haj pilgrims in Saudi Arabia.
4. Fourth, it takes some months before the small ruminants cash sales are paid out to the pastoral household, usually after all transactions have been finalized; cash from camel milk arrives the day after its sale, thus with higher degrees of timing and reliability.
5. Fifth, the income generated through livestock trade ends up in the hands of the men, while women usually retain most of their earnings generated through milk sales, as it is the case for most Sub-Saharan Africa countries as well as for other Islamic societies (Green and Jamal, 1987). This often appears to represent an important part of the overall household income which is likely to be used in large part for the benefit of children and of household nutrition.

Products from large and small ruminants contribute differently to the pastoral household economy and food security. Trading milk and smallstock are quite different enterprises and so are the governance structures enabling and regulating them. They have in common, however, that the achievement of a critical mass of the commoditised product is critical to enhance economy of scale and lower transport costs. In addition, both require establishing and maintaining security arrangements that ensure safe circulation of the products through territories controlled by different groups. The livestock corridors that are shaped through lineage divides have expanded through camel milk market, and include now women-controlled social networks. This is largely

due to Somali women's 'ambiguous' clan affiliation which enable them to establish and maintain alternative forms of association based on solidarity and reciprocal support mechanisms that go beyond the family or the kin group (UNIFEM, 1998).

Control of milk starts at household level. Men are reportedly bringing milk to the primary collector only when camels are brought to distant pastures by young men (refer to table 6.9). These are the times milk is largely directly bartered for main consumption items such as tea, sugar and grains with cash hardly being part of the transaction. Money generated through milk sale is a women's domain. However women's control over milk money is not limited to the household level, as the whole camel milk marketing chain is under their management. Indeed the disaggregated nature of the milk market, the relative durability of soured camel milk, and the low initial investment capital, facilitate the participation of distant pastoral women in the marketing, allowing them a degree of cash autonomy (Little, 1989). This is in contrast to the domains pertaining to the production of camel milk, which are socially regulated through the clan organisational structure.

On the other hand, it is men who control the trade in smallstock which in turn is the result of women herding activities. A transversal gender complementarity can be assessed between the management of flocks and herds and the marketing of their primary products. The shift from the productive to the commercial sphere implies a change in gender responsibilities within the household: men trade smallstocks, whose production is largely controlled by women, while women market the milk of camels produced by men. This is summarised in table 7.1 and graphically represented in figure 7.1.

**Table 7.1 Management and economic control of diverse pastoral resources**

Camel milk		Lambs and kids
Clan grouping	<i>Asset control</i>	Household
Men	<i>Production management</i>	Women
Women	<i>Product control</i>	Men
Women	<i>Marketing management</i>	Men

Exceptions to this rule obviously apply, such as women trading livestock in Somaliland during the 1990s (Warsame, 1996) and in the Ethiopian Somali region more recently (Umar and Baulch, 2007). Indeed women play a role as 'middlemen' in livestock trading when the scale of conflict and related insecurity in the region restrain men's mobility to the territory controlled by his group. In such situations women utilize their 'double clan' identity as a factor facilitating access and mobility. Conversely, the difficulties faced by men-managed enterprises collecting and marketing camel milk in Puntland have also been assessed. Indeed these exceptions tend to reinforce the rule, which defines distinct, complementary and inverse roles for Somali pastoral men and women in the productive and commercial spheres.

## Gender and Clan

Camel represents, in the Somali pastoral society, the means of reproduction for the herd (and thus the clan) as well as for the household. The dual meaning and role of camel within the local society and the contribution of its milk to the household economy generate a conflict of interests between the individual and the corporate dimensions and between men and women's domains. This explains the limitations concerning women control over camels embedded in the local institutional setting. Their ambiguous kinship ties put women de-facto outside the corporate dimension, excluding them from the associated resource control and inheritance rights.

While men herd and control camels and are in charge of their milking, women hold control of the utilisation of milk within the household. In this picture the conflict between men and women is inevitable because women give first priority to satisfying the needs of their children, while men put the needs of calves – and by implication the herd and the interest of clan – first (Talle, 1988; Joeekes and Pointing, 1991). The commoditization of camel milk has generated a new arena for these conflicting interests. A herder in the Karkaar zone expressed it neatly by saying that *'marketing of camel milk is good for people, but is bad for the herd'*. Similar statements have also been reported by Hussein (1984) and Warsame (1996) referring to the camel milk commercialisation in southern Somalia. Reports from the field and from existing literature reveal that before it became a popular activity there was a certain shame associated with the sale of camel milk, and many people regarded this as causing evil to their stock, especially if it was undertaken by women (ibid.:16). As of today the sale of camel milk is still perceived as a cultural taboo in other areas of the Horn of Africa, such as in Afar and Tigray areas in NE Ethiopia.

From a developmental perspective, the commoditization of camel milk is the result of interacting layers of different rights and bundles of claims, from those governing access to range resources amongst different corporate groups, to those allocating camel control within a group, and from those defining use rights of herd products within the household to the mechanisms regulating their transactions. The milk that finally finds its way through local networks is the outcome of negotiations among alternative uses and conflicting interests, which take place between a range of social actors for whom camel related products are essential livelihood elements. These diverse uses intertwine and compete among Somali pastoralists to different extents, depending on the specific household (i.e. stage in the development cycle, labour availability), location (i.e. available range resources), time (i.e. season), ranking (i.e. relative wealth) and other factors.

Marketing of camel milk represents a further step in the larger process concerning the market integration of the Somali pastoral economy. This process hinges on the complementarity between gender-based roles and responsibilities, as men trade what is produced under women's responsibility, and women commercialise the primary product of clansmen.

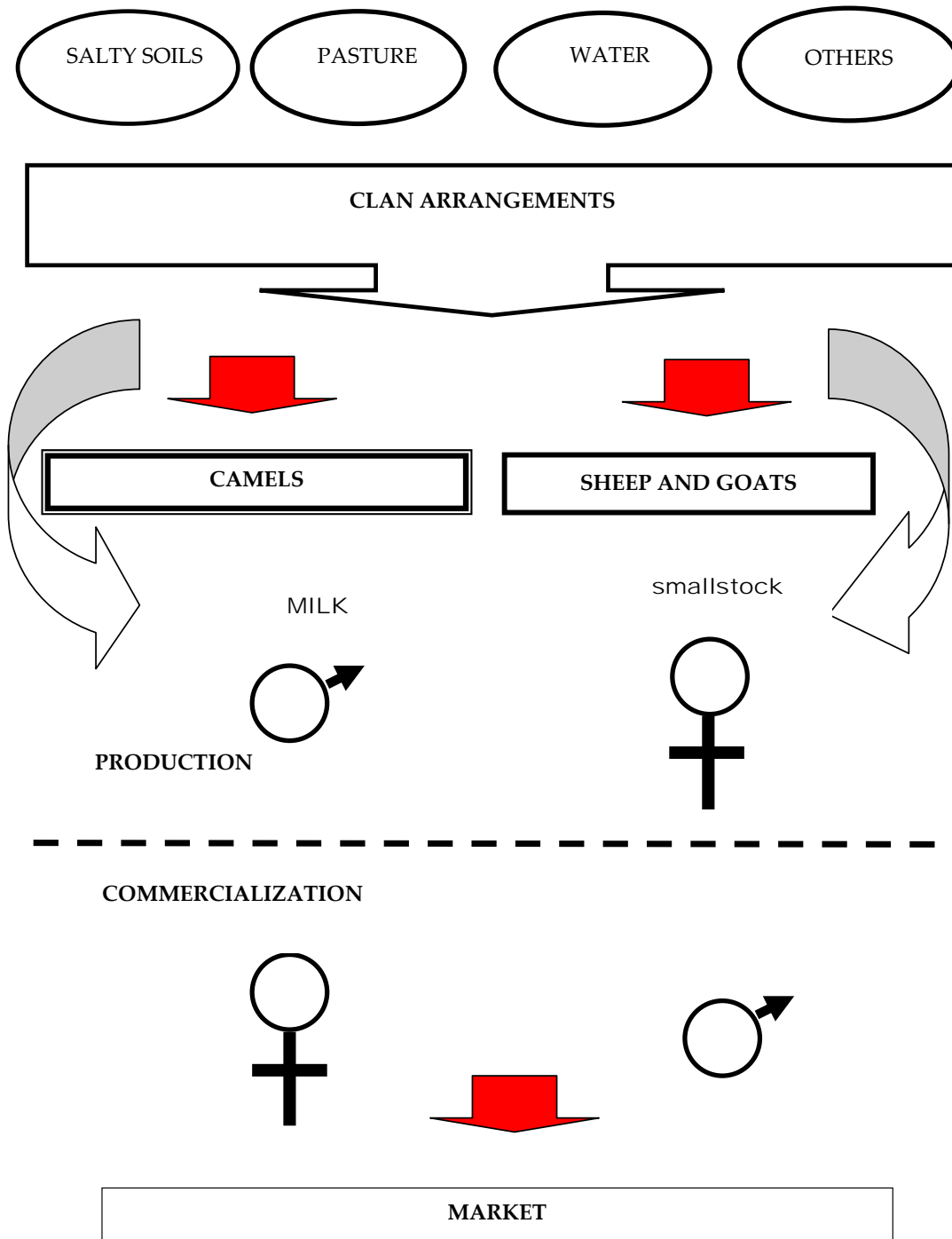
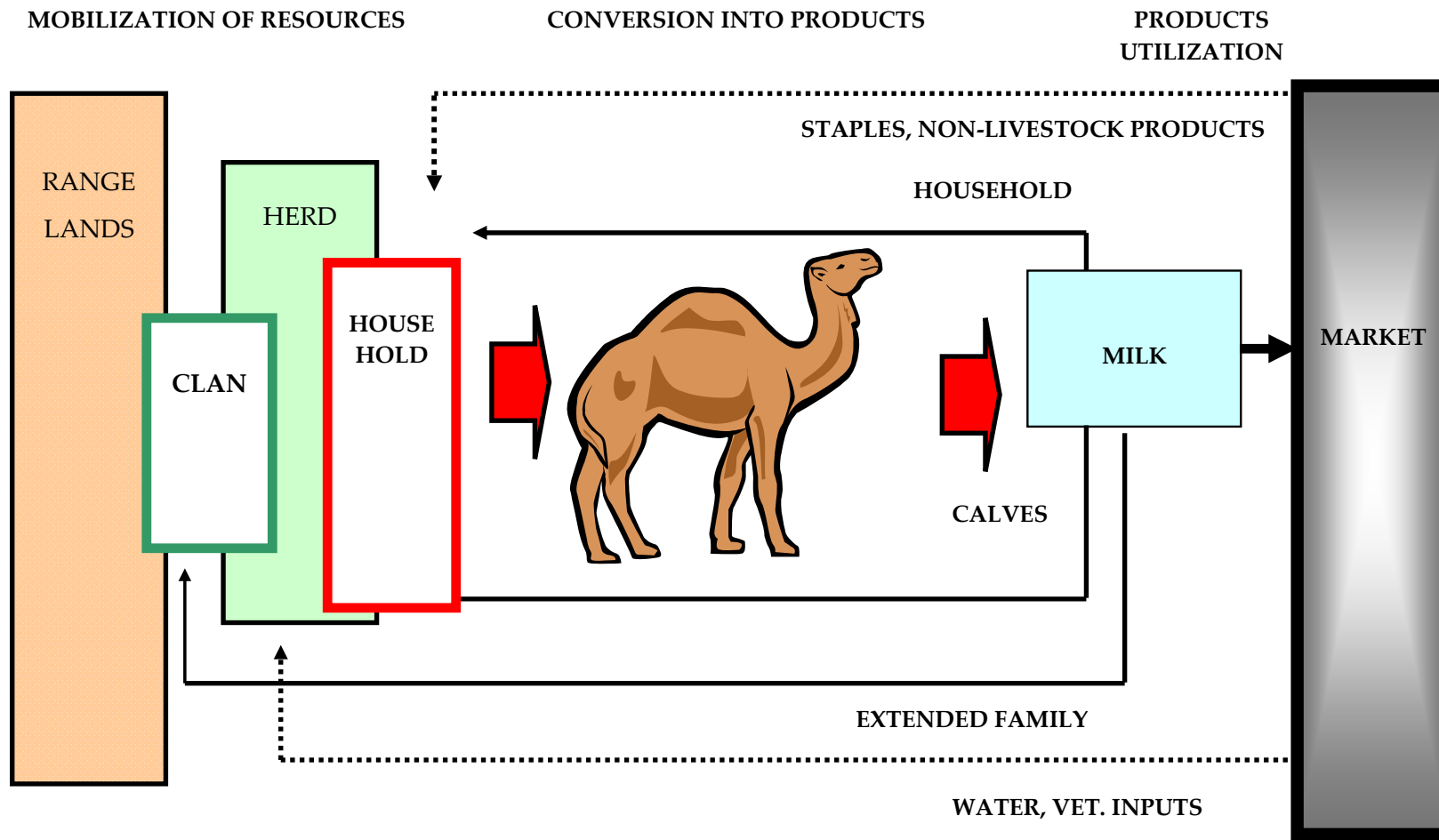


Figure 7.1 Sketch of control system for camels and small ruminants products

This set up reflects the importance of negotiations and agreements held within this society and the related centrality of the mechanisms governing its developments. Men and women in this picture support and defend their own interests as individuals, but also embody societal roles, in that men lobby on behalf of the community of their clansmen, while women advocate for the members of the household. The sharing of responsibility between, on the one hand, who mobilizes resources and converts them into final products and, on the other hand, who brings the products to the market, represents an important mechanism protecting productive resources from dynamics merely driven by market interests, thus enhancing their social relevance.

As highlighted in the research initially men participated in the marketing of CM, but they have then been sidelined. The reason behind this has an official and a more grounded version. Hay Ganni (cfr. before) during an interview expressed it as follows: *men do more important things, such as dealing with politics and trade; milk marketing is a simple business and men are not interested in the petty money it generates.* The less official but more inspiring version reports that men face problems in accessing the milk of camel herds belonging to clans different from their own.

As already noted by Samatar (1994) use rights over camel products such as milk and meat pertain to all members of a *diyaa* paying group. Not only is the sale of camel stock a clan matter, but even the utilization of its milk is so. Despite the fact that milk as a commodity is under women's control, it is nevertheless not easily acceptable that milk from camels of a clan is used to generate a profit for another clan, unless proper arrangements have been agreed upon. In order for men to purchase and sell milk from camels belonging to another clan, negotiations should be undertaken between the milk trader (from say clan W) and representatives of the camels' clans (saying X, Y, Z), and agreements arranged accordingly. This happens to an extent, as seen for the Waaiel and Wanaag companies in the Puntland context, but it proves to be a much less effective system than that operated by women. The fluidity of the system, the scattered nature of grazing and the mobility of herds would in fact imply that negotiations are continuously undertaken and re-arranged between the trading men and representatives from the various clans and groups that happen to graze in the milk collection areas from time to time.



**Figure 7.2 The relationships between the different domains involved in camel milk marketing**

Figure 7.2 above provides an overview of the different social dimensions embedding pastoral resource mobilization, their conversion into products and the control over the latter.

In order to keep transport costs low and overall market access efficient a critical mass of milk needs to be collected daily; when collection is being done by men the transaction costs are much higher compared to those for women. Women's capacity to diminish these costs derives from their 'ambiguity', or 'neutrality,' vis-à-vis the clan organisational structure. Admittedly, they face no problem in accessing the milk of herds belonging to different clans as their own clan identity is not a strongly, defined one. The arrangements they have to set are thus purely commercial ones (i.e. the price of purchase, forms of payment, options for credit), and do not encompass a political dimension.

On the other hand herders prefer to sell their milk through women's social networks as these involve a number of associated services, including the opportunity to directly purchase staples, the flow of information and the credit arrangements - which all represents important livelihood factors. This arrangement is of particular importance for local herders, as the ability to call for help in hard times to minimize livelihood risks represents a paramount concern for pastoralists all over.

Pastoralism is a form of production where male and female contributions are intertwined, and a mere distinction between a domestic domain controlled by women versus a more public one dominated by men is fruitless in understanding the intricacies of Somali pastoral resource management (Rosaldo and Lamphere, 1974; Dahl, 1987 and Talle, 1988 for the Maasai herders). This relevance of gendered roles in shaping rural livelihood strategies in an environment that is continuously reshaped by the wider family, community and extra-community connections has been assessed also for other environments (Richards, 1989; Berry, 1993; Fairhead and Leach, 2005). These negotiations, which underpin milk marketing, represent an important factor when analyzing the market integration of an economy that critically relies on the access to and quality of the natural resource base.

The large presence of Midgaan in the transport companies associated to CMM is also embedded in a social context, with resultant repercussion, which derives from the institutional environment that characterises the Somali society. This can be explained by the relevance of urban-based livelihoods for occupational castes and the limits the Midgaan face in undertaking a pastoral livelihood. Due to their social status Midgaan do not have the capacity to build up the networks needed to access the extensive pastoral resources and the social capital that make camel pastoralism viable and sustainable in the region. As such, Midgaan people might be wealthy in material terms, but enjoy no direct access to camels. To cope with their condition Midgaan, much like other minority groups, have undertaken a mostly urban lifestyle and found their specific economic niches. Many Midgaan have reinvested their wealth in pick-up cars in order to earn their living. This explains to some extent their capacity and interest in generating a livelihood through transport companies, with which they are well involved.



Due to their longer dependence on diverse income-generating activities to sustain their livelihoods, minority people are also better acquainted with marketing and especially with basic accountability, which are important skills they contribute to the CMM. Scott (1976), Long (1977) and Granovetter (1983) have looked into the critical contributions of minority groups in economic development due to their interface role between main groups. This occurs as a result of, on the one hand, their specialisation, and on the other, the 'strength of their weak ties'<sup>58</sup>(ibidem). Even more, by having no direct access to camels, Midgaan power within the CMM remains limited, as they cannot source milk on their own and their capacity to negotiate and to enforce their property rights in the pastoral context is negligible. The Waaiel experience - where drivers once hired by the women network have set up their independent company managed by men - teaches that power relations in the camel milk marketing between women and men belonging to the Majerteen ruling group are a contentious issue. While women's social position facilitates collection and purchase of milk, men control the technological side of this trade, through ownership and management of transport cars.

As reported in other cases, where pastoral dairy commercialisation shifted to men's control soon after its inception, as a result of the income generated becoming of increasing interest within the local economy (Waters-Bayer, 1985; Talle, 1988), a risk exists for women to lose their control of this trade in favour of powerful men. Choosing to engage with transport companies run by Midgaan people is thus a rationale and conscious choice for milk women to preserve their control of the network. In a virtual ranking, the social power displayed by men belonging to minority, occupational castes within the Somali clan organisation is lower than those of Majerteen women, who can still rely on the support of their clan groups in case of disputes.

Overall, given some social groups' apparent weakness vis-à-vis the existing institutional frame, women and occupational castes have found room to manoeuvre, and seem indeed able to exploit the added value of their socio-political marginalisation. Their weak attachment to the clan organisational structure provides them with a specific social identity which enables them to take responsibilities and play economic roles which are only accessible to dominant Majerteen clansmen to a limited extent, in spite of this lineage apparently set the rules.

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<sup>58</sup> Meaning that by being excluded from some roles, they acquire the capacity to perform specific functions within the local set up.



## Chapter 8 - MILKING DRYLANDS CONCLUSIONS

The Somali situation is often described as a hopeless story, a doomed case, or a black hole in development literature. While these features might apply to some extent in places there are areas where socio-economic conditions have improved when compared to the times a central government existed. How have areas of Somalia been able to re-establish monetary and market systems, promote effective forms of local governance and improve security and livelihood conditions for many people in the current stateless environment?

To address this question we have to go behind the headlines of official reporting from Somalia and explore what is really taking place on the ground, in terms of understanding the livelihood strategies people adopt, what architecture and engineering these require and how agents, resources and social relations are related. From this perspective this work has addressed the functioning of the 'real economy' and the conceptualisation of markets as social constructions. In particular the arrangements and forms of organisation that are involved in pastoral milk marketing have been looked at, as these represent an increasingly important activity for local people. This has been done through a comprehensive analysis of the human skills and social dynamics which enable the production and marketing of camel milk - already extraordinary activities under the extremely harsh agro-ecological and socio-political dynamics that characterise this part of the world.

In the wake of a renewed interest in pastoral societies this work contributes to disentangling the social and economic dimensions of pastoral resource management, which are known to be less well understood than their ecological dynamics. The World Initiative for Sustainable Pastoralism launched by IUCN and UN agencies in 2005 is testimony to the renewed interest in pastoral areas.

### THE MYTHS OF DEVELOPMENT

The development domain is typically embedded in mythological visions and mostly irreversibly informed by virtual images linking unknown realities with unattainable objectives (Scott, 1998; van der Ploeg, 2003). The remoter and the less known the entity 'to be developed', the more sophisticated the architecture that was needed to bridge the divide between the myth and the reality. Remote pastoral populations have thus traditionally evoked a plethora of informing mythologies through time (Sandford, 1983; Horowitz and Jokwar, 1992; Swift, 2004). This tradition refers back to the image of the nomad-warrior, Genghis Khan sweeping through Eurasia, and clashes across the Nile as pharaohs fought off invaders from the deserts to the West. This threatening image of pastoralists has persisted throughout history, and remains present even in today's newscasts of Somali, Afghan and Maghreb terrorists (Nori *et al.*, 2005).

Recent literature has either poeticised or dramatized the pastoral lifestyle, without really helping to understand it. Biased policy making has been further fuelled during the last century by the discourse of the 'cattle complex', introduced by Herskovits in

the 1920s, attesting to the supposed economic irrationality of pastoralists' behaviour. This myth was further reinforced by Hardin's analysis of herders pillaging their natural environments in a doomed 'tragedy of the commons'. Through these lenses pastoralists have contributed over time to fuel all the nightmares of modern development: desertification, famine, insecurity, violence and now insurgency. Outsiders and observers have almost inexorably pointed to the inability of pastoralists to adapt in a sustainable way. The distrust of existing pastoral institutions has been paralleled by the belief that modern science had discovered the technical solutions to the problems of pastoral areas (Sandford, 1983:18); pastoralists' backwardness was to undergo effective modernization processes. This has resulted today in many pastoral regions suffering from patterns of environmental degradation, food insecurity, migration and conflict.

Along these lines, a recent World Bank report states that there is little potential for commercializing milk production among pastoralists, especially those on communal lands (Walshe et al., 1991). Not surprisingly, investments were instead to target mixed and intensive dairy farmers, especially in peri-urban areas, the advantage being that control over their production inputs would be tighter as they are closer to markets. Ironically Walshe's report dates 1991, the same year the Siad Barre regime collapsed and camel milk marketing started evolving to become a major economic activity in the Somali region.

As is often the case, the biased analytical lens was instrumental in policy agendas interested in expropriating herders' most precious assets - livestock and land. In such a framework milk production and utilisation went unnoticed, in spite of them representing the main concern for most pastoralists. Without males in the portrait, milk was uninteresting, and thus unlikely to be portrayed (Kerven, 1987; Little, 1994).

## **PUNTLAND LIVELIHOODS**

Livelihood strategies in Puntland hinge on a multiplicity of diverse and interconnected activities, which draw on local, regional and international resources. Its strategic geographical position has facilitated the articulation of the local society into the wider global picture. The origins of the links with the external world originate in ancient times, with different trade patterns spanning from the Pharaoh's of ancient Egypt, to the Greek and Roman empires, to Arabian and Chinese societies. These exchanges have traditionally relied on a solid, supporting infrastructure involving insurance and credit systems (Gunn, 1990).

Migration to other regions has also contributed to the international exposure of the Somali society. Despite a relatively small total population, Somali communities are to be found throughout the world, from Quebec to the Eastern Cape, from Bristol to Sydney, to Jakarta, Geneva, Rome, Dubai and Moscow. Even in their migration patterns Somalis have maintained a form of 'transnational nomadism', tracking resources across the global (Horst, 2006). The extension and the functioning of these world wide webs are critical to the Somali economy, not only in terms of the financial remittance the Diaspora sends to the motherland, but also in terms of the economic opportunities, trade networks and socio-cultural transfers that result.

In more recent times, drawing from the global environment has taken the form of international aid assistance in its various dimensions. Longstanding geopolitics during

the Cold War provided the Somali government with a strategic asset which was used as leverage to receive support from different, and at times conflicting, sources. Lately, parts of Somalia have been converted into hubs of illegal trafficking, smuggling, kidnapping and piracy, alternative and indeed effective ways to draw resources from the wider society.

At a regional scale, livelihoods hinging on resources that are drawing from pastoral, coastal and urban environments that are embedded into one another through a web of interconnections that materialise at different spatial, time and functional scales (Brons, 2001). This economic multiplicity is based on the continuous mobility of people, resources and information; in such context restriction (of movement and of economic options) and limitation (to one occupation and to one place) is an invitation to disaster (Gunn, 1990:251).

Current livelihood patterns therefore result from continuous tensions, negotiations and arrangements amongst interests which might appear to be contradictory but are in fact interdependent. In the Somali pastoral resource management arena public, corporate and private interests complement each other, and existing group ties shows degrees of exclusivity but indeed provide for inclusive opportunities. What seems as an opportunistic behaviour in the short term reflects an in-depth understanding of surrounding ecological dynamics, as well as planning and skills that have been elaborated, re-moulded and continued through history. Without this long-standing web of relationships and arrangements embedding the different resources, there would be no option for short-term decision-making over opportunistic exploitation of range resources. Without this long-standing web of relationships and arrangements, there would be no option for short-term decision-making over opportunistic exploitation of range resources. Seasonal transhumance which might appear to be casual movements in search of patchy rains and pastures but in fact it necessitates preparatory arrangements and extensive discussions. In such a context concepts that appear to be dichotomies from an external perspective, are in fact continuously intertwined in the Somalis daily lives, and their dialectical relationship represents a major determinant to their livelihoods.

### **CAMEL MILK MARKETING**

Camel milk commercialisation plays nowadays an important role in local food security, providing a reliable income for most pastoralists, a critical employment option for marginal groups and enhanced access to a nutritious food for urban dwellers. Traditionally however, camel milk marketing was a taboo activity in the region. Its commoditization is related to the institutional reconfiguration that has taken place in Somalia following the failure of the state experience. This process has witnessed the forging of new social networks, transversal to those based on the clan organisational principle and centred on women, who have skilfully exploited their positioning within the clan setting. It is through these networks that camel milk is marketed today. An accurate analysis of the institutional reshaping related to camel milk commercialisation provides an important framework to understand societal change in NE Somalia. Based on the analysis in previous chapters, notably 6 and 7, three main domains stand out:

*a) What does Camel Milk Marketing represent within the local setting?*

Camel milk marketing represents but one further step in the wider process that sees the pastoral economy increasingly diversified and embedded in market dynamics. Such a process critically supports population and economic growth in East Africa and elsewhere with new products for consumption and for leisure, and a number of related services and facilities. An interest in this process goes hand in hand with a concern over the sustainability of its dynamics.

Within this framework the commercialisation of camel milk represents an innovative interface between Somali herders and the market, alternative and complementary to the long established livestock trade, and thus contributing to strengthening the overall pastoral economy, in terms of:

- 1) Seasonality - livestock trade works according to few seasonal peaks, corresponding to Islamic festivities, while income from camel milk is generated on more regular and continuous basis throughout the year;
- 2) Reliability – camel milk is mostly commercialised locally, whereas livestock export trade faces access and price volatility of the international market that exposes producers and traders to high degrees of risk, as the recent export bans have attested;
- 3) Empowerment – while livestock trade functions through and remunerates mostly men from main clan groupings, the employment and the income generated through camel milk marketing provides important opportunities for marginal population groups, particularly poorer herders, female-headed households and minority clans. For women the evolutions of CMM contribute significantly to enhancing their socio-economic profile.

Apart from the factors just mentioned, a number of further benefits characterise the importance of camel milk markets to many people that have been interviewed during the course of the study:

- 4) Access - the infrastructure developed to support milk commercialisation facilitates more generally the circulation and exchange of goods between the rural and urban environments, through the reverse supply of imported staples to pastoral households;
- 5) Connectedness - together with immediate material exchanges, the milk market infrastructure is critical for the constant flow of people, information and services between the different areas and the multiple livelihood systems;
- 6) Safety nets – women-controlled CMM networks are transversal to clan-based corridors and the support mechanisms they provide (i.e. credit and insurance schemes) represent an alternative to traditional safety nets, thus enhancing the overall local capacity to cope with difficult times.

Camel milk marketing thus evolves as a major set of resources and processes supporting the expansion or diversification of local livelihoods, so as to better cope with the variability and uncertainty characterising the region.

*b) What conditions have triggered Camel Milk Marketing evolution?*

The Horn of Africa can hardly be described as a stable region. The collapse of the Siad Barre regime in 1991 reflected and generated important societal changes. The failure of his regime to mediate amongst the interests and power of different groups eventually led to the breakdown of the centralised institutional structure and the idea of a Somali state altogether. This has no doubt represented a major driver of change and innovation, opening the way for different development trajectories, with different paces and patterns, in the diverse portions of the Somali ecosystem (Bailey, 1973; Brons, 2001). As Fairhead and Leach (2005) argue, when the state rolls back, more informal polities roll in and while civil unrest still rules in some parts of Somalia, in the north effective systems of local governance have been established, drawing from the traditional institutional environment, though rearranged and adapted to fit within and serve the current context.

The important contribution provided by northern-based rebel movements, such as Somali National Movement in Somaliland (largely drawn from the Issaq clan) and Somali Salvation Democratic Front in Puntland (mainly comprising Harti-Daarod people), in the defeat of Siad Barre, attests on the one hand to the attachment and the strength of these organisations within local societies, and on the other to the degree of discrimination and marginalisation these areas have suffered under the centralised Somali state. These explain to a large degree the resurgence and consolidation of effective forms of local governance in these areas following the breakdown of the statutory administrative and control systems.

In the southern part of the country the incapacity of competing leaders and groups to establish administrative structures and restore security conditions in the aftermath of the civil strife has generated over time a widespread climate of violence and unlawfulness that persists up to today. Reasons for this are probably linked to the group heterogeneity of that part of the country associated with the never ending competition over relevant economic assets such as fertile irrigated lands in the riverine region and the trade infrastructure of Mogadishu and Kisimayu. Furthermore the interventions of regional and larger international interests should not be underestimated.

The relatively secure environment and flourishing economies driven by expanded livestock export trade through Berbera and Boosaso ports (see figure 5.4) and the infrastructural developments such as roads, power plants and the construction of the Boosaso port (see chapter 5) have been major triggers of the migration pattern undertaken by thousands of Somali households from the south to the north of the country, provoking a huge and fast growth of urban environments and related demands. This process has been particularly visible in Puntland, where population has reportedly doubled in the last decade. Similar to many other societies, in Africa and elsewhere, a steady growth in population figures and the related expansion of demand from urban dwellers have represented a crucial factor in the evolution of rural markets and related re-arrangements in the control and utilisation of natural resources (Platteau, 2000). In Puntland, the involvement of nomadic women in milk marketing and petty trading and their direct access to cash is a major visible outcome of such processes (Warsame, 1996).

c) *What are the mechanisms governing Camel Milk Marketing?*

These dramatic socio-political events have contributed to re-moulding to a large extent the Somali institutional set up that Lewis described in the early 1960s: *Apparently in such context a person's security ultimately depends upon the strength and goodwill of his clansmen, (...) and the ethics of clanship are more important than those of prestige founded on (material) wealth, and honour more precious than profit (Lewis, 1962:384)*. The old clan-based structures - involving a community of producers whose economic means and social relations had been regulated by its name – have been weakened in their control over the division of labour and the age-based discipline. Elders are losing authority over young men, women are busy carving out new social and economic roles, and rangeland resources increasingly undergo forms of individualisation and commoditization (i.e. enclosures, *berkaad*) (Kapteijns, 1992).

According to Bauer and Yamey (1957 in Platteau, 2000:4) the traditional agnatic structure is an institution that has many advantages in one stage of economic achievement but which may later become a drag on economic development. The limitation of vertically integrated groups is that their size reduces the gains from trade and provides limited flexibility to adapt to changing circumstances over time, as attested by the 'rigidity' of trust, information and credit systems; these represent a source of resilience but also of weakness in rapidly adapting to and accommodating a highly dynamic environment (Umar and Baulch, 2007).

The mobility, scatteredness and variability of camel milk production together with the perishability of the products require highly flexible arrangements that are capable of ensuring that people who have no previous knowledge of one another, no kin relations and perhaps no prospect of future dealings - will co-operate in good faith (Ensminger, 1992). The actors participating in milk marketing share the same ideological orientation and the same set of incentives and sanctions. Camel milk networks hinge on relationships based on trust established through transactions, and have so evolved along lines that are transversal and alternative to those governing the customary organisational set up that regulates pastoral resource management and livestock trade in the region. Marketing of camel milk comes thus to represent an institutional innovation that both induces and reflects at the same time the societal dynamics that have recently evolved in the region.

These evolutions reveal empowering opportunities for Puntland women. Despite the gender-biased hierarchies of property relations and their absence from most visible power arenas, such as the *shiir* (see chapter 3), women nevertheless exercise considerable and increasing informal political influence in their communities and households with regard to marketing, transhumance routes, marriage, inheritance arrangements and the like. During the field survey it was reported that women are being considered the *fifth* Somali clan<sup>59</sup>, meaning a major organization that assembles a large number of people with a shared interest, with the capacity to control certain societal resources.

Overall, recent changes affecting the Somali society could be described through an illuminating metaphor proposed by Kapteijns (1992), where the Somali society is

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<sup>59</sup> The *fifth* rather than the seventh as the two southern agricultural clans, Digil and Rahanweyne, are often overlooked amongst Somali pastoral communities.



compared to the game of chess, and where changes have enlarged the chess board (access to global market, remittance, urban environments, etc.), reshaped the chess pieces (the herd, the clan, the state, women etc...) and remoulded the rules of the game (gender, labour division, trade, etc...). It is in this process that the mechanisms enabling and governing camel milk marketing have evolved.

## IMPLICATIONS

From a methodological perspective this thesis has proven the validity of exploring societal change through a focus on social actors and their practices combined with ample attention to the overall institutional picture. Such an approach seems effective in dismantling and overcoming the myths that undermine proper understanding of societal dynamics, and provides an informative perspective over the mechanisms a society develops in order to adapt to changing conditions.

In this framework livelihood strategies result from a series of negotiations and involve a range of actors, resources and relationships. The institutional environment governs this process, by critically shaping the dynamic relations between conditions of access to a resource and its utilisation (Berry, 1989; Scoones and Thompson, 1994). In turn institutions are themselves governed by the diverse actors, who reshape and reproduce them according to their own interests and capability. It is thus critical to not simply examine the objectives, perceptions, and projects of the various actors and their networks but also how these in turn are shaped and reshaped by their relationships (Ensminger, 1992; Long 2001; Hebinck and van der Ploeg, 1997).

This brings us to the three main analytical concepts that guided the research:

- 1) social embeddedness,
- 2) actors' capability,
- 3) the multi-facets of sustainability.

### *1) Social embeddedness*

Livelihoods do not develop or evolve in a vacuum. The process that has turned camel milk commercialisation from a cultural taboo in to an important economic enterprise attests to the social embeddedness of livelihood strategies and the involved actors, resources and institutions. Despite its conversion into a marketable good, camel milk remains produced through socially regulated, non-commoditised patterns of resource mobilisation and conversion. Furthermore, a clear distinction of social roles and responsibilities remains effective throughout the process that converts pastoral resources into saleable milk. Men are in control of the conversion process, while the control of milk use shifts to the women's domain. These arrangements are deeply embedded in social and political structures and institutions (de Alcantara, 1992; Fairhead and Leach, 2005; Breuer, 2007).

Through its newly acquired market dimension the contribution of camel milk to the household economy has changed, its meaning within the local society has been remoulded and its circulation now involves a much larger web of social actors. The milk that is sold every day is 'filtered' through a number of social interfaces, which attest to its social embeddedness. The actors involved in camel milk marketing are themselves socially constructed entities, members of organisations, groups or networks, and as such parts of extended webs of rights, duties, and responsibilities

(Berger and Luckmann, 1966; North, 1990; Ensminger, 1992; Gibson, 1999). As analysed, in Puntland it is hard to trace a sharp borderline between individual interests, and those of the belonging organization, group or network. People act as social actors that largely take into account the interests and the will of other players, thus resulting embedded and bounded in their economic action (Platteau, 2000).

Market construction, as a socially embedded process, takes different forms according to the specific societal context that generates it. Other ways that exist to commercialize camel milk in the Somali rangelands are extensively documented, in Herren (1990) and Little (1994) for southern Somalia, Mehari *et al.* (2006) for the Ethiopian Somali region (Ogaden), VetAid (2007) for Somaliland, and SNV (2008) for Northeast Kenya. The way camel milk market is developing in Puntland is specifically set to respond to local opportunities and constraints, while generating a number of social externalities through its transactions and associated services.

### **2) *Actors' capability***

The evolution of camel milk marketing shows that in an environment seemingly constrained by a poorly endowed natural resource base and by a well-structured institutional environment, room for manoeuvre can exist for the different social actors to contribute to shaping their livelihood strategies. Individuals, communities and societies tend in fact to keep relevant degrees of autonomy vis-à-vis embedding socio-cultural structures as part of a strategy aiming at enhancing the capacity to cope with, and adapt to, variable and shifting conditions.

This research has explored the way in which the Majerteen have received and adapted Islamic rules so as to fit within their specific conditions. Islam is important to Somalis as it provides a shared set of norms and rules but it is not the only institution people adhere to. In important domains such as marriage relationships, inheritance rights, centralised governance and credit mechanisms the dictates of the Khoran are reinterpreted and blended with institutional arrangements more tailored to the local context.

In a similar way the clan is not a rigid and exclusive organisational structure as it is often described (see for example Kapteijns, 1995). A deeper look into clan functioning shows that mechanisms exist to provide for degrees of attachment to people from other groupings; the case applies for the occupational castes, holding particular technical skills, but also for traders, carriers of capitals and market networks (Brons, 2001). The case of milk marketing by women is even more indicative; it is exactly their marginality from the clan corporate dimension that enables them to establish new entrepreneurial pathways.

### **3) *The multi-facetedness of sustainability***

While the institutional environment provides room for manoeuvre for the diverse set of social actors, and is itself exposed to change, the evolution of local livelihood strategies hinges on three main principles which seem critical to their sustainability in the long term. These pertain to the three dimensions of resource mobilization, conversion into products, and utilisation of the latter, including commercialisation.

**a) Expanding the livelihoods base**

Pastoralism represents the principal livelihood strategy for most households in Puntland, and it is characterized by important degrees of circulation of animals and of their products, flexible arrangements that enable the access to and utilisation of pastoral resources and the related continuous crafting of networks and relationships. The economy of most Puntland households is increasingly multi-based, in that pastoralism is being increasingly integrated and complemented by the important contributions provided by the coastal and the urban economies; altogether these form an intricate web of interconnected economic domains that are linked to one another at different spatial, time and functional scales.

The relevance of the regional and international dimensions in expanding the livelihood base of the local economy is also important - external trade, remittances, smuggling, international aid, piracy and other illegal traffic provide for diverse co-existing and closely intertwined economic activities. The evolution of camel milk marketing fits within this broader strategy as it helps diversifying the sources of income for pastoral households, provides for new employment opportunities and facilitates the overall circulation of goods, information and services in the region.

**b) Patterns of cooperation**

Facing a hostile environment characterised by a limited and variable natural resource base and unpredictable agro-ecological circumstances nearly always requires forms of cooperation. Although pastoral regions are often associated with degrees of insecurity and conflict, in fact important forms of co-operation and collaboration shape their livelihoods. Resources are reproduced and maintained within the group or through interrelations with other groups, livelihood risks are typically shared through socially regulated patterns and difficulties are overcome through strategic alliances, exchanges, credit and reciprocal support mechanisms. It is through the complex intertwining of material and social assets that Somalis have been able to inhabit such austere environments.

This is exemplified in the social mechanisms that govern access to and utilisation of pastoral resources and regulate their utilisation in a socialised way. Similarly collaborative patterns are critical in enabling the commercialisation of milk in the region. Both milk production and its marketing are characterised by important patterns of co-operation and inclusivity. Not only rain but also peace is needed to enable the flow of camel milk through the Somali society.

**c) Integration and distantiation with external environment**

Livelihood developments in Puntland, as elsewhere, have progressed through an increasingly complex integration of the pastoral production system with the wider, global society. The commoditization of camel milk represents a step into this trajectory. The institutional arrangements governing this process are critical in defining its sustainability. Camel milk marketing in Puntland results from the commercialisation of a good that is produced through complex non-commoditised / socially-regulated relationships, in what van der Ploeg defines as an *institutionalised distantiation* of farming from markets (2007:49).

The division of control between diverse social actors (men and women) and their degree of embeddedness (within the clan system) along the milk chain has important

implications, as this brings different perspectives and interests into the daily negotiations concerning milk utilisation. As assessed previously, this applies also for smallstock, whose export trade represents the other important market interface for local households.

The social regulations that underpin pastoral resource management and its interactions with markets must avoid falling into Hardin's 'tragedy of the commons' depiction; this is more likely to characterise the typical capitalist patterns or scenario, where the 'agriculture entrepreneur' controls the whole chain, with the rationale that he would reinvest the profit generated through conversion of capital (i.e. the income generated through the sale of milk from camels) into more means of production (i.e. camels), in order to realise more profits (van der Ploeg, 2008). Instead, among Somali pastoralists, the process of production and development are actively distanced from the markets and can, consequently, follow a different route (ibid: 121). This institutional distancing provides pastoralists the flexibility and the decisional autonomy to contract or expand their attachment to markets at moments deemed appropriate, so as to avoid remaining entrapped in dynamics over which they would hold limited power.

### **The way forward**

Pastoral regions suffer today and historically from important trends of political neglect and socio-economic marginalisation. In time, the incapacity to properly interface with them has induced national governments as well as international organisations to inexorably detach from supporting the livelihoods of populations inhabiting aridlands. *This process started with state retrenchment under Structural Adjustment liberalization, and continued with major withdrawal of international development assistance. Within this larger downscaling of national and international interest, intervention efforts in pastoral areas have become in recent times less proactive and more reactive, emerging only when the scale of drought, famine and lack of security becomes too large to ignore, with army interventions, refugee camps and food aid among the leading forms of support. (...) The 'disaster and emergency' discourse has been replacing the 'modernization through sedentarization' one and currently seems the most powerful approach in pastoral areas* (Nori and Taylor, 2007:46).

This research shows that pastoral societies are not resistant to change and are not isolated from the wider economy, as most 'mainstream' literature used to report (Cribb, 1984); Puntland pastoralists indeed display important capacities to generate new strategies as well as to adapt to change in their livelihoods. This perspective reveals a whole set of innovative investment opportunities for arid lands, in the domains pertaining local food security, empowerment of marginal groups, livestock production and crisis coping. Contrary to what was predicted by 'external expertise' (cf. World Bank, 1991) the commercialisation of milk in pastoral areas is feasible; indeed this represents an increasingly important activity to expand livelihood options in regions where extensive livestock rearing represents the main economic strategy. In order to understand how this is possible and what it implies in development terms an in depth understanding of the social mechanisms that govern these societies is needed, in order to overcome the theoretical constraints that are implicit in a neo-classical, economist's way of looking at market dynamics.

The evolution of camel milk marketing attests to the endogenous capacity of pastoral societies to adapt to changing conditions, along institutional lines that are consistent with the resource base they are endowed with. Yet market integration of pastoral economies takes place through patterns which are not pre-determined by absolute economic principles. The relevance of the principles shaping livelihood strategies identified within this thesis attest to the overall *moral* dimension that characterises the local economy, which ultimately responds to a pastoralists' interest in mitigating their vulnerability in such erratic environments, rather than to pursuing blunt productivity or profit maximization. In this perspective ensuring family reproduction and community survival represents the central preoccupation of the pastoral economy (Scott, 1979; Dahl and Hjort, 1979; Samatar, 1988). In a context where unpredictability and uncertainty are at home, adaptability is critical to enhance sustainable livelihood options.

In a wider perspective this points to the overall concern for sustainability which permeates resource utilisation in pastoral societies, as socially regulated mechanisms govern the process of resource conversion, helping to maintain discrete amounts of animals on the rangelands. Through the interplay between resource availability and their accessibility, institutionally grounded arrangements are critical in avoiding the over-utilisation and consequent degradation of rich but vulnerable rangelands (Berry, 1984; Talle, 1988; Joekes and Pointing, 1991; Nori and Taylor, 2007).

From the findings of this research camel milk marketing evolution seems to have positive externalities on the environment, as it supports the mobility of herds and the utilisation of remote rangelands; in this sense mobility is critical to keep quality pastures and thus enhance productivity. This is contrary to other reported cases where the commercialisation of pastoral milk has induced processes of sedentarisation in peri-urban environments (Broch-Due, 1981; Niamir Fuller, 1982; Waters-Bayer, 1983; Salih, 1985; Kerven, 1987; Michael, 1987; Sirkana et al., 1993; Fratkin and Smith, 1995; Pantuliano, 2000). Along these same lines the research demonstrates that societal changes cannot be predetermined; in this sense integration into markets does not necessarily reinforce social inequalities and gender hierarchies, neither does it imply a marginalization of weaker social groups and an erosion of their rights (as to Salih, 1985; Joekes and Pointing, 1991; Horowitz and Jokwar, 1992; Talle, 1998). One could always see the evolution of CMM as a male form to control women's labour; nevertheless the control over camel milk profits and the high rate of female-headed households involved in its marketing are good indicators of how limited a perspective that vision holds (also refer to Waters-Bayer, 1985; Berry, 1989).

A more thorough consideration of the environmental implications of a growing population base would though contribute to better understand ongoing environmental dynamics in the region; studies integrating satellite imagery and the utilisation of remote sensing for participatory field surveys would serve this purpose. Similarly further studies would be needed to understand better the implications of evolving camel milk marketing on the wealth differentiation and the economic stratification amongst pastoralists in Puntland.

Final conclusive considerations are that assistance schemes in pastoral areas should:

- a) work to expand and strengthen local livelihood strategies, rather than investing in specific resources, such as livestock or rangelands. Social assets

- often represent the most critical pillar in shaping pastoral livelihoods although they are the most vulnerable to external interventions;
- b) strengthen market mechanisms by enhancing the capacities of local networks, rather than weakening them through indiscriminate distribution of food, water, milk powder and other needed goods<sup>60</sup>;
  - c) focus on the groups that critically contribute to the local economy and take their own risks accordingly – such as pastoral producers and marketing agents – rather than targeting more influential urban dwellers;
  - d) recognise the critical role women play in securing peace, food and income and support them accordingly, despite their limited formal visibility.

As cash-based initiatives are increasingly tested in the region (Nori and Gabrielle, 2007), petty traders and milk marketing agents are to be seriously considered for financial support schemes at times of difficulties (e.g. drought, animal disease spread, rampant conflict), as they bear most of the burden of social credit schemes which serve the needs of the most vulnerable population groups.



Picture 8.1 Milk sales in the streets of Hargheisa

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<sup>60</sup> For an interesting analysis of the implications of food aid schemes involving milk powder in southern Somalia refer to Little, 1994b

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## CERES - Completed Training and Supervision Plan, Michele Nori

Description	Department/Institute	Month/year	Credits
<b>I. Orientation</b>			
- CERES orientation Course	CERES Utrecht University	May 2005	5
- CERES Summer School on Social Governance	Institute for Social Sciences, Den Haag (NL)	June 2004	1
<b>II. Scientific and Professional skills</b>			
- Scientific publishing: an introductory workshop	Wageningen Graduate School (WGS)	5-8 September 2006	2
- Socio-cultural Field Research Methods,	CERES, Wageningen	April 2006	3
- Language skills (French)	Migros French school, Geneva	April-June 2006	2
- Food Policy in an era of Globalisation,	Mansholt, Wageningen	October 2003	3
- Quality Food Chains,	Mansholt, Wageningen		1
- Land rights and tenure security,	CERES, Wageningen	November 2005	1
- Neo-Institutional Economics,	Mansholt, Wageningen	February 2007	4
<b>III. Presentations and workshops</b>			
- Paper presentation 'Ungoverned Markets: the emergence of camel milk markets in stateless somali areas'	85 <sup>th</sup> seminar of EAAE, at the University of Firenze (It)	September 2004	3
- Paper presentation 'Milking Drylands'	EFARD conference at Swiss Federal Institute of Technology (ETH), Zurich	April 2005	3
- Paper presentation 'Nomadic Knowledge: An Asset for the Future'	Young Scientists Programme, Engelberg Forum (Ch)	May 2005	3
- Paper presentation 'Milking Drylands: The centrality of livestock, women and markets for Sustainable Livelihoods in marginal areas'	International Conference on the future of transhumant pastoralism in West and Central Africa, Abuja, Nigeria	November 2006	3
- Paper presentation 'Marketing Camel Milk Between The Devil And The Deep Blue Sea'	IInd Conference of the Africa-Europe Group for Interdisciplinary Studies, Leiden	July 2007	3
- Paper presentation 'Browsing An Uncertain Future: extensive livestock production in a changing world'	ICARDA conference on Drought and Risk Management, Damascus, Syria	July 2007	3
<b>Total</b>			<b>40</b>