

**[[ALL TABLES: (1) Alphabetize rows, or put in some other order? (2) Blank cells---  
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## **SOMALI**

### **JOINT NEEDS ASSESSMENT**

#### **PRODUCTIVE SECTORS AND ENVIRONMENT CLUSTER**

## **ANNEXES**

October 21, 2006

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## ANNEX A: Distribution of Major Land Cover Classes in Somalia, 2000 <<A>>

**Table A 1: Distribution of Major Land Cover Classes in Somalia, 2000**

(% share in total)																		
Aggregated land cover groups	Bakol	Banadir	Bari	Bay	Gedo	Galgudud	Hiraan	Middle Juba	Lower Juba	Mudug	Nugal	Sanag	Middle Shabelle	Lower Shabelle	Togdher	North West	Total in thousand hectares	Area in %
Rainfed herbaceous crops	0.36	18.89	0	9.91	1.55	9.08	2.85	1.84	0.98	1.86	0	0	17.82	15.49	0	0.04	1,997	3.13
Irrigated crops	0	0	0	0.02	0.42	0	0.66	3.34	0	0.00	0	0.02	4.62	7.84	0.59	3.62	577	0.9
Trees (open, very open, shrubs, and woody vegetation)	81.43	27.06	31.11	82.36	71.53	57.02	77.83	87.59	87.72	61.56	41.47	37.39	51.43	64.93	46.5	51.57	37,614	58.99
Aquatic with trees and woody shrubs	0	0	0.01	0	0	0	0	0.00	0.39	0	0	0	0	0	0	0.01	20	0.03
Grassland and shrub savannah	14.74	7.17	59.46	7.4	23.11	31.78	17.87	6.27	9.45	32.19	56.04	51.92	18.22	9.4	51.56	37.01	20,859	32.72
Aquatic with open to close grasslands with sparse trees and shrubs	0	0	0.06	0	0.01	0	0	0.58	0.96	0.01	0.68	0	0	0	0	0	103	0.16
Bare rock, hollow sand dunes, and beaches	3.47	29.16	9.35	0.3	3.38	1.96	0.78	0.13	0.26	4.35	1.81	0.06	7.91	2.18	1.32	7.69	2,554	4.01
Urban areas	0	17.72	0.01	0.01	0	0	0.01	0.05	0.02	0	0	10.61	0	0.1	0.02	0.06	14	0.02
Water (natural and artificial)	0	0	0		0	0.16	0.00	0.2	0.22	0.03	0	0	0	0.06	0.01	0	25	0.04
Total %	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100		100
Total (thousand ha)	2,582	21	6,833	4,393	4,524	4,892	3,418	1,875	4,779	6,844	5,678	4,883	1,850	2,563	4,224	4,404	63,763	

Source: FAO-Africover Project, 2000.

## ANNEX B: Trends in Gross Domestic Product (1980–90)<<A>>

**Table B 1: Trends in Gross Domestic Product (1980-1990)**

(1985 So.Sh. millions)

Sectors/subsectors [[identify/indent subsectors in rows below?]]	1980	1985	1986	1987	1988	1989 Est.	1990 Proj.
Agriculture [[assume highlighted indented rows below are subsectors of agriculture as in annex C]]	43,522	55,583	54,868	59,378	61,613	62,644	64,470
Livestock and livestock products	28,665	30,893	28,469	32,945	33,474	33,099	33,751
of which: Change in stocks	-362	2,498	515	2,871	3,419	1,934	1,992
Crop production	12,036	19,121	20,814	20,433	21,949	23,156	24,082
Forestry	4,376	5,060	5,220	5,385	5,555	5,723	5,894
Fishing	443	509	565	614	634	666	732
Mining	278	291	291	291	291	291	291
Manufacturing	4,952	4,145	4,595	4,821	4,580	4,717	4,953
Electricity and water	51	71	77	62	57	50	83
Construction	2,299	1,889	3,289	3,486	2,963	3,141	3,266
Trade and hotels	10,055	8,485	8,587	9,929	8,599	9,081	9,353
Transport, communication	4,595	5,667	8,020	6,153	5,873	5,225	6,412
Finance and insurance	1,887	481	359	575	546	437	446
Real estate	2,675	3,254	3,384	3,520	3,344	3,428	3,565
Government services	2,293	1,625	1,631	1,530	1,404	1,344	1,300
Other services	2,280	2,620	2,698	2,779	2,863	2,949	3,067
Imputed bank service charges	-1,527	-859	-737	-748	-748	-785	-785
GDP at factor cost, inc. stocks	73,130	83,252	85,063	91,775	91,385	93,531	96,401
Indirect taxes	4,809	4,100	5,381	4,220	3,548	3,934	4,937
GDP at market prices, including stocks	77,739	87,352	90,444	95,996	94,931	97,464	101,338

(1985 So.Sh. millions)

Sectors/subsectors [[identify/indent subsectors in rows below?]]	1980	1985	1986	1987	1988	1989 Est.	1990 Proj.
GDP at factor cost, excluding stocks	73,492	80,754	84548	88,905	87,956	91,597	94,409
GDP at market prices, excluding stocks	78,101	84,854	89, 929	93, 125	91,512	95,530	99,348
Memorandum item:							
GDP at market prices (current prices, including stocks)	17,372	87,352	120,970	187,538	288,905	618,622	1,478,524
Change in percent		40.16	38.49	38.49	71.25	115.52	138.88

Source: World Bank, 1991.

## ANNEX C: Trends in Shares of Gross Domestic Product in Somalia by Major Sectors, 1980–90<<A>>

Table C 1: Trends in Shares of Gross Domestic Product in Somalia by Major Sectors, 1980-1990

Sectors/subsectors <small>[[identify/indent subsectors in rows below?]]</small>	1980	1985	1986	1987	1988	1989 Est.	1990 Proj.
Agriculture <small>[[see note previous table]]</small>	56.0	63.6	60.7	61.9	64.9	64.3	63.6
Livestock and livestock products	36.9	35.4	31.5	34.3	35.3	34.0	33.3
of which: Change in stocks	-0.5	2.9	0.6	3.0	3.6	2.0	2.0
Crop production	15.5	21.9	23.0	21.3	23.1	23.8	23.8
Forestry	5.6	5.8	5.8	5.6	5.9	5.9	5.8
Fishing	0.6	0.6	0.6	0.6	0.7	0.7	0.7
Mining	0.4	0.3	0.3	0.3	0.3	0.3	0.3
Manufacturing	6.4	4.7	5.1	5.0	4.8	4.8	4.9
Electricity and water	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Construction	3.0	2.2	3.6	3.6	3.1	3.2	3.2
Trade and hotels	12.9	9.7	9.5	10.3	9.1	9.3	9.2
Transport, communication	5.9	6.5	8.9	6.4	6.2	5.4	6.3
Finance and insurance	2.4	0.6	0.4	0.6	0.6	0.4	0.4
Real estate	3.4	3.7	3.7	3.7	3.5	3.5	3.5
Government services	2.9	1.9	1.8	1.6	1.5	1.4	1.3
Other services	2.9	3.0	3.0	2.9	3.0	3.0	3.0
Imputed bank service charges	-2.0	-1.0	-0.8	-0.8	-0.8	-0.8	-0.8
GDP at market prices, including stocks may not add to 100 because of rounding	98.9	96.3	97.3	96.4	97.1	95.7	95.9

Source: World Bank, Crisis in Public Expenditure Management, 1991, based on official estimates by the Ministry of Planning Note: Need to check totals –

[[Source?]]

## ANNEX D: Crop Production in Somalia, 1982–2004<<A>>

**Table D 1: Crop Production in Somalia, 1982–2004**

Crop	(thousands of tons)																						
	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Sorghum	169.2	62.4	166.64	168.4	212.93	214.59	234.7	247	250	145	100	80	252	172	122.3	165.4	62.5	93.3	168.2	118.9	79.4	116	145
Maize	149.9	235.7	270.1	277.14	322.04	275.63	346.6	362	315	100	100	45	141	92.7	119.7	131.1	132.2	165.6	154.0	146.8	129.0	170	121
Rice, paddy	..	..	..	..	..	..	12	16	15	10	8	5	16	2	2	2	2	2	2	..	1	1	1
Cowpea	15	13	27.13	25.5	21.72	7	9.2	13	14	13	10	11	12.1	13	14	15	13	14	15	16.5	16.5	..	..
Sesame seed	57.1	35.6	39.7	56.7	44.5	45.3	46	48	45	35	10	..	21.7	25	23	24	21	22	23	25	25	..	..
Banana	78.7	88.9	62.2	60	93.9	108	115.2	116	110	90	55	55	43	45	44	42	40	45	42	36	36.9	..	..
Grapefruit	..	..	..	..	..	20.6	27.6	28	28	15	..	17	18	19	13	12	10	9	5.9	6	6.1	..	..

Source: FEWS for sorghum and maize data, FAO, Middle Shabelle Regional Administration. **[[Where can reader access this data?]]**

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## ANNEX E: Estimated Livestock Numbers by Regions, 1999<<A>>

**Table E 1: Estimated Livestock Numbers by Regions, 1999**

Region	Livestock species and number (thousands)				Total numbers
	Camels	Cattle	Sheep	Goats	
North-Western	1,308	309	5,837	4,790	12,245
North-Eastern	1,345	436	3,449	7,096	12,328
Central	1,003	462	1,099	371	2,934
Southern	1,217	1,341	707	1,860	5,125
Juba Valley	1,417	2,062	742	2,048	6,269
<b>Total</b>	<b>6,294</b>	<b>4,609</b>	<b>11,834</b>	<b>16,165</b>	<b>38,902</b>

*Source:* Somali Livestock Sector Strategy, 2004; adapted from estimates prepared by the Somalia Food Security Analysis Unit, FAO, 1999.

[[Is this in biblio? If not, please add]]

## ANNEX F: Sheep Flock Simulation Model—Somaliland and Puntland<<A>>

**Table F 1: Sheep Flock Simulation Model—Somaliland and Puntland**  
(assumed age of male turn-off is 3 years)

Sheep category		Assumptions		Year 1 <sup>a</sup>	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	
		Surv %	Lamb %								
Rams				2	2	2	2	2	2	2	
Ewes	0-1 yr	0.85		25	18.6	19.2	21.5	19.9	18.6	18.8	
	1-2 yr	0.9		13	21.3	15.8	16.3	18.3	16.9	15.8	
	2-3 yr	0.9	0.6	16	11.7	19.1	14.2	14.7	16.5	15.2	
	3-4 yr	0.9	0.6	19	14.4	10.5	17.2	12.8	13.2	14.8	
	4-5 yr	0.9	0.6	17	17.1	13.0	9.5	15.5	11.5	11.9	
	5-6 yr	0.9	0.6	6	15.3	15.4	11.7	8.5	13.9	10.4	
	6-7 yr	0.9	0.6	4	5.4	13.8	13.9	10.5	7.7	12.5	
<b>Breeders</b>	<b>80%=100</b>			<b>100</b>	<b>105.8</b>	<b>108.8</b>	<b>106.3</b>	<b>102.2</b>	<b>100.4</b>	<b>101.5</b>	
Wethers	0-1 yr	0.85		15	18.6	19.2	21.5	19.9	18.6	18.8	
	1-2 yr	0.95		5	12.8	15.8	16.3	18.3	16.9	15.8	
	2-3 yr	0.95		3	4.8	10.0	12.9	15.5	15.2	14.0	
	3-4 yr	0.95		1	2.9						
	4-5 yr	0.95		1	1.0						
<b>Males</b>	<b>20%=25</b>			<b>25</b>	<b>39.9</b>	<b>45.0</b>	<b>50.7</b>	<b>53.7</b>	<b>50.7</b>	<b>48.7</b>	
<b>Total sheep equiv.</b>		(0-1yr = 50% others)		<b>107</b>	<b>127.1</b>	<b>134.6</b>	<b>135.5</b>	<b>136.0</b>	<b>132.5</b>	<b>131.4</b>	
Home use	4% 1-2 yr										
Sacrifice	3% 1-2 yr										
Sakko	1% 1-2 yr										
Religious	5% 1-2 yr										
<b>Total</b>	<b>13% 1-2 yr</b>	Taken as 2-year olds			1.7	2.1	2.1	2.4	2.2	2.1	
<b>Sales</b>	Ewes				<b>4.0</b>	<b>5.4</b>	<b>13.8</b>	<b>13.9</b>	<b>10.5</b>	<b>7.7</b>	<b>55.2</b>
(no. head)	Wethers	Net of home use etc			<b>5.0</b>	<b>8.6</b>	<b>10.1</b>	<b>12.9</b>	<b>15.5</b>	<b>15.2</b>	<b>53.7</b>
<b>Turn-off as a % of total flock</b>					6.2	9.1	15.2	17.2	17.2	15.2	
<b>Turn-off of 2-3 year males as % of all males</b>					12.5	19.0	19.9	24.0	30.5	31.2	
a. Starting flock based on "Ruminant Flocks in Central Somalia," in Baumann, 1993.											

**Table F 2: Sheep Flock Simulation Model—Somaliland and Puntland**  
(assumed age of male turn-off is 2 years)

Sheep	Category	Assumptions		Year 1 <sup>a</sup>	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	
		Surv %	Lamb %								
Rams	2-5 yr			2	2	2	2	2	2	2	
Ewes	0-1 yr	0.85		25	18.6	19.2	21.5	19.9	18.6	18.8	
	1-2 yr	0.9		13	21.3	15.8	16.3	18.3	16.9	15.8	
	2-3 yr	0.9	0.6	16	11.7	19.1	14.2	14.7	16.5	15.2	
	3-4 yr	0.9	0.6	19	14.4	10.5	17.2	12.8	13.2	14.8	
	4-5 yr	0.9	0.6	17	17.1	13.0	9.5	15.5	11.5	11.9	
	5-6 yr	0.9	0.6	6	15.3	15.4	11.7	8.5	13.9	10.4	
	6-7 yr	0.9	0.6	4	5.4	13.8	13.9	10.5	7.7	12.5	
Breeders	80%=100			100	105.8	108.8	106.3	102.2	100.4	101.5	
Wethers	0-1 yr	0.85		15	18.6	19.2	21.5	19.9	18.6	18.8	
	1-2 yr	0.95		5	12.8	15.8	16.3	18.3	16.9	15.8	
	2-3 yr	0.95		3							
	3-4 yr	0.95		1							
	4-5 yr	0.95		1							
Males	20%=25			25	31.4	35.0	37.8	38.2	35.5	34.7	
Total sheep equiv.	(0-1yr = 50% others)			107	118.5	124.6	122.6	120.5	117.3	117.3	
Home use	4% 1-2 yr										
Sacrifice	3% 1-2 yr										
Sakko	1% 1-2 yr										
Religious	5% 1-2 yr										
Total	13% 1-2	Taken as 2-year olds			1.7	2.1	2.1	2.4	2.2	2.1	
Sales	Ewes				4.0	5.4	13.8	13.9	10.5	7.7	55.2
(no. head)	Wethers	Net of home use etc			8.3	10.7	13.7	13.9	16.1	14.9	77.6
Turn-off as a % of total flock					9.0	11.2	19.1	19.8	19.6	16.6	
Turn-off of 1-2 year males as % of all males					26.6	30.6	36.2	36.4	45.3	43.0	
a/ Starting flock based on “Ruminant Flocks in Central Somalia," in Baumann, 1993.											

a/ Starting flock based on "Ruminant Flocks in Central Somalia," in Baumann, 1993.

## Annex G: Export Inspection and Certification for Sheep and Goats<<A>>

### Concept and Implementation Planning <<B>>

#### Current Situation<<C>>

G 1. Sheep and goats are currently required to go through a system that is summarized for Somaliland and Puntland in the table below. Sheep and goats coming from South Central Somalia would also follow the same route. It is understood that the authorities in Somaliland and Puntland are aiming to improve the standards of inspection within the framework described in table G.1, and also to make major improvements to holding yards at inspection centers close to the port towns of Berbera and Bosasso.

**Table G.1: Current Procedures for Export Inspection and Certification of Sheep and Goats**

Activity/location	Details of inspection process
1. Inspection close to production area	First veterinary inspection. Animals are held in an inspection center under observation for 7–10 days—usually at a yard sale or similar location where sheep and goats are marshaled for export sale.
2. Inspection close to port area	Second veterinary inspection. Animals are held in an inspection center under observation for 7–10 days—in an area set aside some distance from the port (such as in Hargeisa) or within the port city boundaries (such as in Bosasso). Animals are tested for brucella and inspected for clinical signs of other diseases such as rift valley fever.
3. Animals loaded on ships	A group of animals owned by a trader is issued with an export certification

G 2. This system is acknowledged to have a number of weaknesses: (i) animals come together at inspection centers from locations where certain diseases may or may not be endemic and cross infections between animals from different groups are likely; (ii) even if each animal is inspected it may not exhibit clinical evidence of some diseases and hence infections will not be detected; (iii) the costs of bringing animals to inspection centers is high because of the stress on animals and the costs of feed and water; (iv) because inspection centers are often close to towns, there are also costs related to the pollution that takes place where many animals congregate.

G 3. The Pan-African Program for the Control of Epizootics (PACE) has conducted research and trials on infectious diseases, such as Rinderpest and Rift Valley Fever (RVF), in livestock in Somalia since 2002.<sup>1</sup> The “PACE Plan for Somalia” (2003) [[not in biblio]] laid

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<sup>1</sup> See, for example, the PACE, “Rinderpest Eradication Strategy,” February 2002. [[not in biblio---where can reader access this data?]]

out, among other things, a proposal for draft legislation (Somaliland),<sup>2</sup> and an update of existing legislation (Puntland),<sup>3</sup> to establish veterinary laws and regulations in Somaliland and Puntland that would take account of modern technology and would also comply with the regulations of the International Office of Epizootics (OIE) and the World Trade Organization (WTO).

G 4. Conclusions from PACE research and trials in Puntland led to recommendations for the strengthening of the Ministry of Livestock, Agriculture, and the Environment (MoLAE), a changed organizational structure for the ministry, improved public services to livestock producers, better linkages between the MoLAE and other ministries and agencies, as well as endorsement of revised veterinary legislation which has been passed by the Puntland parliament as “The Veterinary Law-Code.”

G 5. The revised legislation was considered by the Puntland state government and approved in 2003. This legislation is in nine sections, namely (i) Definitions; (ii) General Provisions; (iii) Disease Notification and General Provisions; (iv) Animal Disease Emergency Response Management; (v) Export/Import of Animals and Animal Products; (vi) Transport of Animals; (vii) The Veterinary Board; (viii) Veterinary Privatization; and (ix) Financial, Penal and Other Provisions. This note focuses on exports of sheep and goats.

G 6. Following the work of Africa-wide PACE and its Somali branch, Somali Animal Health Service Project (SAHSP) aims to strengthen the capacity of Somali institutions to deliver animal health services, establish a surveillance system, and implement measures for the eradication of Rinderpest from the Somali ecosystem, covering areas of northeast Kenya, Southern and Central Somalia, and the Somali Region of Ethiopia. It is understood that the ultimate objective is to improve the efficiency of export inspection, certification, and the care for all livestock during export marketing.

G 7. To implement any credible livestock export system, there is a need for a credible veterinary service in the form of a National Veterinary Service that can apply animal health measures and the international veterinary procedures recommended by the OIE. The concept for these improvements would build on provisions in the revised legislation, which refer to procedures for animals coming from disease-free areas and states that “Only animals that are correctly identified and which come from an establishment free from List A diseases and not situated in an infected area shall be authorized for export.” **[[need citation for quote]]** Simply put the improved concept for ensuring the export of disease-free live animals from Somalia is based on the following strategy, which could be tested as pilot scheme in the medium term—that is, 5 to 10 years:

- mapping of the incidence of all major animal diseases
- eradication of the disease from mapped areas over the long term

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<sup>2</sup> The Italian NGO, Terra Nuova, previously had established a task force that had prepared a draft veterinary law, regulations, and guidelines for Somaliland, based on the earlier law of Somalia of 1967.

<sup>3</sup> Puntland used the Somalia veterinary law and statutes of 1967.

- inspection (on a sampling basis) of groups of animals destined for export within the disease-free area, and the tagging of all approved animals in the group, which would certify their eligibility for export
- walking (along designated disease-free stock routes) or transporting animals by truck to export locations from the disease-free areas directly to an official quarantine area close to port for final inspection, export certification, and almost immediate loading on ships

G 8. Table G.2 outlines the export inspection process for sheep and goats destined for export when the improved concept is available for use as a pilot scheme, probably five years from now at the earliest.

**Table G.2: Outline of Improved Export Inspection Process for Sheep and Goats**

Activity/location	Details of inspection process
1. Inspection close to production area	First veterinary inspection (based on a sample) in an area where diseases have been eradicated. Animals held in an inspection center for a maximum of two days (close to a sale yard or similar location where sheep and goats are marshaled and sold for export). Animals approved for export are each identified with official tags.
2. Inspection close to port	Second veterinary inspection in a quarantined area close to the port (based on a sample). Within one day animals have their tags verified, are again checked (by sample) for diseases, and if approved are certified for export.
3. Animals loaded on ships	Export certificate is issued and animals are loaded on ships.

G 9. The Livestock Working Group of the Somalia Aid Coordinating Body has been considering such conceptual improvements in the arrangements for export inspection and certification of livestock for many years. It may be possible for the Working Group to come to closure on these arrangements before the completion of the report by the Productive Sectors and Environment Cluster of the Somali JNA. Obviously it would also be essential for the Working Group to discuss a revised system based on the concept developed by PACE and the SAHSP with the livestock producers and exporters and seek their support and agreement. External support for financing the implementation of this vision in all areas and Somali regions could then be factored into the costing for the JNA.

G 10. The change to a simpler and more direct concept for export inspection and certification should be more efficient and cheaper for traders as well as for the Puntland MoLAE and the Somaliland Ministry of Livestock, which should be reflected in higher prices to producers. Assuming that the improved concept is accepted by the authorities, producers, and traders as the target, and that Somalia's international customers for livestock will endorse it, then it seems logical that the JNA should budget for the costs associated with providing the basis for this scheme (eradication, monitoring, and so forth) and for its implementation. This is exactly what this report has done.

G 11. Of course the actual implementation of the improved system assumes successful eradication of epizootic diseases (probably phased by regions), which will take time and

resources. Clearly animals not originating from disease-free areas will still need to pass through the more tedious and costly traditional inspection system. In the interim period an improved version of the traditional process based on improved infrastructure and implementation capacity can probably be devised.

G 12. It is possible, however, that if the proposed system based on eradication of epizootic diseases is not implemented that the Saudi authorities may require a system like the export inspection system used by Sudan for sheep, which is more costly than the current system used for sheep in Somali regions and ports. The current system is summarized in Table G.3

**Table G.3: Export Inspection and Certification Procedures—Sudan**

(April 2006)

Location/timing	Activities
Inspection close to production area	First veterinary inspection. Animals held in an inspection center under observation for 7–10 days.
Entry into a quarantine area	Second inspection at inland quarantine station by veterinarians. Blood sample taken from every animal for brucellosis testing. Animals held for 7–10 days.
Inspection on the way to the port	Third animal inspection in quarantine area by veterinarian. The group of animals receives three certificates: number of animals, free from infectious and noninfectious diseases, animals in good health.
Prior to loading on ship	Fourth inspection seven days prior to shipment. Animals are held in quarantine and inspected to verify that they have no evidence of infectious or noninfectious disease and not generally weak.
Animals are eligible to be loaded on ship with certificate	If animals pass this final inspection all animals intended for export are issued with an international animal health certificate

*Source:* Dr. Hassan Nur, Director of Planning, Ministry of Animal Resources and Fisheries, Government of National Unity, Khartoum, Sudan.

## **Annex H: Estimates of Somalia's Fisheries Resources**

### **General**

- H 1. Since the mid-1960s, several fishery resource surveys have been carried out in Somali waters. Reports from the main survey studies are listed below.

### **R/V Thetis (Greece)**

- H 2. A freezer trawler from Greece carried out exploratory trawl surveys between Mait and Eil from January to December 1966. The total catch was 3,310 tons, taken at a mean catch rate of 24.9 tons per day. Sea breams and scavengers were the principal species in the catches. The main fishing grounds were on the northeast coast where the average individual trawl catch ranged from 2.8 to 4.3 tons. On the basis of the area swept by the trawl gear and the catches obtained, average densities of demersal fish were calculated (Fisheries Development Limited, 1982).[[not in biblio]] For the north coast, the average fish density was 2.3 tons per square kilometer, and for the northeast coast, 4.8 tons per square kilometer. These estimates are considered to have been overestimates when related to the wider Somali sea area because fishing effort was concentrated at the richest fishing grounds.

### **R/V Zheleznyakov (USSR)**

- H 3. This vessel carried out experimental fishing surveys on the north coast and in the Ras Hafun area in the period August 1970–October 1971. The main target was the tuna resource at the north coast, but some limited trawling on demersal fish was also carried out. The reports from the surveys describe in general the fish distribution and the influence of environmental factors, but no estimate of fish abundance was made.

### **R/V Misshin Maru # 52 (Japan)**

- H 4. This was a commercial freezer trawler which fished between March 1970 and August 1971, mainly in the area from Ras Asir to Ras Hafun. No resource evaluation was made but catch rates were reported within the range 82–472 kilograms per hour of trawling.

### **R/V Dr Fridtjof Nansen (Norway)**

- H 5. Operating under a FAO/MORAD/UNDP project, this research vessel carried out five acoustic surveys of the entire Somali coast in the period March 1975 to November 1976. The estimates of the small pelagic fish ranged from 240,000 to 800,000 tons for the east coast, with the average 490,000 tons. For the north coast, the estimates ranged from 4,000 to 180,000 tons, average 80,000 tons (Kesteven, et al., 1981). The greater part of the pelagic fish stock was found between Ras Asir and Ras Hafun.

- H 6. Estimates of demersal biomass were also made. The average biomass for the east coast was 335,000 tons, and for the north coast 65,000 tons. These figures also include some



fairly high densities of cardinal fish (*Synagrops* spp.), although the species were considered to be of little commercial value (Stromme, 1987). [[not in biblio]]

### **Somali Fish (Soviet/Somali Joint Venture)**

H 7. Somali fish was a Somali/Soviet joint-venture company that carried out bottom trawling for fish, mainly off the northeast coast, but also in a narrow belt in deeper waters for deep-sea lobster. The fleet consisted of 10 trawlers which caught about 8,700 tons in the period 1975–77. The data collected from these activities did not lend themselves to being used for resource evaluation.

### **Amoroso E Figli (Italy)**

H 8. An Italian fishing company operated with three freezer trawlers off the northeast coast in 1978–79. The catch rates ranged from 4.0–4.4 tons per trawler per day of commercially valuable demersal fish, and 0.3–0.6 tons per trawler per day of lobster. Trawling indicated fish densities of 0.95–1.3 tons per square kilometer.

### **R/V “Isla De Lanzarote” (Spain)**

H 9. This vessel carried out an extensive trawl survey along the whole of the Somali east coast in the period February to April 1981. The report estimated the demersal biomass of valuable commercial species (groupers, snappers, scavengers, sea breams) at 31,000 tons, at an average density of 1.16 tons per square kilometer. This was about one-third the density estimated by Dr. Fridtjof Nansen but that survey also included noncommercial fish.

### **F/V Clabucet (Romania)**

H 10. A Romanian factory trawler operating pelagic trawl gear in the Ras Asir/Ras Hafun area from November 1983 to October 1984 collected a considerable amount of data on catch rates, biological characteristics of the species, and fishing techniques. The data collected were not suitable for estimation of the abundance of the fish resources.

H 11. Initially, as part of the project, some local coastal trawlers carried out trawl surveys off the north coast. Due to difficult sea conditions and heavy loss of gear on the rough grounds, these activities were stopped.

### **Somitfish**

H 12. Somitfish operated three stern trawlers along the entire Somali east coast in the years 1980–85. Both demersal fish and deep-sea lobsters were caught. Catch rates for fish were 5–7 tons per day and for lobsters 1.5–2.5 tons per day (FAO, 1987). [[not in biblio]]

**Table H.1: Best Estimates of Annual Fish Catch Potential by Somali Regions**

Species	Somaliland	Puntland	South Central	All regions
	(tons)			
<b>Large pelagic</b>	1,600– ,200	9,000–18,800	9,000–18,000	20,000–40,000
<b>Small pelagic</b>	5,600–8,000	32,900–47,000	31,500–45,000	70,000–100,000
<b>Large demersal</b>	3,200–4,800	18,800–28,200	18,000–27,000	40,000–60,000
<b>Sharks and rays</b>	2,400	14,100	13,500	30,000
<b>Spiny lobster</b>	120–160	705–940	675–900	1,500–2,000
<b>Prawns</b>	40	235	225	500
<b>Total</b>	12,960–18,600	76,140–10,9275	72,900–104,625	162,000–232,500

*Source:* The estimates of fish catch potential in this table are for the three regions considered in this report based on various pieces of research done mainly 20 to 30 years ago. The estimates are prepared by the Productive Sectors and Environment Cluster based on figures obtained from the Dr. Fridtjof Nansen cruises (FAO, 1999) and other research and reported observations. The basic figures used were the figures for all areas. Those figures were then broken down into estimates for the three regions by dividing the total Somali figures by the estimated proportion of the total EEZ taken up by each state. Somaliland has an EEZ, which is roughly 8 percent of the total Somali EEZ, Puntland 47 percent, and South Central Somalia 45 percent. The cluster fisheries expert considers these estimates to be conservative and actual results could be as much as 50 percent higher than those in the table, assuming the current destruction of habitat and illegal fishing practices are stopped.

*Note:* Pelagic species are open sea, usually large, fish such as tuna and kingfish. Demersal species are bottom fish such as flounder, grouper, and snapper.

## Annex I: Registered Manufacturing and Industrial Enterprises in Somaliland

**Table I.1: Somaliland—Registered Small-Scale Industries**

#	Name of company	Description of production	Dates registered	Location
1	N.P.P.C	Newspapers	3-04/09/95	Hargeisa
2	Aala-yaasir	Bread (loaves)	4-04/12/96	Hargeisa
3	Warshadamasabiirta	Nails	6-14/02/98	Hargeisa
4	Al-khayraatfoamfactor	Matrices	8-28/11/99	Hargeisa
5	Towfiqbuidinq Ca-orpro	Leather	9-20/20/93	Burao
6	Warshada Baastada	Spaghetti	10-29-11-99	Hargeisa
7	Gamuur Fiberglass	Fiberglass	33-23-06-2001	n.a.
8	H, Foods	Chilled meat	16-29-06-2000	<b>Burao</b> [[Burco is Somali spelling; Burao used in main report]]
9	Hargeisa Plastic Factory	Plastic products	20-08-10-2000	Hargeisa
10	Brick & Tiles factory	Cement blocks & tiles	26-03-03-2001	Hargeisa
11	Hargeisa spring water	Treated water vase	27-04-03-2001	Hargeisa
12	World wide business	Soft drinks & pastry	29-29-03-2001	Hargeisa
13	W, Biyaha Nature	Pure natural water	30-21-04-2000	Hargeisa
14	Daryel work shops	Building material	31-22-04-2001	Hargeisa
15	Saafi water	Purified water	33-23-06-2001	Hargeisa
16	Gamuur Fiberglass	Fiberglass	34-23-06-2001	Hargeisa
17	Aluminum Factory	Aluminum production	35-01-09-2001	Hargeisa
18	Dalashis	Bricks & blad	36-20-09-2001	Hargeisa
19	Hargeisa Furniture	<b>Ceranictisces</b> [[can't find spelling]]	38-23-09-2001	Hargeisa
20	Deeqa Brick Production	Bricks	39-22-01-2001	Hargeisa
21	Afgal food industries	Food	40-21-11-2001	Hargeisa
22	Building Material	<b>Cumar.f.&amp;jamacmired</b> [[translate?]]	41-03-05-2002	Hargeisa
23	Waaberi	Biscuits	46-12-05-2002	Hargeisa
24	Red sea salt Enterprise	Salt	50-05-05-2002	Hargeisa
25	Ilo-tango	Powdered drinks	52-14-07-2002	Hargeisa
26	Takhoshis	Iodized salt production	55-17-07-2002	Hargeisa
27	Bakery.	Loaves of bread	57-22-07-2002	Hargeisa
28	Al-Towfiq Automatic	Bread & cakes	58-20-07-2002	Hargeisa
29	Awro aluminum	Aluminum	66-03-03-2003	Hargeisa
30	Golisb distilled water elan	Distilled water processing	68-12-01-2003	<b>Hudisa</b> [[Hargeisa?]]
31	Gudud processing group	Dye substances (for women)	5/6/2003	n.a.
32	W, marmarka iyo dhagaxa	[[product?]]	69	n.a.
33	Hargeisa food & Beverage	Diluted drinks & soft drinks	71-02-02-2003	Hargeisa
34	Warshada marmarka	Tiles	72-04-03-2003	Hargeisa

#	Name of company	Description of production	Dates registered	Location
35	Warshada nacnaca	Candies, chocolates	75-17-05-2003	Hargeisa
36	Natural Gas Reprocessing	Natural gas & filling iron [?]	78-13-01-2003	Hargeisa
37	Rasamaal	Roofs/ flooring/walls	82-04-10-2003	Hargeisa
38	Raaxo foam factory	Sponge	85-01-12-2003	Hargeisa
39	Foster-ZamZam factory	Powdered drinks	86-14-12-2003	Hargeisa
40	Somecrete inc	Marmarka (tiles)	93-13-03-2004	Hargeisa
41	Warshada kaluunka laasqoray	Fish	94-13-03-2004	Hargeisa
42	Livestock	Animal byproduct processing	98-09-05-2004	Hargeisa
43	Batuun leather tanning	Karoomka [translate?]	99-09-05-2004	Hargeisa
44	Shaam construction factory	Building materials	102-17-06-2004	Hargeisa
45	Boqal jire Building products	Building product	109-15-07-2004	Hargeisa
46	Hargeisa Marble Factory	Tiles	110-15-07-2004	Hargeisa
47	W. Saab, Budada Ileys Burao	Soap detergents	114-20-11-2004	Hargeisa
48	United leather factory	Wet Blue [??]	112-27-09-2004	Hargeisa

[[Author should check names  
for punctuation and spelling]]

[[unclear to me  
how to read many  
of these dates]]

Source: Ministry of Commerce and Industry, March 2006.  
n.a. Not applicable.



## Annex J: Reforestation Programs in Arid and Semiarid Areas in Sub-Saharan Africa

### Description of Achievements in Forestry Nurseries in Sub-Saharan Africa

J 1. Nurseries have been established in four countries, namely Niger, Cameroon, Nigeria, and Chad. **[[repeated below]]** Between 2 and 5 hectares have been established as community woodlot sites and planted with species using seedlings from the nurseries. Community members have been provided with tree seedlings of their choice, which they have successfully planted and are managing around household compounds and farm land.

J 2. Nursery plots covering an area of 0.25 hectares have been established on all four country sites since 2002. The seedlings planted consist of overexploited and threatened indigenous species and a few exotic species of economic, dietary, medicinal, and cultural value to communities in the project area. These include: *Acacia Senegal*, *Acacia seyal*, *Boabab* spp, *Khaya senegalensis*, *Ziziphus Mauritania*, *Prosopis juliflora*, *Tamarindus indica*, *Balanites aegyptiaca*, *Neem* spp, *Eucalyptus* spp, and *Zeaton* spp.

- Community woodlot sites covering an area of 2 hectares (Cameroon, Nigeria, and Niger) and 5 hectares (Chad) have been established and planted with the above species.
- Community members have been provided with tree seedlings of their choice, which they have successfully planted and are managing around household compounds and farm land, with significant impact realized in 2003 due to favorable conditions compared to 2002.
- In Diffa, Niger, about 7,500 seedlings were produced between 2002–03 and 5,000 in 2004 for transplanting in the rainy season in June-July 2004. Although survival was low in 2002 (about 20 percent) due to drought conditions, in 2003 the woodlot was replanted with 2,400 seedlings and 3,500 distributed to the community with 95 percent survival.
- In Makilingai, Cameroon, 20,000 seedlings were produced in 2002–03 period for woodlot plantation and distribution to the communities for afforestation purposes. Eight thousand have been planted in the 2 hectares of community woodlot plots, **[[OK?]]** with more than 2,000 distributed to Junior School Environmental Clubs and 10,000 to the community members to plant around their compounds and farms.
- In Ngala, Nigeria 10,000 seedlings were produced in the nurseries in 2002–03 and 8,000 have been established in pots for transplanting into fields this year. About 3,000 of these have been transplanted in the 2 hectares of community woodlot.
- In Zafaya, Chad, about 2,000 seedlings were produced in 2002 but with 80 percent mortality due to prevailing drought conditions. In 2003, with the provision of water from a developed well and better rainfall, survival rate was 85 percent with 3,000 seedlings.

## **Annex K: Conditions for Fishing Licenses in Puntland**

K 1. The following are the terms and conditions under which foreign fishing licenses are granted in the State of Puntland.

**[[Note: Created new unnumbered para below to contain the text of provisions]]**

**Fishing Law No. 25 of November 30, 1985 and/or Puntland, State of Somalia**

**Regulations.** Contravention of this law may result in suspension or withdrawal of license and further restriction in relation to issue of license for future fishing in Puntland waters. Master, owner or charterer of vessel in respect of which this license is granted shall:

- a. Keep original of license aboard vessel.
- b. Make available vessel for boarding for inspection upon receipt of request by Fisheries Protection Officer and/or any other person authorized by him including stopping and/or moving to prescribed location to facilitate safe boarding by him.
- c. Not assault, obstruct, delay, or intimidate Fisheries Protection Officer and/or his authorized person.
- d. Not carry or allow to be carried on board or use any type of fishing gear other than is stated in license.
- e. Complete a daily catch report in the form attached to license and comply with requirement as to provision of copies.
- f. At all times comply with Code of Conduct (as defined in Regulations).
- g. Not transship any part of vessel's catch inside or outside Puntland waters unless authorized by Fisheries Protection Officer who may require observers to be aboard the transshipment vessel.
- h. Obey any orders and directions given by Fisheries Protection Officer in command of the Fisheries Protection Vessel.
- i. Comply with internationally recognized Law of the Sea and regulations.
- j. Inform Fisheries Protection Officer by electronic communication every 24 hours as accurately as possible or upon request the fishing vessel's position.
- k. During passage in Puntland waters stow all fishing gear in hold or other place provided for that purpose.
- l. Not catch any other species than as authorized in license except that there may be by catch of no more than 50 percent of the authorized species on board.
- m. No fish within the Territorial Waters of Puntland, State of Somalia, the seaward boundary of which shall be not less than 6 nautical miles from the nearest point of

land, nor allow the vessel's fishing gear when deployed to drift within that boundary.

- n. Ensure that any installment for this license is paid on time, failing which this license may be suspended or withdrawn.
- o. Carry or use for trawling operation nets whose cod ends shall be not less than 70 mm stretched mesh.
- p. Not use blinders or double nets or any material to reduce mesh size of net.
- q. Comply with any variation of license notified to Vessel.
- r. Ensure that the relevant radio frequency used for communication with the Fisheries Protection Vessel is monitored during the prescribed schedule as notified to fishing vessel from time to time.
- s. Ensure that the fishing vessel displays clear identification marks in accordance with the Code of Conduct (as defined in regulations).
- t. This license shall be valid only for the period provided therein and shall not entitle holder to automatic renewal following expiry.



## Annex L: Achievements, Status and Way Forward for the Telecommunications Industry<sup>4</sup>

### Background

L 1. The purpose of this annex is to outline the remarkable developments in the Somali telecommunications industry, the current status of the industry, and the possible way forward. The opportunities that information and communications technology (ICT) offer pose complex policy choices for the government (Tables L.1 and L.2) in the context of recovery and reconstruction process. The government has to address the implementation of ICTs amid strong competition for limited financial resources from other sectors of the economy. In addition, consideration has to be given to other crosscutting areas such as governance, gender, human resource development, appropriate legislation, security, privacy, and protection of intellectual property rights.

**Table L.1: Somalia Telecommunication Indicators**

<b>Regions</b>	<b>Land line</b>	<b>Mobile</b>	<b>Telecom staff</b>	<b>10 years investment (US\$ millions)</b>	<b>Digital main line (%)</b>
Awadal	4,500	2,000	45	4.5	100
Northwest	14,000	12,500	1,010	19	100
Togdher	9,000	5,200	190	8.7	100
Erigavo	960	300	21	1.2	100
Sool	2,300	950	39	1.9	100
Nugal	2,500	1,100	37	3.2	100
Bari	12,700	8,500	890	17.8	100
Mudug	8,700	7,500	530	9.9	100
Galgadud	800	250	—	0.4	100
Hiran	6,500	4,900	105	4.2	100
Lower Shabelle	7,500	6,000	89	3.9	100
Banadir	61,000	49,000	2,200	33	100
Middle Shabelle	6,000	4,500	109	3.9	100
Bay	2,500	150	55	2.1	100
Bakool	400	—	7	0.3	100
Gedo	550	160	6	0.2	100
Middle Juba	300	125	9	0.2	100
Lower Juba	3,250	1,900	90	3.1	100

*Source:* Somali Telecommunications Association.

— Not available.

<sup>4</sup> Prepared by Abdighani Jama in collaboration with Svet Titchev

**Table L 2: Somalia Internet Indicators**

<b>Regions</b>	<b>Internet subscribers</b>	<b>Internet users</b>	<b>Internet coffee shops, etc.</b>	<b>Number of PCs available</b>
Awadal	23	4,500	3	104
North-West	1,991	56,000	38	8,231
Togdher	54	15,000	9	417
Erigavo	—	300	1	21
Sool	11	4,000	3	183
Nugal	67	5,500	4	114
Bari	1,409	49,011	36	5,781
Mudug	101	22,000	9	942
Galgadud	—	200	2	54
Hiran	16	18,000	7	470
Lower Shabelle	18	17,900	9	563
Mogadishu	7,890	226,800	93	21,900
Middle Shabelle	66	11,760	8	311
Bay	—	970	3	54
Bakool	—	50	1	39
Gedo	—	35	1	40
Middle Juba	—	90	2	49
Lower Juba	11	5,811	4	311
<b>Total</b>	<b>11,657</b>	<b>437,927</b>	<b>233</b>	<b>39,584</b>

*Source:* Somali Telecommunications Association.

— Not available.

L 2. The successful implementation of the ICT policy objectives depends on an integrated approach underpinned by developing strategic synergies and partnerships between the public and private sector as well as with civil society. This implies clear definition of the roles, responsibilities, and functions of all stakeholders. Developing this mutual understanding requires a deliberate and open process of broad-based consultations among all major stakeholders. Neither government nor industry can itself create the necessary conditions for success in ICT. Therefore, it is fundamental for government to create the right policy conditions that allow ICT to flourish. Yet it is equally important for the private sector to take a leading role in investment and lend its own expertise to the planning and implementation process. The national ICT leadership should reflect responsibilities across public, private, and civil society.

### **Institutional Framework**

L 3. Coherent strategies are required to address the current problems in Somalia, in order to achieve objectives that have been set for the growth of telecommunication services, in an investor-friendly environment, which is conducive to rapid development. One of the essential conditions is to pursue more rigorously the structural transformation of telecommunication institutions in Somalia.

L 4. Somalia has not achieved any institutional rearrangements and is at ground stages of implementing an effective management of the telecommunication industry. Although Somalia still lacks the dominant operator, no government now provides telecommunication services directly. However, some local governments are indirectly and lightly involved in regulating of these enterprises. In fact, basic telecommunication services in Somalia are provided by non-state-owned or completely run by private-sector-owned enterprises. So far, Somalia has not established telecommunications regulatory authority as the country is recovering from civil conflict. But, compared with neighboring countries or those in a similar situation as Somalia, the regulators' mandate and autonomy has been enhanced in order to be able to function optimally in the current competitive environment. However, in some of these countries regulatory responsibilities are shared in various degrees between government and the state-owned dominant operator.

L 5. There is consensus in Somalia for rebuilding infrastructure and the necessity of restructuring existing institutions in order to empower, clarify, and assign appropriate roles to key players in the telecommunication sector, which should be the top priority. The ultimate goal is to come up with a telecommunication industry framework that assigns separate roles for government, regulators, and service providers, operated through adequate legislation. In moving to this target industry configuration, the reinforcement of human resource capacity in both government and regulatory institutions has become an urgent consideration, to enable them to pursue the building process effectively.

### **Objectives of the Institutional Framework**

L 6. *The key objectives of proposed institutional framework are to:*

- Allocate clear roles and responsibilities to key role-players.
- Promote principles of good corporate and public governance such as accountability and transparency.
- Remove unnecessary duplication of functions, and promote efficiency and cost-effectiveness in managing the information and communications industry.
- Promote an investor friendly environment.
- Create a level playing field for competition.
- Restructure the national incumbent operators including broadcasting operators and postal services operators.
- Introduce and promote competition.
- Promote market growth.
- Promote ICT diffusion; universal service, and universal access.
- Promote regional integration.
- Promote as far as possible peace and harmony through communication.

### **Key Role-Players**

L 7. The key role-players in building a structure for the telecommunication industry are:

- government

- regulator
- investors, operators, and service providers
- consumers/users

L 8. Traditionally, governments have played the role of strategic planner and policy maker, regulator, and service provider. Future government interventions should be confined only to policy making and should create independent regulation authority.

L 9. In a reformed telecommunication industry, these roles must be clearly separated. Government should retain strategic planning and policy making. It should withdraw from operational involvement and an independent regulator should undertake enforcement.

L 10. The importance of the role of labor should be accorded greater recognition and interests of consumers should be taken into account in decisions affecting the telecommunication sector. All players have the inherent responsibility to improve the performance of the industry in order to meet macroeconomic, microeconomic, and social goals.

### **The Role of Government**

L 11. In Somalia, government would be the largest buyer of ICT goods and services in the country, and is a critical provider of services to its citizens. The government is also the single largest collector, user, and disseminator of information in the country. Hence, the government can and does play an important and catalytic role in moving Somalia into the information age by integrating ICTs in the delivery of services to the citizens.

L 12. The single most important role for government is to provide vision leadership in the area of ICTs. The government can set a positive national tone and sense of urgency in a way no other stakeholder will. The government is duty-bound to provide an enabling political, institutional, and legal environment to guide the participation of other stakeholders. Therefore, the political leadership in the country takes center stage in the elaboration of a coherent national strategy for ICT as a matter of priority. The government shall ensure the formulation of short-, medium-, and long-term implementation plans of this policy in tandem with the National Development Plans and other strategic frameworks.

L 13. Government also will actively promote local participation of Somalia citizens through deliberate empowerment strategies including leveraging its procurement operations. In summary, the government's role in ICT policy implementation will also include the following responsibilities:

- Develop the required technical capacity for ICT policy development and implementation in all ministries and public sector organizations. Establish a department of ICT in the ministry responsible for the ICT portfolio Provide visionary and catalytic leadership in the implementation of the ICT policy at all levels.

- Develop broad ICT skills and a knowledge base in the public sector. Devise a political, institutional, economic, and legal framework that promotes competition at all levels in the ICT sector. Develop change and project management skills with a view to integrating ICTs in the public sector as part of Public Sector Reform Program.
- Provide the necessary technical and financial resource to achieve the objectives of the policy. Mobilize regional and international development organization to support the implementation of the policy.
- Ensure continuing monitoring and evaluation of the ICT policy interventions and outcomes.
- Take the leading role in mobilizing resources and encourage smart partnership between public and private sector operators.

### **Overall Functions of Government**

L 14. At the aggregate level, government should be doing the following principal functions:

- Create an enabling environment for the provision of affordable and available services through liberalization and commercialization of telecommunication sector.
- Create a level playing field to facilitate the entry and growth of nascent operators.
- Provide good governance, including ensuring law and order in the state; and allowing for, at the most basic level, checks and balances including an independent judiciary, which ensure fair and efficient regulation in the ICT sector.
- Establish and implement development-promoting policies that are market guiding and friendly.
- Restructure and consolidate the telecommunication sector by assigning responsibilities to players dealing with policy (ministry), regulation (regulator), and operations (operators/service providers) to ensure that the community as a whole, and all of its parts, is provided with adequate services with choice at affordable prices.
- Manage change through adequate mechanisms, such as state-of-the-art policies and an investment center.
- Encourage national and regional network interoperability and cross-border connectivity.
- Play a leadership role in using telecommunication applications (e-governance, e-government, and so forth).

## **Policy Responsibility of Ministries Responsible For Telecommunications**

L 15. Recognizing that telecommunications is a public utility and tool necessary to the development of all sectors of the economy and society, as well as a business in itself, the ministry responsible for telecommunication has the following functions:

- Establish broad policy frameworks for ensuring universal access to basic telecommunication services and advanced information services.
- Create and oversee maintenance of a facilitative and credible regulatory framework for the telecommunication industry.
- Build and sustain an enabling environment for the provision of telecommunication services largely by the private sector.
- Ensure that policy-making, regulatory, and enforcement structures have the institutional and human resource capacity to perform their respective functions comprehensively and fairly; and formulate and review broad policy frameworks. [[Delete highlighted text? Doesn't seem to belong here]]

L 16. These functions change the responsibility of the ministry from the previous combinations of policy, rule creation, enforcement, implementation, and operation. The ministry's new roles are sector analysis, policy development, rule creation, and general facilitation. To fulfill its functions, the ministry must introduce and enforce effective competition policies so that the national or regional resources are allocated and utilized in an efficient way in the interest of the public. One such policy is to enable, promote, and facilitate fair competition between interests active in the marketplace, while ensuring universal access and universal service to all sectors of the community relevantly.

L 17. Once correct policies are established, they should be embodied in a simple, reliable, and enforceable set of stable legislation, and introduced and enforced in a transparent manner. These actions create an enabling environment in which the private sector or other bodies can successfully participate in the building up and delivery of telecommunication infrastructure and services.

## **Capacity Building of Government**

L 18. To attain the required transformation of government to the new role, the composition, job content/description, and skill requirements of the staff may need readjustment. An adequately staffed strategic policy and planning unit will be geared to carrying out the necessary policy development and endorsement. Where such a unit exists, it should be strengthened in terms of skills and other resources.

## **The Role of Parliament**

L 19. The liberalization of the telecommunications, postal, and broadcasting sectors worldwide have opened new requirements for transparent and effective legal and regulatory environments. Therefore, the role of parliament in the effective implementation of the ICT

policy shall include the enactment of a modern telecommunications law which should include the establishment of a telecommunications regulatory authority (TRA).

L 20. The telecommunications law should provide the framework for the allocation and approval of financial resources for the implementation of the ICT policy in the public sector. The framework should provide for monitoring of the effective utilization of resource allocated to public sector institutions in the implementation of the ICT policy. Finally the framework should ensure that good governance principles are applied and adhered to in the implementation of the ICT policy by public sector institutions

### **The Role of the Private Sector**

L 21. The importance of entrepreneurship and partnerships between government and the private sector in the development of ICTs cannot be overemphasized. However, given the nascent nature of the ICT industry in Somalia, government must be committed to providing an environment that is conducive for the growth of a locally based and globally competitive ICT sector. On the other hand, despite its relatively small size, the private sector plays a catalytic role in the formulation and implementation of the ICT policy. Thus, the private sector is encouraged to take the following actions:

- Support and participate in innovative and productive ways of establishing a competitive local ICT sector so as to guarantee Somalia competitiveness in the global market.
- Take advantage of business opportunities resulting from implementation of the information society initiatives such as **NEPAD** and **AISI**. [[pls spell out]]
- Provide incentives for ICT skills retraining of their workforce.
- Participate in the provision of cost-effective technical education and internationally recognized certification programs in ICT.
- Outline the large and growing opportunity cost due to under investment in basic national ICT infrastructure.
- Develop local capability for manufacture of ICT products and creating innovative services for local and export markets..
- Invest in ICT projects for rural and underserved urban areas as well as traditionally disadvantaged areas. Participate in policy formulation and implementation process on an ongoing basis.

### **The Role of the Telecommunications Regulatory Authority**

#### ***The Regulatory Institution***

L 22. The Ministry for Telecommunication should put into place an appropriate regulatory institution for the enforcement of government's policies and legislation and strengthen the regulatory oversight. By so doing, the regulatory institution will take over the responsibilities for enforcement of regulations and rules to facilitate efficient operations in the market.

L 23. The regulatory institution enforces laws and rules within the telecommunication market boundaries. This entails the monitoring of market demand and supply capacity of service providers, and intervention to correct imbalances or market distortion. Its activity ensures the existence of an efficient and competitive market environment allowing telecommunication services to be developed and delivered at affordable prices. The regulatory institution is also critical in guiding and facilitating the healthy development of telecommunication infrastructure, services, and applications.

L 24. The regulatory institution should have the necessary independence from stakeholders to ensure impartiality, flexibility, and transparency. However institutional oversight must be sufficient to ensure accountability. Furthermore, it must have requisite capacity in order to avoid “regulatory capture” by stakeholders and ensure transparent public accountability. Consequently, legislation is required to specify the rights and obligations of operators in the industry and the powers and accountability of a regulatory institution to enforce them.

***The Regulatory Framework Should Comprise Five Main Elements:***

- Legal instruments should be introduced that facilitate market growth, articulate the scope and powers of a regulatory institution, and define the rights and obligations of operators and regulatory processes.
- Legal provisions should be introduced to support the national socioeconomic strategies.
- Enact necessary laws to implement this policy;
- Enact a comprehensive telecommunication law.
- Enact laws that enable specific complements to telecommunication, such as the Internet.

L 25. There is a need for a regulatory institution that is independent from operators/government and equipped with resources and skills to enforce rules. Where such an institution already exists at the state level, but lacks some of the recommended attributes, it should be strengthened appropriately. The institution should also be capable of progressively adjusting itself to changes in technology and services. Such an institution should carry out and oversee the following functions:

- Perform regulatory functions involving specialized activities related to establishment, expansion, and operation of telecommunication technologies, services, applications, and markets.
- Monitor relationships between the regulatory institution and other institutions or authorities in exercising its powers conferred in the legislation.
- Ensure that the regulatory authority is accountable for its actions

**Establishment of a Regulatory Authority**

L 26. The regulatory institution, referred to as the “Regulatory Authority,” should be established as an autonomous entity with all the powers of a legal persona.



## **Scope and Mandate of the Somali Regulatory Authority**

L 27. In addition to mandating the adoption of a telecommunications policy, the Regulatory Authority should establish the degree of cooperation among institutions concerned with technical matters and the government. Such cooperation will promote the development of telecommunication policy through the establishment of appropriate mechanisms. In these circumstances, Somalia's telecommunication policy may encourage the development of software and content but not address the control of content, namely that which is transported through information and communication networks. Although telecommunications is broadening into ICT that includes elements of telecommunications, broadcasting, and computing, the mandate of the Regulatory Authority proposed in this document is confined to the promotion of the development of telecommunications infrastructure and services, as well as the development of reconstruction for information services, including issues relating to the management and monitoring of the radio frequency spectrum for telecommunications.

L 28. However, some time in the future, Somali areas may establish "fully converged" Regulatory Authorities to regulate both ICT infrastructure services and content as has been done in a number of countries elsewhere. Under that scenario suitable policies and legislation relating to content would be developed and adopted.

L 29. For the telecommunication regulator proposed in this document, various names could be used. Some countries have retained the traditional name of "Telecommunications Authority." Others have used "Communications Authority" or "Information Development Authority," which appears to be more descriptive than "Telecommunications Authority" of a regulator whose mandate extends to the regulations of other information and communication services. Whatever name is used, what matters is the clear specification of responsibilities and authorities in the instrument establishing the institution, which would include facilitative regulation of the transmission and reception of information in sound, data, and video through telecommunications infrastructure, other radio communications, and the Internet.

L 30. In some countries the management of the radio spectrum is undertaken by a separate institution, but the tendency now is to merge this function with those of the telecommunication regulator. Where aspects of the activities or services in the information and communications sector are regulated by different institutions, close coordination among them is essential for effective and healthy ICT development and applications.

## **Mission of the Regulatory Authority**

L 31. In line with the objectives for telecommunication development proposed above, the primary mission of the Regulatory Authority would be as follows:

- Ensure the provision of adequate high-quality and cost-effective services that meet the diverse needs of consumers in order to promote economic growth and social development.

- Promote universal service with regard to basic communications services and universal access with regard to advanced information services; and promote regional seamless telecommunication connectivity and trade in telecommunication services.

L 32. Based on this primary objective, the specific objectives of the Regulatory Authority will be to regulate telecommunication services in the public interest as follows:

- Achieve progress towards the social goals of telecommunication policy, such as the provision of universal service and universal access.
- Ensure the provision of a wide range of telecommunication services to stimulate and support sustainable social economic growth.
- Regulate the activities of telecommunication operators and service providers.
- Stimulate investment in the public telecommunications network.
- Ensure a level playing field where competitive entry is permitted under the telecommunication policy.
- Protect the interests of telecommunications users and consumers, and ensure privacy rights.
- Stimulate innovation in the telecommunications industry with a view to providing advanced information services.
- Promote the development of human resources for the telecommunications industry.
- Effectively manage scarce, common, national resources, such as the radio frequency spectrum, numbering plan, and domain names.
- Actively participate in the international management of orbital slots and developments in international standards; and promote public confidence in telecommunication market through transparent regulatory licensing and other regulatory processes.

### **Functions and Issues of the Regulatory Authority**

L 33. The typical functions of an autonomous regulatory body include rule making and enforcement, licensing, and management of scarce resources. The regulatory body should perform these functions in a transparent manner while encouraging public participation. In performing these functions, the following are some of the key regulatory issues:

- rule-making process and enforcement
- licensing
- management of scarce resources
- universal service/access
- service provision and user needs
- investment
- ownership and control
- liberalization/competition

- competitive safeguards
- technical standards
- human resources development
- dispute resolution
- interconnection
- price regulation/tariff policy guidelines
- consumer and user protection
- access to services of international bodies
- dialogue with the ministry to ensure the identification of issues arising in the sector based on experience in policy implementation, aimed at leap-frog solutions applying technology conversion approach
- reporting to parliament
- consultation on regional and international issues
- data and information collection, analysis, and dissemination
- establish indicators of performance by sector operators and the sector as a whole
- technology migrations
- emergency communications

## Annex M: Summaries of Somali Field Assessments in Somaliland, Puntland, and South Central Somalia

**Table M.1: Summary of Somaliland Field Assessment for Productive Sectors and Environment<sup>5</sup>**

S/N	Sectors	Major Constraints	Key Priority Actions
1	Livestock	Rangeland degradation and devastation hazards	<ul style="list-style-type: none"> <li>• Reactivation of animal grazing reserves</li> <li>• Introduction of small-scale range and forestry management system</li> <li>• Support to the implementation of regulation of forestry protection.</li> </ul>
		Lack of veterinary service deliveries at all levels	<ul style="list-style-type: none"> <li>• Rebuild the original field veterinary services (public and private) <ul style="list-style-type: none"> <li>◆ Veterinary clinics dipping station at region and deistical [?]</li> <li>◆ Veterinary mobile team</li> <li>◆ Veterinary diagnostic labs</li> <li>◆ Drugs instrument</li> <li>◆ Capacity building for public and private professionals.</li> </ul> </li> </ul>
		Absence of disease surveillance capacity	<ul style="list-style-type: none"> <li>• Development of animal disease surveillance system. <ul style="list-style-type: none"> <li>◆ Data collection</li> <li>◆ Standardized and validated diagnostics sampling, and so forth</li> </ul> </li> </ul>
		Livestock ban [Saudi Arabia only?] because of poor hygiene and sanitation	<ul style="list-style-type: none"> <li>• Rehabilitation of marketing infrastructures and marketing diversification <ul style="list-style-type: none"> <li>◆ Holding grounds</li> <li>◆ Quarantines &amp; marshalling yard</li> </ul> </li> <li>• Reconstruction of modern slaughters &amp; improving hygiene &amp; sanitation</li> <li>Regional &amp; district slaughter house <ul style="list-style-type: none"> <li>◆ Water drainage system</li> </ul> </li> <li>• Development of the credibility of veterinary health certificates <ul style="list-style-type: none"> <li>◆ Movement control system</li> <li>◆ Pre-export inspection</li> <li>◆ Export certification</li> </ul> </li> </ul>
		Low-quality production	<ul style="list-style-type: none"> <li>• Reestablish livestock breeding centers</li> </ul>

<sup>5</sup> The summary is based on the report of the field assessment carried out by the Somaliland JNA Technical Cluster Counterparts from March 16–29, 2006. [Should this report appear in Biblio?]

S/N	Sectors	Major Constraints	Key Priority Actions
			<ul style="list-style-type: none"> <li>◆ Extension service for animal breeding system</li> <li>◆ Cattle dairy farm</li> <li>◆ Milk processing technologies</li> </ul>
2	<b>Agriculture</b>	Lack of cadastral survey and database for land management	<ul style="list-style-type: none"> <li>▪ Conduct cadastral survey of farm and database information</li> <li>◆ Regulate agriculture industry</li> <li>◆ Data collection system</li> </ul>
		Low yield of production	<ul style="list-style-type: none"> <li>▪ Improvement yield of crop production through provision of quality seeds &amp; extension service program (multi-cropping system)</li> </ul>
		Lack of meteorological stations	<ul style="list-style-type: none"> <li>▪ Reestablish meteorological stations at all regions</li> </ul>
		Extensive soil & water erosion	<ul style="list-style-type: none"> <li>▪ Establish soil &amp; water conservation measures</li> <li>◆ Repair of farm bunds</li> <li>◆ Watershed management schemes</li> </ul>
		Lack of rehabilitating for irrigation system	<ul style="list-style-type: none"> <li>▪ Rehabilitation/construction of farm irrigation systems</li> </ul>
		Absence of MAO capacity building	<ul style="list-style-type: none"> <li>▪ Improve MOA—capacity building framework</li> </ul>
		Absence of flood protection measures	<ul style="list-style-type: none"> <li>▪ Establish concrete flood protection mechanism</li> </ul>
		Lack of basic agricultural inputs	<ul style="list-style-type: none"> <li>▪ Increase the supply of basic agriculture inputs</li> <li>◆ Seeds, hand tools (pesticides)</li> </ul>
		Lack of food processing technology	<ul style="list-style-type: none"> <li>▪ Reestablish agriculture food processing (preservation technology)</li> </ul>
		Poor tillage capacity	<ul style="list-style-type: none"> <li>▪ Improvement of tillage capacity through credit scheme</li> </ul>
		Lack of agriculture extension service	<ul style="list-style-type: none"> <li>▪ Re-establish agriculture extension</li> <li>◆ Structures of multiplication</li> <li>◆ Equipment</li> <li>◆ Transport facilities</li> </ul>
3	<b>Fisheries</b>	Lack of coastal artisanal fisheries	<ul style="list-style-type: none"> <li>▪ Reactivation of coastal artisanal fisheries to improve household economy of fishing families</li> <li>➤ Fishing gear</li> <li>➤ Ice making machine</li> <li>➤ Boat engines</li> </ul>
		Poor fishing boat inputs	<ul style="list-style-type: none"> <li>▪ Establish fishing gear for traditional fisherman</li> <li>➤ Fishing nets</li> <li>➤ Mending twines</li> <li>➤ Hull repairs</li> <li>➤ Nylon ropes, hooks</li> <li>➤ Marine engines parts</li> </ul>

S/N	Sectors	Major Constraints	Key Priority Actions
			➤ Fishing lines
		Collapse of all preexisting infrastructure	<ul style="list-style-type: none"> <li>▪ Rehabilitation of Berbera fishing center <ul style="list-style-type: none"> <li>➤ Structure</li> <li>➤ Cold chain system</li> </ul> </li> </ul>
		Lack of capacity building of the relevant organizations	<ul style="list-style-type: none"> <li>▪ Provision of capacity building of the relevant organizations (public and private)</li> </ul>
		Lack of encouragement for efforts of private sector	<ul style="list-style-type: none"> <li>▪ Develop necessary infrastructure and short training programs <ul style="list-style-type: none"> <li>➤ Marketing facilities</li> <li>➤ Equipment</li> <li>➤ Material</li> <li>➤ Workshops</li> </ul> </li> </ul>
		Less public demand for consumption	<ul style="list-style-type: none"> <li>▪ Establish sales promotion of efforts for awareness building</li> </ul>

S/N		List of Products	Major Constraints	Key Priority Actions
	<b>Other products</b>	<ul style="list-style-type: none"> <li>▪ Minerals</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lack of capital investments</li> </ul>	<ul style="list-style-type: none"> <li>▪ Introduction to appropriate technology for products production and processing</li> </ul>
		<ul style="list-style-type: none"> <li>▪ Frankincense products</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lack of appropriate technologies and expertise for production and processing</li> </ul>	<ul style="list-style-type: none"> <li>▪ Improve marketing feeder-roads [[OK?]]</li> </ul>
		<ul style="list-style-type: none"> <li>▪ Gum arabic</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lack of inputs for production</li> </ul>	<ul style="list-style-type: none"> <li>▪ Provision of credit schemes</li> </ul>
		<ul style="list-style-type: none"> <li>▪ Honey products</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lack of credit</li> </ul>	<ul style="list-style-type: none"> <li>▪ Increase in puts to local product production</li> </ul>
		<ul style="list-style-type: none"> <li>▪ Salt</li> </ul>	<ul style="list-style-type: none"> <li>▪ Low production</li> </ul>	<ul style="list-style-type: none"> <li>▪ Establish sales promotion efforts for locally produced Salt</li> </ul>
		<ul style="list-style-type: none"> <li>▪ Natural charcoal</li> </ul>	<ul style="list-style-type: none"> <li>▪ Inaccessibility to markets</li> </ul>	[[ACTION?]]
		<ul style="list-style-type: none"> <li>▪ Colton</li> </ul>	[[?]]	[[?]]
		<ul style="list-style-type: none"> <li>▪ Beauty-making substances</li> </ul>	[[?]]	[[?]]

5	Private Business	Main Constraints	Key Priority Action
		<ul style="list-style-type: none"> <li>• Livestock ban effects</li> </ul>	<ul style="list-style-type: none"> <li>• Improvement of livestock marketing systems</li> </ul>
		<ul style="list-style-type: none"> <li>• Lack of capital investment and currency exchange trends</li> </ul>	<ul style="list-style-type: none"> <li>• Availability of capital investment through loan or grand schemes</li> </ul>
		<ul style="list-style-type: none"> <li>• Lack of business diversification</li> </ul>	<ul style="list-style-type: none"> <li>• Access to recognized banking system</li> </ul>
		<ul style="list-style-type: none"> <li>• Lack of regulatory framework for trade</li> </ul>	<ul style="list-style-type: none"> <li>• Reestablish trade regulatory framework</li> </ul>
		<ul style="list-style-type: none"> <li>• Lack of encouragement for small-scale business</li> </ul>	<ul style="list-style-type: none"> <li>• Credit support to small-scale business organizations</li> </ul>

5	Private Business	Main Constraints	Key Priority Action
		<ul style="list-style-type: none"> <li>Absence of partners and cooperative businesses ownership</li> </ul>	<ul style="list-style-type: none"> <li>Introduce and strengthen the capacity of business partnership and cooperative business ownership as well</li> </ul>
		<ul style="list-style-type: none"> <li>Lack of supporting institution (credit availability and training)</li> </ul>	

9	Industries	Main Constraints	Key Priority Actions
		<ul style="list-style-type: none"> <li>Collapse of all preexisting infrastructure and facilities for both public and private sector</li> </ul>	<ul style="list-style-type: none"> <li>Rehabilitate infrastructure and facilities of industries in the region</li> </ul>
		<ul style="list-style-type: none"> <li>Lack of capital investment</li> </ul>	<ul style="list-style-type: none"> <li>Introduce capital investment through recognized banking system</li> </ul>
		<ul style="list-style-type: none"> <li>Lack of banking system</li> </ul>	<ul style="list-style-type: none"> <li>Provision of appropriate technologies to small-scale industries</li> </ul>
		<ul style="list-style-type: none"> <li>Lack of skills and expertise for industrial development</li> </ul>	<ul style="list-style-type: none"> <li>Establish functional policies and regulatory frame for industrial goods</li> </ul>
		<ul style="list-style-type: none"> <li>Importation industrial goods</li> </ul>	<ul style="list-style-type: none"> <li>Upgrade skills knowledge of the relevant organization</li> </ul>
		<ul style="list-style-type: none"> <li>Lack of appropriate technologies for small industries development</li> </ul>	[[?]]
		<ul style="list-style-type: none"> <li>Absence of policies for investment of industries</li> </ul>	[[?]]
		<ul style="list-style-type: none"> <li>Lack of capacity-building initiative to relevant agencies organization</li> </ul>	[[?]]

10	Women's Affairs	a)	Major Contrarians Facing Women in Region
			<ul style="list-style-type: none"> <li>Poor household economy</li> <li>Nomadic living style and effects of drought crisis</li> <li>Drawbacks for women in education opportunity (illiteracy)</li> <li>Poor medical care and welfare</li> <li>Low participation of women in decision-making processes</li> <li>Lack of access to humanitarian resources</li> </ul>

	<b>b)</b>	<b>Major Constraints Facing Women in Crop and Livestock Production</b>		
		<b>Products</b>	<b>Constraints</b>	<b>Key Priority Actions</b>
	<b>Crops</b>	<ul style="list-style-type: none"> <li>Vegetable and fronts</li> </ul>	<ul style="list-style-type: none"> <li>Less farm inputs</li> <li>Lack of credit</li> <li>Lack of skills</li> </ul>	<ul style="list-style-type: none"> <li>Improve farm inputs</li> <li>Credit availability</li> <li>Skills training in business</li> </ul>
	<b>Livestock</b>	Milk and butter	<ul style="list-style-type: none"> <li>Low growth rate and low production of livestock due droughts</li> <li>Livestock trade ban</li> <li>Low household economy</li> </ul>	<ul style="list-style-type: none"> <li>Establish opportunities for restocking of programs as drought crisis mitigation efforts</li> <li>Improve household economy</li> </ul>
	<b>Other products</b>	<ul style="list-style-type: none"> <li>Beauty-making substances</li> <li>Honey</li> <li>Poultry products</li> <li>Imported goods</li> </ul>	<ul style="list-style-type: none"> <li>Lack of inputs</li> <li>Lack of technologies and skills for production and processing</li> <li>Lack of credit</li> </ul>	<ul style="list-style-type: none"> <li>Improve beekeeping and poultry inputs</li> <li>Introduce appropriate for producing and processing local material</li> <li>Availability of credit</li> </ul>

	<b>C)</b>	<b>Main Priority Actions for Women's Equality Opportunities</b>		
		<ul style="list-style-type: none"> <li>Upgrade education opportunities for women</li> <li>Establish various income generating opportunities</li> <li>Strengthen the capacity building of women's organization</li> </ul>		



**Table M.2: Summary of Regional Priority Needs Ranking for the Productive Sectors and Environment**

Region sector	Hargeisa					Awdal					Sahil					Togdher					Sanaag					Sool				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Crops	√					√							√				√					√								√
Livestock	√					√					√					√					√					√				
Fisheries								√					√									√								
Private sector business	√					√					√					√					√					√				
Land & sea environment.	√					√					√					√					√					√				
Land tenure	√					√					√					√					√					√				

[[Source?]]

*Note:* Sectors are ranked on a scale of one to five (with 1 being very important and 5 being relative less important) with respect to reconstruction and development needs by region.

**Table M.3: Summary of Puntland Field Assessment for Productive Sectors and Environment<sup>6</sup>**

[[Note: I have not edited this table much; it needs extensive reformatting to separate categories. Editing will confuse cross-column relationships]]

Region/ districts	Subcluster	Constraints	Priority actions	Order of importance	Response in the report
Bari/Hafuun	Livestock production	Water	Increase water supply	1	Included
		Veterinary services	Improve vet. Services	2	Included
		Deterioration of rangeland		3	Included
		Import ban		1	Included
	Livestock marketing	Lack of financial services	Rangeland improvement	2	„
		Holding grounds needed	Lifting of ban	3	„
			Financial services	1	„
				2	„
	Crop production	Lack of irrigation facilities	Establishment of hold. Gr.	3	„
		Pests	Irrigation	1	Bari is food deficient
		Shortage of agric. Inputs	development	2	Recommended
		Unregulated food aid	Pest control	3	
	Fisheries production		Increase availability	1	Included
		Inadequate access to agricultural land	Plan food aid	2	„
				3	„
		Lack of credit	Improve infrastructure	4	„
		Illegal fishing		1	„
		Lack of access			„

<sup>6</sup> This is a summary of various reports from the field assessment teams of Puntland State. The JNA Field Assessment Mission was from March 16 to April 4, 2006 and met with communities in Rako, Iskushuban, Badhan, Las Qoray, Hasbahale, Gara'ad, Galdogob, and Talex. They also passed through other communities.

Region/ districts	Subcluster	Constraints	Priority actions	Order of importance	Response in the report
	Other Product	Inadequate cold storage	Improve credit availability	2	„
		Destruction of marine resources	Ban illegal fishing	1	„
	Islamic credit facility.	Natural resources	Infrastructure development	1	„
				2	„
	Land environment		Develop cold storage	3	„
		Needed		1	„
		Desertification		2	„
		Poor land management		3	Jetties suggested
	Marine environment		Protect marine environment	1	
			Common salt		Included
		Environmental destruct.	Exploration of oil and min.	2	
				3	„
	Private business	Illegal fishing	Provision of credit	1	„
		Accessibility	Reforestation	2	Recommended
		Lack of credit and financial services	Land tenure	3	Included
		Poor trade and marketing	Environmental protection		„
	Industry	Weak public services	Environmental protection	1	„
		Shortage of know-how	Stop illegal fishing	2	„
	Problems facing Women		Roads and airport network	3	
		Lack of financial services.		1	„
		Inadequate power supply		2	„
			Financial services	3	„
	Women in crops, livestock and fisheries		Trade regulation		
		Illiteracy	Better marketing		
		Less representation	Electrification		
		Lack of awareness of gender and human right issues	Financial services		
		Lack of skills	Investment		
		Lack of equality	Education		
		High household burden	Equal opportunities		
			Increase community awareness		
			Skill training		
			Improve gender equality		
			More mother and child care		
Karkar/Bender Beyla, Rako, Iskushuban	Livestock Production	Water and grazing space	Water improvement	1	„
		Shortage of vet. Services	Improve vet services	2	„
				3	„
		Lack of access	Infrastructure improvement	4	„
	Livestock marketing			1	„
		Export ban	Range improvement		
		Lack of credit and financial services		2	„
			Lifting of export	3	„
				4	„

Region/ districts	Subcluster	Constraints	Priority actions	Order of importance	Response in the report
		Lack of regulation	ban	1	„
				2	„
	Crop production	Absence of irrigation	Financial	3	„
		Pest damage	institutions	4	„
		Lack of agric. inputs	Land and marine	1	„
			transport	2	„
	Crop marketing	Unregulated food aid	Holding grounds	3	„
		Access of agric land	Irrigation		
		Absence of credit	improvement	1	„
	Fisheries production and marketing	Chaotic and unregulated export trade	Agric. Inputs availability	2	Jetties planned
		Environ destruction	Better land management	3	Included
		Illegal fishing	Environ.	4	„
		Accessibility	Protection		
		Inadequate cold storage	Increase production	1	„
				2	„
	Other products	Frankincense	Infrastructure development	3	„
			Financial/credit facilities	1	„
		Salt		1	„
	Would producers take Islamic based credit?	Oil and minerals		2	„
		Yes	Ban of illegal fishing	3	„
		Desertification		1	Jetties planned
	Land environment	Poor management		2	„
		Accessibility	Infrastructure	3	„
		Environ. destruction	Improve cold storage		
	Marine environment	Illegal fishing	Credit and financial services	1	„
		Accessibility	Improve	2	„
			production, processing and marketing	3	„
	Private business	Lack of credit and financial services		1	„
		Poor trade and marketing	Encourage production	2	„
		Weak regulation and public services	Research and exploration	3	„
		Inadequate power supply		1	„
	Industry	Lack of financial services	Make credit available	2	„
		Lack of know-how	Environmental protection	3	„
			Improve management		
	Women's issues	Illiteracy	Infrastructure development		
		Lack of equal opportunities	Improve infrastructure		
		Lack of public awareness	Stop illegal fishing		
			Environmental protection		

Region/ districts	Subcluster	Constraints	Priority actions	Order of importance	Response in the report
			Improve financial services  Improved marketing Improved trade regulation  Electrification improvement  Improve financial services Increase investment and training Women education Equal opportunities in public and private sectors Improve community awareness		
Nugal/Eyl	Livestock production  Livestock marketing  Crop production  Crop Marketing  Fisheries production and marketing  Other products  Would producers use Islam based credit?  Land	Shortage of water and grazing space Inadequate vet services Accessibility Export ban KSA Lack of credit and financial services Absence of institutional regulation Lack of irrigation Pest damage Lack of agric inputs Unregulated food aid Inaccessibility Lack of credit  Illegal fishing Accessibility Cold storage Salt Oil and minerals  Yes Desertification Poor land management	Improve water supply and rangeland Improve vet services Improve infrastructure Lifting of export ban  Improve financial services  Holding grounds Improving irrigation Availability of agric inputs Environmental protection Encourage local production Improve infrastructure Improve credit and financial services Stop illegal fishing Improve infrastructure	1 2 3 1 2 3 1 2 3 1 2 3 1 2 1 1 2 3 1	„ „ „ „ „ „ „ Food deficit area Included „ „ Jetties planned Included „ „ „ „ „

Region/ districts	Subcluster	Constraints	Priority actions	Order of importance	Response in the report
	environment	Inaccessibility Illegal fishing Lack of credit and financial services	Improve cold storage Encourage salt production Oil and mineral exploration	1 2 3 1	“ “ “ “
	Marine environment Private business	Poor trade and marketing regulation Weak public services Inadequate power Lack of financial services	Improve credit and financial services Reforestation Proper land tenure Environmental protection Stop illegal fishing	2 3 1 2	“ “ “ “
	Industry	Shortage of know- how	Improve credit and financial services	3	“
	Women's issues	Illiteracy Lack of equality in public representation Lack of public aware of gender issues	Better trade regulation Improve poor services Electrification		
			Improvement of financial services Investment and capacity building Women education and skill training Improvement of public opportunities participation Increase community awareness		
Mudug/Gara'ad, Galdogob	Livestock Production	Shortage of water and grazing space Lack of vet services Inaccessibility Import ban by KSA	Improve water supply and range management Improve vet services	1 2 3 1	“ “ “ “
	Livestock marketing	Lack of credit and financial services Lack regulation Lack of irrigation facilities	Develop infrastructure Lifting of livestock ban	2 3 1	“ “ “
	Crop production	Pests Lack of agricultural input Unregulated food aid	Improve financial services Improve regulation Improve irrigation	2 3 1	“ “ “
	Crop marketing	Inaccessibility Lack of credit and	Pest control	2 3	“ “

Region/ districts	Subcluster	Constraints	Priority actions	Order of importance	Response in the report
	Private business	financial services Lack of credit and financial services	Improve input availability	1	„
		Poor trade and marketing	Improve local production	2	„
		Weak regulation and public services	Improve infrastructure	3	„
	Industry	Inadequate power supply	Introduce credit facilities	1	„
		Shortage of knowledge	Improved financial services	2 3	„ „
	Women's issues	Lack of financial services	Better marketing	1	„
		Illiteracy		2	„
		Lack of equal opportunities	Improved trade regulation		
		Lack of public awareness of gender issues	Electrification Investment and capacity building Improved financial services	3	„
			Women education		
			Instituting equality		
			Enhance community awareness on gender issues		
Sanaag/Badhan, Las Qoray	Livestock production	Inadequate water and grazing	Improved water supply and	1	„
		Lack of vet services	rangeland	2	„
		Inaccessibility	Improved vet services	3	„
	Livestock marketing	Livestock export ban	Improved infrastructure	1	„
		Credit and financial services	Lifting of livestock export ban	2	„
		Inadequate land and marine transport		3	„
	Crop production	Lack of irrigation facilities	Improved financial services	1	„
		Pests		2	„
		Lack of agricultural inputs	Improved roads and jetty	3 4	„ „
		Unregulated food aid	Improved irrigation	1	„
	Crop marketing	Inaccessibility	Improved pest control	2	„
		Absence of credit and			

Region/ districts	Subcluster	Constraints	Priority actions	Order of importance	Response in the report
	Fisheries production and marketing	financial services	Improved availability of agr inputs	3 1	„ „
		Illegal fishing	Environmental protection	2 3	„ „
		Inaccessibility		4	„
		Lack of cold storage	Improved irrigation	5	„
		Credit and financial services	Improved infrastructure	1	„
		Environmental degradation			
		Frankincense			
	Other products	underdeveloped	Improved financial services	2	„
		Unexploited oil and minerals			
		Inadequate financial services	Stopping illegal fishing	3	„
		Desertification	Improved	1	„
	Land environment	Poor land management	infrastructure	2	„
		Inaccessibility	Improved cold storage	3	„
		Environmental degradation	Improved financial services	1 2	„ „
		Illegal fishing		3	„
	Marine environment	Inaccessibility	Environmental protection	1	„
		Poor trade and marketing			
	Private business	Lack of credit and financial services	Improved frankincense production and marketing	2 3 1	„ „ „
		Weak public support services	Oil and mineral exploration	2	„
		Inadequate power supply			
		Shortage of know- how		3	„
	Industry	Inadequate financial services	Improved financial services	1	„
		Illiteracy and lack of skills			
	Women's affairs	Lack of equal representation in decision-making	Reforestation Improve land management Improved infrastructure	2 3	„ „
		High household burden			
			Environmental protection Fight illegal fishing		
			Improved infrastructure		
			Improved trade regulation		
			Improved financial		

Region/ districts	Subcluster	Constraints	Priority actions	Order of importance	Response in the report
			services  Improved public services Electrification Improved financial services Improved capacity building and investment  Improved women education And skill training  Achieving equal opportunities Improved mother and child care		
Sool/Talex	Livestock production	Limited of water supply and grazing	Improved water supply and grazing	1	„
		Shortage of vet services	Improved vet services	2	„
		Inaccessibility	Improve	3	„
	Livestock marketing	Import ban by KSA	Improve infrastructure	1	„
		Absence of credit and financial services	Lifting of the export ban	2	„
		Absence of institutional regulation	Improved financial and regulatory services	3	„
	Crop production	Lack of irrigation	Improved financial and regulatory services	1	„
		Pests	Holding grounds	2	„
		Shortage of agric inputs	Improved irrigation	3	„
			Proper pest control	4	„
	Crop marketing	Improved availability of agric inputs	Improved availability of agric inputs	1	„
		Unregulated food aid	Better land management and environmental protection	2	„
		Inaccessibility	Better land management and environmental protection	3	„
	Other products	Lack of credit and financial services	Boosting of local production	1	„
		Unexploited oil and mineral resources	Improved infrastructure	2	„
	Land environment	Desertification	Improved infrastructure	3	„
		Poor land management	Improved financial services	4	„
	Private business	Inaccessibility	Starting of oil and mineral exploration	1	„
		Lack of credit and financial services	Reforestation	2	„
		Poor trade and marketing	Improved land	3	„
				1	„



Region/ districts	Subcluster	Constraints	Priority actions	Order of importance	Response in the report
	Industry	Weak public services	tenure	2	„
		Inadequate power supply	Environmental protection	3	„
		Inadequate financial services	Improved infrastructure	1	„
	Women's affairs	Shortage of know-how	Improved financial services	2	„
		Illiteracy		3	„
		Lack of equal representation	Improved trade and marketing regulation		
		Lack of public awareness on gender issues	Improved public services		
			Electrification		
			Improved financial services and investment		
			Improved capacity building		
			Improved women education and skills		
			Equal opportunities in private and public sectors		
			Improving community awareness of gender issues		

#### A. Central Zonal Field Assessment (South Mudug, Galgadud, Hiran, and M/Shabelle)

M 1. The productive sector cluster examined issues related to production and marketing for crops, livestock, fisheries, and other products, as well as environmental issues on land and marine areas. In addition, issues related to private business development and women's affairs were discussed. Overall the key constraints observed by the participants both in the production process and marketing of the *livestock* subsector were: lack of veterinary services, security, water scarcity, and lack of marketing infrastructure and poor coordination between production process and marketing. *On crop production* the main constraints observed by the participants were lack of security, capital and farm inputs, and lack of knowledge on seed multiplication. Proposed measures to address these problems include the following: facilitate access to credit facilities; improve security; develop seed multiplication centers, farm inputs, and training; and most important rehabilitate agricultural infrastructure such as irrigation, bridges, and rural roads.

M 2. On *fisheries production* participants were of the view that the key problems hindering production were lack of production skills and equipment and overfishing by foreign shipping companies. Proposed measures include provision of skills, fishing equipment, and establishment of a cold chain system.

M 3. *Other products* considered important in the zone include honey and incense production. These products are hindered by lack of needed skills, security, and poor knowledge of the production process. Participants indicated that necessary measures to overcome the situation should include upgrading skills, training farmers and other people involved in the production of these products, and improving security.

M 4. *On the environment*, tree cutting, charcoal burning (land), and overfishing, particularly by foreign industrial shipping companies, and dumping of industrial waste were the major problems observed by the participants. Suggested solutions include abolish charcoal exports, and introduce marine control by forbidding foreign industrial shipping from Somali costs and dumping of industrial waste.

M 5. On *private business*, the issues to be addressed are not different from other subsectors, apart from improving investment climate, improve access to credit facilities, and facilitating access to both local and international market.

M 6. On *women's affairs*, women's tasks and responsibilities are huge. They participate in the production and marketing of the agriculture and livestock but not in the decision-making process. They are excluded by tradition, culture, and other related factors which ingrained within the society. Their time is shared between the core household activities, child care, food production, and food preparation. Participants gave general suggestions on how the situation of women could be improved; these include increasing participation of women in decision-making process, supporting more handcraft industries, and improving women's skills through training.

## **B. South West Zonal Field Assessment (Bakool, Bay, and Lower Shabelle)**

M 7. The Productive sector and environment cluster examined issues related to production and marketing for crop production, livestock, fisheries, and other products, environmental issues on land and marine areas, as well as issues for private business development and women's affairs. Overall the key constraints observed by the participants both in the production process and marketing of *livestock* subsector were: lack of veterinary services, security, water scarcity, and lack of marketing infrastructure and poor coordination between production process and marketing. *On crop production* the main constraints observed by the participants were lack of security, capital, and farm inputs, and lack of knowledge on seed multiplication. Proposed measures to address these problems include facilitate access to credit facilities, improve security, develop seed multiplication centers/farm inputs and training; and most important rehabilitation of agricultural infrastructure, such as irrigation, bridges and rural roads.

M 8. On *fisheries production* participants were of the view that the key problems hindering production were lack of production skills, equipment, and overfishing by foreign shipping companies. Proposed measures to address include provision of skills, fishing equipment, and establishment of a cold chain system around the coastal areas. In addition, rehabilitation is needed of the two major ports of Barawe and Merka and the transportation system to help access to local and international markets.

M 9. *Other products* considered important in the zone include honey and incense production. These products are hindered by lack of needed skills, security, and poor knowledge of the production process. Participants indicated that necessary measures to overcome the situation should include upgrading skills, training farmers and other people involved in the production of these products, and improving security.

M 10. *On the environment*, tree cutting, charcoal burning (land), and overfishing particularly by foreign industrial shipping companies, and dumping of industrial waste are the major problems observed by the participants. Suggested solutions include abolish charcoal exports and introduce marine control by forbidding foreign industrial shipping from Somali costs and dumping of industrial waste.

M 11. On *private business*, the issues to be addressed are not different from other subsectors, apart from improving investment climate, improve access to credit facilities, and facilitate access to both local and international markets.

M 12. *On women's affairs*, women's tasks and responsibilities are huge. They participate in the production and marketing of agriculture and livestock but not in the decision-making process. They are excluded by tradition, culture, and other related factors which are ingrained within the society. Their time is shared between the core household activities, child care, food production, and food preparation. Participants gave general suggestions on how the situation of women could be improved; these included increasing participation of women in decision-making process, supporting more handcraft industries, and improving women's skills through training.

## **Livestock – Production**

### **Constraints:**

M 13. This sector's cluster group discussed and classified the constraints that hinder the livestock subsector under three major headings:

- a) Settlement problem.
- b) Drought and water shortages—a result of delayed rains, and missed seasons in combination with insufficient water wells, and breakdown of water sources.
- c) Lack of livestock health services. The availability of dispensaries to treat sick livestock hinders the subsector. The problem is exacerbated by lack of good-quality medicine in the country. Furthermore the knowledge to use the available medicines is limited in the countryside, where side effects are common as a result of improper use

of drugs. This economically affects the whole nation, and Mogadishu suffers the most as many nomads relocate from the countryside to the city in search of **copying** **[[coping?]]** mechanisms. This contributes to low livestock production and insecurity and economic burdens on Benadir zone inhabitants.

### **Marketing**

- a) Livestock trade ban. The neighboring countries imposed a trade ban on the Somali livestock exports, on which the economy of the country mainly depends. This decreases the value of livestock-related incomes, which make up the livelihood of many Somalis.
- b) Lack of appropriate traders. Livestock traders do not consider the quality of livestock exports, in terms of physical condition and proper medical treatment. This gives a negative impression of the health of the Somalia's livestock exports, and contributes to persistent ban on the production system of the region.
- c) Training. The livestock owners and traders need some sort of training that includes quality control, and as well as proper treatment of livestock in terms of feed and medical practices. Thus this can add value to the livestock production system in the country, and in particular to Benadir zone.

### **Priority actions to improve livestock production and marketing system**

#### **Production**

- a) Mass vaccination is needed.
- b) The establishment of health service centers is important.
- c) The sector cluster group also reports the need for refresher courses to the professionals in the livestock sector.

#### **Marketing**

- a) Market research is important.
- b) Holding grounds are needed.
- c) Feed lot centers and feed production are needed.

#### **Crop Production**

#### **Constraints**

- a) Infrastructure within and outside the farm.
- b) Farm inputs are needed such as seeds, farming tools, and land preparation tractor costs.
- c) Extension services. Farm extension training is important such as land preparation, sowing, plant spacing, the use of fertilizers, and as well as pest controls and others.

## **Marketing**

- a) Unbalanced input and output costs. Because of insufficient market information, farmers and traders produce more than the market needs. At the same time they don't have storage and consumption plans to break even the input and output of crop production system.
- b) Lack of pesticides. Most of the farmers cannot afford to buy the pesticide control chemicals to protect their crop from the harmful insects that attack the crops produced during cultivation and after harvest in the "bakaar" storage system.
- c) Receipt of food aid at harvest time depresses market prices. This is one of the major problems that hinders the marketing of local crops harvested. Many times, aid agencies deliver food aid simultaneously with the local harvest period of each season. This reduces selling prices for local products, which in turn can result in losses to local farmers. In that context, the result is loss of invested input costs, which discourages the farmers from continuing the crop production system.

## **Priority actions to improve agricultural products**

- a) The group recommends the introduction of new varieties of plantation seeds from international sources to upgrade and improve the current crop yield level.
- b) The group also recommends the establishment of proper extension services to introduce effective crop management systems.
- c) The participants also suggest the improvement of the current farming infrastructure system in the country, such as the machines, tools, and storages systems, and as well as transportation system between villages to the districts and the capital city.

## **Marketing**

- a) The group of this cluster suggested that farmers should produce a standard-quality crop so that it can compete with local and regional markets that exist.
- b) Establish good trading relations with the neighboring countries as the potential buyers of the crops produced by the Somali people. The group believes this will add value to crop production and to the Somali economy.
- c) The group recommends that food aid is brought in only during bad times and during the crop planting period. The group argues this will provide relief from food crop price reduction on the local farmers at harvest time, and will be real assistance to farmers, and will at the same time boost the market value of the local crop products during harvest, even if the harvest is small due to drought.

## **Fisheries**

### **Constraints**

- a) Lack of capital. The group mentioned that people in Mogadishu lack the initial capital to start the fishery business and to acquire fishing gear, nets, and other necessary

- tools. The group also discusses the need for start up capital to finance the fishing operations during the first few seasons until one stands on its own feet.
- b) Illegal foreign fisheries with no enforced regulation to control them are also one of the major problems fisheries face.
  - c) Lack of fishing knowledge exacerbates the problem as most of the fisheries do not have sufficient knowledge in terms of the appropriate seasons, the most profitable fish catches, or the marketing know-how.

### **Priority actions in terms of fishing catches and marketing**

- a) Capital availability. Start up capital is needed to finance the equipment and provide some petty cash to enable the fisheries to wait until seasonal catches are harvested.
- b) The cluster group also recommends introducing procedures to control the illegal foreign fisheries in the waters of the Somali people.
- c) Capacity-building training for the fisheries in Benadir region is also recommended so that the knowledge of the Somali fisheries is upgraded to become effective producers.

### **Other products**

### **Potential projects in the region, and marketing in order of their economic importance**

M 14. The group in their discussion named some potential commodities that can be produced from Benadir zone such as leather, different kinds of juice, and meat production.

### **Constraints**

<b>Type of commodity</b>	<b>Constraints</b>	<b>Priority Actions</b>
Leather	Marketing problem	Leather improvement
Juice production	Marketing problem	Production facilities
Meat production	Market ban	Quality improvement and political lobbying

M 15. The groups in this cluster discussion see credit facilities as a good way of empowering fishermen and livestock owners in the country. They recommend the **La-ribba** credit system through microfinance institutions with guaranteed deposits, and substantial capacity building to minimize potential default rates.

### **Land and Environment**

## **Damaging factors to the land environment**

- a) Deforestation. The participants indicate the existence of severe land degradation challenges in Somalia as an urgent problem due to continuous and massive deforestation in the country. The participants suggest **genuine** **[[strong?]]** intervention—first by the Somalis in collaboration with the international community. With the continuation of Somalia’s environmental degradation, particularly the range and forests, the group foresees that no development project will be sustainable due to lack of a conducive environment.
- b) Soil erosion. The cluster group discusses the tropical climate of Somalia, where vegetation is high, there is more rainfall, and where the vegetation is low, rainfall decreases. The vegetation can be maintained through the conservation of range and forests. Where there is sufficient vegetation the livestock and farmers can anticipate enough pasture and seed production respectively.
- c) Unbalanced ecosystem. The group thinks that if there is no genuine intervention to preserve environment, the unbalanced ecosystem will have negative impacts in both the short term and long term, and Somalia’s ecosystem will always be susceptible to land degradation.

## **Marine Environment**

### **Damaging factors**

- a) Discharge of nuclear, toxic, and other harmful chemicals in Somali waters is one of the major damaging factors the participants of the workshop reported.
- b) Illegal fishing actions. The group also disclosed the persistence of widespread illegal fishing practices by illegal fishermen that devastate the available marine resources in the Somali waters.
- c) Unplanned fishing methodology. In addition to the above the cluster group specifically mentioned that fishing fleets use illegal methods and equipment repeatedly without consideration to the breed of fish in the Somali waters. The group expresses its concern that there are no monitoring plans to prevent harmful actions of such fishing practices by illegal boats.

## **Private business starting and expanding**

### **Constraints**

- a) Knowledge. The group shares the view with the organizing team that most of the Somali people don’t have the necessary entrepreneurial skills for starting and expanding a potential business in the country.
- b) Capital. Lack of start-up capital is one of the obstacles that hinder the Somalis living in Benadir region.
- c) Markets. Another major problem noted is a lack of security that is conducive for the market environment. The group also argues the Somalis lack the marketing skills

needed, in terms of the strategic location to install the business, as well as the business plans needed before commencing any type of business.

### **Actions to address the business constraints**

- a) Capacity building. Business management training is one of the major factors that the cluster group members discussed as a vital contributor to the success of any business.
- b) Microcredit programs are also suggested as a supplementary source for start-up capital.
- c) Marketing skills training has also been proposed to equip the Somalis with business aspirations with crucial marketing constituents that can contribute to success.

### **Industries**

#### **M 16. Constraints to start and expand industry business**

- a) Raw material. The participants express concerns ranging from the acquisition of the raw materials locally, to properly processing and accounting for all the costs related, to producing merchandise that reasonably can compete in the local and international markets in terms of quality, quantity and price. These are the fundamental constraints that can lead to either the success or failure of any production trade industry.
- b) Technical institutes. The availability of effective technical institutes that are available and affordable to potential manufacturing companies is also a major problem that obstructs any likely manufacturing business entity in the country.
- c) Microcredit. Another major problem reported is that many industries take advantage of loan services. The group explains that lending financial institutions in the country are not available, and to expand a profitable business in the country virtually **takes the loss side of the coin**. **[[not sure what this means]]**

### **Women's Affairs**

#### **Major problems facing the women in Benadir region**

- a) Lack of education. As the Somali culture always puts daughters into circumstances that are not learning friendly, the group articulates that the Somali women have less schooling chances than male family members. Critical issues mentioned include the fact that girls are not registered into schools in equal numbers to boys. Also, other household workloads and early marriages discourage them from completing the education required to compete with male counterparts in the education system.
- b) Domestic workload. It was also reported by the group members that women have more domestic work than men within the same households. These cultural practices have continued for centuries; however, the group suggests advocating for a better environment that could at least give women the opportunity to become empowered economically and socially.
- c) Lack of job opportunities. Women are underrepresented in the employment opportunities available. The group attributes the problem to their limited educational



opportunities within the household level, and to the fact that many Somalis believe that women can't work full time due to home-related matters such as child rearing and other domestic works.

M 17. The group further discussed cross-cutting issues and debated integrating peacekeeping issues into the entire productive subsector cluster. Concurrently, the group recommends incorporating gender promotion into all aspects of the cluster through women's rights seminars and other awareness works. Capacity building is also a cross-cutting pillar of all the sector subclusters to supplement the effectiveness of the individual subcluster.

## **Sector Findings**

M 18. The following is a summary of the main findings of the consultations.

- Livestock constraints found during the assessment include settlement, drought, and water shortage problems.
- There is the lack of livestock health care facilities and services in the Benadir region and its outskirts.
- Poor marketing is another main issue that hinders the value of livestock products in Benadir zone. The problems of this subsector include international trade bans, and imbalance of input and output due to insufficient marketing skills by most of the Somalis.
- The crop production constraints include lack of pest control, trade bans, and foreign food aid that coincides with harvesting time of the farmers.
- The fisheries constraints include the disturbance of illegal foreign fisheries, insufficient knowledge, and lack of the initial capital to start the fishing business.
- There are also marketing and knowledge constraints on other products such as leather, juice, and meat in Benadir zone.
- Environmental problems such as deforestation, soil erosion, and nuclear wastes and other chemical disposals in the waters of the Somali people are other issues that affect the production level of the Somalis living in Benadir zone.
- Capital for running private businesses and lack of marketing skills are other factors that obstruct the private business sector in Benadir zone.
- According to the industry business sector, the people of Benadir zone suffer from the lack of raw materials, lack of skills and expertise, and lack of lending institutions in Benadir zone.
- Women in particular endure problems such as insufficient education, high domestic workloads, and lack of job opportunities compared to men in Benadir zone.

## **Recommendations**

M 24. The following recommendations emerged from the consultations.

- The construction of water points in areas of Benadir region and its outskirts, where water problems exist is important. This will relieve the burden on women and other people as a result of distance traveled for fetching water for livestock and for household purposes.
- Vaccinations and other health facilities, and services needed for livestock in combination with training for community members is also important.
- Market research and facilities in terms of holding grounds and lot centers in Benadir region and its outskirts is also recommended.
- Introducing new plantations and varieties, along with infrastructure rehabilitations such as canals and farm extension training works, are necessary to increase crop production and the livestock pasture system in Benadir zone and its outskirts.
- Food aid control mechanisms should also be scheduled with the donor agencies in order to minimize its coincidence with the farmers' crop harvest times.
- Mechanisms such as the resource capital and capacity building to control the illegal fisheries in the waters of the Somali people should be introduced.
- Affordable credit facilities have to also be introduced to assist the interested Somalis in Benadir region with starting businesses. This would help raise the income level of Somalis in the Benadir zone.
- Awareness raising and increasing opportunities for the Somali women in Benadir zone is necessary in order to empower and enable them participate in the reconstruction and recovery plans and implementation of the country plans.

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