

Guide to develop the camel sector in Kenya



Guide to develop the camel sector in Kenya

Preface

Extracts from the speech given by the Director of Livestock Production from the Ministry of Livestock Development of Kenya during the official opening of the camel stakeholder workshop in December 2010

(...) At least 90% of the camel pastoralists in Kenya reside in the fragile and resilient rangelands commonly called the ASAL's which cover three quarters of the surface area of Kenya. The Kenyan Government acknowledges the vital role camels play and their contribution to the national economy, food and nutritional security.

Kenya is home to about three million one humped camels, distributed in all eight regions of the country, according to the 2009 census (Kenya National Bureau of Statistics), owned and used mainly by pastoralists.

(...)Major breeds are Somali, Gabra, Rendille, and Turkana. (...)

Camels have been recognized and identified as the most suited livestock species in the ASALs and are being supported by the Government of Kenya (GoK). (...)The devastating drought in 1984-1985 and subsequent droughts have demonstrated that camel ownership can give pastoralists a competitive edge and excellent chance for survival. Whereas herds of cattle, sheep and goats succumbed to the droughts, camel populations survived. Consequently, some pastoral communities with traditions of only herding cattle, such as the Samburu in Northern Kenya, the Maasai and the Keiyo, have started to emphasize on camel production. (...)

The Ministry of Livestock Development through the ASAL based Livestock and Rural Livelihood Support Project in collaboration with Kenya Camel Association and other development agents has focused on farmer empowerment and improved camel husbandry in more than seventeen districts (...). It has put in place policies that recognize the vital role of the camel in the lives of 25% of this country's population that inhabit the arid and semi-arid areas. (...)

The importance of the camel for food security is unchallenged, for under the harsh ASAL environment it is well adapted to survive and provide milk even during extreme drought. Camel meat production is about 7,000 metric tonnes per year. Camels are the main source of milk in the ASALs, producing about 220 million litres of nutritious milk with a high content of Vitamin C and iron per annum.

Despite its economic and social importance the camel's full potential still remains unexploited in terms of investment initiatives, productivity, marketing and promotion of its products. (...)

The major objectives for camel development are to increase the output per camel in terms of meat and milk, to increase marketing of camels and camel products locally and internationally, to add value to camels and camel products for increased household income, to introduce camel keeping in other ASAL districts, to promote consumption of camel products in these areas and to enhance food security. These will be achieved through the following main strategies:

- *Establish a database on population dynamics by conducting surveys and ascertain camel production potential and productivity.*
- *Address issues of constraints and challenges in the context of husbandry and marketing for both internal and external trade.*
- *Camel product processing.*
- *Markets and marketing facilities investment (loading ramps, handling crushes, etc).*
- *Introduction of better camel breeding material to match the environment with genetic potential.*
- *Look into the possibility and necessity to have in place the breeds and stud book.*
- *Identify training needs for technical staff and herders on camel husbandry and health.*
- *Intensify promotion of camel products for use by non-pastoral communities.*



- *Encourage formation of camel user groups for marketing purposes.*
- *Strengthen research in productivity, husbandry, and health aspects.*
- *Encourage entrepreneurs to invest in and promote a wider variety of camel and camel products through value adding processes to create further demand.*
- *Documentation and treatment of camel diseases among the camel keeping communities.*
- *Improvement of camel forage.*
- *Introduction of cooling plants at camel milk collection centres.*

(...)

Please be assured that the Ministry will continue to provide the necessary environment and support to boost camel production initiatives.



Introduction

The impacts of climate change are expected to be generally detrimental for agriculture in many parts of Africa. Increasing frequencies of heat stress, drought and flooding events may have a detrimental effect on crop and livestock productivity. There are places where livelihood strategies of rural people may need to change in the coming decades to preserve food security and provide income-generating opportunities. These so-called transition zones are likely to include areas in Africa that are already marginal for crop production. As these become increasingly marginal, then livestock, especially with the more drought-resistant camel, may provide an alternative to cropping.

Over 70% of Kenya's land mass consists of arid and semi-arid lands (ASALs). Extensive livestock grazing, in a nomadic pastoral production system, is seen as a suitable means of utilizing these agro-ecological zones.

Camels are well adapted to the hot and dry conditions of the ASALs and are used since centuries in various pastoral communities, for example in Northern Kenya. The dromedary camel is generally kept by pastoralists and is an important part of their livelihood, essential to their subsistence economy. Many argue that dromedaries are the most important livestock species in terms of food security. The camel contributes to the household assets of the pastoralist communities as follows: Milk is the most important product of the camel, and contributes between 50 – 60 % of the nutrient intake of some of the pastoralist communities of sub Saharan Africa, especially during the dry season. Financial support is given to the household through the sales of milk, meat, hides, animals, transport services and the camel represents a saving instrument. Physically the camel is used for draught power for transport. Furthermore its meat is available for household food consumption. Additionally the camel plays an important role for the socio-cultural set up of the community (e.g. payment of dowry, settlement of fines (e.g. in tribal feuds, recreational activities). The pastoralists, especially the Somali who represent the largest and oldest camel keeping tribe, see camels as a banking system or security against drought, disease, and other natural disasters that affect smaller stock more seriously.

In the past decades the interest in the camel has constantly risen in Kenya. Various stakeholders, including the Government, Universities, scientists, development actors and the private sector are currently trying to support camel keeping communities with issues related to health, husbandry, production, products and marketing – even the introduction of camels into non-traditional camel keeping communities (e.g. such as the Maasai and Samburu tribes in Kenya) becomes more and more common. Often the efforts of such interventions are limited to some small areas and experience and lessons learnt are rarely shared among the stakeholders, including the pastoralists.

During a two day workshop in December 2010 stakeholders from various sectors representing the Government, Education, Research, Development and the Private Sector got together to discuss the current status of the camel sector in Kenya, to identify major gaps within their sector and to define priority areas, that need to be addressed to develop the camel sector in Kenya. The outcome of these discussions and joint work are summarized in this document.



Government Sector

1. No specific policy on camel development exists
2. Inadequate government budgetary allocation for livestock sub-sector in general and camel sector in particular
3. Lack of technical staff with adequate knowledge on camels
4. Poor collaboration among various Government departments resulting in conflicting information delivery to camel keepers
5. Weak/inadequate public-private partnerships



Research Sector

1. Lack of linkages between researchers and stakeholders on the ground
2. Lack of coordination between different researchers
3. Lack of focus on camel research incl. adequate funding
4. Lack of human capacity and research facilities (especially in ASAL's) and inadequate infrastructure)
5. Poor information management
6. No platform for stakeholders
7. Poor collection and dissemination of existing information
8. Lack of user friendly material
9. Publish and perish culture

Education Sector

1. Lack of appropriate and uniform teaching, training and extension material for all stakeholders
2. Lack of human capacity
3. Lack of teaching facilities in the ASAL's
4. Lack of practical exposure of teachers and trainees
5. Lack of adequate funding

NGO Sector

1. Lack of proper coordination, networking and information sharing between NGOs, private sector, government, and other stakeholders
2. Lack of standardization of best practices in project implementation
3. Limited funding and focus on short-term projects where long-term engagement is required
4. Lack of data collection and information sharing to inform policy development
5. Meeting the growing milk demand with the growth and promotion of markets. Need to improve and promote milk production



Private Sector

1. Inadequate camel health services (public, private, community based available)
2. Lack of regulated camel and camel product marketing results in the loss of potential revenue for National economy
3. Camel owners not sufficiently consulted to define priorities for research & development.
4. Information flow to camel owners (extension, research results/knowledge) is poor.
5. Lack of capacity building/training on economic opportunities in camel production.
6. Inadequate planning to address decreasing natural resources for camel keeping
7. Socio-cultural issues may hinder the adoption of camels in non-camel keeping communities.





Role of the Government Sector

The Government of Kenya needs to ensure that an adequate policy environment is developed and financially supported in order to develop the camel sector in Kenya. This needs to include the recognition of the current and potential future economical contribution of the camel sector to the National Economy. Currently most of the income is lost to other countries where the market environment is more advantageous than in Kenya. Hence the development of market and trade friendly regulations for camels and camel products are required so that the revenue can be fed into Kenya's economy.

In addition the Government of Kenya needs to allocate adequate resources to fund the development of the camel sector. This includes investment into infrastructure, research, education and general development.

Emphasis should be put on the strengthening of Public-Private-Partnerships for example in the delivery of adequate veterinary services to the camel keeping communities and in market development and support.

Currently coordination within and between the various sectors is inadequate. Each sector acts on its own, approaches are not harmonized and duplication instead of complementation of activities occurs. A coordination body is required with authority to coordinate the various sectors and acting as a resource base and information platform. Such a body needs to be officiated and supported by the Government. The existing Kenya Camel Association does have the potential to take up this role and needs support from all stakeholders involved.

Role of the Research Sector

A significant amount of research on camels has been conducted in Kenya in the past. However, feed back to the camel keeping communities has been inadequate and therefore news on improved husbandry practices, production and products are not being implemented at grassroots level. The majority of research has been in the “publish-and-perish-culture”. Future research in the camel sector should largely be based on priority needs identified by the camel keeping communities. Better coordination between various research actors and stakeholders needs to be put into practice. Participatory action and development oriented research is required to find practical solutions for camel keepers problems that can be fed back to the camel keeping communities in simple and practical ways.

Currently no camel specific research centre exists in Kenya. Ways and means should be identified of creating research and diagnostic facilities, close to the camels and the existing needs in the ASAL areas.

Role of the Education Sector

Lack of human capacity has been highlighted in all the sectors as one of the major hindrances for the development of the camel sector in Kenya. There is virtually no adequate teaching and extension material and the knowledge among various stakeholders is very limited. Even though camel topics have been included in the curriculum of veterinary medicine, there is hardly any reference material available making implementation of any recommendations a challenge.

The major role of the education sector is to develop such reference material for various levels targeting universities, colleges and communities. Investments are required to avail the education especially in the ASAL areas. This would facilitate the building of human capacity and knowledge on camels in areas where they are most relevant.



Role of the Development Sector

Various actors have developed and implemented projects supporting camel keeping communities and promoting camels in non-traditionally camel keeping communities.

These efforts have been rather uncoordinated than feeding into a wider strategy. Common approaches and complementary work within the development sector have been erratic over the last few years. Best practices have not been systematically gathered and been made available to support the camel keeping communities. Again, the need for a coordinating body is substantial to bring various efforts together and lead to the common goal, the development of the camel sector in Kenya.

The development sector can play a big role in advocacy and lobby work for camel keeping communities, voice and advocate for their needs, inform policies and research and feed back information to the ground. In addition, production and dissemination of extension material and messages and building of human capacity on camel related topics can be supported.

Role of the Private Sector

The private sector encompasses a wide range of actors, including the pastoralists with few camels for subsistence as well as industries investing in camel and camel product export. Export of camel meat to the Gulf States and North Africa seems to be as viable a business as the local camel milk market of Northern Kenya. Both markets are mainly informal and their real contribution to Kenya's GDP can only be estimated.

The private sector requires a reliable and favourable policy environment for investment. Vital marketing infrastructure needs to be improved and camel health services need to be delivered on a sustainable basis. Capacity building is required for improved decision making to improve camel production.





Guidelines for strategic development of the camel sector in Kenya

Camel Husbandry and Production

Priority Area	How	Who
To gather and avail traditional and new knowledge for camel stakeholders where appropriate	<ul style="list-style-type: none"> Identify and compile available and missing knowledge Address gaps through research Assess validity Develop adequate and appropriate training and teaching material (standardized) Training and capacity building at all levels 	<ul style="list-style-type: none"> KCA to be resource platform Supported by all sectors – research studies, interviews, literature review. Ministries, Universities, researchers, camel owners, NGOs Ministries, KARI, LCA, Universities
Avail adequate nutritional requirements to sustain camel development	<ul style="list-style-type: none"> Rehabilitation and conservation of camel feed resources Improve rangeland management – control deforestation, water point development and human settlement Supplementation (including minerals) when and where necessary Identify products and markets Evaluate cost/benefit 	<ul style="list-style-type: none"> Ministries, NGOs, Communities Sedentary (dairy) camel owners, traders, researchers
Improve breeds, breeding and reproductive performance without compromising sustainability	<ul style="list-style-type: none"> Review of literature and evaluation of the performance of existing breeds Capacity building Development of a stud book for camels Further research into short term and long term breed improvement 	<ul style="list-style-type: none"> Researchers Ministries, KCA, NGOs, Researchers GOK, National Stud book, Researchers Researchers
Adapt to needs of emerging production systems (extensive, Intensive and semi-intensive)	<ul style="list-style-type: none"> Identify and evaluate emerging production systems and their contribution and impact to production (extensive, Intensive and semi-intensive) Develop appropriate strategies 	<ul style="list-style-type: none"> Researchers All stakeholders





Camel husbandry and management practices are very traditional. However the magnitude and the potential of their knowledge to inform camel husbandry in non-traditional systems has hardly been assessed nor tapped into. In return information about improved, adapted and changed management systems in other camel keeping parts of this world exists and are implemented, without being shared and tried by the traditional camel keepers of Kenya. Efforts need to be made to gather this information, process it and redistribute to the relevant stakeholders, but first and foremost the camel keeping communities.

Camel production depends partly on nutrition and hence on the improvement of rangeland management. Thus more emphasis should be put on rangeland rehabilitation and management through controlling deforestation, watering point development and restriction of up hazard creations of human settlements on browsing and grazing areas. The potential of the genetic quality of the local camel breeds should be looked into. Improvement can be achieved both in short term and long term interventions at all stakeholder levels. Introduction of a stud-book would be a first step into the right direction.

In addition the camel is more and more being used in non-traditional systems, this includes pastoralist who in the past just focused on cattle keeping, ranchers in the ASAL keep camels for milk, meat and tourism while farmers e.g. in Kiboko have started using camels for ploughing. The use of the camel in extensive, semi-intensive and intensive management systems is on the rise and needs to be looked into in order to define its impact on production and determine its potential contribution to the camel sector in Kenya.



Camel Health

Priority Area	How	Who
Improve Camel Health Service delivery	<ul style="list-style-type: none"> Promote Public Private Partnerships addressing camel health Support establishment of private veterinary pharmacies and linkage to suppliers Improve disease surveillance and reporting 	<ul style="list-style-type: none"> GOK' NGOs, KCA, MoLD, Pharmaceutical companies, Universities
Camel health extension and educational materials reviewed and/or developed for <ul style="list-style-type: none"> Universities Middle level colleges Community/pastoralist levels 	<ul style="list-style-type: none"> Stakeholder workshops Review and compile existing materials Develop new material to bridge gaps Edit and publish the material Disseminate the training material to end users 	<ul style="list-style-type: none"> KCA, Universities, NGOs, MoLD
Training and capacity building at all levels to increase the number of qualified extension workers on camel health	<ul style="list-style-type: none"> Training courses for camel keepers, CAHWs/CASPROs, Training courses for GOK veterinarians and extension workers Training courses for private veterinarians 	<ul style="list-style-type: none"> GOK, KCA, NGOs, Universities
Support camel keeping communities to form groups to address camel health and welfare issues	<ul style="list-style-type: none"> Facilitation of exchange visits and study tours among camel keeping communities Link the community groups to veterinary service providers 	<ul style="list-style-type: none"> KCA, NGOs, Universities, MoLD
Conduct research on existing and emerging camel diseases and analyse and document Ethnoveterinary knowledge	<ul style="list-style-type: none"> Gather, analyse and document information on existing, emerging camel diseases and ethnoveterinary knowledge in camel keeping communities Prioritize camel diseases with highest impact Develop and conduct adequate research on these diseases Develop treatment and control strategies Lobby for camel specific drug production Disseminate documented material to stakeholders 	<ul style="list-style-type: none"> KCA, Universities, NGOs, Camel owners, Traditional animal health practitioners, MoLD

Treatment and control of camel diseases still remains a big challenge in Kenya. This is mainly due to the inadequate training of veterinary personnel on camel medicine as well as lack of quality camel-specific drugs in the market. Improvement on these two areas will lead to improvement in diagnosis and treatment





of camel diseases. Promotion of public-private partnerships might be a step in the right direction. In addition adequate and standardized teaching material and training modules need to be developed and disseminated at various levels (university, college and community) and should be used during teaching, training and capacity building activities. Knowledge on drug withdrawal periods before milk and meat consumption should be emphasized to consumers and traders so as to ensure public health restrictions are maintained. Research on existing and emerging diseases should also be focused on especially on “camel sudden death” which is still occasionally reported in Eastern and North Eastern Provinces. This should have a positive impact on production through reduced mortalities and higher productivity.



Camel Products and Marketing

Priority Area	How	Who
Recognize and legalize currently existing but informal export trade	<ul style="list-style-type: none"> • Conduct market study and analyse economic value • Improve market routes and relevant infrastructure • Lobby with relevant authorities to legalize trade 	<ul style="list-style-type: none"> • KCA, KLMC, Local NGOS, Camel Owners, Economists
Improve road infrastructure in Northern Kenya and encourage private investment	<ul style="list-style-type: none"> • Lobby with line ministries and private sector • Develop strategy on economic returns • Equitable development 	<ul style="list-style-type: none"> • MoDNKOAL, Local government, CDF, Local NGOS, Ministry of Roads
Formalize existing markets for camel milk and meat and develop adequate infrastructure	<ul style="list-style-type: none"> • Develop, enhance and share blueprints for the existing markets • Construction of milk shades and bars, slaughter houses/slabs and sale yards, improve water and power supply 	<ul style="list-style-type: none"> • KCA, KLMC, Local NGO, Camel owners, MoLD, private sector
Marketing groups are formed and supported/empowered (capacity building, access to market credit etc)	<ul style="list-style-type: none"> • Formation of groups and capacity building on business management • Facilitation of exposure tours • Facilitate access to micro-credit providers 	<ul style="list-style-type: none"> • KCA, KLMC, Local NGO, Camel owners, MoLD, Local government, Ministry of Gender, Children and Social Development, private sector, banks
Improve access, availability and quality of products	<ul style="list-style-type: none"> • Improve market intelligence (market analysis, product positioning and marketing strategy, customer preferences and competitors) • Improve product quality (hygiene, value addition) • Linkage with private investors and other stakeholders 	<ul style="list-style-type: none"> • NGOs, KCA, KLMC, Local NGOs, Researchers and Universities, Agribusiness Experts, Local government and MoLD

Marketing of camel products is mainly through informal and unregulated market chains whether this involves export of live animals or sale of camel meat and milk in town centres. Its contribution to the national GDP can only be estimated, but is not fully taken into consideration. Potential revenue from the trade for the Government is also lost. Hence there is a need to firstly recognize and then legalize the current mainly informal trade with camels and camel products.



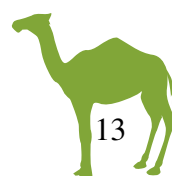


Poor road and marketing infrastructure in camel rearing areas is also a major hindrance in the growth of the markets and potential private investors. Investments into road and market infrastructure need to be looked into in order to improve the trade.

In the local markets production and quality of the product needs to be improved, i.e. through the formation of market groups and/or cooperatives.

In order to come out of the local markets and to tap into national and even international market, market intelligence research and analysis needs to be carried out covering issues such as consumer preference and product positioning.

Marketing information using various market monitors should also be relayed back to camel owners in the grass roots. Inclusion of camel products information to the national market information network will also encourage the growth of this sector.

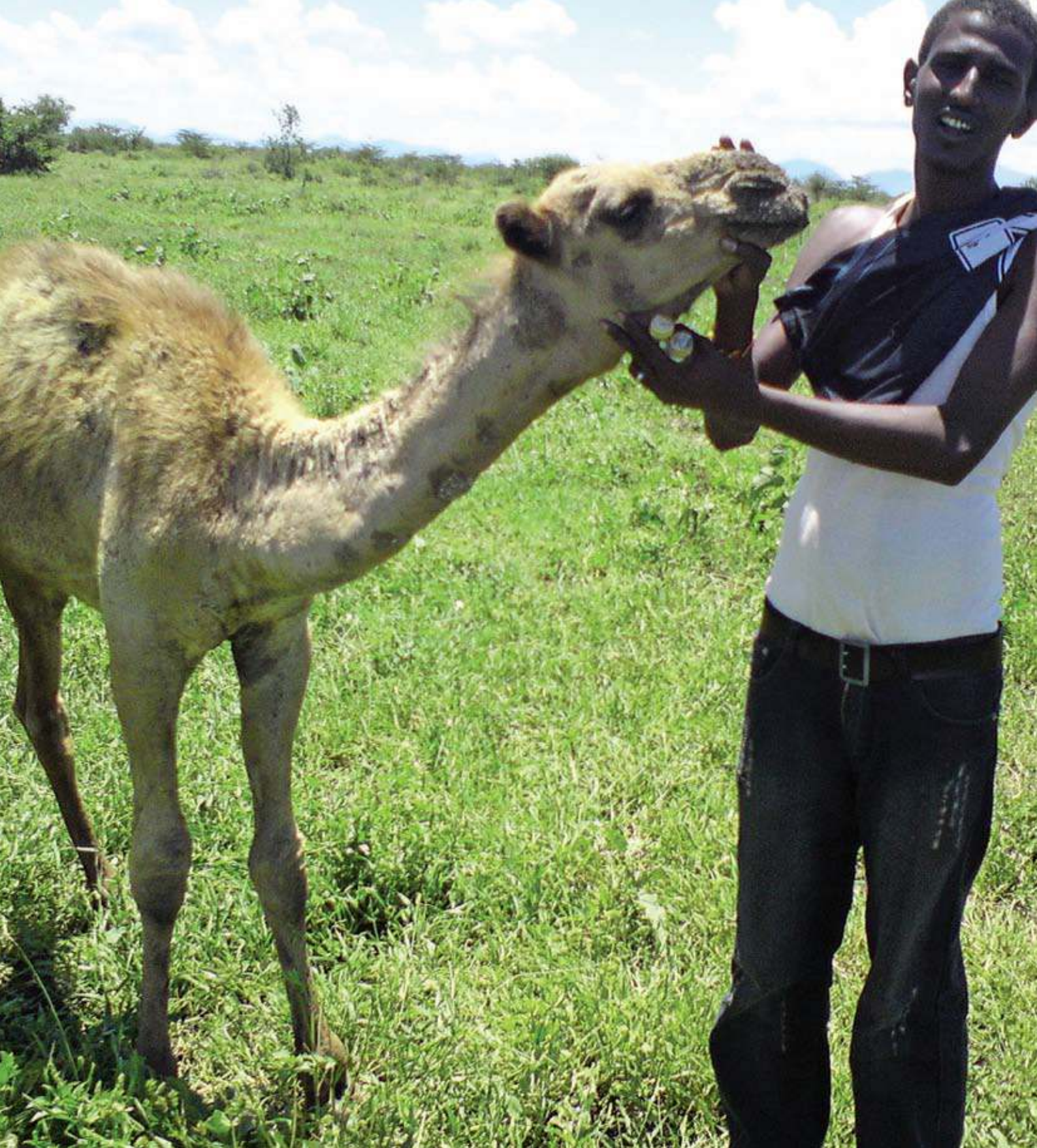


Camel Policy and Education

Priority Area	How	Who
Formulate, endorse and implement a comprehensive camel development policy	<ul style="list-style-type: none"> • Baseline assessment survey on economic importance of camel to include resources available, population trends • Formulate a consultative national camel policy • Ensure endorsement process through parliament • Lobby for resource allocation for camel development 	<p>Livestock donor agencies and MoLD and Kenya national bureau of statistics</p> <p>MoLD in consultation with the stakeholders</p> <p>MoLD Livestock stakeholders(NGOs and MoLD)</p>
Institutionalize the importance of the camel in the national education systems	<ul style="list-style-type: none"> • Basic education (primary and secondary)- include topics on camels into the curriculum • Intermediate education(certificates and diploma level) – introduce independent courses on camels and integrate camel topics in animal production unit • High education (degree and above) - include camel topics in lectures and practical units on camels diseases included in the veterinary medicine. Review of curriculum in higher institutions to incorporate all aspects of camel production. • Informal education – develop educational and extension programs through media, seminars, workshops, posters, fliers, brochures, booklets, internet (camel resource website) to reach all stakeholders 	<p>MoLD ministry of education and KCA</p> <p>MoLD ,Individual colleges and KCA</p> <p>MoLD, universities MoHEST</p> <p>MoLD, KCA, NGOs, proposed national camel development body</p>
Establish an official national camel development body	<ul style="list-style-type: none"> • Formulation, review, and implementation of camel policy • Co-ordinate camel development in the country • Commission relevant studies on camels 	<p>MoLD, KCA and other Stakeholders</p> <p>The proposed body</p> <p>Proposed body</p>
Establish a camel research fund and centre	<ul style="list-style-type: none"> • Establishment of a camel research fund • Establishment of camel research centre to generate and disseminate relevant camel information and data. 	<p>MoLD, relevant donor agencies and other stakeholders</p> <p>MoLD, relevant donor agencies and other stakeholders</p>

Currently a policy document for the regulation, marketing and education of camel related issues does not exist. The Ministry of Livestock Development is planning to establish a Camel Division in collaboration with Ministry of Education and the Kenya Camel Association (KCA). This division will formulate the Camel Development policy as well as work towards mainstreaming camel education in the tertiary level. The Kenya Agricultural Research Institute (KARI) will also be establishing a centre in Garissa that will





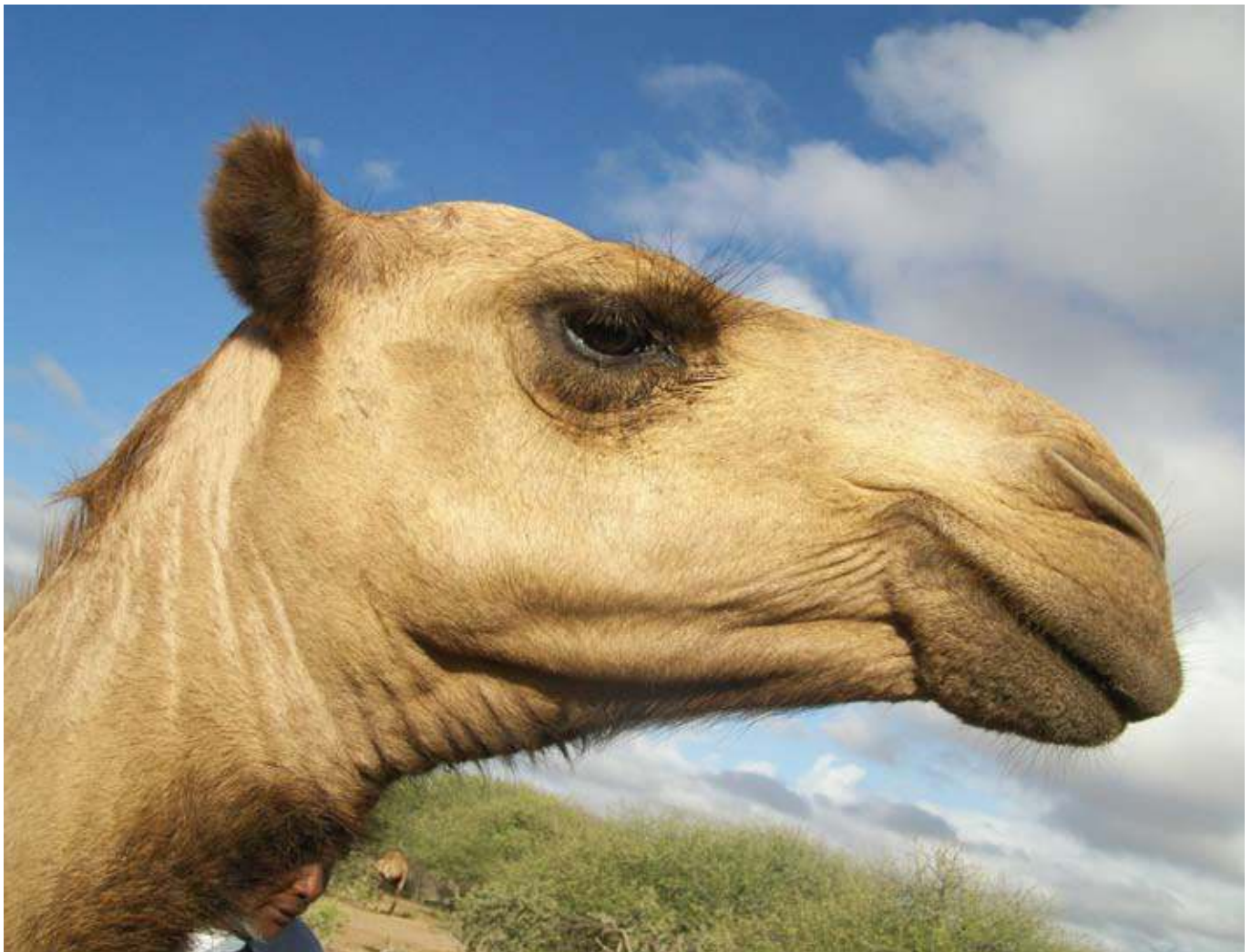
mainly focus on camel research among other areas of interest for the ASALs. All these efforts will be a good start in the mainstreaming of the camel in the government and education priority areas but a lot of lobbying support will still be required through KCA and other stakeholders. Thus there is also the need to focus on strengthening and supporting KCA and other the existing structures. Camels are envisaged as the animal of the future with the climate change trend and with this in mind the government and other donors should be more inclined in investing towards the development of the camel sector in Kenya!



Acknowledgement

We would like to thank the following people for their active contribution in developing this document (in alphabetical order):

A. M. Ibrahim, Abdi Y. Guliye, Abdille S. Billow, Abdulkadir Biru, Adan Ibrahim, Ahmed Khalif, Anne Bruntse, Belinda Okotsi, Charles Ochodo, Chris Field, Dakane Dimbil, Dan Irura, Diana Onyango, G.M. Kimathi, Gitao C.G., Grace G. Kimaru, Guyo Tuke, Helen Laqua, Henry Kimathi, Henry Tingoria, Hussein Haji, Hussein Osman Abdi, Ilona Gluecks, Isaac Lubutsi, J. T. Kariuki, J.R. Mbura, Jane Wamatu, John Lokaale Aule, K.C. Toroitich, Katelo P. Issako, Keadu Simachew, Khalif A. Abbey, Kisa J. Ngeiywa, Kula Jarso, Mario Younan, Markus Takkunnen, Martin Okonji, Moge Abdi Mohamed, Mohamed Hussein, Morgan Siloma, Omar Abdi, Osman I. Ala, Paul M. Mutungi, Reuben Lemunyete, Simon Chuchu, Simon Kuria, Simon Lodiango





For further information kindly contact



VSF Suisse
PO Box 25656
00603 Nairobi
Tel: 020 4343441
Email: regofficenbi@vsfsuisse.org



Kenya Camel Association
Hill Plaza, 10th Floor
PO Box 6067 – 00100 Nairobi – Kenya
Tel: +254 (0)20 2731975
Email: kca@allpro.go.ke

This development of this document was funded by

