SOCIO-ECONOMIC CONTRIBUTION OF PASTORALISM AS A LIVELIHOOD SYSTEM IN TANZANIA:

CASE OF SELECTED DISTRICTS IN ARUSHA, MANYARA AND DAR ES SALAAM REGIONS

Pastoralists Indigenous Non Governmental Organization's Forum
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Table of Contents

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SOCIO-ECONOMIC CONTRIBUTIONS OF PASTORALISM AS LIVELIHOOD SYSTEM IN TANZANIA: CASE OF SELECTED PASTORAL DISTRICTS IN ARUSHA, MANYARA AND DAR ES SALAAM REGIONS

Pastoral systems offer dual national benefits. The first benefit is the continuity of the cultural heritage of the nation and the second, pastoral systems - with right signals on animal numbers - offer optimal livestock production systems in arid and semi-arid rangelands. The government role is to enable strong resiliency in pastoral systems to take advance of their natural competitive advantages.[1]

ABSTRACT

Tanzania is endowed with numerous resources including livestock. It is number three country in Africa in terms of livestock population after Ethiopia and Sudan. Currently, the country (Tanzania) has more than 22 million livestock, of which at least 95% are indigenous animals kept under traditional livelihood model known as indigenous pastoralism. At least 70% of Tanzanians earn their living through agro-pastoralism whereby around 40% of them entirely practices indigenous pastoralism. Those include Maasai, and Barbaig who are also internationally recognized and protected as indigenous people because of their unique livelihood connectivity to the nature. The indigenous pastoralism plays double roles, namely; being an income or revenue generator; and two, being a means of social livelihood. Its contributions to this two folds (social and economic) at individual and national level is not well documented due to, inter alia, negative mindset of some of the decision makers about this traditional model; and scant information about its usefulness. As such, numerous government records suggest contradictory estimates of pastoralism. In this way, the false impression about pastoralism is perpetuatedby the policy makers and law enforcers. This study was aimed at addressing the information gap about socio-economic contributions of pastoralism. With aid of value chain analysis; total economic value; and total use value, by sampling four pastoral districts (Monduli, Simanjiro, Londigo and Arumeru) and Pugu, Ilala Dar es Salaam (being a terminal livestock market) as case studies, it was found that, indeed, this livelihood model contributes tremendously to micro and macro development areas. For instance, the sampled pastoral districts almost entirely depend on this model to earn revenues for the whole district machineries (more than 90% of own source budgets). The central government earns billions of shillings through charges, taxes, exports, and other forms of income. At household level, the livestock remain to be wealthiest assets amongst rural residents. They get milk and meat; but also, capital, school fees, and other socio-economic benefits. Livestock is their trustworthy banks and insurance. As for urban residents, indigenous livestock's products and by-products offer employment opportunities to millions of people. The urban hotels, pubs, markets, etc trade indigenous beef, milk, and the like. Pastoralism is one of the food security strategies mentioned in the government reports. It is everything.

Owing to the numerous challenges facing this economic sub-sector, it is hereby recommended, inter alia, that, the regulatory frameworks should be reformed further to accommodate pastoral norms e.g communal grazing land. It is also recommended that, livestock marketing structures should be improved and that, improvements of breed, pastures and value addition of livestock product to be a must.

KEY WORDS: Indigenous or Traditional Pastoralism ‖ Livestock keeping ‖ Socio-Economic Contributions ‖ Livelihood.

[1] United Republic of Tanzania, Livestock Modernization Initiative, July 2015. Ministry of Livestock and Fisheries Development. Page 28.

1.0: INTRODUCTION AND BACKGROUND INFORMATION ABOUT PASTORALISM

The traditional livestock (pastoralism) system represents a potential pathway out of poverty for many smallholders in the developing world,[2] Tanzania is inclusive. It (pastoralism) is a way of life for some 20 million people across sub-Saharan Africa. Adding in agro-pastoralists – who derive 50 percent of their income from non-livestock sources - the numbers of this economic sub-sector would reach 200 million, over 30 million in the Greater Horn of Africa alone.[3] Therefore, pastoralism is indeed, a vital livelihood system all over the world, especially in the developing countries.

Contrary to that reality though, the experience has shown that, pastoralism as socio-economic model has been marginalized in all spheres due to, inter alia, policy environment that favors individualization and private ownership of land and natural resources as the result they are systematically eliminated from national socio-economic processes especially on the effective use of productive natural resources which support this model. Furthermore, the available information shows that pastoralism is not (adequately) reflected in the government policies as a productive and sustainable production system upon which a vibrant national livestock industry could be based.[4] Besides, this model has for long been blamed for improper land use, mainly associated with rangeland and environmental degradation.

On practical basis, the pessimism against pastoralism has been quite vivid and in most cases, contributed to injustice. For instance, the forth president Tanzania, Mr. Jakaya Kikwete, has, on different occasions been quoted by the media criticizing traditional pastoralism. For instance, on 30th December, 2005, when making his Parliament inaugural speech, the President partly said:-

> Mr. Speaker, we must modernize animal husbandry. We will have no alternative. We must abandon nomadic pastoralism which makes the whole country pastureland... [T]he cattle are bony and the pastoralists are sacks of skeletons. We cannot move forward with this type of pastoralism in the twenty first century.[5]

Such position remained alive throughout his presidential phase (2005 and 2015).[6] It is during this period when so many anti-pastoralism and related incidents were launched and implemented in different parts of the country. Such incidents include the famous Loliondo evictions of July 2009[7] and several others.[8] The

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[2] Alemayehu, Kefyalew (Undated) Value Chain assessment of Beef Cattle Production and Marketing in Ethiopia: Challenges and Opportunities of Linking Smallholder Farmers to the Markets. Bahir Dar University, Faculty of Agriculture and Environmental Sciences, Department of Animal Production and Technology. Bahir Dar: Ethiopia. Pages 1 and 2.

[3] Future Agriculture (2012) Pastoralism in the Horn of Africa: Diverse livelihood pathways. FA CAADP Policy Brief 6. Page 3. Accessed from: www.future-agriculture.org on 29th September, 2015.

[4] TNRF (2007) Study on Options for Pastoralists to Secure Their Livelihoods. Assessing the Total Economic Value of Pastoralism in Tanzania. Tanzania Natural Resource Forum: Arusha. Page 3.

[5] The Parliamentary Hansard of 30th December, 2015 as translated into Kiswahili. Also see: PINGO's Forum (2009) Human Rights Shadow Report of June 2009. PINGO's Forum: Arusha. Page 6.

[6] For instance, on 22nd February 2006, the President reaffirmed his stand against pastoralism, that '*it is better for a few pastoralists to be angry, but protect the lives of the next generation.'* (Reference: PINGO's Forum and Partners (2009) Pastoralism as a Livelihood and Economic Activity in Tanzania. PINGO's Forum: Arusha. Page 11).

[7] Loliondo is one of the Ngorongoro district ward, Arusha region. In July 2009 the District Commissioner ordered eviction of the Maasai pastoralists inhabiting several villages in Loliondo, including the Orelia, Kalkakamoo, Girgiri, Ololosokwan, Soitsambu,

picture below shows a bull alleged to have been killed by the game angers during the 2009 Mikumi National Park's operation to evict pastoralists:

Picture: Pastoralist's cattle killed in Mikumi National Park during eviction operations in 2009 (Source: PAICODEO, 2013).

Given the negative perception and the nature of the livelihood of pastoralists, development priorities have not given to some of the areas that pastoralists reside. As it is a case in many parts of Africa, this remains to be a historical fact. The colonial policy promoted agriculture in highland[9] and other ecologically rich areas such as Ngorongoro in Tanzania. Such colonial attitudes about pastoralism tended to be reinforced to date.

This study has noted that, in a bid to widen macro-economic development, Tanzania has introduced a number of investment and economic policies, including expansion of wildlife protection areas and commercialization of livestock keeping as the current livestock's policies, strategies, programmes and laws suggest. For instance, the vision of the National Livestock Policy of 2006[10] states that:-

> There should be a livestock sector which to a large extent shall be **commercially run**, **modern** and sustainable, **using improved and highly productive livestock** to ensure food security, improved income for the household and the nation while conserving the environment [Emphasis supplied].

As such, the traditional (against the 'modern') livestock keeping, which is done for socio-economic (against solely 'commercial') and which keeps indigenous (against 'improved' or 'exotic') livestock breeds, is regarded as unsustainable and do not ensure food security and income for the individuals herders and the nation. However, the newly formulated Tanzania's Livestock Modernization Initiative of July 2015 tries to

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Arash, and Olorien-Magaiduru villages on the ground that, they were intruding into wildlife protected areas (and the investor's hunting block). There is a constitutional case challenging constitutionality of these evictions. The case is still pending in one of the High Court registry in Tanzania since December 2010. Therefore, this analysis will not discuss it in details here.

[8] Other incidents against pastoralists allegedly performed by the government authorities include the Ihefu in Mbarali district; Emborie-Murtangos in Kiteto district; Mabwegere in Kilosa district; Vilima vitatu in Babati district; countrywide Operation Tokomeza Ujangili (anti-pouching military operation) which predominantly targeted villagers residing nearby wildlife protected areas (pastoralist communities).

[9] Future Agriculture (2012), *Op citi*, Pages 3-4.

[10] Quoted from: Paragraph 2.1, Page 11 of the National Livestock Policy of 2006.

synchronize modern-traditional livestock keeping approaches. For instance, it mentions improved breeds, which thrive in extensive and seasonal pastoral systems, and access to markets for pastoral communities as a key to thriving resilient pastoral communities.[11] But, the strategies on how to go about this are not adequately addressed on practical basis, especially due to the fact that the harmful system against pastoralism is embodied in the policies and laws as it is further discussed in this report.

2.0: STUDY'S AIM, METHODOLOGY AND APPROACHES

2.1 Aim and Objectives of the Study

Basing on all aforesaid positions, this study was commissioned as a response to the negativity about pastoralism as livelihood model in Tanzania. The study maps out some intellectual, empirical, and evidence-based analysis of the socio-economic contributions of traditional or indigenous pastoralism. The study supplements, by using value chain and other analysis tools on socio-economic contributions of pastoralism, other similar studies which were conducted on the same subject matter. For instance, the Tanzania Natural Resource Forum (TNRF)'s 2007 study[12] observed that, there was a long track of records (and appreciation) of inadequate understanding of this livelihood system in Tanzania.

Specifically, the study, which was conducted in September 2015, was aimed at gathering facts from communities on the social economic contribution and benefit of pastoralism in terms of the land use system; the livelihood support; and environmental conservation, wildlife protection and tourism contribution.

2.2 Study Methodology and Approaches

Five districts of Tanzania Mainland, namely; Arumeru, Longido, Monduli, Simanjiro and Ilala (Arusha, Manyara and Dar es Salaam regions), were sampled for this analysis. The rationale of the sample included, being districts which house more than one-third of Tanzanian total pastoralists; and that, there were primary, secondary and terminal livestock markets where the value chain analysis could easily be made due to presence of pastoralists, traders, processors of livestock products and by-products and stakeholders who were directly involved in livestock economic sub-sector.

The study reached out a total of 72 pastoralists and other individual persons[13] (of whom 37% were women). Moreover, government and non-government institutions were consulted. Such institutions included, district councils' officials (especially the district executive directors and livestock officers), livestock market leaders, and the Ministry of Livestock in Dar es Salaam. Most of the statistics and other data used for this analysis were obtained from the government departments.

[11] United Republic of Tanzania, Livestock Modernization Initiative, July 2015. Ministry of Livestock and Fisheries Development. Page 28.
[12] TNRF (2007) Study on Options for Pastoralists to Secure Their Livelihoods. Assessing the Total Economic Value of Pastoralism in Tanzania. Tanzania Natural Resource Forum: Arusha.
[13] Such as traders in livestock markets, butchers, and others.

Both primary and secondary data collection methods and tools were employed, whereby, there were a set of interview guides. Apart from individual interviews, there were focus group discussions (FGDs) carried out in Themi-Lokii, Longido, Monduli, Sukuro, Terrat and Pugu livestock markets.

The analysis tools for ascertaining socio-economic contributions of pastoralism were; i) the Value Chain Analysis (VCA);[14] the Total Economic Value (TEV);[15] the Direct Use Benefit (DUB)[16] of livestock. The first analysis frameworks were for economic component; while, the third framework was mainly for social aspect of this study.

3.0: CURRENT SITUATION OF PASTORALISM

3.1 Pastoralists Ethnicities and Geographical Locations

Agriculture supports the livelihoods of 82% of the population, 70% of which is rural. It is estimated that, an estimated 2,329,942 Tanzanian households (about 37% to 40% of the agricultural households) kept livestock. Majority of the livestock are kept by smallholders. The smallholders accounted for 99.6%, while large scale accounted for 0.4% of the total livestock population.[17] Despite the fact that there is no updated statistics of indigenous pastoralists, basing on the same logic and the definition of pastoralism, it seems that about 50% of livestock keepers in Tanzania purely practice pastoralism. The United Nations Industrial Development Organization (UNIDO) defines 'pastoralism' to mean a traditional cattle production system, which relies entirely on natural pasture for animal rearing.[18]

The eight regions of Mwanza, Shinyanga, Mara, Singida, Tabora, Dodoma, Arusha and Manyara, which have 39% of the human population of Mainland Tanzania (33,667,659), account for more than 70% of the

[14] It is an assessment of the full range of activities required to bring a product (such as live animals, meat, milk, eggs, leather, fibre, manure and other by-product) to final consumers passing through the different phases of production, processing and delivery. It can also be defined as a market-focused collaboration among different stakeholders who produce and market value-added products (IFAD (Undated) Value Chains, Linking Producers to the Markets. Livestock Thematic Papers, Tools for Project Design. Page 1). The VCA considers the relationships between different actors in the chain (producers, traders, processors, etc.), vertical relationships (upstream or downstream in the chain) as well as horizontal relationships (between companies in the same link of the chain).

[15] An analysis which consists of livestock's use values and non-use values. Sales and subsistence values of livestock at household, intra and inter-pastoralists and others relationship, local and national micro and macroeconomic and non-economic contributions of livestock animals, products, by-products and associated services (complimentary products and services) which are influenced by livestock production, trade (market chain and multipliers), processing and consummation (adopted with modification from: TNRF (2007), *Op citi*, Pages 11-12).

[16] The concept of direct use a broad range of livelihood benefits that livestock owners depend upon in practice, but which cannot, for technical reasons, be incorporated into national accounts. The concept of direct use therefore provides a more balanced expression than GDP accounting of the economic reasons why livestock owners keep and value their animals (Reference: IGAD Center for Pastoral Areas & Livestock Development (ICPALD) The Contribution of Livestock to the Kenyan Economy Policy Brief No: ICPALD 4/CLE/8/2013. FAO, EU and IGAD. Pages 2 and 3. Accessed from: http://igad.int/attachments/714_The%20Contribution%20of%20Livestock%20to%20the%20Kenyan%20Economy.pdf on 2nd October, 2015).

[17] URT (2012) National Sample Census of Agriculture Small Holder Agriculture Volume III: Livestock Sector – National Report. National Bureau of Statics (Tanzania) and the Office of the Chief Government Statistician (Zanzibar): Tanzania. Pages 8 and 9.

[18] UNIDO (2012) Tanzania's Red Meat Value Chain: A diagnostic. Africa Agribusiness and Agro-industry Development Initiative (3ADI) Reports. United Nations Industrial Development Organization (UNIDO). Vienna, Austria.

total cattle herd in the country.[19] The ethnic groups which occupy these regions include, Sukuma, Nyamwezi, Nyaturu, Maasai, Barbaig, Akiye (Ndorobo), Sandawe, Hadzabe, Gorowa, Burugi, and Iraqw.[20] Some of these groups have specific methods of subsistence which qualify them to be indigenous[21] people, under special consideration under the international human rights instruments.[22]

Most of the pastoral regions of Tanzania receive an average of rainfall between 450mm and 1,200mm per a year. For instance, one of the case study regions (Manyara) receives that rainfall range, with two rain seasons (October-December and February-May seasons). However, the bushes Maasai steppe and semi-arid midlands (which cover a large part of the region[23]) attract short and unpredictable rainfalls which range from 350mm to 400mm per annum.[24] Such areas and the climatic condition support pastoralism because they are free from tsetse flies and other challenges which would have rendered it difficult for the pastoralism to flourish. Due to the stated climate condition, the transhumance livestock husbandry (nomadic model) becomes inevitable – as coupling strategy of the situation.

3.2 Livestock Population

The study noted that, there were currently more than 21.3 million cattle, 15.2 million goats and 6.4 million sheep in Tanzania basing on the 2012 livestock population estimates.[25] Other livestock include 1.9 million pigs, 35 million local chicken and 23 million improved chicken. About 95% of the livestock population is of indigenous types[26] (kept under traditional pastoralism). The study region, Manyara, has the 4th largest herd of cattle after aforementioned Shinyanga, Mwanza and Tabora regions. The region (Manyara) has more

[19] URT (2010) Livestock Sector Development Strategy of 2010. Ministry of Livestock and Fisheries Development. Government Printer: Dar es Salaam. Page 1.

[20] However, the Sandawe, Hadzabe, Gorowa, and Burugi are traditionally hunters and gatherers – not pastoralists.

[21] The term 'indigenous' derives from the Latin word *indigena* made up of the two words, namely *indi* ('within') and *gene* or *genere* ('root'). It can therefore mean, 'born in' or 'something that comes from the country in which it is found' or 'native of' (Reference: Barume, Albert Kwokwo (2010) Land Rights of Indigenous Peoples in Africa. IWGIA Document 115, Copenhagen. Page 20). The indigenous people differ from the rest of the people in the country in terms of language and culture. They live in close interaction with nature [Reference: MS-Danish Association for International Co-operation (1997) Strategy and Action Plan for Support to Pastoralists and Hunters Gatherers. MS-Tanzania: Dar es Salaam. Page 6). Also, Peter, Chris Maina 'Human Rights of Indigenous Minorities in Tanzania and the Courts of Law' (2007) 14 International Journal on Minority and Group Rights 4, 455, for more clarification on 'indigenous peoples', who argues that, the people are identified as indigenous when, inter alia, they voluntarily perpetuate their cultural distinctiveness, which may include modes of production.

[22] The rights and welfare of the indigenous people are protected by a number of international human rights instruments. The ILO's 169 Indigenous and Tribal People Convention of 1989; and the UN Declaration on the Rights of the Indigenous Peoples of 2007 maintain that, indigenous peoples have a right to self-determination. In pursuance of this right, they shall freely determine their social and cultural development. Article 27 of the International Covenant on Civil and Political Rights, 1966 states that, these people have the right to enjoy their own culture (including pastoralism).

[23] Note that, Manyara region has three major agro-ecological zones, namely the rift valley highlands (called '*Engotiek'* in Maasai language); the semi-arid midlands; and the bushes Maasai steppe. It is the rift valley highlands which receive reasonable or moderate high rainfalls (between 800mm and 1,000mm). Reference: 2013 Manyara Region's Investment and Socio-Economic Profile, Page 3. Note, the profile is fully cited below.

[24] URT (2013) Investment and Socio-Economic Profile Manyara Region, August 2013. Regional Commissioner's Office: Manyara Region, Tanzania. Page 4.

[25] URT (2012), Op citi, Page 10.

[26] Interviews with the district livestock officers of the sampled study districts in Arusha and Manyara. Also, URT (2011) Livestock Sector Development Programme. Ministry of Livestock and Fisheries Development. Government Printers: Dar es Salaam. Page v.

than 1.4 million cattle basing on 2013 estimates. The distribution of cattle and goat in Manyara's districts is as shown in Table 1:-

Table 1: The Number of Livestock in Manyara Region

LGAs	Cattle Breed		Goat Breed		Sheep
	Indigenous	Exotic	Indigenous	Exotic	
Babati Rural	142,982	3,268	65,621	3,851	28,741
Babati Town	18,530	4,457	20,721	356	5,375
Hanang	248,689	22,184	184,904	2,783	98,799
Kiteto	315,131	594	226,099	1,524	45,555
Mbulu	355,102	1,666	205,233	45	121,588
Simanjiro	326,528	469	222,594	816	115,036
Sub-Total	**1,406,962**	**32,638**	**925,172**	**9,375**	**415,094**
Grand Total:	**1,439,600**		**934,547**		**415,094**

Source: Extracted from Manyara Region Profile (2013: 5).

From Table 1 above, exotic (modern or 'improved') breed accounts for only 2.3% and 1.0% for cattle and goat respectively. That means, more than 97.7% and 99.0% of the cattle and goat breeds in Manyara region are indigenous animals kept under traditional pastoralism. This situation tends to negate government commitment to wide-spread improved livestock breeds as part of commercialization and value addition in livestock. It is also evident that, a vision to attain commercialized livestock keeping by 2025 is a far reach and unrealistic dream especially without proper and effective participation of the indigenous herders; and, given the fact that in arid and semi-arid lands (ASAL) the indigenous livestock are more adaptive to hardship environment compared to improved breeds whose chances of survival is minimal during drought critical times.

The statistics show that, at national level, the (indigenous) livestock population in Tanzania has increased from only 6,555,468 in the year 1919 countrywide to more than 21 million in 2015 as Table 2 below summarizes livestock populations of some the years:-

Table 2: Livestock Population by Selected Years since 1919 – Cattle, Sheep and Goats Only

Type of Livestock	Selected Years						
	1919	1935	1955	1961	1978	1994	2012/2015
Cattle	3,147,442	4,793,000	6,755,000	8,016,000	12,000,000	15,644,806	21,300,000
Sheep	1,362,444	1,912,000	2739,000	2,986,000	3,600,000	3,250,708	6,400,000
Goat	2,043,665	2,566,000	3,878,000	4,448,000	5,500,000	9,202,404	15,200,000

Source: Extracted from Basic Data for Livestock and Fisheries Sectors, July 2014, Page 6[27] (plus other Sources[28]).

The estimated number of cattle alone as of 2012 was more than 21.3 million of which, around 20.6 million (being 97.1%) were indigenous cattle and the remaining 0.7 million (being 2.9%) were beef and meat

[27] URT (2014) Basic Data for Livestock and Fisheries Sectors 2013. Government Printer. Dar es Salaam. Page 6.

[28] Statistics for 2012/2015 were obtained from: URT (2012) National Sample Census of Agriculture Small Holder Agriculture Volume III: Livestock Sector – National Report. National Bureau of Statics (Tanzania) and the Office of the Chief Government Statistician (Zanzibar): Tanzania. Page 10.

(exotic) cattle. The country ranks third in terms of cattle population in Africa,[29] after Ethiopia and Sudan.[30] Ethiopia has the largest livestock population and the highest draft animal population in the continent. There are approximately to be 55 million cattle, 39 million sheep and goats, 8.6 million equine, 1 million camels, and 55.4 million chickens in the country.[31]

The main breeds kept by majority of pastoralists and agro-pastoralists in the country are the Tanzania Shorthorn Zebu (TSZ) and Ankole breeds.[32]

Picture: A cross section of tradtional breeds pictured at Duka-Bovu market, Monduli, September, 2015 (field photo).

The 'improved' or hybrid livestock breed[33] was steadily ingenerated to the local pastoralists through artificial insemination and distribution of cross-breed bulls in the villages. There is also a small scale diary sector in all districts visited including urban areas. The diary sector is managed by small-holder livestock keepers who keep pure dairy cattle breeds (such as the Friesian, Jersey, Hereford and cross of such breeds); dairy

[29] URT (2011) Livestock Sector Development Programme of 2011. Ministry of Livestock and Fisheries Development. Government Printer: Dar es Salaam. Page 1; and URT (2014) Basic Data for Livestock and Fisheries Sectors 2013. Government Printer. Dar es Salaam. Pages 10-11.

[30] URT (2006) National Livestock Policy of 2006. Ministry of Livestock Development. Government Printers: Dar es Salaam. Page 1.

[31] AGP-Livestock Market Development Project (2013) Agricultural Growth Project - Livestock Market Development. Value Chain Analysis for Ethiopia. USAID: Ethiopia. Page 9. Note, Solomon, Ayele; Assegid Workalemahu, M.A. Jabbar M.M. Ahmed and Belachew Hurissa (Undated) Livestock Marketing in Ethiopia: A Review of Structure, Performance and Development Initiatives Socio-Economics and Policy Research Working Paper 52 Livestock Marketing Authority. The Federal Democratic Republic of Ethiopia. Accessed from: Page 1-4. a, http://www.fao.org/fileadmin/templates/agphome/images/iclsd/documents/wk2_c5_gerard.pdf on 3rd October, 2015 estimated the total cattle population in Ethiopia to be 35 million. Be it as it may, there is no any other country in Africa or may be all over the world with more than 30 million cattle herds like Ethiopia.

[32] The TSZ is well adapted to local conditions, namely arid and semi-arid conditions as stated earlier on.

[33] Example, the Boran and Sahiwal cattle; and Isiolo goats.

goat breeds and crossed (that is, the blended goat breeds and Anglo-Nubian goats (Isiolo); and the pure breeds such as Saanen and toggernburg in Monduli district.[34]

Pictures: Examples of improved cattle and goat breeds as captured at Themi-Lokii, Arumeru district; and at a farm Monduli district, September 2015 (L and R respectively). Field photos.

The big size of the indigenous or traditional livestock or pastoralism in general, has a direct implication and huge contribution to the micro and macro-economic development in Tanzania. For instance, as it further evidenced below, this (traditional) sector, accounts for about 95% of all beef produced in the country. Therefore, the commercial ranching and dairy herd,[35] which are highly encouraged and supported under the National Livestock Policy of 2006, and other related plans, strategies, rules and regulations, account for only about or less than 5% of the economic development.

4.0: IMPLICATIONS OF THE LIVESTOCK REGULATORY FRAMEWORKS ON TRADITIONAL PASTORALISM

The livestock economic subsector is governed by several laws, plans and policies which together form a livestock regulatory framework. The mother policy governing the subsector is the National Livestock Policy of 2006. Other livestock plans and strategies include the Ministry of Livestock's Medium Term Strategic Plans (of 2009-2011; and 2012-2017); the Livestock Sector Development Strategy of 2010; the Livestock Sector Development Programme of 2011; the Livestock Modernization Initiative of 2015; and the Participatory Agriculture Development and Empowerment Project (PADEP), which seems to have been phased out at the moment (2015). Such policies, laws and plans are purportedly and retrospectively enforced by a number of relevant legislation including:-

[34] Such breeds are mainly distributed by non-governmental organizations to so called vulnerable community groups, through the then Tanzania Social Action Fund (TASAF)'s funded projects (Source: Interviews with Monduli and Longido district officials, September 2015).

[35] The National Ranching Company (NARCO) is the main operator of commercial beef production in the country. Breeds kept on some commercial farms include the Boran, Mpwapwa, Charolais, Chianina, Simmental, Hereford, Brahaman, Santa Getrudes and Aberdeen Angus (Reference: URT (2010), Op citi, Page 6).

(i) Animal Diseases Act, 2003;[36]
(ii) Veterinary Act, 2003;[37]
(iii) Dairy Industry Act, 2004;[38]
(iv) Meat Industry Act, 2006;[39]
(v) Hides, Skins and Leather Trade Act, 2008;[40]
(vi) Animal Welfare Act, 2008;[41]
(vii) Grazing Land and Animal Feeds Resources Act, 2010;[42]
(viii) Livestock Identification, Registration and Traceability Act, 2010;
(ix) Other legislation which impact on livestock keeping, especially the pastoralism model, namely:-
  (a) Village Land Act, 2009;[43]
  (b) Forest Act, 2002;[44]
  (c) Wildlife Conservation Act, 2009;[45]
  (d) Ngorongoro Conservation Area Authority Act, 1959;[46]
  (e) Land Use Plan Act, 2007;[47] and

There are also several regulations formulated to implement those laws. The pieces of legislation establish livestock regulatory bodies, namely; the Tanzania Dairy Board (TDB); the Tanzania Meat Board (TMB); and Veterinary Council. The scope of the study limits further discussions about these and other bodies.

The Grazing Land and Animal Feeds Resources Act, 2010 was enacted as part of the implementation of the Ministry of Livestock's Medium Term Strategic Plans (of 2009-2011; and 2012-2017). Together with other laws such as the Village Land Act, 1999 and the Land Use Plan, 2007, the grazing land law was enacted as part of the government efforts to address the problem of grazing land availability to livestock keeper. Section 58 of the Village Land Act, 1999 calls for village land use plan (VLUP), while the grazing land law makes provisions for demarcation of grazing areas for pastoralism. But, the national land use plan initiatives are still not adequately implemented. For instance, as of 2013, there were only 800 villages out of 12,000 national wide which were surveyed and granted land certificates, which allow them (as villages) to have proper VLUPs.[48] As for the demarcation of grazing land, the government has managed to demarcate about 1.4 million hectares of the land for grazing livestock in 266 villages in only 15 (50%) regions (of required 12,000 villages) countrywide. Moreover, the demarcated grazing land is still underdeveloped due to, lack of concrete grazing land development and management plans required for suitable resource ownership and land use[49] as the 2010 legislation require.

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[36] Act No. 17 of 2003.
[37] Act No. 16 of 2003.
[38] Act No. 8 of 2004.
[39] Act No. 10 of 2006.
[40] Act No. 18 of 2008.
[41] Act No. 19 of 2008.
[42] Act No. 10 of 2010.
[43] Act No. 5 of 1999.
[44] Act No. 14 of 2002.
[45] Act No. 5 of 2009.
[46] Act/ Ordinance No. 413 of 1959.
[47] Act No. 7 of 2007.
[48] LHRC (2013) Business and Human Rights Report. LHRC: Dar as Salaam.
[49] URT (2011), *Op citi*, Page 8.

Moreover, this study has noted that, the current land law framework which allows customary right of occupancy (CRO) is relatively inhibitive of the pastoralism mode of production, which reinforces communal land ownership for collective pasture management. The communal or common property land regime preferred by traditional pastoralists arrowed them to suitably manage vast areas of land, rotating from one angle to the other as coping strategy due to a nature of climatic condition indicated above. For instance, the Maasai, as indigenous pastoralists, have 4 distinct pastoral zones, corresponding roughly with climatological zones. Such zones[50] are:-

(i) *Olpurkel*: Arid and semi-arid lands, rich in salt, used during wet season when water is sufficient and grasses are nutritious.
(ii) *Oloing'aha*: Transitional areas that can be used during both the wet and dry season.
(iii) *Olng'arwaa*: Riverine areas, used for dry season grazing.
(iv) *Osukupo*: Areas with reliable rainfall, used for dry season grazing.

Therefore, enforcement of modern land structures, has definitely distorted traditional pastoral norms. It is an obvious fact that, the ongoing land use conflicts between pastoralists and other land users are, to a large extent, attributed to the distortion of the traditional land tenure systems by the current regulatory frameworks on lands and livestock economic sub-sector. Indeed, the provisions of some of the laws, especially the Village Land Act of 1999 ensure pastoralists the right to own land for grazing communally but, with limited liberty. Section 6(d) of the Ngorongoro Conservation Area Act, 1959[51] states that, one of the functions of the Ngorongoro Conservation Areas Authority (NCAA) shall be:

> [t]o safeguard and promote the interests of **Maasai citizens** of the United Republic (of Tanzania) engaged in **cattle ranching and dairy industry** within the Conservation Area [Emphasis supplied].

But, 'cattle ranching' and 'dairy industry' presupposes modern and mechanized livestock keeping which, at the moment, not realistic for traditional livestock herders. Secondly, as Chachage[52] argues, the experience shows that entrance into the Ngorongoro Conservation Area (NCA) is very limited to Maasai and other pastoralists especially when they want to access grazing areas in NCA. Moreover, agricultural activities are strictly prohibited within the NCA, a situation which causes famine every year to Maasai communities in the area.

Subsequent parts of this study report give a more detailed discussion about this subject matter; however, suffice to note from this outset that, policy and legal frameworks' failures to recognize diversity of pastoralism model, has led to numerous adverse effects, which all together mitigated the value and contributions of pastoralism to micro and macro-developments.

The investment policies in wildlife, mining and other sectors, which are enforced by a number of laws, have been main attributing factors to the stead decreasing on the amount of indigenous land meant for pastoralism. A serious of land displacement tricks, which are justified by the current regulatory frameworks,

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[50] Copied from: Monduli District Council (1997) Planning for a Better Environment in Monduli District. Monduli District Council: Monduli. Page 36.
[51] This law establishes the Ngorongoro Conservation Authority (NCAA).
[52] Chachage, S. (1996) Land Policy and Tenure in National Parks, Game and Forest Reserves in Tanzania. Seminar Presentation: Dar es Salaam. Page 15.

under the pretext of 'widening of wildlife protected areas,' 'creation of land banks for investments,' 'acquisition of land for public purposes,' and 'environment protection,' have resulted into forceful (and constructive[53]) evictions of the pastoralists (as typified above) from their traditional lands.

The 2003 study[54] on causes of recent Maasai's influx in the urban areas found that, there were various pushing and pulling factors to that situation. The attributing factors mentioned were; lost (displacement from) of grazing lands (47.8%); loss of livestock as means of livelihood due to diseases (23.7%); migrated to urban areas just for searching peace (15.5%); shortage of land for cultivation (8.5%); and prolonged drought (5%). Despite the fact that more than ten years has gone by since when the said study was conducted, the focus group discussions for this study confirmed, to a large extent, the pragmatism of the same situation to date (2015).

The displacement of pastoralists has continued to pose a danger of not only losing pastoralists' means of livelihood, but also a total distinction of traditional pastoralism in Tanzania.[55] For instance, the urban migrated Maasai pastoralists now prefer urban lifestyle despite the fact that they live miserable life such as being informal and low-paid security guards (with frequent victimization by their bosses); hawking around herbs; managing tiny road side stalls along the street where they sell sweets, cigarettes, etc. as the picture below shows:-

Picture: Maasai selling ornaments and herbs in Dar es Salaam streets (Source: Riley, E *et al* (Undated)).

[53] That is compelled by the circumstance e.g. lack of land, security, etc.

[54] Mung'ong'o, C., and Mwamfupe, D. (2003) Poverty and Changing Livelihoods of Migrant Maasai Pastoralists in Morogoro and Kilosa Districts [Printer and Place not indicated]. Page 6. Quoted from: Riley, E., Olengurumwa, O., and Olesangale, T (Undated) A Report on the Demographics, Standards of Living, and Employment Conditions of Migrant Maasai Living in Dar es Salaam. LHRC & Livelihood Initiative Support: Dar es Salaam. Page 7.

[55] Olenasha, William (Undated) Reforming Land Tenure In Tanzania: For Whose Benefit? Presented during one of HAKIARDHI's workshops. HAKIARDHI: Dar es Salaam. Page 2.

The misplaced Maasai pastoralists change not only lifestyles and cultural norms (which identified them as indigenous groups), but also, deteriorate further their family livelihood such as union, education for their children, and the like. The displaced pastoralists who prefer to pursue rural life found themselves in conflict with farmers due to limited grazing land. Moreover, the reduction of grazing land causes overuse of land resulting in prolonged period of droughts.[56]

On the other hand, the regulatory frameworks which propagate exclusion of pastoralists do also threaten the local government and national economies as well. Some of the districts sampled for this study (Longido and Simanjiro) depend entirely (for more than 90% of own source collections) on revenues from traditional livestock rearing model. It is the huge number of cattle which determine the volume of revenue collections in their jurisdictions; because, as it is further illustrated below, each head of the cattle entering and exiting the livestock market, pays not less than Tshs 5,000 (USD 2.5) or Tshs 8,000 (USD 3.8) levy to the local and secondary markets if it is primary or secondary market respectively. That amount is exclusive of numerous other fees, fines and tips or bribes charged along the way which are very common especially when the pastoralists trek their animals from one place to the other for pasture or sale. Kinds of these incidents have been widely reported by the media (see the newspaper's clip of 3rd October, 2015 below) and only a few cases were judicially decided. The perpetrators of illegal livestock fines in Mbarali (Ihefu) evictions in 2006 onwards were not prosecuted to date.

Ofisa mifugo anusurika kifungo cha miaka mitatu kwa rushwa

Baraka Rwesiga, Mwananchi

Chato. Mahakama ya Wilaya ya Chato mkoani Geita, imemhukumu Ofisa Mifugo wa Kata ya Makurugusi, Florence Barongo kifungo cha miaka tisa au kulipa faini ya Sh1.5 milioni kwa kuomba na kupokea rushwa ya Sh1,010,000.

Mshtakiwa alipokea fedha hizo mara mbili kwa kutumia muamala wa M-Pesa, baada ya kukamata ng'ombe 49 aliodai walikuwa wanasafirishwa bila ya kibali cha idara ya mifugo.

Hata hivyo, mahakama ilimwachia huru mshtakiwa namba mbili, Jovitha Mshuti ambaye ni jamaa wa karibu na mshtakiwa huyo kutokana na kutomkuta na hatia licha ya simu yake kutumika kupokea muamala wa Sh510,000 kutoka kwa mmiliki wa ng'ombe hao.

Barongo, alilipa faini hivyo kunusurika kupelekwa jela kutumikia kifungo.

Akisoma hukumu hiyo juzi, Hakimu Yona Wilson alisema Mahakama imeridhishwa na ushahidi uliotolewa na upande wa mashtaka kwa kuwasilisha vielelezo vitano na mashahidi tisa akiwamo mtaalamu wa miamala kutoka Kampuni ya Simu ya Vodacom.

Hakimu Wilson alisema kielelezo cha taarifa kuhusu akaunti ya mlalamikaji Samson Bunoli ilithibitisha kuwa, alituma Sh510,000 kwa M-Pesa kupitia simu ya mshtakiwa Mshuti.

Hata hivyo, Mshuti alidai licha ya kupokea kiwango hicho cha fedha, hakujua nia ya mtumaji kabla ya kuelekezwa na mshtakiwa namba moja kuzipokea.

Alisema mashahidi Mathias Samwel na Masanja Ntiginya waliokuwa wanaswaga ng'ombe kuwapeleka wilayani Biharamulo kutafuta malisho kuwa, siku walipokamatwa walitoa kiwango hicho baada ya kupokea maelekezo kutoka kwa Bunoli.

Hakimu Wilson alisema mshtakiwa alikutwa na hatia ya kushawishi, kupokea rushwa kwa M-Pesa na kupokea fedha taslimu.

Katika utetezi wake, Barongo alishindwa kuthibitisha kuwa fedha alizoomba zilikuwa ni adhabu kwa kusafirisha ng'ombe kwa kuwa kati ya Sh1,010,000 ni Sh 75,000 alizokatia stakabadhi halali ya Serikali.

Newspaper Clip: 'Livestock officer 'escapes' a three year jail term for corruption' (Mwananchi, 03/10/2015, Page 14).

In the above media caption, the Mkurugusi Ward Livestock Officer demanded Tshs 1,010,000 (USD 481) from pastoralists on the allegation that, he (the pastoralist) was transporting his 49 livestock without a permit from the livestock department. The pastoralist paid the amount of 'fine' requested but he was, in

[56] Riley, E., Olengurumwa, O., and Olesangale, T. (Undated) A Report on the Demographics, Standards of Living, and Employment Conditions of Migrant Maasai Living in Dar es Salaam. LHRC & Livelihood Initiative Support: Dar es Salaam. Pages 7 and 8.

return, given a government receipt displaying Tshs 75,000 (USD 36) as a total fine paid. The rest of the money paid (Tshs 935,000 or USD 445) went into private pockets of the livestock officer.

Therefore, loosing livestock or its products or revenues by any reasons is detrimental to both sides – livelihoods for individual pastoralists; business opportunity and income for traders in livestock's products or by-products; and revenues on part of the government. For instance, the 2006/2007 Mbarali-Ihefu livestock eviction, which destocked (killed) more than 300,000 cattle; 20,000 sheep and goats, could be regarded as a loss of billions of revenue on part of the government. Example, without the destocking, the government would have collected Tshs 1,500,000,000 (USD 714,285) from cattle alone just as livestock market fee/ levy (basing on a calculation of Tshs 5,000 (USD 2.4) per head of cattle as illustrated above). If other value-chain components were to be included, that amount would have cumulated to about half a trillion Tanzanian shillings.

5.0: CONTRIBUTIONS OF PASTORALISM INTO MACRO AND MICRO-ECONOMIC DEVELOPMENTS

5.1 Contributions to Macro-Economic Development

5.1.1 Overview of Pastoralism Contribution to National Economy

Tanzania is endowed with abundant natural resources, which include land, water, forage and a large livestock resource base,[57] which makes it the third in Africa in terms of livestock population as stated earlier on. The traditional livestock keeping (pastoralism), which this study focused on, is one of the major agricultural activities in the country that is contributing towards achieving development goals of the national Growth and Reduction of Poverty (NSGRP)[58] commonly abbreviated in Kiswahili language as MKUKUTA.

The livestock industry, which is largely dominated by indigenous pastoralism, contributes about 16% and 3.8% to the Agricultural Gross Domestic Product (AGDP) and the National Gross Domestic Products (GDP) respectively.[59] However, it seems that more updated statistics depicting real current contributions of livestock subsector are highly needed. This is due to the fact that, various reports on the subject matter had presented different percentages of livestock contribution to AGDP and GDP in Tanzania. For instance, the July 2015 World Bank economic update report as Table 3 below shows indicated that, Livestock contributes 7.4% to the GDP.

Table 3: Shares of Economic Activity in GDP (Current Market Share) 2009-2014 (Percent)

Economic Activity	2009	2010	2011	2012	2013	2014
Agriculture and Fishing	**30.2%**	**30.1%**	**29.6%**	**31.1%**	**31.7%**	**28.9%**
Crops	16.0%	16.7%	16.6%	18.0%	17.8%	16.2%
Livestock	9.7%	9.1%	8.7%	8.5%	8.4%	7.4%
Forestry and Hunting	2.3%	2.2%	2.2%	2.5%	3.1%	3.1%

[57] URT (2011), *Op citi*, Page 1.
[58] URT (2010), *Op citi*, Page 1.
[59] URT (2011), *Op citi*, Page 1.

Fishing	2.2%	2.1%	2.1%	2.2%	2.4%	2.2%

Source: World Bank, Tanzania Economic Updates, July 2015, Page 52.[60]

The livestock's contribution to GDP in Ethiopia (the country with highest population density Africa), is quite impressive. According to the available reports,[61] the sub-sector contributes 12% and 33% of the AGDP and GDP, respectively; and that, it provides livelihood for 65% of the population. As for Sudan (before independence of South Sudan), this sector contributed substantially to AGDP more than crop farming.[62] Ethiopia cherishes a lot this sector, and the government support to the sector in terms of input supplies, financial services, etc. is relatively huge compared with Tanzania. Therefore, it is not about a size of livestock population which determines its contribution to the GDP; but rather, nature and extent of support to add value to the sector as it is illustrated further in the coming sections of this report.

Fact Box # 1: Underestimation of Pastoralism's Economic Contributions

The contribution of livestock to GDP is considerably masked and seriously underestimated. The GDP only considers livestock and livestock products that are marketed. The value of most of the products coming from the extensive livestock system dominated by agro-pastoralists and pastoralists, comprising about 95% of the total livestock population is not reflected in the GDP. The contribution of pastoralism to the national economy of Tanzania is also largely invisible because the national statistics on livestock production are usually in terms of livestock products such as beef, milk, hides and skins; but, as this study ascertained, these do not in themselves show adequately what comes out of the pastoral sector. The statistics do not include the number of live animals from the pastoral sector that are not slaughtered. Although the pastoral sector produces meat, milk and blood, most of them are usually consumed in the pastoral households. For instance, out of the total milk produced from the pastoral sector, it is only 5% to 10% that enters the commercial market by selling to consumers usually through middlemen (Reference: TNRF (2007) Study on Options for Pastoralists to Secure Their Livelihoods. Assessing the Total Economic Value of Pastoralism in Tanzania. Tanzania Natural Resource Forum: Arusha. Page 26).

The low contribution of pastoralism into Tanzania macro-economic development is attributed to a number of factors such as; i) neglect of the sector by the government mainly due to negative perception of the model; insufficient support to increase its productivity examples availability of viable and profitable markets; and ii) inadequate extension services especially in remote areas. In most cases, as this study established, the pastoralists do manage themselves informally in terms of market information, control of diseases and other technical and non-technical issues. It was found that, there was no regular extension services rendered to support pastoralists; insufficient facilities to enable extension officers and veterinary doctors to do their work perfectly such as the refrigerators for storing drugs in rural setting such as Sukuro, Simanjiro;

[60] World Bank (2015) Tanzania Economic Update: Why Should Tanzanians Pay Taxes? The Unavoidable Need to Finance Economic Development. Issue 7, World Bank. Also available at http://www.worldbank.org/tanzania/economicupdate accessed on 28th September, 2015.

[61] Solomon, A., Workalemahu, A., Ahmed, M., and Hurissa, B (Undated) Livestock Marketing in Ethiopia: A Review of Structure, Performance and Development Initiatives. Socio-economic and Policy Research Working Paper 52. Livestock Marketing Authority: Ethiopia. Page 2. Accessed it from: http://www.fao.org/fileadmin/templates/agphome/images/iclsd/documents/wk2_c5_gerard.pdf on 30th September, 2015.

[62] IGAD Center for Pastoral Areas & Livestock Development (ICPALD) (2013) The Contribution of Livestock to the Sudan Economy. POLICY BRIEF SERIES Policy Brief No: ICPALD 6/CLE/8/2013. Accessed from: http://igad.int/attachments/714_The%20Contribution%20of%20Livestock%20to%20the%20Sudan%20Economy.pdf on 25th September, 2015.

the input supplies such as veterinary drugs and feed supplements, syringe, spray pumps, etc. were done informally by unspecialized local pastoralists without sufficient safeguard of the nature, quantity and quality of drugs or facilities supplied. The Sukuro ward pastoralists said that, there is a complicated livestock disease known as *'catarrhal fever'*, which springs out during rainy seasons (due to bacteria found in the wild animal's placenta).[63] It was said that, no cure has been found as yet and they were not seeing the government taking actions to help them. The East Coast Fever, Malignant (MCF); and Olmilo (dizziness) were also mentioned to be some of the diseases which frequently and highly affect pastoralism development in the sampled areas.

Picture: A lady vending veterinary medicine in Longido livestock market (Field Photo, September, 2015).

The lady (pictured above) told the study team that, she could prescribe the drugs' dosage to her customers by using 'experience' and 'common sense.' She was holding blue large tablets which she told the researchers to be for fattening the goat. However, the 'fattening-drugs' she was talking about were actually anti-worm treatments. Probably, the wrong dosage and drugs had already been administered to a number of livestock due to seller being completely layperson in vet-services.

The livestock services such as cattle dips, dams, artificial insemination were found by this study to be inadequate all over the study areas, and Tanzania at large (basing on recent official statistics by the government and other sources).

[63] According to the livestock doctor interviewed at Sokulo market in September 2015, when the wildlife placenta falls on the grasses, it causes bacteria to grow with the grasses. Then, when a cattle feeds on those grasses the harmful bacteria form a disease known as *chatarra fever*.

Picture: Sukoro dam is a water source for more than seven villages in Simanjiro. It is for human and livestock consumptions (field photo, September 2015).

As Table 4 below shows that, an average of 50% of the required dips, dams and services were missing in Manyara region.

Table 4: Availability of Livestock Facilities in Manyara Region

Livestock Facilities		Distribution of Resources by Local Government Authorities						
		Hanang' DC	Babati DC	Kiteto DC	Simanjiro DC	Babati TC	Mbulu DC	Regional Total
Cattle dips	Exist	19	39	23	25	04	39	145
	Required	52	41	56	52	10	46	257
	Shortfall	32	05	33	27	06	10	113
Dams	Exist	0	08	41	24	0	0	73
	Required	20	16	45	30	08	09	128
	Shortfall	20	08	04	06	08	09	55
Market Infrastructure	Exist	11	09	07	06	01	08	42
	Required	15	13	17	19	04	10	78
	Shortfall	04	04	10	13	03	02	36

Source: Extracted from Manyara Region Profile (2013: 49-50).

Apart from challenges relating to service provision, there are several other challenges which hinder pastoralism development in Tanzania; hence, low contribution to the economic development. The other challenges[64] include:-

(i) Livestock diseases such as endemic tick-borne especially east coast fever, worms and epizootic viral.

(ii) Decreasing grazing areas due to increased livestock population (at 2.8% growth rate per annum); shrinking of village land in favor of investments and wildlife protections; and other factors discussed in the coming parts of this study report.

(iii) Marketing challenges as discussed further below. Around 30% or 40% of the animals brought in the primary markets are eventually returned home due to poor prices and quality.

(iv) Lack of small-scale industries for processing livestock products in order to add value. This is also discussed in details below.

[64] As analyzed from various sources including the Livestock Sector Development Programme of 2011.

(v) Lack of education such as market information, technology, perception of new ideas, etc. about their (pastoralists') livestock.

(vi) Restricted livestock mobility as it affects access to water, grazing areas as well as application of traditional means to mitigate the effects of climate change.

Such and other factors have rendered livestock's real growth rate to GDP to remain less than 3% per annum since 2010 to last year as Table 5 below shows:-

Table 5: Real GDP Growth Rates 2009-2014 (Percent)

Economic Activity	2009	2010	2011	2012	2013	2014
Agriculture and Fishing	**5.1%**	**2.7%**	**3.5%**	**3.2%**	**3.2%**	**3.4%**
Crops	5.5%	3.7%	4.8%	4.2%	3.5%	4.0%
Livestock	5.3%	1.4%	1.6%	1.8%	2.0%	2.2%
Forestry and Hunting	5.1%	3.4%	3.3%	3.5%	4.7%	5.1%
Fishing	0.5%	0.9%	2.6%	2.9%	5.5%	2.0%

Source: World Bank, Tanzania Economic Updates, July 2015, Page 51.[65]

The crop farming and hunting (tourism) have been receiving enormous support from the government, sometimes to the detriment of traditional pastoralism. Some of the government supports extended to these economic sub-sectors included increased budget allocation, proclamations in support of the same such as 'Kilimo Kwanza' which go hand in hand with provision of subsidized input supplies and grabbing of village lands (example under SAGCOT projects[66]). On the other hand, so many incentives have been devised to support tourism sector.

Picture: Tourists at the Serengeti National Park (internet source).

The support to tourist sector include the creation of land banks for investors, allowing camps and hotels in the national parks (while pastoralists are strictly prohibited), expansion of wildlife protected areas including creation of more hunting blocks and wildlife management areas (WMA). Such 'protected' areas are extended towards the pastoral lands.

[65] World Bank (2015), Op citi.

[66] SAGCOT is the Southern Agricultural Growth Corridor of Tanzania. It was initiated at the World Economic Forum (WEF) Africa summit 2010 with the support of founding partners including farmers, agri-business, the Government of Tanzania and companies from across the private sector. SAGCOT's objective is to foster inclusive, commercially successful agribusinesses that will benefit the region's small-scale farmers, and in so doing, improve food security, reduce rural poverty and ensure environmental sustainability (Reference: http://www.sagcot.com/ accessed on 3rd October, 2015).

5.1.2 Livestock Markets' Structures and Value Chain of Pastoralism

The Tanzania Mainland had a total of 475 livestock markets countrywide,[67] of which 464 (being 97.7%) were primary livestock markets and the remaining 11 (being 2.3%) were secondary and terminal livestock markets. The primary markets are characterized by sellers and buyers who are mainly pastoralists themselves from within the market vicinity; and low-price of livestock sold or purchased. Moreover, in the primary markets, it is the buyer who hold bargaining power (because the demand is lower than the supply); unlike the secondary market, where the seller and buyer are of somehow equal bargaining powers (because the demand is relatively higher than the supply). The terminal markets, as this study noted, involve livestock dealers – in most cases not from pastoralism communities. The dealers, local and international traders, buy and sell animals in bulk (wholesale). However, there are retail buyers as well.

The livestock market chain involves pastoralists, transporters, brokers, traders (example, butchers), slaughters, processors as well as regulatory authorities and consumers.

Pictures: (L) Slaughter place (Mazizini, Ukonga, Dar es Salaam); (R) Butcher at Monduli town, September 2015 (field photos).

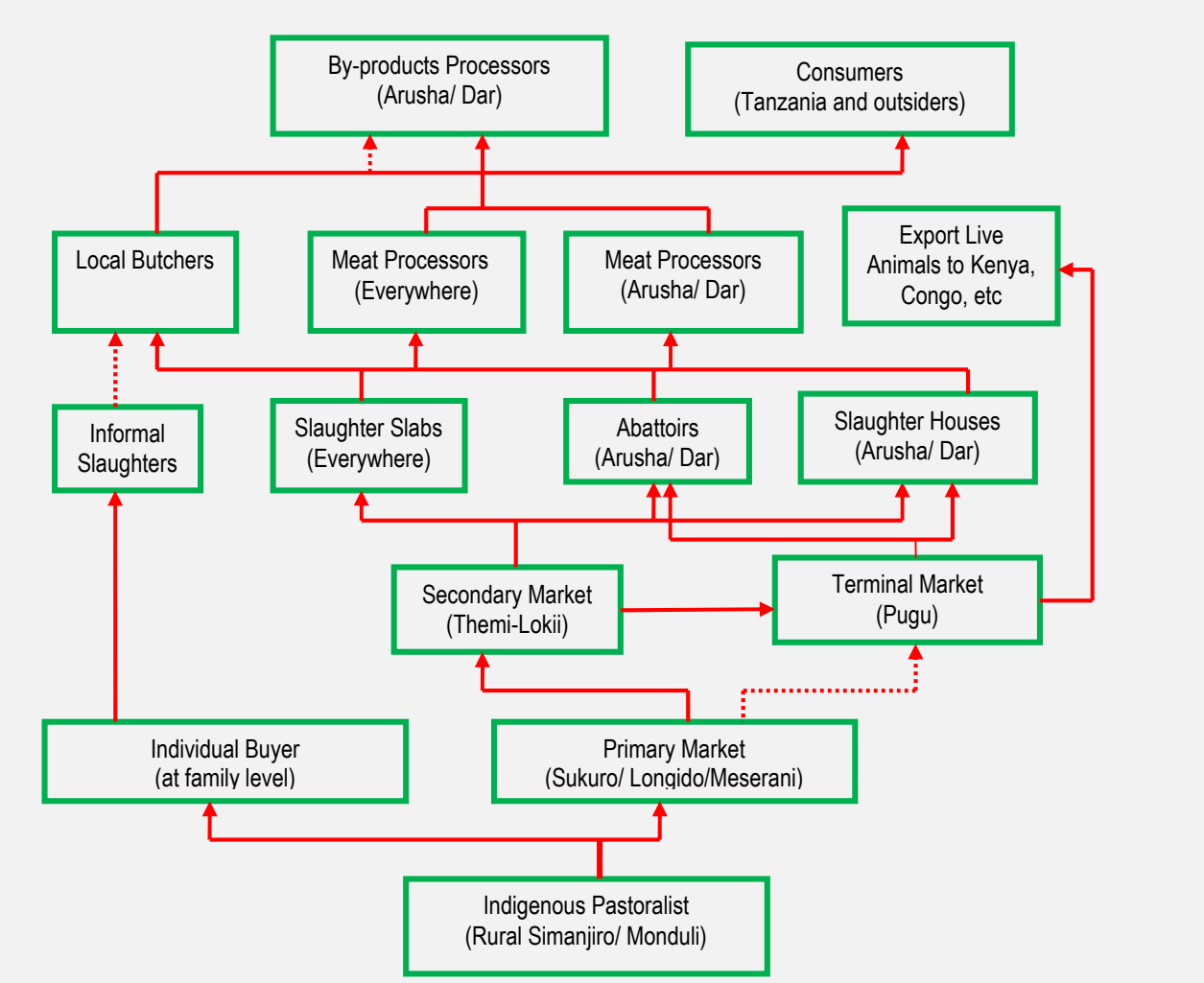
The Tanzanian livestock market structure is almost the same as of other countries which follow traditional livestock keeping model. The market structure has several levels (tier), which can be grouped into four main ranks,[68] namely:-

(i) Lowest rank ('farm-gate' market), which involves pastoralists and traders at rural level. They transact at grassroots level with around 1 or 2 livestock.
(ii) Primary market, which involves traders and buyers from different places trading at the local market.
(iii) Secondary market, both small and larger traders operate and traders and butchers from terminal markets come to buy animals.
(iv) Terminal market, big traders and butchers transact large number of mainly slaughter type of animals.

[67] URT (2014) Basic Data for Livestock and Fisheries Sectors 2013. Government Printer. Dar es Salaam. Page 43-62.
[68] Alemayehu, Kefyalew (Undated) Value Chain assessment of Beef Cattle Production and Marketing in Ethiopia: Challenges and Opportunities of Linking Smallholder Farmers to the Markets. Bahir Dar University, Faculty of Agriculture and Environmental Sciences, Department of Animal Production and Technology. Bahir Dar: Ethiopia. Page 3.

The market operates a chain of pastoralists and other market operators (mentioned) above until when the livestock products reach terminal markets[69] and consumers. The livestock market structure of the traditional cattle can be summarized as follow, basing on lesson learnt from sampled markets (Longido, Themi-Lokii, Duka-Bovu (Meselani), Sukulosi, and Pugu), visited slaughter houses, butchers, interviews conducted and literature reviewed:-

Figure 1: Livestock Market Structure (Case: Simanjiro/ Monduli Districts to Arusha/ Dar es Salaam Cities)



Source: PINGO's Forum Study (Adv. Kipobota's Analysis), September 2015 (with aid of various literatures).

As it is shown in Figure 1 above, an animal, its products (meat and milk) and by products (skins, hides, horns, etc.) passes through a lot of hands before it is finally consumed by the customer at local or international market. The value chain movements as it was learnt from the field has two major steps, namely; i) when an animal is live; and ii) when an animal is in carcass form (after being slaughtered). In all these steps and sub-steps as Figure 1 above and Table 6 below show, an animal generates or causes to be generated a lot of income and revenues for individual or government institutions.

[69] IFAD (Undated) Value Chains, Linking Producers to the Markets. Livestock Thematic Papers, Tools for Project Design. Page 3.

The way in which the livestock market structure operates, especially by considering the value chain of the livestock (live, carcass and by-products), it seems that one indigenous cattle like Tanzania zebu generates between Tshs 3.5 million (USD 1,670) and Tshs 7.5 million (USD 3,570) from the pastoralist's homestead gate to the final level of the livestock market (consumer as shown above, depending on the market level it reaches a final buyer or consumer). Table 6 below exemplifies some of the main and associated incomes generated from single indigenous cattle – basing on the assumption that the value chain originates from Simanjiro or Monduli or Longido distric to Pugu market (Dar es Salaam), via Themi-Lokii secondary market in Arumeru, Arusha region.

Picture: Lorries boarding cattle at Duka-Bovu market, Monduli ready to be ferried to terminal market, Pugu (field photo, September 2015).

The cost estimates used in the Table were based on September 2015's market value of the live livestock, its products, by products and associated services rendered as part of the transactions made:-

Table 6: Value Chain Analysis and Total Economic Value per Head of Normal Indigenous Cattle

S/No.	Main Market Step	Costed Activity/ Associated Costs	Approximation in Tshs/ Unit Livestock	Income Generated (for Individuals/ Government) - Tshs
A: Live Cattle				
0	Grounded at village home (Value at Home)	While at homestead (estimated village market value – if sold to a fellow villager)	500,000	500,000
1	Home to Primary Market (Value at Primary Market)	Escorting/ transporting	5,000	683,500
2		Movement permit	1,500	
3		Entrance market levy	5,000	
4		Central government fee	-	
5		Feeds and water in market ring	2,000	
6		Sale price	650,000	
7		Exit market levy (buyer)	5,000	
8		Movement permit (outside the district)	5,000	
9		Transporting to secondary market	10,000	
10	Primary Market to Secondary Market	Entrance market levy	6,500	
11		Central government fee	2,000	
12		Feeds and water in market ring	3,000	
13		Sale price	800,000	

14	(Value at Secondary Market)	Exit market levy (buyer)	8,500	859,000
15		Movement permit (outside the region)	5,000	
16		Lifting costs to the Lorry (casual laborers)	2,000	
17		Transporting to terminal market e.g. Pugu	30,000	
18		Communications (phone, Mpesa, etc.)	2,000	
19	Secondary Market to the Terminal Market (Value at Terminal Market)	Entrance market levy (Pugu market)	6,000	2,541,000
20		Feeds and water in market ring	4,000	
21		Storage charges/ security fees	2,000	
22		Sale price (to broker)	1,000,000[70]	
23		Sale price (from broker to retailer)	1,500,000	
24		Exit market levy (final buyer)	6,000	
25		Transport to the slaughter facility from Pugu	20,000	
26		Communications (phone, Mpesa, etc.)	3,000	
B: Carcass Level				
27	Slaughtering and meat (Urban carcass value)	Transport from Pugu to slaughtering sight	4,000	2,939,000
		Slaughtering expenses (summation)[71]	20,000	
28		Meat inspection fees	5,000	
29		Skinning and cutting costs	15,000	
30		Sale price of carcass (Kg 250)	1,250,000	
31		Transport from slaughter to butcher	15,000	
32		Selling of carcass (beef) in retail form (Kg 250xTshs 6,500 (Dar es Salaam)	1,625,000	
33		Communications (phone, Mpesa, etc.)	5,000	
C: By-Products				
34	Skin, intestine, horns, legs, head, liver, etc (By-Products' Value)	Skin (Tshs 1,000 x Kg 20 of the cow skin)	20,000	199,500
35		Intestine	25,000	
36		Legs	12,000	
37		Horns	-	
38		Tail	7,500	
39		Liver (@ Kg = 7,000 x 6.5 Kg)	20,000	
40		Head	15,000	
41		Other by-products[72] are sold in retail (Aprox.)	100,000	
Grand Total (Exclusive of other TEV's sub-components e.g. utility costs, salaries, etc.				**7,311,500**

Source: PINGO's Forum Study (Adv. Kipobota's Value Analysis), September 2015.

From Table 6 above, it is clearly that the economic value of the livestock increases as it exchanges hands between seller and buyer, from primary to secondary markets; and from the secondary to the terminal market. The more the sold cow is taken deep to the urban areas, the more the value. The value chain increases (by almost 500%) when the cow is transformed into carcass. When the by-by products are added in, the value of the cow increases by almost 600% compared to its homestead or primary market values.

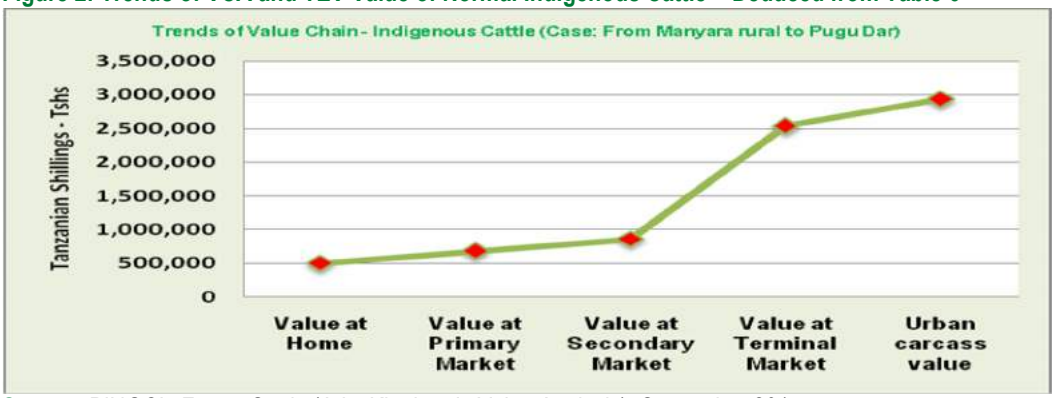
[70] This depends of quality grades. They have graded cows in grades 'A' to 'D', which ranges from Tshs 1,500,00 (USD 715) to Tshs 400,000 being USD 190 (A to D grades respectively). However, during high-demand seasons such as religious festivals, the prices go high to about Tshs 2,000,000 (USD 950) per one cow (Source: Discussion with traders at Pugu terminal market, September 2015).

[71] The Tshs 20,000 is an approximation of all charges attached to slaughtering of a cow. According to interviewees (September 2015 at Pugu market), the slaughtering charges include; slaughter (Tshs 1,000); skinning (Tshs 10,000); slaughtering fee paid to the government (Tshs 2,500); temporary accommodation (rent) fee at the slaughter house (Tshs 2,200) paid to the owner of the slaughter place; and Tshs 200 to Meat-Sellers' Association (not government).

[72] Example 'gasting' mineral (found in the cow's pancreases); raw or burned and smashed borne; manure; etc.

Figure 2 below summarizes the economic-gain trends of the livestock through the three value chain steps analyzed in Table 6 above:-

Figure 2: Trends of VCA and TEV Value of Normal Indigenous Cattle – Deduced from Table 6



Source: PINGO's Forum Study (Adv. Kipobota's Value Analysis), September 2015.

Moreover, the livestock markets as institutions hoard a lot of revenues from the fees charged. For instance, according to the officials interviewed, Themi-Lokii receives around 350 cattle per each market day. It charges Tshs 6,500 and Tshs 2,000 for local government and central government respectively; and a cow can be charge when it enters and goes out of the market. Therefore, if only 300 cows are charged Tshs 13,000 each (for in and out movements) as a local government's levy, it can collects a total of Tshs 3,900,000 (USD1,857) on the spot for cattle only – apart from goats, sheep and non-livestock trades taking place. Each of stall of these non-livestock micro-trades are charged between Tshs 1,000 and 3,000 per day.

Pictures: Side micro-business ventures at Themi-Lokii (Arumeru); and Sukuro (Simanjiro) livestock markets - Left and Right respectively, September 2015 (field photos).

The side-business ventures which hawk around to follow the livestock market days range from selling vegetables and fruits as pictures above show; to sell of second hand clothes, cultural attires, raw meat, traditionally roasted meat, beverages in cold containers, etc. as pictures below show:-

Pictures: Micro side-trades within livestock markets at Sokuro (L) and Duka-Bovu/ Meserani (R), September 2015 (field photos).

The Pugu market receives around 10,000 cattle per month. Each cow is charged Tshs 6,000 upon arrival; and can be charged same amount when is taken out of the market (after being bought). That means, the market collects between Tshs 60 million (USD 28,570) and Tshs 120 million (USD 57,140) per month from cattle alone – apart from side-businesses and other market users' fees.

5.1.3 Market Challenges which Affect Value Chain of Pastoralism

Most of the primary markets are administered by the Local Government Authorities (LGAs), which use them as part of sources of revenues. However, some of the markets such as Themi-Lokii (Arusha) had both LGAs and central government co-managing and collectively collecting levies.

Picture: Part of Themi-Lokii market area, September 2015 (field photo).

The secondary and terminal markets such as Weruweru (Moshi), Korogwe (Tanga), Lumecha (Songea) and Pugu[73] (Dar es Salaam) are administered by the central government through the Ministry of Livestock and Fisheries Development (MLFD).[74]

[73] This is the largest of the terminal markets which handles about 60% of total number of marketed animals in Tanzania.
[74] URT (2010), Op citi, Page 10.

It was noted during the study that, there are several challenges facing livestock markets in Tanzania, which to a large extent, affects the profitability of the livestock and its products especially in favor of pastoralists. Some of the challenges ascertained included:-

(i) Lack of price information especially in the primary markets such as Monduli and Longido visited during the study. In most cases, the sellers use what is called 'eye-ball' pricing, whereby the seller or buyer estimates the price by considering the weight, fatness ('*nona*'), color, appearance, etc. of the animal body mass. The price of a cow or goat is then concluded basing on assumptions. This could be an advantage or disadvantage on part of the seller or buyer. For instance, the trader could estimate that a cow has 250 Kgs (carcass weight); but, he could find only 150 Kgs after being slaughtered.

(ii) Lack of weighing services. Apart from Pugu market, other markets visited including Themi-Lokii (Arusha) did not have weighing facilities. The market coordinator of Lokii said that, his market used to have all facilities in place in the past such as a huge weigh bridge, modern cattle ring, feeding lots, etc. But, all of them worn-out long time ago. Currently, the market, despite of the fact that it was regarded as secondary market, was in a very bad shape.

(iii) Lack of processing plants around. In this way, livestock is sold without any value addition.

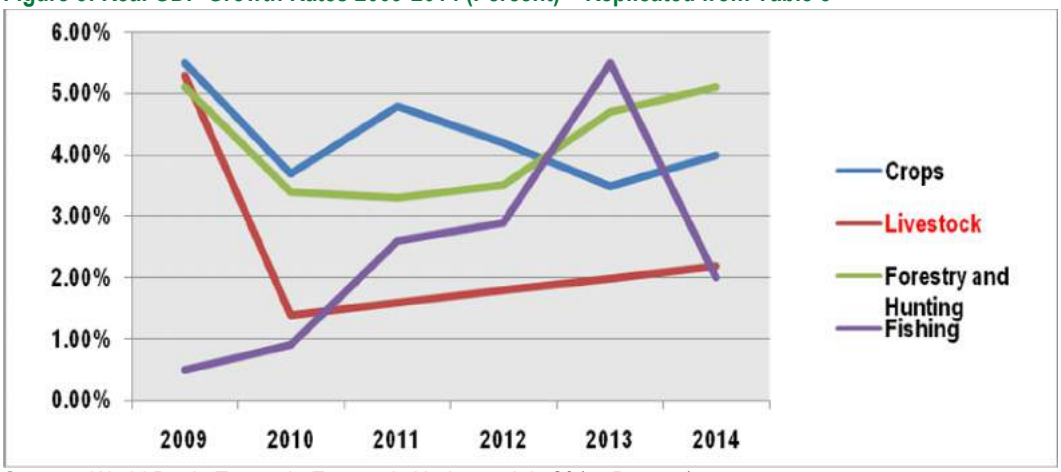
(iv) Nuisance taxes, levies, fees and fines to and from the markets. One cow pays about Tshs 50,000 from home to the market due to those nuisance contributions. Apart from a salary paid to the one who drives the cow from homestead to the market, the police normally demand some tips on the road. There are also fees paid for 'permits' (all pastoralists interviewed could not explain what is it all about), and levy per each head of animal entering in the market place. The purchased animal is also charged same things. In some markets like Lokii, there are district council levy and central government fees which totaling Tshs 8,500 per a head of cattle for in and outside movements of the cattle in the market.

The aforementioned weaknesses mitigate the patentability and profitability of the livestock and its product. As other studies[75] found out, excessive mistreatments of pastoralists and traders in the markets make discourage them to improve the practice and supply of the livestock as they do not see market incentive for them to trade in.

Those challenges highlighted above, could be some of the obvious facts which cause livestock subsector's gross income and contribution to the GDP to decline instead of growing. For instance, despite this large livestock population size as Table 2 above shows, its contribution to the national economy (in particular, GDP) has persistently been declining; example, from 18% to only 5.9% between 2001 and 2005; and, declined further to 4.0% in 2009, which is disquieting.[76] Furthermore, as Table 5 above and its replicator Figure 1 below show, livestock GDP annual growth rate against other economic sectors is shambling and growing downward:

[75] AGP-Livestock Market Development Project (2013) Agricultural Growth Project - Livestock Market Development. Value Chain Analysis for Ethiopia. USAID: Ethiopia. Page 11.
[76] URT (2010), Op citi, Page 2.

Figure 3: Real GDP Growth Rates 2009-2014 (Percent) – Replicated from Table 5



Source: World Bank, Tanzania Economic Updates, July 2015, Page 51
(Replicated by the Report Writer/ Author from Table 5 above).

Other relevant factors which negatively influence the marketing of the livestock include prolonged drought especially in Arusha and Manyara regions. The study was informed that, during dry seasons such as September to November, the price of the livestock goes down to about 50% of the ordinary price because; i) the supply of livestock in the markets in bigger than the demand. During this time, many pastoralists destock their livestock as a risk-mitigating strategy; and, ii) animals become weaker (thin and pale) in appearances – even though not losing weight. Because of this second reason, the Manyara region statistics show that, 29% cattle, 28% goats and 34% sheep that are taken to the livestock markets are not sold and are returned at home implying (among other things) that the quality of animals in terms of meeting internal market standards is not satisfactory.[77]

5.1.4 Meat and Milk Productions

The estimated production of livestock products such as meat, milk, and eggs increased since 1992 to the recent years as Table 7 below shows. However, as pointed out earlier on, the official statistics of the government on livestock contributions and productivity vary a lot. For instance, the Livestock Sector Development Strategy of 2010 (page 1) indicates that, the total meat (beef) production increased from 323,000 tons in 2000/2001 to 449,673 tons in 2009/2010 (being an increase of 39.2%). According to this 2010 Strategy, during the same period, milk production increased from 814 million to 1.64 billion litres (being an increase of 102%). But, the July 2014 Basic Data for Livestock and Fisheries Sectors (Page 25) shows that, the total meat production in 2000/2001 was only 181,000 tons and 243,943 tons in 2009/2010. However, figures for milk production seem to be ok – the same for both reports.

Notwithstanding the discrepancy of the livestock production statistics, it is an obvious fact that, the livestock sector, which is largely dominated by traditional pastoralism, has earned the government billions of money due to increased productivity during past twenty years as Table 7 below shows:-

[77] URT (2013) Investment and Socio-Economic Profile Manyara Region, August 2013. Regional Commissioner's Office: Manyara Region, Tanzania. Page 17.

Table 7: Production of Livestock Products 1992-2013

Type of Production/ Year	Meat Production (Tons)		Milk Production ('000' Litres)		
	Beef[78]	Lamb/ Mutton	Traditional Herd	Improved Herd[79]	Total (Milk Production)
1992/1993	132,000	40,000	390,000	200,000	590,000
1993/1994	140,000	45,000	366,000	189,000	555,000
1994/1995	137,000	40,000	385,000	200,000	585,000
1995/1996	149,000	50,000	396,000	224,000	620,000
1997/1998	151,000	62,000	430,000	245,000	675,000
1998/1999	155,000	64,000	437,000	250,000	687,000
1999/2000	175,000	71,000	445,000	265,000	710,000
2000/2001	181,000	72,000	492,500	321,500	814,000
2001/2002	182,000	74,000	578,000	322,500	900,000
2002/2003	182,000	74,500	620,700	359,800	980,500
2003/2004	184,000	75,800	813,700	366,300	1,180,000
2004/2005	204,520	78,093	920,000	466,400	1,386,400
2005/2006	208,046	78,766	935,540	485,056	1,420,596
2006/2007	180,629	80,936	945,524	475,681	1,421,205
2007/2008	218,976	81,173	980,000	520,000	1,500,000
2008/2009	225,178	82,884	1,012,436	591,690	1,604,126
2009/2010	243,943	86,634	997,261	652,596	1,649,857
2010/2011	262,606	103,709	1,135,422	608,800	,744,222
2011/2012	289,835	111,106	1,255,938	597,161	1,853,099
2012/2013	299,581	115,652	1,297,775	623,865	1,921,640

Source: Extracted from Basic Data for Livestock and Fisheries Sectors, July 2014, Page 25[80]

The 2012 government statistics showed that, an average of 400 tons of meat worth Tshs 1.6 billion (USD 761,900) was exported annually. Moreover, at least 112,400 litres of milk was/is currently processed per day.[81] That means, litres 40,464,000 of milk are processed per annum in Tanzania.

But, as argued earlier on, the Tanzania's tonnage of meat exports per annum could have been bigger than it is performed at the moment if the main producers (indigenous pastoralists) were supported and motivated to produce more. Some of the highly anticipated supports include presence of sufficient pastoral land which could render them possible to practice traditional pastoralism; or, alternatively, presence of huge support to enable traditional pastoralists adopting 'improved' livestock breeds as the current policies and strategies encourage.

[78] All breeds (indigenous and improved herd), but according to other available data discussed in this study report, more than 90% of livestock products come from the indigenous herd).

[79] Note that, a good number of indigenous livestock keepers started to improve their livestock since 2000s especially in Longido, Monduli and Arumeru districts due to government's initiatives but a huge support from civil society organizations.

[80] URT (2014), Op citi, Page 6.

[81] URT (2012), Op citi, Page 9.

Fact Box # 2: Tanzania Livestock Productivity Lags Far Behind if Compared with Other Pastoral Countries

The Tanzanian livestock sector is relatively far behind compared with its fellow three giants nations in livestock keeping in Africa. For instance, Ethiopia exported 7,717 tons of meat worth USD 15,598,000 in 2005/ 2006; while, its (Ethiopia) exports increased to 16,500 tons worth USD 68,000,000 per annum in 2012/2013 - same year which Tanzania recorded 400 tons of meat export (Reference: Future Agriculture (2014) Pastoral Livestock Trade and Growth in Ethiopia. Policy Brief 72 of May 2014. Page 2. Accessed from: http://www.future-agricultures.org/policy-engagement/policy-briefs/1880-pastoral-livestock-trade-and-growth-in-ethiopia/file on 1st October, 2015).

The coming parts discuss specific micro and macro-contributions of each of these (beef and milk) livestock production's components.

5.1.4.1 Livestock and Meat or Beef Productions and Trade

At least 86% of the beef production in Tanzania mainly comes from the traditional pastoralism that is dominated by the Tanzania Short Horn Zebu (TSZ)[82] as stated earlier on and as Table 7 above shows. Therefore, the commercial ranches and zero-grazing contribute only 6% of the meat production in the country.

Lack of sufficient meat processing facilities lowers the income and therefore, revenues ought to have been accrued from the meat production. The statistics show that, there were only 10 small and medium scale meat processors located in Dar es Salaam, Iringa, Arusha, Coast, Rukwa, Morogoro and Ruvuma regions; and, only 3 functioning modern abattoirs found in Sumbawanga, Dodoma and Arusha.[83] It is unfortunate that none of such facilities exist in Lake Zone (Shinyanga, Simiyu, Tabora and Mwanza regions) which possess more than 60% of livestock production in Tanzania. The study noted that, most (more than 80%) of the processed and chilled and packed meat found in the Arusha and Dar es Salaam's supermarkets in September 2015 was actually imported from Kenya and South Africa. Moreover, caned-meat and fish were imported from western countries including especially Scandinavian countries. As such, most of the meat produced is consumed locally and in micro-commercial forms.

As for individual basis, the parameter for meat production basing on profit per unit indigenous livestock is also low and not directly or completely benefiting the pastoralists as Table 8 shows:-

[82] URT (2011), *Op citi*, Page 10.

[83] URT (2010), *Op citi*, Page 10. According to this Strategy, an annual (commercial) slaughter was about 1.5 million cattle, 2.5 million goats, and 550,000 sheep which together produce 330,149 tons of ruminant meat in 2008. The figures could be a slight higher in 2015; but, still relatively low production if compared to Ethiopia and Kenya as argued before.

Table 8: Parameters for Meat Production (Indigenous Cattle)

Type of Product	Average Live Weight Kg or Gram/ Animal	Average Carcass Weight Kg or Gram/ Animal	Purchase Prices (Sept. 2015 Market Values) basing on Arusha (livestock and urban) Markets	
	Directly benefiting a pastoralist	*Directly benefiting others*	Live Animal (in Tshs)	Carcass Animal (in Tshs)
Cattle	206 (or 350)[84]	107 (or 251)	600,000 (or 900,000)	695,500 (or 1,631,500)[85]
Sheep	24	12	-	-
Goat	24	12	70,000	150,000[86]
Pigs	51	40	250,000	320,000[87]
Chickens (Grams)	1,270	900	10,000	20,000[88]
Ducks (Grams)	-	1,000		

Source: Basic Data for Livestock and Fisheries Sectors, July 2014, Page 24[89] (with field data modifications, Sept. 2015).

The profit margin basing on the price of the livestock unit (example, at Longido or Themi-Lokii markets) in favor of the pastoralist is not known. The pastoralists never kept records of the expenditures per each livestock. Probably due to the fact that they keep livestock not for commercial purposes; but, for social needs. It could therefore be the fact that, the costs for growing one livestock is relatively higher that the amount of money obtained by a pastoralist after disposing of his cow by way of sale. Apparently, the brokers and buyers plus processors, butchers and hoteliers are the one who benefit a lot from pastoralism. A man pictured below (Monduli) said that, he buys a kilo of beef at Tshs 5,000. Then he chops the beef into smaller pieces ('*Mapande*'); and afterwards, either roasts them, or makes a meat soup.

Picture: A bar meat seller at Monduli, September 2015 (field photos).

[84] Note, the figures put in the brackets in this row are field data basing on the Livestock Officers of some of the Districts visited during PINGO's Forum study in September 2015.
[85] Basing on Tshs 6,500 (USD 3.1) per 1 Kilogram of meat in the local butcher shops in Arusha and Dar es Salaam urban shops, in September 2015.
[86] It is an approximation basing on the local bar owner's explanations in Arusha, September 2015. They sell goat meat in pieces and parts ('*mapande*'). For instance, a fore-leg of the goat alone is sold between Tshs 20,000 (USD 9.5) to 30,000 (USD 14.3).
[87] Basing on Tshs 8,000 (USD 3.8) per 1 Kilogram of pork meat in the local bars in Arusha town, in September 2015.
[88] A cooked or roast indigenous (farm) chicken was sold at Tshs 20,000 (USD 9.5) in Arusha town's local pubs in September 215.
[89] URT (2014), *Op citi*, Page 6.

In return, that meat '*Mapande'* seller could earn more than Tshs 9,000 per one kilogram (the profit margin is about Tshs 5,000). So if he has only 50 Kgs of raw meat from the butcher, he could earn about Tshs 500,000 – proportionally more than what a Maasai pastoralist earns by selling his cow at Longido primary market or even Duka-Bovu or Themi-Lokii secondary markets. Because basing on the estimated carcass weight of the indigenous cattle, which is between 170 Kg and 250 Kg, it means that the Mapande seller could earn between Tshs 1,530,000 and Tshs 2,250,000 (of the said range of carcass weight of a normal Tanzania zebu cattle). Therefore, there is a kind of magical value about livestock. The more it is sold in smaller pieces, the bigger the profit.

The broker (agent) pays no tax or levy out of their business in the livestock markets. For instance, basing on the Themi-Lokii market experience, the broker waits for the livestock inside the market place. He purchases at lower price and resale same livestock at higher price right in the same market (without taking an animal outside). After the market time, he just goes out with his cash. In this way, he evades all levies and fees which the pastoralists and end buyer had paid to the government.

5.1.4.2 Milk Production

As Table 7 above shows, the current annual milk production is estimated at 1.9 billion litres whereby about 60% is produced by indigenous cattle kept in rural areas and 40% by improved cattle mainly kept by smallholder producers. Only 10% of the milk produced annually enter the market (through formal or traceable channels) and the remaining (90%) is consumed at home or considered to be a waste commercially mainly due to lack of collection systems.[90] Basing on this reality, it seems that annual milk production in Tanzania is more than 2 billion litres – if all milk productions and supplies were to be documented.

The processing capacity of milk per day (as a way of adding value) is 394,600 litres.[91] However, the 2010 Livestock Sector Development Strategy showed that, only 105,380 litres per day or a total of 38.5 million litres per year were processed in 2009 from 40 small and medium scale dairy plans. The diary processing plants were estimated to be 67 countrywide in 2013.[92] However, some of them were either not operational or operated on seasonal basis. For instance, the all Manyara's milk processing plants visited during this study in Terrat, Orkesumet and Naberera (owned by same person), were closed during dry seasons on the ground that, supply of milk from the pastoralists was minimal. Again, the leading regions in livestock keeping (Shinyanga and Simiyu) did not have any processing plant as of October 2015.

[90] URT (2011), *Op citi*, Page 12.
[91] Oral interview between Adv. Clarence Kipobota and anonymous officer of the Ministry of Livestock and Fisheries Development in September, 2015, Dar es Salaam.
[92] The plants include Azam, Tommy, Profate, Manow, and Tan diaries (Dar es Salaam); Northern Creameries, International Dairy Products, Mountain Green, Agape, Jitume, Idafao, Inuka, Kijimo, Longido diaries (Arusha); and Kagera Milk, Kyaka, Del Food, Bukoba Milk, Salari Milk, and Kayanga (Kagera).

Fact Box # 3: Tanzania Imports Milk while it is number 3 giant nations in Africa's Livestock Population

There is a narrow product range which is concentrated on liquid and fermented milk while the demand for processed milk products is far from being satisfied. The demand supply gap for processed dairy products is filled by imports of about 15-20 million litres of liquid milk equivalent (LME) per annum worth about USD 5 million (or Tshs 10.5 billion). Reference: URT (2010) Livestock Sector Development Strategy of 2010. Ministry of Livestock and Fisheries Development. Government Printer: Dar es Salaam. Page 11).

5.1.5 Hides and Skins Production

Hides and skins are one of the most valuable exports for many developing countries and play an integral role in the livelihoods of communities as a source of income and employment opportunities.[93] As a resource, hides and skins are the raw materials for various types of businesses such as collecting, processing and distributing, which provide many service jobs in countries where livestock are produced.[94] Most of the hides and skins are produced from indigenous stock. [95]

In Ethiopia, hides and skins make 85% of the total livestock export with value of USD 600 million (per annum).[96] Nigeria, being one of the countries with high population of indigenous livestock, also earns millions of money from hides and skins' exports. As for Tanzania, the potential annual output of raw hides and skins for past ten plus years was as shown in Table 9 below:-

Table 9: Hides and Skins Selling in Tanzania Since 2000

Year	Hides	Goat Skins	Sheep Skins	Value (Tshs. '000')
2000/2001	1,200,000	511,700	165,000	4,000,000
2001/2002	1,200,000	511,700	165,000	4,000,000
2002/2003	1,300,000	600,000	300,000	4,600,000
2003/2004	1,774,000	1,431,000	488,000	5,712,000
2004/2005	1,400,000	1,200,000	597,155	4,025,400
2005/2006	1,321,721	1,216,740	861,770	7,500,000
2006/2007	1,700,000	1,050,000	925,530	16,200,000
2007/2008	2,300,000	1,600,000	1,100,000	21,500,000
2008/2009	982,668	2,990,700	769,936	12,806,365
2009/2010	7,390,315	1,900,000	176,000	8,200,000
2010/2011	1,719,506	2,11,176	83,600	17,400,000
2011/2012	2,000,000	2,900,000	578,000	17,500,000
2012/2013	1,269,060	2,582,525	522,500	63,600,000

[93] Mohammed, Rukiya and Wuyah, Titus 'The impacts of Hides, skins and leather production on the Nigerian Economy.' Journal of Business Management and Corporate Affairs. Volume 3, Issue 1, pp 10-16; July 2014. According to these authors, at the social livelihood level, the hides and skins have been used since antiquity as clothes, vessels, bedding, and possibly structurally in ancient dwelling places. Indeed, some of the communities in Tanzania such as Hadzabe and Barbaig still use them as garments. The Sukuma tribe uses animal skins for rituals and as traditional mattress.

[94] Leach, Ian and Wilson, R. Trevor (2009) Higher Value Addition Through Hides and Skins. FAO Diversification Booklet 8. FAO: Rome. Page 1.

[95] URT (2011), Op citi, Page 14.

[96] Tegegn, Melakou (Undated) Contribution of Pastoralism to National Economies. Regional Sensitization Seminar on Rights of Indigenous Populations/ Communities in Central and East Africa. PPT Presentation (Slide 12), accessed from: www.achpr.org/files/news/2011/08/d33/dr_tegegn_presentation.pptx on 3rd October, 2015.

Source: Extracted from Basic Data for Livestock and Fisheries Sectors, July 2014, Page 26.[97]

It is further ascertained that, about 80% of the hides and skins collected is exported in raw forms mainly as air-dried and wet salted. [98] Therefore, no value addition is made, a fact which denies Tanzania a lot of revenues from hides and skins.

There are at least ten hides and skins' processing plants or tanneries in Tanzania. The plants include the Himo Tanners and Planters Limited; Moshi Lather Industries Limited; Salex Industries Limited; East Hides Tanzania Limited; Afro Leather Industries Limited; Lake Trading Limited African Tanneries Limited; and Petro City Tannery. Most of these facilities were operating below their installed utilization capacities per pieces and square feet. For instance, the Lake Trading Limited was installed to process 184,615 pieces of hides. But as of 2010, it was processing only 48,000 pieces. The reasons of underperformance could not be immediately obtained due to time constraint of this study. But certainly, this (hides and skins) business is a lost business opportunity the way it is at the moment.

Other livestock by-products that include horns, blood, bones, bristles, hair, wool, fur, hooves and dung form important components of slaughter animals. By-products yield, generally vary from 40-45% of the animal depending on the species.

Picture: The Maasai warrior drinks cow's blood as part of cultural ritual in Tanzania (internet source).

The by-products have diverse uses such as human food, medicinal, pharmaceuticals, animal feeds and energy. [99] However, there was no official statistics obtained by this study to ascertain the economic value especially the share of these other by-products to the GDPs. But, in most cases, such products are locally consumed by pastoralists themselves. For instance, the animal dung is used as source of cooking energy in Shinyanga and Simiyu regions (rural areas). There is now a bio-gas technology steadily spreading in many parts of the country. A pastoralist or farmer with just 2 or 3 cows or 7 pigs, or a flock of 170 poultry,

[97] URT (2014), Op citi, Page 6.

[98] URT (2011), Op citi, Page 14. It is further stated in this document that, almost 50% of the hides and skins, entering the commercial processing chain is downgraded, mainly due to poor animal husbandry practices, poor handling of the hides and skins at the slaughter facilities, poor storage and preservation methods and inadequate enforcement of the existing laws related to hides and skins. This problem of quality caused by defects extends to each of the subsequent stages of processing of the leather, thus ultimately determining the price paid to the primary producer and of the semi processed or an end product.

[99] URT (2011), *Op citi*, Page 15.

can generate sufficient gas to meet his or her family's daily basic cooking and lighting needs.[100] The 1999's statistics showed that, animal manure output in mainland Tanzania is about 14 million tons per year.[101] Basing on the current livestock population (which is more than 22 million), the current animal manure output per annum could be more than 30 million tons.

5.2 Contributions to Micro-Economic Development

Pastoralism is an important economic and cultural way of life for between 100 and 200 million people throughout the world. [102] It is one of the determinant micro-economic development factors, not only for the rural dwellers, but also the peri-urban and urban residents. It is the source of individuals' and households' livelihoods through the products and by-products it produces. At least 37% of the rural households in Tanzania entirely depend on this economic subsector to earn their living. Therefore, pastoralism or livestock in general is of critical importance to the country economic (to the achievement of macro and micro development goals) and well-being of the rural population.[103]

Apart from the supply of meat and other animal products in Tanzania and beyond, pastoralism makes productive use of a large percentage of the available dry lands where the scarcity and variability of its natural resources has few alternative uses. The pastoralists have widely been active managers of their natural resources. They have not simply used these resources, but they have also manipulated their stock and rangelands to sustain an adequate level of productivity in essentially marginal environments.[104] The rotational grazing, as it is discussed above, is one of the strategies used to maintain the environment (ecosystem goods and services in rangelands) for the current and future socio-economic development. For instance, they have, for years, been good keepers of wildlife stock in Serengeti, Ngorongoro and other wildlife conservation areas. They have unique knowledge of how a balance between conservation and sustainable use of natural resources can be maintained.[105] In this way, such areas remained to be main source of tourism in Tanzania. Besides, pastoralism as cultural model is one of the sources of tourism attraction as pictures below show:

[100] Tanzania Domestic Bio-gas Programme (Undated) Why Bio-gas? Accessible through: http://www.biogas-tanzania.org/highlights/view/why_biogas on 5th October, 2015.
[101] Maerere, A., Kimbi, G., and Nonga, D (Undated) Comparative Effectiveness of Animal Manures on Soil Chemical Properties, Yield and Root Growth of Amaranthus. Sokoine University of Agriculture: Morogoro. Page 1.
[102] CRB (2010) A Good Practice Guide Pastoralism, Nature Conservation and Development. CBT (Unpublished). Pages 1-3. Accessed from: https://www.cbd.int/development/doc/cbd-good-practice-guide-pastoralism-booklet-web-en.pdf on 5th October, 2015. Note: CRB means Conservation on Biological Diversity.
[103] URT (2011), Op citi, Page 1.
[104] Mung'ong'o, Claude and Mwamfupe, Davis (2003), Op citi, Pages 1-2.
[105] CRB (2010), *Op citi,* Pages 1-3.

Pictures: Tourists trek thousands of KMs to come and visit Maasai pastoralists in Tanzania (Pictures from Internet Sources).

As on part of well-being of Tanzanians, apart from contributing cash money to the cattle keepers and other beneficiaries of this sub-sector, pastoralism is mentioned as one of the strategies to ensure and improve household food security (HFS) in Tanzania. The National Nutrition Strategy of July 2011/12-June 2015/16 of Tanzania states that animal husbandry (which is largely done by pastoralism) need to be encouraged, where possible, though 'beneficial indigenous practices.'[106] The current per capita consumption of meat and milk is 12 kg and 43 litres against the FAO recommended per capita consumption rates of 50 kg and 200 litres respectively.[107] That means, efforts is needed to make this economic sub-sector more useful to its beneficiaries.

Traditional livestock, in particular, oxen (male cattle) and donkeys are used by agro-pastoralists especially the Nyamwezi and Sukuma to do farm activities (animal draught power). The animal traction draught is said to be an appropriate, affordable and sustainable technology that contributes towards agricultural. There are about 1.0 million draught animals in the country. Utilization of animal power reduces the workload on ploughing, planting and weeding by 75%, likewise it lessens the workload in pastoral areas by fetching water and carrying other luggage.[108]

Pictures: (L) donkeys in Monduli livestock market, field photo, September 2015; and, (R) plauring by oxen (internet source).

[106] URT (2011), *Op citi*, Paragraph 116, Page 25.
[107] URT (2010), *Op citi*, Pages 1 - 2.
[108] URT (2011), *Op citi*, Page 15.

The livestock can also be sold or slaughtered at an advanced age, or in case of urgent need. If slaughtered, the animal provides the family with meat and income from hides and skins.[109] The Maasai, Barbaig and Sukuma cultures give male household members (especially fathers) a total control the income from the livestock sales. However, they (males) are traditionally required to buy food and other family necessities back home from the auction after-market day. According to the interviewees in the sampled markets for this study, pastoral Maasai women are allowed to own and manage small livestock such as goats, sheep and chicken. They also control milk. These are items which, nowadays, can be sold without much restriction from their husbands. They (pastoral women) have also a total discretion to decide on the expenditure of the income from the sales. In most cases, they use the income for purchasing domestic utensils and own ornaments or closes. Others use the income to open up own income generating activities such as selling of milk tea or yoghurt and other items at livestock market places as the picture below show:-

Picture: Pastoral Women selling milk tea and soda at the Longido livestock market (Field photo, September 2015).

6.0: CONTRIBUTIONS OF PASTORALISM INTO SOCIAL LIVELIHOODS

6.1 General Perspectives on Pastoralism's Livelihood Support

The livestock perform multiple functions in the economy and household livelihood by providing food, input for crop production and soil fertility management, raw material for industry, cash income as well as in promoting saving, fuel, social functions, and employment.[110] It (traditional livestock) is intricately linked to social status through accumulation of wealth and savings. It, also, provides a variety of benefits to rural communities such as risk mitigation, food security and improved nutrition[111] as it is stated in the Tanzanian National Nutrition Strategy of July 2011/12-June 205/16 (fully cited above), as well as insurance and credit (that is, ability of a pastoralist to cash-in their animal for a particular purpose at the time a socio-economic need arises)[112] instead of going to borrow some money with huge interest rates from the financial institutions. Therefore, livestock is an opportunity cost of 'rural credit.'

[109] AGP-Livestock Market Development Project (2013), *Op citi*, Page 9.
[110] Solomon, Ayele, Workalemahu, Assegid, Ahmed, Jabbar and Hurissa, Belachew (Undated), *Ibid*, Page 2.
[111] URT (2011), *Op citi*, Page 1.
[112] IGAD (2013), *Op citi*, Pages 2-3.

This model also contributes a lot to direct measurable values (micro and macro-economic contributions discussed above); direct unmeasured values such as employment, production, etc. of more than 60% of rural population; indirect measurable values, such as subsistence, inputs to tourism, inputs to agriculture (example, manure and oxen mentioned above), market linkages (value chain also discussed above), and the like; and, indirect unmeasured values including the ecological and rangeland services, agricultural services, socio-cultural values, and so on.[113]

Other social contributions discussed during the study's FGDs in September 2015, included; pastoral model being tool for social justice. For instance, a wrong-doer in all pastoral society is normally fined to pay certain number of cattle or goat or even chicken as retribution to the injustice perpetrated by him or her.[114] The cultural norms, as interpreted by traditional leaders such as *Laigwanani* in case of Maasai and *Wanamhala* in case of Sukuma tribesmen, normally state amount of animals to be paid. The livestock are also used to perform traditional rituals. In most cases, certain type of a goat or cow is slaughtered at the shrine as a symbol of thanks giving (sacrifice or present) to the ancestors.[115] The traditional rituals are common in almost all tribes including non-pastoral ones such as Chagga and Zaramo. Being a tool for social justice and part of traditional rituals, pastoral system ensures social tranquility, which is important prerequisite factor for both micro and macro-development. Moreover, pastoralism facilitates marriage and family unity through dowry payment and other forms of gifts.

Fact Box # 4: Pastoralists pay much Loyalty to their Traditional Norms than Formal Rules

It was gathered from the FGDs that, majority of pastoralists pay much loyalty to their traditional norms than formal rules as contained in the laws, policies, or political proclamations. An example was given than, in one of the community forests in Ngorongoro district, the district and law enforcers used at least five years to arrest, prosecute and jail the alleged trespassers of the water source; but, all was in vain. However, it took only one night for the trespassers (all of them to vacate the water source after an 'order' from the chief *Laigwanani* of the place. Similarly, the implementation of the wildlife, land, animal traceability, etc continue to face stiff resistance apparently because they are, to a certain extent, contradict with pastoral communities ways of life, which helped them from the time of immemorial.

Moreover, the Maasi communities in Monduli and all other districts sampled for this study are sensitized to use their livestock in order to enforce social development in their areas. For instance, a number of public and private schools in Monduli have been constructed as pastoral-community schools (*Shule za Kata*) by a huge contribution from Maasai cattle. The pastoralists contributed more than farmers in school construction fundraising event at Mtowambu area, Monduli. Some of the Monduli district' schools which were constructed through pastoralists' contributions were Nanja; Oldonyolengai (Engaluka); Oltiga (Selela); Moita; Kipok (Moita); Ole Sokoine (Mondulijuu-Enguit); and Loksale. The only school built through farmers' contributions is Rift Valley, located at Mtowambu. Moreover, so many Maasai families were currently

[113] TNRF (2007), *Op citi*, Pages 10 and 21.

[114] For instance, for Maasai, when a man elopes a girl he pays 8 cows as a punishment; committing adultery with a person not of one's age a fine is 1 sheep; pride price pay 10 cows (in Sukuma a bride price attracts more than 100 cattle); rape offence demands 2 cows; when a man does not ensure a birth control of 3 years range he pays 1 cow, 1 goat and 1 sheep.

[115] For instance, during dry seasons Maasai men normally go the dense forest to search for herbs. Going to the forest for this particular activity is known in Masaai language as *Okeleti*. The forest 'pilgrims' spend around 44 days in the forest; and, while they are in the forest collecting herbs and performing rituals, their main meal is cow. They can slaughter one or more cows depending on the number of 'pilgrims' (Source: FGD at Sokolu livestock market, Simanjiro, September 2015).

paying for their children's school fees up to the University level, with little or without government higher learning student loans.[116]

6.2 Gender Perspectives on Pastoralism's Social Livelihood

Women play important roles in the livestock value chains. When women own livestock, it constitutes an important component of their asset portfolio, being an asset that they can easily own and that is not bound by most of the legal and property rights issues such as land. Livestock, therefore, has a huge potential to reduce gender asset disparities commonly found in households in most developing countries, Tanzania is inclusive.[117] The study was informed that, women and children are the main managers of the livestock at the homesteads. They are the one who milk the cows, and take care (example, feed and water) of calf, goats, sheep and chickens. These are items which pastoral women could generally claim ownership or certain control freedom. However, it is unfortunate that, women's roles in pastoralism are 'valueless.' Their contributions to livestock keeping are not counted in monetary form. A separate study is needed to expand this discussion.

At the market place, women do also manage businesses which have connection to pastoralism such as selling of livestock feeds (locally made hays), food and beverage vending. Other non-pastoral women do also benefit a lot from the livestock-related gatherings as picture combinations below show:

Pictures: (L) Maasai-women selling locally made hay at Duka-Bovu/ Meselani livestock market; (R) a non-pastoral lady (Standing behind Maasai elders, doing micro-trade food vending at Londigo livestock market. Field pictures, Sept. 2015.

In urban areas, many employees of hides and skins tanneries and other processing companies are women.

[116] Interviews with Monduli district officials, September 2015.
[117] AGP (2013), Op citi, Page 12.

7.0: FACTORS IMPACTING TO SOCIO-ECONOMIC CONTRIBUTIONS OF PASTORALISM

7.1 Land Use Systems: *'Loving our Meat; but, Faulting our Ways'*

The modern and traditional land use systems fall apart to each other. They are two extremes especially by considering how indigenous pastoralism is practiced. The old man at Themi-Lokii livestock market, Arusha, shared his views to this study in September 2015 that, *'kama hawatupendi na kutupa huduma za mifugo yetu, kwanini wanafurahia nyama zetu, na pesa za mifugo yetu?'* The old man's remarks could be translated as *'if they (government) don't like us (pastoralists) and without facilitating livestock services, why they love our (livestock's) meat, and the revenue from our herds?* To him, the policy and decision makers are double-standard persons. They (most of the government officials) hate pastoralism production processes (nomadic) but very much cherish pastoralism products such as milk, meat, hides, skins and by-products. They also like livestock services because they earn revenues out of it.[118] The economic policies demand for more production, in this current case, more livestock; while the environmental policies call for destocking and controlled movements. It is therefore that, the land use system is hanging at a very critical balance at the moment.

One of the critical challenges facing traditional livestock economic subsector is an access to land for grazing huge flocks which have increase from only 3,000s in 1920s to currently more than 21 million in Tanzania as Table 2 above shows. The nature of pastoralism and its connectivity to the nature is well covered above. Therefore, this paragraph map some legal and policy issues surrounding land use system by, among other things, presenting hard facts which the analysis for this study considers to be the root course of negative perception about pastoral mode.

Fact Box # 5: Pastoral Land Grabbing as a Living Reality: Case of Kiteto and Loliondo Areas

In recent decades pastoralism has been in deep crisis and although the causes for the crisis are several, those that are related to loss of grazing lands and prolonged drought are most significant. An increasing number of agricultural populations have steadily encroached on rangeland areas in Kiteto district. In Loliondo district the Tanzania Breweries Limited introduced mechanized barley farming after acquiring 10,000 acres of Maasai grazing land triggering off a proliferation of medium scale barley farming around Loliondo town. This development alienated much of the dry season pastoralist grazing land. More pastoral land has also been taken over by smallholder farming of new drought resistant crops (example serena) in the area (Reference: Mung'ong'o, Claude and Mwamfupe, Davis (2003) Poverty and Changing Livelihoods of Migrant Maasai Pastoralists in Morogoro and Kilosa Districts, Tanzania. REPOA Research Report No. 03.5: Dar es Salaam. Page 5). The Loliondo village land is also in danger of being annexed to the Serengeti National Park or/and a large part of it being carved for 'creation' of buffer zone and of course expansion of hunting blocks. However, this is not yet vividly revealed through formal government circular. The anxiety is justified by the fact that same areas have been prone to grabbing since the colonial era as it is explained elsewhere in this report.

The national land resources for agricultural and livestock productivity is said to be vast and utilized – but, have, principally declared inadequate for pastoralism. Statistics show that, out of the total 94 million hectares (Ha) of land resource in Tanzania, 50 million Ha are regarded as rangelands, suitable for grazing.

[118] Some of the districts councils in Tanzania such as Simanjiro and Longido exclusively depend on revenues from this 'outdated' model. They do not have any other viable sources of income.

However, as Table 9 below explains further, only 24 million Ha (being 25.5% of the 94 million Ha) were currently and actually used for grazing in Tanzania.

Table 9: Land Resource and Livestock Population in Tanzania

Type of Ruminant Livestock	Million Ha
Total Land Area	95.5
Arable Land (Ha)	44.0
Cultivated Land	10.5
Area Suitable for Irrigation	29.4
Area under Irrigation	0.29
Area under Medium and Large Scale Farming	1.5
Rangeland	50.0
Land under Livestock (currently)	24.0
Per Capita Land Holding (Ha/ Head)	0.1

Source: Livestock Sector Development Strategy (2010: 5).

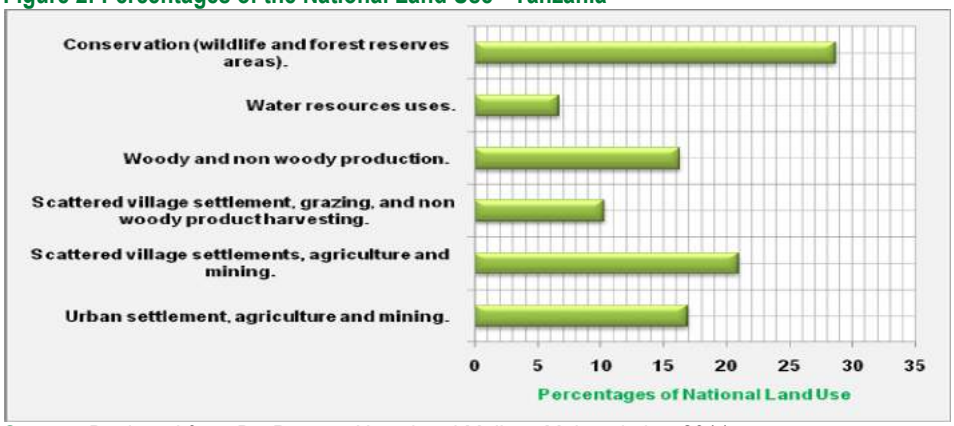
Furthermore, according to the government itself, to date, there are no proper arrangements to allocate land and give ownership of grazing areas to livestock farmers according to traditional or legal procedures.[119] It is not clear whether the stated 24 million Ha allocated for pastoralists has actually been made available for them. It is also not certain as to when the remaining 26 million Ha (out of the 50 million Ha rangeland) will be ultimately located for the pastoralists.

It is gathered from numerous reports reviewed for this study that, traditional pastoral land tends to shrink (and never expanded) all the time due to evictions and dislocations which started during colonial era and continued to the present. For instance, famous fake treaties signed between the colonialists and the Maasai in 1904, 1911 and 1959 to evict the Maasai from their best ancestor lands in order to make room for colonial settlers and wildlife conservation, example, the creation of the Ngorongoro conservation area in 1959 by the British government. Consequently, the Maasai were pushed to the periphery and remained marginalized. Evictions still follow them everywhere they reside. For instance, the serious of evictions (Ihefu, Loliondo, Kilosa, Mikumi, etc) mentioned in part one of this study report.

While the land for pastoralism (and rural residence) steadily shrinks due to evictions, and other displacement reasons; the size of land for wildlife conservation has tremendously expanded from only 18% in 1998 to the current size of about 30% as Figure 2 below shows:-

[119] URT (2011), *Op citi*, Pages 1 and 7.

Figure 2: Percentages of the National Land Use - Tanzania



Source: Designed from Dr. Prosper Ngowi and Melissa Makwarimba, 2011.[120]

Therefore, from the Figure 2 above, the national landmass share (percentage) for grazing plus other rural settlements is only 10.3%. It rangeland for grazing is specifically singled out from other residential land usages, wood production/ harvesting etc, it would appear that, the total portion of landmass allocated for traditional livestock keeping is less than 10% of whole Tanzanian landmass. In this way, land pressure (attributed to shrinking grazing land, growths of human and livestock populations) between various land users is inevitable. Overgrazing, as it is a case of Manyara region (except Simanjiro district) as Table 10 below shows, is seen as serious land issue. The Manyara region says that, number of livestock on this region is twice larger compared to the available grazing land.[121] Therefore, during the dry season, there is scarcity of food and water. Suitable areas in each (Manyara's) district are shown in Table 10 below:

Table 10: Available Land Alienated for Grazing in Each District Council – Manyara Region

	Babati DC	Babati TC	Hanang DC	Kiteto DC	Mbulu DC	Simanjiro DC	Total
Available Grazing Area (Ha)	154,000	28,182	224,000	947,200	109,600	1,357,000	2,981,800
Required Grazing Area (Ha)	366,752	82,544	1,394,784	1,214,584	1,751,356	1,283,540	6,093,560
Number of Livestock compared to available Grazing Area (Ha)	Livestock exceeds by 2.4 than the available land.	Livestock exceeds by 2.9 than the available land.	Livestock exceeds by 6.2 than the available land.	Livestock exceeds by 1.3 than the available land.	Livestock exceeds by 5.8 than the available land.	Livestock exceeds by 0.9 than the available land.	Livestock exceeds by 2.0 than the available land.

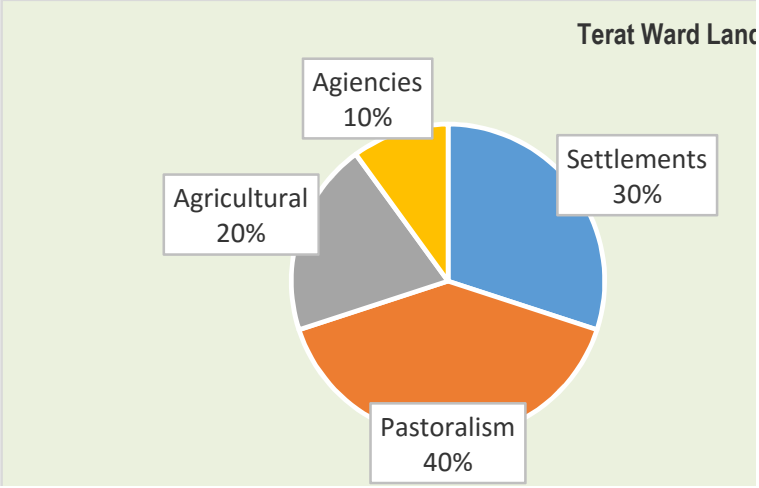
Source: Manyara Region Profile (2013: 17).

However, factors attributed to land scarcity (overgrazing) could be more on how the government uses livestock population growth to make land use plans which reflect and correspond with the reality on the ground; and not, that the land is shrinking due to increased livestock population size. The study noted that, some of the wards within the sampled districts had their land use plan reflecting the socio-economic and

[120] Ngowi, P., and Makwarimba, M. (2011) Making Land Investment Work for Tanzania: Scoping Assessment for Multi-stakeholder Dialogue Initiative. Draft Final Report. Page 7.
[121] URT (2013), *Op citi*, Page 16.

cultural situations. For instance, an anonymous ward officer said that, at least 40% of the Terrat Ward, an area which is consist of 10 villages, is allocated for livestock keeping. That mean, the remaining portion, as Figure 3 below shows, is for other uses.

Figure 4: Ward Land Use Plan – Terrat, Simanjiro



Source: Terrat Ward Office, September 2015 (it is reconstructed).

Another challenge which inhibits pastoralists from full utilization of the land is a widespread of tsetse flies and trypanosomes. A control of the flies has been constrained by, *inter alia*, high costs of control.[122]

As for the land tenure system in particular, Tanzanian policy and legal frameworks on land ownership and management recognize customary right of occupancy (CRO). The CRO has, to a large extent, embodied elements of communal land ownership, which is widely practiced by indigenous pastoralists in Tanzania and beyond. Other pastoral tribes which practices communal land ownership in Africa include the Samburu, Turkana, Rendille, Orma and Borana of Kenya and Ethiopia; Karamojong of Uganda; Touareg and Fulani of Mali, Bukina-Faso, Niger; and the Mbororo of Cameroon and other west African countries.[123] Most of these tribes are internationally recognized as indigenous people (see explanations at the beginning of this report).

The UN Declaration on the Rights of Indigenous Peoples of 2007;[124] ILO Convention No. 169;[125] the Convention on Biological Diversity[126] and others affirm that indigenous peoples' natural resources are vital and integral components of their lands and territories. According to the UN Development Group Guideline for Indigenous Peoples, indigenous peoples have been guardians of these natural environments and play a key role, through their traditions, in respectfully maintaining them for future generations.[127]

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[122] URT (2010), *Op citi*, Page 5.
[123] International Work Group for Indigenous Affairs (IWGIA) (2005) Report of the African Commission's Working Group of Experts on Indigenous Populations/ Communities. African Commission on Human and People's Rights (ACHPR): Banjul. Page 17.
[124] Articles 20, 25-32.
[125] Articles 15-19
[126] Article 8(j).
[127] UN (2008) Development Group Guideline for Indigenous Peoples' Issues. UN. February 2008. Page 17. The guideline further states that, the indigenous peoples have managed these resources sustainably for millennia and in many places have created

Contrary to that international legal framework stand on indigenous land, the Tanzanian legal framework does not recognize the term and existence of indigenous; hence, offers loose protection of the indigenous lands. It alienates the local communities from the natural resources that they once owned and that they depend on for their livelihood, identity and culture.[128] They are now required to have permits and licenses to access and use the natural resources. The alienation process is coupled with the criminalization of most of the traditional uses of such resources that were previously to a large extent governed by customary norms[129] and by people themselves.

As it is argued further in the PAICODEO's report (cited above), the Natural Resource Act of 2002 gives discretionary powers to the local government authorities and area commissioners to, among other things, decide on or order the manner of watering animals, grazing, and moving the livestock herds; and prohibition or restriction of cultivation of any part of the land. Those powers include the ordering of destocking and relocation of pastoralists from their areas to various other parts of the country. Section 20(1) of the said law states that:-

> Where the Minister is satisfied that the natural resources of any area are being injured or deteriorating through overstocking of domestic animals, he may authorize the reduction and prescribe the maximum number of and class of such animals in such area.

Sections 14 and 15 of the Wildlife Conservation Act, 2009 empowers Minister to declare wildlife protected areas within village boundary contrary to the Land Act, 1999 and the Village Land Act, 1999 which declare village council the managers of all land in their areas of jurisdiction. The above mentioned wildlife law clearly states in Section 16*(5)* that, *'for the purposes of subsection (4), the Minister shall ensure that no land falling under the village land is included in the game controlled areas.'* Is this a contradiction as still GCAs are within villages' lands.

Probably this kind of situation is common throughout African countries.[130] But, it is relatively severe in Tanzania. As the government admits itself the main or root cause of the problem of land tenure system in Tanzania, water and pasture resources is lack of proper arrangement to allocate land and give ownership of grazing areas according to traditional or legal procedures.[131]

As said above, traditionally the grazing area is a communal land and there is no way it can be individually owned due to rotational grazing to cope with harsh climatic conditions.[132] To Maasai for instance, land is considered as *enkai naishorua*, to mean a common or collective property endowed to them by the Almighty

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unique bio-cultural landscapes. Many of these indigenous management systems, even though altered or perturbed by recent processes of change, continue to contribute to the conservation of natural resources to this day.

[128] PAICODEO (2011) Report on the State of Pastoralists' Human Rights in Tanzania: Survey of Ten Districts of Tanzania Mainland 2010/2011. PAICODEO/ IWGIA: Morogoro. Page 6.

[129] Kabudi, Palamagamba John 'Challenges of Legislating for Water Utilization in Rural Tanzania: Drafting New Laws, International workshop on 'African Water Laws: Plural Legislative Frameworks for Rural Water Management in Africa', 26-28 January 2005, Johannesburg, South Africa, Page 2.

[130] Doyle C. (ed.) Business and Human Rights: Indigenous Peoples' Experiences with Access to Remedy. Case studies from Africa, Asia and Latin America (Chiang Mai, Madrid, Copenhagen: AIPP, Almáciga, IWGIA, 2015). Page 1.

[131] URT (2010), *Op citi*, Page 14.

[132] IWGIA (2005), *Op citi*, Page 89.

God as a gift. Therefore, it is *olchoni le nkai* (right of everyone to use the land and other resources on it. This is why so many international human rights instruments call for safeguard of their (traditional way of living),[133] and respect of the same under local legal systems.[134]

There is a room for further improvement of the policy and legal regulatory frameworks on the land ownership systems, in order to reflect the pastoralism realities. As the Swahili proverbs says, *'mkono wenye uchafu husafishwa, haukatwi.'* Literally mean, *'a dirty hand is cleaned, not cut.'* Therefore, if pastoralism is 'primitive' and 'outdated' socio-economic means of livelihood, it needs to be modified ('cleaned') and not being eradicated ('cut') as that would adversely affect both micro and macro-economic development contributions of pastoralism in Tanzania.

7.2 Environmental Conservation: Untamed Struggle with Other Users

Many pastoral areas are endowed with a number of forests and grasslands with a variety of natural resources such as wild animals, insects, trees, grasses and birds. Owing to these resources most of such areas have been prone to government interventions, converting some of them into game reserves, national parks and conservation areas.[135] They (indigenous communities) have been victims of different environmental conservation projects such as expansion of wildlife protected areas, creation of WMAs and other things discussed earlier on. Such decisions and incidents deny the pastoralists of access to not only grazing land, but also other resources such as herbs and trees for various usages.[136] Being traditionalists, their livelihoods are directly connected to what the nature and they have been friendly to the environment and wildlife. They require all these for their survival.

The current statistics show that, about 18 million Ha of the forests (being 50% of all forests in Tanzania), have been gazetted as forest reserves under government's control; and that, despite the fact that the government allows Participatory Forest Management (PFM) under the Forest Act, 2002, the access to the forest areas is quite inhibitive. The PFM is implemented in only 12.8% of the whole country's forest due to lack of funds to initiate those arrangements.[137]

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[133] For instance, Article 10 of the UN on the Rights of Indigenous Peoples of 2007 states, *inter alia*, that '*[I]ndigenous peoples shall not be forcibly removed from their lands or territories. No relocation shall take place without the free, prior and informed consent of the indigenous peoples concerned and after agreement on just and fair compensation and, where possible, with the option of return*.'

[134] Article 14 of the Convention on Indigenous and Tribal Peoples of 1989 (ILO's C169) states that, the rights of ownership and possession of the (indigenous) peoples concerned over the lands which they traditionally occupy shall be recognized. In addition, measures shall be taken in appropriate cases to safeguard the right of the peoples concerned to use lands not exclusively occupied by them, but to which they have traditionally had access for their subsistence and traditional activities. Particular attention shall be paid to the situation of nomadic peoples and shifting cultivators in this respect.

[135] TNRF (2007), *Op citi*, Page 29.

[136] According to: URT (2009) National Framework for Reduced Emissions from Deforestation and Forest Degradation (REDD). Government Printer: Dar es Salaam. Page 1, forests and other natural resources are crucial as sources of livelihoods and provide direct benefits such as firewood, fruits, traditional medicine and many others. The forest and woodlands also have very important and critical ecological values and are a source of vital services such as conserving genetic resources, ameliorating climate, serving as habitants for wildlife, they provide a wide range of cultural and spiritual benefits and are important sinks for removing carbon dioxide from the atmosphere.

[137] URT (2009), Op citi, Page 11.

PINGO's field experience shows that, pastoralists are good protectors of natural resources and they have doing that through indigenous knowledge for year before the introduction of 'modern' knowledge which forces them out of their friendship with the nature. They have used rotational grazing system to cope with natural changes. Moreover, they have been keen to redeem lost natural resources as well as sternly create new ones and devise measures to protect the existing. Two examples of pastoralists' community based forest management explained below can be cited as good examples.[138]

- *SULEDO Community Based Forest*

The first case is SULEDO forest. This is the manmade forest found in Kiteto district, Manyara region. Kiteto district is a predominantly pastoral land. The SULEDO forest has a total of about 167,416 Ha. It spread over three wards namely Sunya, Legatei and Dongo, covering nine villages within these wards.[139] Therefore, 'SULEDO' is an acronym of the initial letters of the names of the three wards. The artificial forest, which is an inter-wards joint conservation of the grazing land effort, started exactly 20 years ago (in 1995) to take advantage of the government's failure to conserve this forest through its 1990's attempts. Due to the failure, the villagers of some of the areas in the three wards were allowed to try conservation through own arrangements. The management of the forest is communally done, but has been formalized as the Village Land Forest Reserve under Section 35 of the Forest Act, 2002. There are arrangements (plans and rules)[140] made on how to harvest trees and graze in the forest. One of such arrangements is designation of rotational grazing paddles, whereby pastoralists could graze on certain location over period of time, and then, shift to the other forest's grazing paddles during next season. But generally, the grazing is free for every villager of those villages. Twenty years down the line still make this forest look green and rich of trees and other resources. The management of the forestry is still in the hands of local communities, most of them being Maasai pastoralists as said above. Any money obtained from sell of forest resources is shared equally to all villages and wards members to this forest. In 2001, the SULEDO forest won an international acclaimed Equator Initiative Award.

- *Matebete-Madunguru Community Forest Reserve*

This is also unique pastoral community natural resources redeem and protective initiative. The forest is found at Matebete (Madunguru) Village, Mbarali District, Mbeya Region. The 12,700 Ha, which was found on 23/11/1993 is communally owned by the pastoral Maasai community as their grazing land, but also a source of water and other resources for human consumption. Like the SULEDO forest, this one too has formal recognition with land title.[141] The management of this area is in the hands of every person in the village. They are actively collectively protecting natural resources as well as planting new trees as the picture below shows:

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[138] Explanations about the two projects obtained from researcher's own experience in the two areas when visited the forests between 2007 and 2013. The information is also available at: URT (2013), Op citi, Page 5; Also, PAICODEO (2011), Op citi, Page 45; and, SULEDO (Undated Project Document) 'Mradi wa Jamii ya SULEDO Wilayani Kiteto.' SULEDO: Kiteto. Page 1.

[139] The villages falling within the three wards forming SULEDO are; Sunya, Olgira, Loltepesi, Asamatwa, Lengatei, Lesoit, Orkitikiti, Engong'o-Engare and Laiseri.

[140] The forest has by-laws formulated by the Maasai villagers of those villages. It has also *Mpango wa Uvunaji Endelevu wa Ardhi ya Vijiji SULEDO 2008/2009* (Sustainable Log Harvest of SULEDO villages 2008/2009).

[141] Note that, the Land Certificate title number 20507 was issued on 1/1/1974 for 99 years in favour of the Usangu Farmers Co-operative Society and Mbeya Development Co-operative (USAMBECO). Therefore, the pastoral community purchased it from the former owners.

Picture: Pastoralists of Matebere-Madunguru village planting Trees in 2007 (Source: PAICODEO, 2013).

The management of the forest is quite effective and linked to the village governance structures. There is forest committee with several members (inclusion of at least 30% of women representation is mandatory). The committee is accountable to the Village Assembly, the supreme governing organ comprised of all adult villagers. There are own-devised rules including on carrying capacity of livestock population allowed in the forest. For instance, their 2013 limit was 5,000. During the time, there were about 4,200 cows; 890 goats; and 120 sheep. Non-residents to this village are charged Tshs 2,000 (USD 0.9) per head of cattle for three months to access this grazing land. Grazing to water catchment areas and cutting of trees are strictly prohibited. Grazing to this forest is rotational depending on the seasons. Because of all these arrangements, the forest remains evergreen throughout the year.

Fact Box # 6: Pastoralists need grasslands for pasture; Farmers needs bare-land for growing crops

Other natural resources users such as farmers and hunters do not have such arrangements. In most cases, when a farmer clears out the forest to acquire a space, he or she never replaces the lost tree. Instead, he or she keeps on clearing the forest in order to get a bigger land for farming. To the contrary, the pastoral animals spread seeds through their dung. On the other hand, the hunter normally kills a wild animal and he or she does not have any plan to replace the lost animal. But to the contrary, the Maasai pastoralists mingle around with wild beast zebra and others without any harm. They do not consume wild animals. The pastoralist needs trees and grasses for his cow to feed; while the farmer needs a bare land for planting his crops. To farmers, grass mingled with crops are weeds and therefore harmful; but, to pastoralist, grassland is resources to be encouraged to grow.

Manyara region's records shows that, the region has 927,526 Ha of forest reserves which occupy 18.2% of the total area of the region. The national (central government) forest reserve occupy 71,326 Ha; while the remaining 856,200 Ha of the total forest reserve is managed by the villagers under the Community Based Forest Management (CBFM) initiatives.[142] According to the regional profile (Page 22), *'incidents which threaten forests in the region are illegal harvesting, firewood, charcoal burning, and agricultural activities due to population growth and lack of alternative sources.'* Livestock keeping is not mentioned as one of the dangers to forest conservation.

[142] URT (2013), *Op citi*, Page 22.

Therefore, the claims against indigenous pastoralism model in relation to natural resource management and sustainability are illusionary, base mainly on assumptions and negative perceptions than realities on the ground. However, this study refutes to negate the fact that, excessive concentration of huge livestock herds over limited land space (beyond carrying capacity) could be detrimental to the environment. That is why sufficient grazing area should be located for pastoralists basing on their traditional land tenure system. Moreover, introduction of modern livestock breeds should also be adopted very carefully. For instance, according to pastoralists themselves, the new cattle breeds demand a lot of food and water, and that, due to their abnormal weight, soil degradation is higher than keeping ordinary Tanzanian zebu breed. Cost-benefit analysis is needed before jumping into the decision.

8.0: SUMMARY OF THE KEY ISSUES

Basing on the finding of the study presented above, and information gathered from various sources, especially government's plan, strategies and programmes,[143] it can be summarized that, livestock sector, which is predominantly managed by indigenous pastoralists in Tanzania contributes tremendously into the socio-economic development at micro and macro-levels. It is one of the main sources of incomes and revenues to most of the rural residents and some of the district councils. Its products and by-products form a large component of exported goods in Tanzania. It is also the chief-food supplier to millions of Tanzania. At least 90% of meat and milk products come from indigenous pastoralism. On social basis, pastoralism is not only a source of household income, it is also a bank, social security and enforcer of social justice as it is explained in the main text. It is the family wealth which ensures household financial security against unexpected risks. Traditional ceremonies and rituals do also depend on livestock.

Despite those and other notable socio-economic contributions of this economic model, the current policy and legal frameworks do not give it the support it deserves. Instead, there are regulatory standards formulated and passed to discourage it. Natural resource and wildlife conservation laws are just some of such standards harmful to pastoralism model. This is notwithstanding the fact that, so many international human rights instruments oblige States, including Tanzania to respect traditionalists' ways of life.

It's economic advantageous is marred by a number of factors, main one being lack of initiatives to add value of livestock as live animals or their products and by-products. Billions of revenues are collected from this sector without bothering on how an individual pastoralist struggles to grow up his cattle. When the pastoralists try to earn an income out of the sales of his animals, he faces a number of administrative challenges, some being excessive fees and charges or fines. There is no any benefit in return to the revenue collected. Instead, everything relating to animal health and development is borne by the pastoralist himself.

Moreover, there is little value addition in the livestock value chains characterized by lack of grading of livestock and livestock products, lack of fattening of animals to improve quality prior to marketing, inadequate infrastructure for processing and poor handling, presentation and packaging of most livestock

[143] Such as: URT (2010), *Op citi*; URT (2013) *Op citi*; Ministry of Livestock's Medium Term Strategic Plan 2012/2013-2016/2017; Medium Term Strategic Plan 212/2013- 2016/2017; and the National Livestock Sector Policy of 2006.

products. Therefore, pastoralists gain very little from the huge investments they have incurred to raise their livestock. To the contrary, as it is shown above, those who benefit more are secondary and intermediary livestock traders.

Some of the challenges pertaining development of the livestock sector, as found by this study and being documented in various literature include:-

(i) Negative perception towards pastoralism as said earlier on;
(ii) Lack of livestock policy which reflects the reality on the ground (pastoralism model);
(iii) Poor market infrastructure for livestock and livestock products;
(iv) Poor and costly transportation system for livestock and livestock products;
(v) Poor or little knowledge (inadequate information) of the markets (domestic and export) for livestock and livestock products;
(vi) Weak linkages or coordination among actors in the livestock value chains;
(vii) Inadequate entrepreneurship and business skills including negotiation skills especially among smallholder resource poor livestock producers;
(viii) Competition from other livestock exporting countries for existing and new markets for livestock and livestock products; and
(ix) Complience with livestock trade regulations and international code.

9.0: RECOMMENDED REFORMS TO ENHANCE PRODUCTIVITY OF PASTORALISM

The specific areas for reforms have been highlighted throughout this report. Moreover, all areas indicated as challenges for pastoralism protection, promotion and developments can be considered as opportunities for further improvements. Therefore, below are rather generalized strategic recommendations, which touch policy, administrative and legal areas of reforms:-

9.1 Access to Natural Resources and Improvement the Rangeland

Given the fact that pastoral livestock model favorably flourishes under communal land ownership in order to, inter alia, reinforces traditional natural resource conservation through rotational grazing (to adopt with the changing environmental conditions), it here by proposed (basing on this and other similar studies plus government policies) that:

(i) The ongoing land demarcation initiatives under the national and village land use plans should reflect this reality. This could go with securing the national mobility corridors (pursuant to the Grazing Land and Feed Resources Act, 2010).

(ii) The need to improve the current rangelands and pasture by, *inter alia*, support and encourage the pastoralists to grow pastures such as *cenchrus-ciliaris* grass. Simanjiro district has started this programme. But it needs to be scaled-up in terms of sufficient budget support and intensive sensitization sessions to the pastoralists.

(iii) The a need to effectively implement the Livestock Modernization Initiative of July 2015, which, among other things, proposes an establishment of the Village Rangeland Reserves (VRRs), which will have to be managed under community plans.

(iv) The government should allocate sufficient budget in order to claim rangeland areas which are currently occupied by tsetse flies. The study has ascertained that, at least 26% of the potential rangeland for pastoralism is currently not utilized in Tanzania due to preoccupation of tsetse flies (among other reasons).

(v) The government and its agents should reconsider repealing anti-pastoralism policies and decisions which encourage land grabbing and eviction of pastoralists from their indigenous lands.

9.2 Value Additions to Livestock, Products and By-Products

It was established that, at least 95% of the beef, meat, milk, livestock products and by products come from indigenous livestock breeds, which are said to have low weight (and quality) compared to improved breeds. In this way, pastoralists receive little return from the livestock products. On this, it is recommended that:-

(i) The government and civil society organizations should encourage and extensively support to adopt improved livestock breeds as Londigo and Monduli district's experience has shown that, such breeds are quite useful to the pastoralists and that, the breeds are adoptive of the arid and semi-arid climatic conditions. The pioneer areas (including Kenya) can serve as best examples.

(ii) There is a need to encourage investments in value addition factories such as milk and meat processing plants in all areas where pastoralism is the main economic activities. This could be done by subsidizing establishment in processing facilities just the way the government did for pro-farmer investors under *Kilimo Kwanza* initiative.

(iii) The grassroots based livestock services such as dams, dips, veterinary shops and advisors, feedlots, information centers, and the like, should be improved in the rural areas in order to livestock productivity and serve the pastoralists from high livestock mortality rates.

9.3 Market Structures and Supports

Since the market is the best opportunity in which a pastoralist interacts with traders for the disposition of his livestock for monetary gain, there is an urgent need to ensure that:-

(i) The market infrastructures such as weighing bridges, water tubs, feeding lots, toilets, and market information desks are placed in every market.

(ii) The pastoralists are facilitated by their cooperatives, civil society organizations and the government, on business negotiation skills including elementary knowledge on the laws governing business activities, contracts, as well as livestock economic subsector.

(iii) The guidelines which will indicate the market grades of various livestock and proposed minimum prices per each grade are formulated by the government. The current 'eye-bow' approach to determine the price of an animal in the market as it was observed during this study is really oppressive to pastoralists – who stand at a high risk of getting loss because of the cost incurred to raise the animal.

(iv) It is important that pastoralists are encourage to engage directly with secondary and terminal livestock markets in order to earn more money from the sales than what they currently receive in primary livestock money.

(v) There is a need to encourage pastoralists to form themselves into livestock cooperative societies in every village. The Cooperative Society Act, 2003[144] provides this opportunity under Section 22(f) of this law. It states that, the livestock cooperative societies designed to deal with the needs of members in animal husbandry, livestock keeping and dairy farming can be registered to the Registrar of Cooperative Societies.[145]

(vi) There is also a need of national livestock census, which will, inter alia, maps out the actual livestock population size against the current services rendered to support it; and use total economic value and value chain analysis frameworks to trace comprehensively socio-economic contributions and value of pastoralism into agriculture and general GDP.

9.4 Livestock Regulatory Frameworks and Mindset

As it is was argued in the main text, the regulatory frameworks (relevant policies, laws and practices) of this economic sub-sector, the decision makers' mindset and perceptions towards indigenous pastoralism are

[144] Act No. 20 of 2003.

[145] The association will help pastoralists to have ready markets on which to sell their cattle on good prices.

quite pessimistic as this indigenous pastoralism. As such, the focus of the laws, policies, programmes, strategies relating to livestock have prejudicially 'forced' indigenous pastoralists to adopt modern livestock keeping standards, which instigate commercialization of the livestock keeping. But, livestock is more than being a wealth or a symbol of richness; rather, it includes also realization of certain traditional norms such as ritual, social orders, and so on.

10.0: CONCLUSION

The study aimed at mapping the socio-economic contributions of pastoralism as livelihood system in Tanzania in order to inform the general public, in particular livestock sector's stakeholders in the wealth, value, modus operandi as well as areas which need further attention as far as indigenous pastoralism model is concerned. As a livelihood system, pastoralism model offer survival means to majority of rural residents in Tanzania. It is the main source (more than 95%) of meat, milk, skins, hides, and other by-products, which benefit millions of Tanzanians. Its presence gives the government billions of shillings through levies, charges, fees, taxes and fines associated to livestock business in rural and urban areas. One ordinary traditional cattle's generates between Tshs 3.5 million and Tshs 7.2 million basing on simple value chain or total economic value analysis.

Its huge contributions to micro and macro-economic developments to individual pastoralists, non-pastoralists, governmental and non-governmental institutions have not been treasured. This is due to the fact that, its value is underestimated, neglected and misses updated statistics. The main attributing factor to this reality seems to be pessimistic mindsets preoccupying majority of the decision makers and law enforcers. In that regard, it is considered as outdated model, to be replaced by modern livestock breeds and system. However, it is a fact that, a large part of indigenous pastoral community leaves in arid and semi-arid areas such as ones sampled for this study, where the climatic condition is too harsh for the soft modern livestock breeds to endure.

All those issues pose a critical dilemma on how to go about with these two contradictory perceptions about pastoralism. Basing on the reasons and facts discussed in this study report, it is certainly viable to consider a way of promoting, developing and protecting pastoralism instead of superimposing new models. The mainstreaming of new breeds into existing ones (cross-breeding) is highly encouraged as it has, to a certain extent, worked out in Monduli and Longido districts. Secondly, there is a need to facilitate the pastoralists to have means of adding values of their livestock and products, for instance, by supplying them with market information, health livestock facilities, establishment of processing industries to their vicinities, etc. It is strange to note that, a number one cattle producer in Tanzania (Shinyanga/ Simiyu region(s)) did not have a single processing industry or plant. Besides, regulatory frameworks need further reform to ensure sufficient access of rangeland for pastoralists basing on their communal grazing model. It is possible because less than 25% of potential grazing land in Tanzania is currently utilized as pastoral grazing land.

Conclusively, when the decision makers stop hating this livelihood model, and start seeing its values more objectively, it is when it (pastoralism) will flourish high and benefit everyone, more than it is a case at the moment.

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