

## IMPACT OF INSUFFICIENT DEYR RAINS ON NOMAD ACCESS TO FOOD IN THE FORMER EASTERN HARARGHE OF THE ETHIOPIAN SOMALI NATIONAL REGIONAL STATE (ESNRS)

---

By Dr. Ahmed Yusuf Farah, Anthropologist, UNDP Emergencies Unit for Ethiopia

### *Background*

This report is the fourth in a series based on findings of the rapid assessment undertaken by the UNDP Emergencies Unit in the predominantly nomadic arid zones of the Somali National Regional State and in the adjacent lowland areas of the Borana. The Unit's reports, including the present one, and others produced by the DPPC since December 1996 portray a deteriorating situation in the areas. Pastoralists in the peripheral lowland grazing parts of the affected zones of the two regions face difficulties as a result of restricted access to food primarily emanating from scarce of pasturage and water sources.

Aggravated by additional pressure on the available scarce, diminishing and unevenly distributed resources exerted by the influx of pastoralists from drought impacted neighboring grazing regions of Kenya and Somalia, the cardinal cause of the current drought is partial, or, complete failure of the short deyr rains. Smaller rains are important for the survival of the pastoralists in the following long dry season of *jiilaal* and are essential for replenishment and regeneration of water and grazing; therefore, they ensure the bare survival of pastoralists and supporting herds. Failure of the *deyr* rains in late 1996 imposed the adverse effect of the start of the *jiilaal* earlier than the normal time of January. In the severely impacted areas of Liban, Wardher and Dghahbur zones diminished local resources prompted unusual migration to dry season deep wells well in advance of the *jiilaal*.

As in the previous reports, the present report indicates unfavorable terms of trade between livestock and food in the Haud areas of Dhagahbur zone where the immediate problem is scarcity of water and grazing for the weakening livestock. Access to these resources is most pronounced in localities where the main rains in the past *gu'* season has not been sufficient to replenish local resources. In these severely impacted areas, which include the environs of Gashamo and Kam Abokor, local wells (*birkas*) have dried up, forcing rural communities to depend upon water sold by trade trucks from distant sources that have retained some water. As the availability of these basic resources becomes critical with the progress of the dry season, livestock and dependent pastoralists will start perishing unless saved by unusual early rains in March or external assistance programmes delivering large scale water relief.

The SERP Branch Office for Eastern Hararghe provided the vehicle for the field trip to Gashamo and furnished raw market data. Eastern zones of Gurzum (Fafen and Babile), Jijiga, Fiiq and Dhagahbur are served by SERP's Eastern Hararghe branch, while its counterpart branch at Godey serves the central regions. The statistical market data supplemented with information elicited from SERP staff and Gashamo district administration has been analysed in order to find out the implications of exchange rate between livestock and grains for the survival of pastoralists over the long dry season of *jiilaal*. *The report deals with the Haud area in length as this area seems to be severely affected by drought.*

In the first three months of the Ethiopian Calendar, the nomads in the ESNRS have been affected by adverse rate of exchange. Thus, the price of staple grains, which constitute an important element in the diet of nomadic families during the long dry season of *jiilaal*, when pastoral staples are scarce due to seasonal shortage of nomadic resources, have shown constant price increase; while in the same period the livestock prices constantly declined.

Pastoralists in the eastern zones face precarious existence in the current *jiilaal* season. The situation is more critical than perennial dry season problem in which pastoralists become preoccupied with the arduous task of searching water and pasturage for human and animal consumption under an austere life- limited pastoral products, expensive supplementary grains become and low while the market price of livestock.

#### Implications of Large-scale Development of *Birkas* for the Pastoral Economy in the Waterless Haud

SERP's project area in former Eastern Hararghe consist of two distinct ecological zones. The first zone occupy north and northwestern parts, including areas of Gurzum plateau, Jijiga plains and Fiiq zone. This high ground zone is endowed with favorable conditions suitable for a mixed economy of crop production and animal husbandry. Here cattle which can be raised in a sedentary setting replaces the fast and frequently moving camels as the primary stock unit. Most areas in this zone receive an annual precipitation of around 600 mm. Here also rainfall seems to be more reliable than in the other zone. The main rainy seasons in this agro-pastoral zone starts in June and ends in August, while the short season occurs between in March and April.

Situated in south and southeastern areas bordering Somalia comprise the second ecological zone. It is dominated by vast lowland open plains frequented by nomadic clansmen herding a primary stock of camels and supplementary flocks of sheep and goats. Rainfall is erratic and limited, varying from 200-250 mm annually, to prevent cropping on a sustainable basis, nevertheless, it is just sufficient to ensure access to often scarce and unevenly distributed pasture and water for free foraging nomadic camels and flocks of sheep and goats. This lowland nomadic zone has two distinct rainy seasons different from those in the agro-pastoral zone. The main season of Gu' starts in May/April and ends before June, while the short rains occur between October and December.

Paradoxically, very little development was carried out in the drought prone peripheral lowland nomadic areas which suffered most from historical neglect. Social services found in the region are concentrated in the other favored zone which is also endowed with more sources of water- water available just below the surface of the valleys, earth dams, had-dug shallow wells and boreholes. It these isolated and remote nomads areas that are hit by the impact of the failed deyr rains.

Gashamo and Aware weredas that extend as far as the border with Somaliland form part of the Haud grazing region traditionally characterised by lack of permanent water. Therefore, it acted previously as the wet season grazing region when rains grow pasture and provide water. During the dry season nomads used to abandon the Haud by driving animals to the dry season grazing region - in close proximity to the permanent sources of water found on the other side of the border in Somaliland: Ceynabo, Bu'co and Odweyne, or outside the Haud near Danot wells in the neighboring Wardher zone.

Throughout the waterless Haud, construction of private *birkas* (cemented underground water tanks) began to be embraced as a local solution to the absence of permanent water, a development which started in the 1950s and later on dramatically increased after the 1970s.

Two main goals explain the widespread desire to invest in the construction of the rapidly expanding *birkas*. First, they act as a safety valve supplying regular water to family members of the owning family and its herd during the critical *jiilaal* season. *Second, investment in Birkas is a lucrative* enterprise based on profit calculation- it earns the owning family a significant quick return from the sale of surplus water to non-owning poor nomads during the *jiilaal* season. Thus, it is no surprise that construction of *birkas* represents a popular investment strategy in the Haud.

Depending upon availability, non-owners of *birkas* also utilize these sources on a commercial basis during the dry season. In average year, water contained in the *birkas* is sufficient and affordable to satisfy the local demand for water during the *jiilaal* in the traditionally waterless Haud. This relieved local nomads from the rigors of the dry season- migration to deep water wells, the arduous task of watering livestock from deep wells, and the search for grazing as the surroundings of the permanent wells become desiccated by congregation of a large number of stocks.

A comprehensive and a balanced understanding of impact of the *birkas* is essential in understanding water problems currently affecting the Haud. Thus it is apposite to examine in the following paragraphs the negative implications of the ubiquitous *birkas*. The scope of the development of this source seems overwhelming.

For example, there are about 120 permanent or semi-permanent settlements of various sizes controlled in Gasahmo district which is dominated by the Habar Yonis clan. About 50 similar settlements are inhabited by the 'Ciidagale clan in Aware district partly controlled by Ogaden. Reportedly some of these settlements contain more than 100 *birkas* while others contain less than 50 each. Thus it seems reasonable to give an average number of *birkas* per village at 100. Hence, 12,000 and 5,000 *Birkas* are found scattered across trade centers in Gashamo and Aware areas controlled by the 'Ciidagale clan respectively.

Due to the multiple-function (market, political and administrative center) they have for the local land-holding lineages, trade villages influence the movement of trans-humant groups in Haud. In this sense nomadic kinsmen belonging to a corporate lineage tend to move within a radius to the village base depending upon the availability of grazing and surface water.

Ties of lineages and clans to delimited grazing territories is not usually enforced as the well-being of herds and herdsmen ultimately depends upon essential resources that are often scarce and distributed across lineage boundaries. Nevertheless, development of permanent water in the Haud replicates the pervasive social organization based on lineages. Therefore, development of *birkas* in the territory controlled by the local lineage depends upon membership. Accordingly, outsiders not belonging to the land holding lineage are not allowed to construct *birkas*. This phenomenon localized local lineages to a great extent. Herding kinsmen of the local lineage nowadays move within a short radius to the village even during the *jiilaal* - in the livestock and herders abandoned the waterless dry Haud in this season.

Lineages depend upon water contained in the *birkas* found in their areas of influence, after the surface water in the Haud becomes exhausted, nevertheless, sharing of water between different lineages of the clan and between clans is very common. For instance, if the *birkas* in locality controlled by a particular lineage dry up at the height of the dry season, the affected lineage seeks water from the next settlement its *birkas* contain water. This process continues until the on-set of the main rains. If and only if the total *birkas* in the Haud dry will the nomadic inhabitants in the Haud be forced to abandon the area to the traditional deep wells across the border in Somaliland. Among other reasons, the availability of permanent water through out the seasons in the Haud grazing region certainly accelerated the endemic problem of overgrazing and degradation of pasture.

Development of ubiquitous *birkas* and attached permanent settlements encourage further diversification of the traditional animal husbandry. In addition to camels and small ruminants, *birka* owners living in rural villages in the Haud started raising water-dependent cattle in this traditionally waterless camel land. The husbandry of cattle earns additional advantage (milk, purified ghee and adult cows for sale) to the wealthy owners of *birkas* in an average year. However, this has the effect of increasing livestock population in an overpopulated region and therefore puts additional pressure on shrinking resource base. Virtually the vicinity of all settlements have become overgrazed by cattle belonging to the villagers, thus driving away ideal nomads raising camels and small ruminants in the eternal search for pasture and water.

Unlike Aware, Gashamo is a pastoral wereda not yet affected by expansion of agriculture, however, development of *birkas* in the Haud seems encourages permanent settlement and adoption of 'opportunistic' agriculture that is encroaching to pastoral areas marginal for cropping.

Possession of a *birka* acts as a crucial element promoting stratification among kinsmen in the grazing region of Haud. Permanent water allowed Barkad owners to further diversify and raise cattle, become rich herders keeping large stocks produced for partly for export. All these are happening to the detriment of the non-owning poor herders because of the pressure on the fragile nomadic ecosystem.

Spontaneously proliferating *birkas* provide sufficient water to livestock and human population in Haud in an average year. However, *birkas* do not provide a long-term solution, as indicated by the current drought situation in the Haud. Boreholes constructed at a suitable distance across the Haud seem to provide a better alternative, even though this source itself has its own limitation including maintenance problems relating to shortage of spare parts.

### ***Current Situation in the Haud***

The predominantly agro-pastoral zones of Jijiga and Gurzum as well as elevated parts of Fiiq are less prone to drought than the remote and arid and nomadic lowland zones of Dhagahbur, including Gashamo and Aware wareds. Sedentary areas in the former zones are wetter than the pastoral lowland zones. Moreover, development agents have carried out most of the water related work in these favored zones- bore holes, ponds and shallow wells.

In the *birka* belt across Gashamo and Aware districts, there is no permanent water other than Aware dry season wells which supply only a limited amount of water to the local lineages. Shortage of water is most acute in areas *deyr* rains have not replenished water stored in the *birkas*. This include settlements surrounding Gasahmo town and Kam Abokor area. *Birkas* in Rabasso have fortunately been replenished by *deyr* rains and therefore contain some water.

At the time of visit, the price of one barrel of water sold Birr 25 and 10 in Gashamo and Kam Abokor respectively. The normal price per barrel is less than Birr 5. In this early stage of long dry season of *jiilaal*, the group most needy of water is the settled or semi-settled population raising water-dependent cattle in the permanent villages in Haud, including Gashamo and Kam Abokor.

The nomadic population is mobile and move away from dried up villages to others its *birkas* still contain water. Therefore, since nomads buy water at the source, they obtain water at a price cheaper than that in the villagers supplied by trade tankers and trucks mounted with water tanks. Once the water contained in the *birkas* around a village is exhausted water is fetched from the nearest village. At the time of the visit, water was transported to Gashamo from a radius of 100 km.

As the dry season progresses, more *birkas* in the Haud will be exhausted and therefore more local nomadic and village populations will be plunged into a critical situation requiring emergency assistance. The district administration in Gashamo estimated that the reserve water remaining in *birkas* of villages outlying Gashamo town is just enough to satisfy demand until early February. Once local *brakads* dry up sometime at the beginning of February, the nearest sources to fetch water for Gashamo will be Jijiga and Bur'co, about 400 and 160 km respectively.

The condition of livestock has not yet deteriorated to a critical level. However, as soon as local sources dry up in February in Gashamo woreda, water will become expensive for flocks of sheep to be watered as frequently as is the case under a normal dry period - pastoralists will be forced to economize scarce water. For the last decades water in the *birkas* made possible for *birka* owners and poor nomads to keep large herds produced for the market.

Right now availability of water is the immediate concern for pastoralists and villagers in drought affected areas in Dhagahbur zone and other parts of the region. The problem is that places with water usually have no grazing and areas with grazing lack water. Thus, survival depends upon striking a balance between these basic resources.

On the basis of situation assessments carried out by the administration, available resources have been distributed and dispatched to the most affected zones- Liban, Wardher and Dhagahbur. The assistance provided so far by the regional authority comprise of limited relief food (65,000 tons) and a fleet of 12 water tankers.

The limited number of tankers dispatched to mitigate water crisis existing in those zones where drought condition is most pronounced, represent no more than a good gesture and is beset by formidable problems. For example, there is scarcity of boreholes in the reomte lowland pastoral areas in general and some of the few existing ones are not functioning due to lack of spare parts. For instance, the nearest boreholes to Gashamo with the capacity to fill-up water tanks are situated in Wardher, a distance of around 160 km from Gashamo town. Rehabilitation of Wardher boreholes and others in the region is urgently required to benefit both locals and Gashmo which is currently served by tankers that transport water from Jijiga boreholes, a distance of around 350 km. It is very difficult to sustain a large scale water relief to affected nomads in isolated areas such as Gashamo over a long time from given the long journey to Jijiga.

The administration of the Gashamo woreda suggested an alternative effort to mitigate the drought situation affecting this district and the Haud in general. This alternative confirms the presence of sufficient number of private tankers and trade trucks improvised to serve as tankers at times of distress, e.g. the current *jiilaal*. At times of water crisis in the Haud water is a lucrative business for the owners of tankers and trade trucks. When local *birkas* dry up water is transported from boreholes in Bur'co region in Somaliland for sale to nomads and rural villages. Given the capacity of local private tankering service to provide sufficient water to the drought affected local population in the Haud, we recommend the use of private tankering to carry out the task of supplying water to thirst rural villages and nomadic populace.

To induce efficiency and reduce the price of water to drought affected population in the Haud, we recommend deliberation of the following support to the private tankering system. In isolated areas such as Gashamo the price of fuel is almost twice that in Jijiga, Birr 1.70 and 3.30 respectively. Therefore, a regular supply of fuel to selected centers in the Haud, e.g. Gashamo and Kam Abokor is required.

Of course there is a need to organize private tankering operation so as to make sure it benefits the target population and avoid possible misuse of any subsidy provided by relief operators to mitigate water crisis in the Haud. Registration of the number of available tankers and is the first priority. This could be carried out by the administrations in the affected areas. This is necessary for planning the distribution of tankers among the affected weredas and kabales.

Perhaps the best arrangement is to contract the private tankers, who shall be paid per load to supply water to a specified locality. Recipients will be charged a rate enough to or cover the actual cost of the delivered water. This needs to be supervised by a water committee comprising of representatives of the beneficiaries, local administration and assisting organizations. Of course the proposed commercial system will be valid as far as the situation does not deteriorate to a critical level in which livestock become so weak that they fail to earn nomads an income to exchange with water.

The Somali authority gave permission unregistered trade trucks and tankers operating between Haud and Somaliland. This is not enough to ensure free movement of goods that is vital the survival of the nomads in Haud as elsewhere in the region- since locally produced livestock are exported through Somaliland and the proceeds are purchased with food stuff and consumer goods that enter the region illicitly until September 1996. It will help the affected population in the Ethiopian Somali region if the restrictions imposed last year on the franca valuta system is eased until the situation is normalized.

### ***Nomad Access to Food***

In the eastern zones, food security is usually more favorable in crop producing settled agro-pastoral zones than in lowland nomadic areas. In the latter areas, scarcity of pastoral resources during the long dry season of *jiilaal* affects the well-being of free-foraging nomadic herds resulting a precarious existence among the pastoralists. Decline of the price of livestock and corresponding increase of cereals that form an essential element of nomadic diet in the *jiilaal* than in the rainy season when nomadic products are relatively plenty undermine nomad access to food.

The perennial problem of nomad access to food in the *jiilaal* season has been escalated in the current season by failure of *deyr* through out the region. Of the greatly commercialized nomadic economy in the Haud (Gashamo, Aware, etc) production of livestock for export over a long period smoothed difference over food consumption between pastoralists and villagers. Both populations consume imported food items of rice, wheat flour and oil, in contrast to nomadic areas outside the region where sorghum and maize form the staple foods.

The high value of imported staples in the Haud represents a particular problem affecting pastoralists in this area. Under normal circumstance, nomads in this area are used to a rate of exchange much better than one currently prevailing. This time last year, two third of proceed from an adult sheep was exchanged with 50 kg of rice. At present, an adult sheep was sold at about Birr 170 in Gashamo while the price of 50 kg of rice was Birr 190-200. This establish drought induced factor as being the principal factor responsible for adverse rate of exchange affecting food security.

Reported nomadic influx from Haud to neighboring areas in the country and into Somaliland tend to suggest the severity of drought there. In contrast, Liban, Afdher and some areas of Wardher attracted an influx from neighboring countries, Somalia and Kenya, mainly because of being less affected by this regional drought menacing peripheral nomadic groups.

### ***Livestock Price***

The preceding section show the disproportionate difference between the high price of food and low price of livestock during the current *jiilaal* season in the Haud and in other drought affected areas of the nomadic lowland parts of the country. In the severely impacted nomadic areas, the deteriorating livestock-food rate of exchange has already eroded the ability of nomads to procure sufficient food, causing malnutrition.

As the already weakened herds supporting pastoralists continue to struggle surviving upon dwindling nomadic resources during the current prolonged *jiilaal*, the situation will deteriorate further as livestock and pastoralists might start dying in numbers before the on-set of the main rainy season in April or May.

In spite of large gulf between the prices of livestock and food, the most distressing problem is the depressed demand for livestock. Even in areas in the Haud where the well-being of livestock is still satisfactory, livestock merchants seem reluctant to buy animals in advance to accumulate purchased livestock for speculation and profit. Given shortage of essential pastoral resources, middle merchants tend to avoid the risk involved in feeding and watering large number of hoarded animals the time they wait exporters to come and collect them.

As explained in our last report, the export of camels diminished with the collapse of the centralized Somali state in 1991, as this market was essentially based upon quotas negotiated by the authority with the client countries in the Gulf. Since then the demand for export camels diminished although a limited number of adult camels are slaughtered for domestic consumption in urban centers. In effect, Somali pastoralists are left with marketable surplus they can not dispose off, a trend contributing to the diminishing significance of the drought resistant camels forming the foundation of increasingly pervasive camel-centered nomadic economy.

Another external factor relating to scarcity of Somali Shilling (common currency in the rural areas in the region) in the Haud and in the nomadic areas in general adds to the problems affecting nomad access to food. The transnational clansmen inhabiting the Haud are opposed to Egal's administration in the Somaliland and therefore the new Somaliland Shilling is not accepted in their areas of influence on both sides of the border. The old Somaliland shilling is getting worn out and scarce since there is no central authority to endorse printing of a new currency.

The threat imposed by the drought and associated problems discussed in the above, is further compounded by yet another external factor.

Noticeable shortage of Somali Somali for circulation, and the reasonable risk involved in transporting large bundles of cash from the main livestock markets in Bur'co, Hargeysa and Hartasheikh, forced partial or complete exchange between livestock and imported food. However, this barter trade is explained by some to benefit importers who are said to realize profit from both livestock and the food and consumer goods exchanged with the exported livestock.

The barter trade functioning at present in the region is not restricting for nomad access to basic staples but is making purchase of other essential things difficult. A family can not give away a sheep to obtain everyday necessities. The truck owners selling water may ask for cash rather than animals for water.

<b>Food Item</b>	<b>Unit</b>	<b>Average Retail Price (Birr) Maskaram (Sept. 96)</b>	<b>Average Retail Price (Birr) Tikimt (Oct. 96)</b>	<b>Average Retail Price (Birr) Hidar (Nov. 96)</b>
Local sorghum	1kg	2.10	2.77	2.00
White maize	1kg	2.75	2.80	2.75
Red maize	1kg	1.75	1.90	1.50
White teff	1kg	3.00	3.00	3.00
Red teff	1kg	2.70	2.75	2.70
Highland wheat	1kg	1.50	1.50	1.55
Releif wheat	1kg	1.20	?	1.25
Highland barley	1kg	2.25	2.00	2.25
Highland Pea	1kg	2.00	2.50	2.00
Oil	1Lit	11.00	11.75	11.00
cow milk	1Lit	1.50	1.50	1.50
Camel milk	1lit	2.20	2.00	2.00
Highland butter	1kg	27.00	29.50	27.50
Lowland butter	1kg	21.00	21.00	21.00
Pasta	1kg	4.00	4.55	4.00
Rice	1kg	5.00	5.50	5.00
Imported macarona	1kg	8.50	8.00	8.00
Local macarona	1kg	5.25	5.00	5.00



Livestock Price at Jijiga Market in the month of Meskerem 1989

Type of animal	Number brought for sale	Number sold	Number unsold	Average price
Ox	122	23	99	1015.53
Messena (dry cow)	9	1	8	980
Cow	387	159	238	742
Steer	405	77	328	378.13
Heifer	124	27	97	365.5
Male calf	41	2	39	270
Male camel	33	10	23	855
Female camel	14	2	12	850
Male donkey	37	7	30	258.33
Female donkey	27	2	25	230
Male sheep	234	29	205	145.75
Female sheep	172	12	160	101.66
Male goat	449	164	285	115.83
Female goat	385	39	330	92.69

Livestock Market at the Jijiga Market in the Month of Tikimt 1989

Type of animal	Number brought for sale	Number sold	Number unsold	Average price
Ox	58	23	35	906.25
Messena	2	-	2	-
Cow	487	146	341	694
Steer	424	94	330	400.75
Heifer	136	53	83	389
Male calf	24	3	21	240
Female calf	5	3	2	225
Male camel	52	20	32	1055
Female camel	25	7	18	809.3
Male donkey	39	6	33	240
Female donkey	20	5	15	213.33
Male sheep	230	54	176	132
Female sheep	344	117	227	105.68
Male goat	489	82	407	127.75
female goat	454	63	390	108.75

Price of Livestock at Jijiga Market in the month of Hidar 1989EC

Type of livestock	Number brought for sale	Number sold	Number unsold	Average price
Ox	56	15	41	740.75
Messena	-	-	-	-
Cow	603	198	405	728
Steer	335	122	413	445.2
Heifer	207	40	167	420
Male calf	23	7	16	270
Female calf	11	-	11	-
Male camel	46	19	27	1010
Female camel	20	10	10	757
Male donkey	19	2	17	230
Female donkey	14	3	9	205
Male sheep	129	44	125	121
Female sheep	373	102	271	108
Male goat	692	83	559	114
Female goat	591	89	502	95

Livestock Price at Gurzum Market in the Month of Meskerem

Type of animal	Number brought for sale	Number sold	Number unsold	Average Price
Bull	114	5	109	1150
Ox	231	75	156	1050
Messena	51	22	29	725
Cow	97	46	51	650
Steer	405	122	283	750
Heifer	111	45	66	450
Male calf	213	55	158	425
Female calf	63	19	44	325
Male camel	6	2	2	1000
Female camel	-	-	-	-
Male donkey	52	13	39	300
Female donkey	38	4	34	200
Male sheep	225	49	176	130
Female sheep	182	39	143	110
Male goat	443	109	374	130
Female goat	432	79	353	110

Price of Livestock at Gurzum Market in the Month of Tikimt 1989 EC

Type of livestock	Number brought for sale	Number sold	Number unsold	Average price
Bull	81	3	68	1050
Ox	185	44	141	795
Messena	35	18	27	632.50
Cow	93	36	57	475
Steer	364	72	292	687.50
Heifer	103	20	83	437.50
Male calf	165	37	128	387.50
Female calf	68	-	-	-
Male camel	2	1	1	1000
Female camel	2	-	2	-
Male donkey	51	12	37	283.33
Female donkey	30	4	26	200
Male sheep	88	32	56	130
Female sheep	90	30	60	102.50
Male goat	256	65	191	120
Female goat	345	71	274	110

Price of Livestock at Gurzum Market in the Month of Hidar 1989

Type of Livestock	Number brought for sale	Number sold	Number unsold	Average price
Bull	98	3	95	
Ox	114	19	95	
Messena	48	21	27	
Cow	150	47	103	
Steer	266	59	207	
Heifer	164	51	113	
Male calf	147	40	107	
Female calf	53	7	46	
Male camel	4	3	1	1050
Female camel	-	-	-	
Male donkey	90	18	72	300
Female donkey	36	5	31	210
Male sheep	184	64	120	135.50
Female sheep	93	35	58	115
Male goat	258	99	159	120
Female goat	388	68	320	110

DISCLAIMER

The designations employed and the presentation of material in this document do not imply the expression of any opinion whatsoever of the UN concerning the legal status of any country, territory, city or area of its authorities, or concerning the delimitation of its frontiers or boundaries.

8 April, 2004

UN-EUE  
PO Box 5580,  
Addis Ababa, Ethiopia

Tel.: (251) (1) 51-10-28/29  
Fax: (251) (1) 51-12-92  
Email: UNEUE@padis.gn.apc.org