

Addun Pastoral

HISTORICAL TIMELINE

Year	Rank	Events, Effects and Responses
2010	3-4	Rainfall (normal-good), 3 successive drought seasons, lift in export livestock ban, improved pasture and water availability, livestock body conditions, livestock production and food prices, average kidding of small ruminants, low camel calving, normal TOT (goat/rice), normal coping responses, abnormal migration in Deyr'09, poor households resorted to cheap foods, food aid distributions by WFP during the period.
2009	1-2	Poor Rainfall, drought, poor pasture & water availability, poor livestock body conditions, high livestock deaths, no calving and kidding, low conception, low-normal livestock prices, low-normal goat/rice TOT, abnormal migration and family splitting, increased water trucking and livestock sales, increased loan taking, hand feeding of livestock on relief grains, increased social support seeking, increased purchase of cheap food.
2008	1-2	Poor rainfall, drought, locust invasion (Mudug), poor pasture and water conditions, low livestock prices, increased livestock deaths, high food prices, low TOT, relief distribution (ICRC), abnormal livestock migration, above normal livestock sales, increased social support seeking, reduced consumption of non-essential items, reduced number of meals, use of cheaper foods, increased seeking of fishing labor activities and migration to urban areas.
2007	2-3	Below average rainfall, drought conditions, poor pasture and water, poor livestock prices, high inflation, livestock deaths and slaughter of calves, low TOT, abnormal livestock migration, high livestock sales and food prices, livestock migration, increased social support, increased seeking of fishing labor activities, reduced number of meals, consumption of cheaper foods, migration to urban areas.
2006	2-3	Normal to good rainfall, below average to normal pasture/water conditions, good livestock body conditions, average-high milk production, food prices, low TOT, improved livelihood activities and food security situation, low livestock prices, abnormal out-migration of livestock for better pasture and water.

BASELINE YEAR DESCRIPTION

- April The baseline reference year (Oct'09 – Sept'10) was below average year, due to the poor Deyr (Oct-Dec' 09, that was followed by average to good Gu (Apr-Jun'10) rains, that resulted in pasture and water availability, hence translating to improved livestock productivity and kidding of small ruminants.
- The successive droughts, before the reference year, impacted negatively on camel conception rates, leading to low calving and subsequently low less milk availability.
- Near average livestock prices translated into good incomes which were further boosted by improved access to loans and other forms of social support.
- Low cereal prices improved terms of trade during the reference year.

Addun Pastoral: Mixed Sheep, Goats & Camel



LIVELIHOOD ZONE DESCRIPTION

- Galkayo Addun Pastoral Livelihood is the second largest pastoral zone, covering Galgadud (Adado, Dusamareb and El Bur districts), Mudug (Galkayo, Hobyo districts) and south eastern Nugaal (Eyl, Jariban districts).
- The livelihood zone is typically characterized by flat plains, with the topography gently sloping towards the coastal areas in the east. The soils are predominantly sandy with scattered diminutive rocky areas. Sandy soils allow for quick seepage of water that results in underground and surface runoff, which empties in to the ocean.
- Predominant vegetation types comprise of short and hardy bushes locally known as jillab and, qaroon; different species of grass and scattered acacia trees (locally known as dheerdheere and Jeerin).
- Rangeland conditions are under continuous degradation due to the persistent droughts, overgrazing and proliferation of berkads.
- Rainfall (100-200 mm) is erratic, and is influenced by location on the leeward side of the Kenyan/Ethiopian highlands proximity to the coast and descending motion of the air and low humidity. Two main rainfall seasons: (Gu: April-June), and (Deyr: October-December) are received.
- Addun is windy, hot and dry (240c - 280c) with high evapo-transpiration rates (1751-2250 mm/annum).
- Boreholes and berkads are the main water sources (springs widely used in south and central parts).
- Estimated livelihood population is 227,077 people.
- Basic social services and infrastructure (health facilities and roads) are limited and poorly developed.
- Environmental and eco-climatic conditions favour pastoral system of production, under rain-fed conditions, with the main livestock species raised, in order of reference, being goats, sheep and camel.
- Main socio-economic activity is pastoralism, with fishing labor opportunities confined to the coastal areas. Sale of livestock and livestock products is the main source of income.

For full report see;
FSNAU Addun Pastoral
Baseline Report No. VI.38,
July, 4 or contact:
fsnainfo@fsnau.or.ke,
www.fsnau.or.ke

Table 1: Population Estimates

Livelihood population by district			Wealth groups				% of total
Zone	Districts	LZ population	Very Poor	Poor	Middle	Better off	
Central	Cabud-waq	8,490	424.5	2547	3820.5	1698	4
	Cadaado	15,248	762.4	4574.4	6861.6	3049.6	7
	Ceel buur	38,439	1921.9	11531.7	17297.6	7687.8	17
	Dhusa mareeb	61,042	3052.1	18312.6	27468.9	12208.4	27
	Galkayo	10,938	546.9	3281.4	4922.1	2187.6	5
	Hobyo	27,219	1360.9	8165.7	12248.6	5443.8	12
	Hare-dhere	14,604	730.2	4381.2	6571.8	2920.8	6
Total (Central)		175,980	8799	52794	79191	35196	78
North East	Eyl	4,211	210.6	1263.3	1894.9	842.2	2
	Galkayo	25,523	1276.2	7656.9	11485.4	5104.6	11
	Jarriban	21,363	1068.2	6408.9	9613.4	4272.6	9
Total (North East)		51,097	2554.9	15329.1	22993.7	10219.4	22
Grand total		227,077	11353.9	68123.1	102184.7	45415.4	100

Source: UNDP Somalia, 2005 Population Estimates.

Baseline reference year description

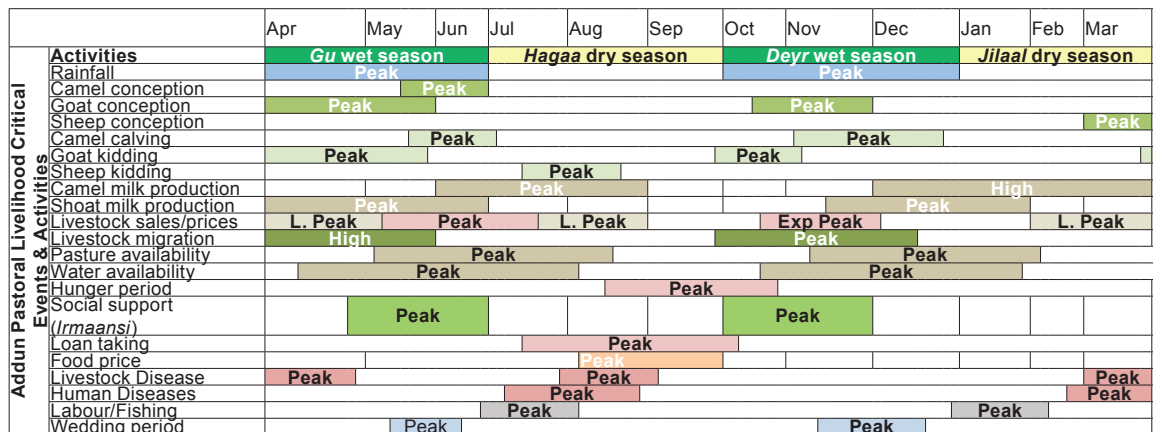
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Table 2: Average commodity prices and purchasing power

Camel Local Quality (Head)	12,666,667 SoSh/head
Daily Labour Rate	110,000
Goat Export Quality (Head)	1,350,833 SoSh/head
Goat Local Quality (Head)	1,230,417 SoSh/head
Imported Red Rice (1 Kg)	23,333 SoSh/kg
Milk Camel Fresh (Litre)	42,800 SoSh/litre
Red Sorghum (1 Kg)	8,233 SoSh/kg
TOT Goat (Local) to Rice	53 kg/1 goat
TOT Goat (Local) to Sorghum	155 kg/1 goat
TOT Labour to Sorghum	14 kg/daily labour
TOT Labour to Rice	5 kg/daily labour

SEASONAL CALENDAR

Figure 1: Seasonal calendar critical events & activities in Addun pastoral livelihood zone



SEASONALITY

- Peak pasture and water availability occurred in Gu (end of May) and Deyr (November). Livestock migration is high towards the middle/end of the dry seasons and at the start of the rainy seasons, then declines when the rains resume and pasture is fully replenished.
- Camels conceived in mid-May to June (Gu) and mid-November (Deyr) and calving occurs after 13 months. Goats conceive two weeks after the start of rains (1st dekads of May & November). Controlled sheep mating practiced to allow births only once a year.
- Milk availability and consumption was high during peak calving and kidding periods (May-June and November-December).
- Dependence on imported food supplies was high in Hagaa (July-September), due to seasonal monsoon tides and rough seas that inhibit navigation and reduce imports.
- Livestock prices increased in the rainy seasons since pastoralists prioritized fattening and restocking in anticipation of expected export demand during Hajj and Ramadan (August to November 2010).
- Peak hunger period for poor households and increased loan taking and social support seeking.

Table 3: Wealth Breakdown

WG	% Pop	HH size	Livestock Assets	Other characteristics
Better-Off	15	10-12 (11)	Camel: 20	<ul style="list-style-type: none"> 1 berkad, houses in the villages Polygynous (2 wives)
			Goats: 100-120 (110)	
			Sheep: 50-70 (60)	
Middle	45	7-8 (8)	Camel: 10-12 (11)	<ul style="list-style-type: none"> Monogamous-Polygynous (1-2 wives)
			Goats: 55-80 (68)	
			Sheep: 25-30 (28)	
Poor	35	6-8 (7)	Camel: 2-3 (2)	<ul style="list-style-type: none"> Monogamous (1 wife)
			Goats: 30-50 (40)	
			Sheep: 15-25 (20)	
Very Poor	5	6-8 (7)	Camel: 0	<ul style="list-style-type: none"> Monogamous (1 wife)
			Goats: 6-10 (8)	
			Sheep: 5-10 (7)	

Table 4: Wealth group Livestock Herd Dynamics

Shoat herd dynamics	Poor			Middle			Better off			Average		
	Goat	Sheep	camel	Goat	Sheep	camel	Goat	Sheep	camel	Goat	Sheep	camel
Total number of herd owned at start of reference year	50	26	3	67	35	12	135	65	25	84	42	13
Adult female	22	10	1	37	16	6	70	26	13	43	17	7
No. born during the year	14	6	0	24	10	0	55	14	0	31	10	0
No. sold	10	3	0	11	6	1	38	7	1	20	5	1
No. slaughtered	4	3	0	6	4	0	9	5	0	6	4	0
No. died	4	3	0	10	8	1	13	5	0	9	5	0
No. given away	2	0	0	2	1	0	6	3	0	3	1	0
No. bought	0	0	0	0	0	0	0	0	0	0	0	0
No. lost or stolen	0	0	0	0	0	0	0	0	0	0	0	0
No. at end of reference year	44	23	3	62	26	10	124	59	24	78	36	12

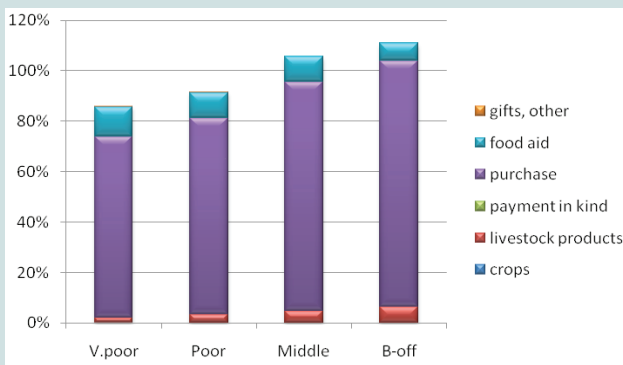
Livelihood Assets

Human Capital	<p>Household Size and composition: Monogamous (very poor and poor) and polygynous (middle and better off) family structure.</p> <p>Access to Education: Poor have no access to education due to economic constraints, unlike children of Middle and Better off HHs. Boys and girls in Better off wealth groups have equal access to formal education.</p> <p>Health: No public health facilities exist in Addun. Poorly equipped maternal and child health (MCH) centres are found in Sallax, Jariban, Godobjiran and Doccoland few private pharmacies. Better off HHs access health services in Galkayo. The poor cannot afford transport and consultation fees, and rely on traditional healers. Endemic disease is malaria, and morbidity peaks in the dry periods.</p> <p>Food security and nutrition: Post <i>Gu</i> 2010 food security and nutrition situation assessment, indicates the population in Addun as Humanitarian Emergency (HE). GAM rate of 22.8 % (19.2-27.0) and a SAM rate of 7.1 % (4.7-10.5), in the livelihood indicates Very Critical nutrition situation¹. Crude and under-5 year-old mortality rates were 0.36 (0.14-0.95) and 1.61 (0.58-4.45), below Alert thresholds according to WHO classification. Diarrheal diseases, birth related complications and accident/killing were the main causes of deaths.</p>	
Social Capital	<p>Informal support (Gifts): Strong social support networks exist in Addun. Food loans (<i>Qardo</i>), gifts of milking animals, restocking/herd rebuilding and livestock production/reproduction improved following good <i>Gu</i> rains. Gifts and loans in-kind contributed 26% and 23% of total income for very poor and poor respectively. Middle and Better off give meat, milk and other gifts to poor and very poor. Dry food gifts are shared.</p> <p>Debt: Debt repayment started when water and pasture conditions improved due to good <i>Gu</i> 2010 rains. Most Middle and Better off remained indebted after <i>Gu</i> rains, due to high borrowing incurred. Normally, debt repayment can extend till full recovery of livestock or other options is attained (a unique social support deep rooted in cultural and religious belief systems).</p> <p>Formal support (Zakat): Better off and Middle HHs gave obligatory <i>Zakat</i> in form of live animals to the Poor and Very Poor. Prolonged drought and decline in livestock herd sizes reduced the amount of <i>Zakat</i> received. Nonetheless, most Poor and Very Poor households received <i>zakatul fitr</i> (a special form of obligatory gift given at the end of the fasting month of <i>Ramadan</i>) as well as food aid (maize, vegetable oil and pulses) through WFP food distribution program in almost 6-10 months.</p> <p>Remittances: Remittances are less important in Addun. Some Middle and Better off HHs access to remittances from relatives and friends in towns within Somalia and Diaspora. Since most pastoralists lost herds due to prolonged droughts (2007-2009), amounts of remittances received were lower in the reference year, because the number of remittances seekers increased. Most poor households did not directly receive remittances, they benefited from the portions of the remittances through sharing.</p>	
Physical Capital	<p>Transport: All weather roads, interspersed by rocky terrain, dry river beds and gullies, link rural villages to towns. The remoteness of the LZ influences inaccessibility and marginalization from major markets and roads, implying that the livelihood experiences poor terms of trade and high variations in market access. Consequently, the very poor and poor sell their livestock at low farm-gate prices and purchase their food and non-food items at high prices.</p> <p>Telecommunication: Most villages have access to telecommunication services, used for information sharing on rainfall, pasture and water availability, migration, marketing of livestock and livestock products and security surveillance, via scouts.</p> <p>Veterinary services: International NGOs (Veterinarian sans Frontier-VSF) and local NGOs (Puntland Professional Association-PULPA; Nomadic animal health association) and Ministry of Livestock (MOL) provide veterinary services. Most pastoralists however use indigenous knowledge to treat animal diseases (CCPP) and of parasites.</p>	
Financial Capital	<p>Sale of livestock is the main income source of income used to purchase basic food and non-food items. About 74-86% of the total income for all wealth groups is derived from livestock sales. The poor wealth group rely on self-employment work, loans and social support. Paid labor opportunities are very low, with fishing labor opportunities confined to the coastal areas (though severely disrupted by piracy activities over the last 3-4 years). The Better off and the Middle have better access to food and non-food loans, than the poorer wealth groups.</p> <p>All large stock (camels) are owned by men, although women can own camels or any other high value property, if: (i) given by the husband, (ii) given by parent, brother/other relative, or (iii) owned before getting married. Among the Very Poor, women own/co-own some of the shoats, but among the better off, camel are owned by men. Due to its high value and the man being the head of the household, women are informed of any intent to sell camel, unless she owns the camel.</p> <p>Decision making (community and HH levels) is predominated by men, as the arbiter in disputes and are the custodian of family property, while women view their roles relate to child-bearing, child rearing, food distribution and domestic chores. Women in the Middle (33%) and Better off (38%), who own shoats, can sell small stock in consultation with the husband, and make decisions on the consumption/sale of milk. In poorer households, mutual consultation on sale of camels and shoats exist.</p>	
Natural Capital	<p>Vegetation conditions: Scattered short trees, bushes, and shrubs, predominantly <i>acacia</i> species (Dheer-dheere, Jeerin), <i>casalpenia</i>, (Qaroon, Xagar and Dhusundhus), different species of grasses, and short bushes (jillab) exists. Scattered trees (<i>Thrminalia spp.</i>) are found in the northern parts.</p> <p>Soil types: Sand mixed with loam soils, hard stones and gravel of medium-large sizes, protrude on the landscape. Rocks are mostly limestone-rich. Light red soil colour is a common phenomenon observable in the inland areas but turns grayish towards coastal Deeh. These areas are largely bare with scanty vegetation. Due to the influence of strong on-shore winds, the sand movements from steep sand dunes.</p> <p>Water sources: Bore-holes are the main water sources in the livelihood, in addition to <i>Berkads</i> and shallow wells (about 30- 50 km from homesteads). Pastoralists depend on water trucking during dry seasons and prices fluctuate between 30,000-70,000 SoSh per 200l drum, depending on the transportation distance. Mainly, water from bore-holes and shallow wells is hard/saline while <i>berkad</i> water is soft. All available water sources are either contaminated or not treated and therefore not potable.</p>	

LIVELIHOOD STRATEGIES

Sources of Food: All wealth groups depend on market purchase for food. Very Poor and poor HHs mainly depend on imported cereals (rice/pasta), locally produced (sorghum and maize) and food aid. Imported rice was less consumed by all wealth groups. Staple cereals were supplemented by non-staple foods such as sugar and oil. Consumption of livestock products (milk and ghee) was low for most wealth groups, although peak meat consumption occurred during the dry periods. Low camel calving and goat kidding reduced milk availability, thus the very poor and poor were not able to obtain sufficient food and incomes required to attain the basic threshold for survival in the reference year. The total calorie energy obtained from purchased foods (staple and non-staple) by the Very Poor and poor wealth groups was 71% and 78% respectively. Food aid complimented 12% for the Very Poor and 10% for the poor. Most Middle and Better off households depend more on rice and wheat flour followed by non-staple foods such as sugar and oil.

Figure 2: Sources of food



Consumption from own livestock products (milk, meat etc) is higher among the Better off, due to their larger herd sizes. About 91% and 98% of the basic food energy for the middle and better off wealth group's respectively, was obtained from market purchase, while 5% and 6% was from own livestock products respectively. This was further supplemented by 10% and 7% food aid distribution for the two wealth groups respectively.

Sources of Income: Livestock sales is the main income sources for all wealth groups. About 76% and 66% of the annual incomes for the very poor come from the sale of 11 goat/sheep (64% for local markets and 36% for export markets), while the poor sold 17 goat/sheep (53% for local and 47% for export markets). Gifts and loans contributed 26% and 34% of the total income of the very poor and poor respectively, whereas middle HHs got less from gifts and loans on average. The middle and better off HHs obtain 81% and 78% of their income respectively, from the sale of sheep, goats and 1-2 camel. Middle households also receive about 14% of the annual income from loans and gifts. The middle and better off have access to employment and diverse income sources (petty trade, shops, sale of water from *berkads*) than the poor and very poor, generating 11% of total annual income from these sources. Remittances contributed 6% and sale of livestock product (milk) generated 5% of total income. In all wealth groups, men obtained food by accessing loans, cash gifts and cash remittances.

Figure 3: Sources of Income

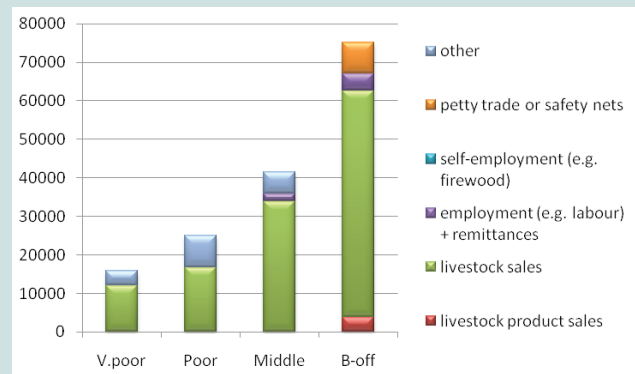
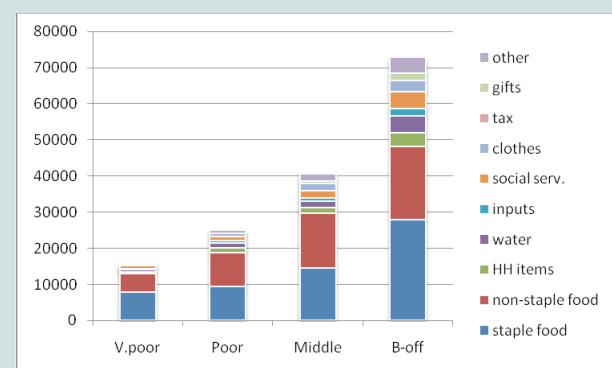


Table 5: Kcal Intake and Income

	Very poor	Poor	Middle	Better off
% Kcal	86	94	107	110
Income	16,000,000	25,100,000	41,600,000	75,200,000

Expenditure patterns: Almost all expenditure of the very poor and poor are on cheap cereals (sorghum and maize) as well as some rice, sugar and oil. The very poor and poor spend about 50% and 37% of their income on staple food purchase respectively, while the middle and better off use 37% and 38% respectively, on staple food purchase (rice, sorghum, maize). Sugar and oil contribute about 33% and 37% to food energy of the very poor and poor respectively. With the better off having at least one *berkad*, and the poor and Middle having none, expenditure on water, especially during the water stress periods (drought and dry seasons) increases across these wealth groups. Better off spend more on livestock inputs due to their bigger livestock holdings.

Figure 4: Expenditure patterns of wealth groups



Major risks factors

- Drought
- Market disruption
- Livestock diseases
- Environmental degradation

COPING STRATEGIES

- Increased migration in search of pasture and water trucking, with consequent family splitting.
- Increased animal sales, at low prices, due to disease outbreaks or market disruptions, in order to reduce the risk of losing stock through death, cover increasing financial needs for out-migration and potential disease outbreaks, and meet the cost of food purchases.
- Increased seeking of loans (better off and middle HHs), while very poor and poor HHs increased seeking support from relatives, friends and neighbours in both rural and urban areas to reduce the potential for getting deeper into crisis.
- Reduction of the number of meals in a day and switching to cheap cereals.
- Reduced expenditure for non-food items.
- Intensify income generating options (casual labour, firewood collection for sale, charcoal burning, and stone collection). Increasing charcoal burning and indiscriminate tree cutting have likely adverse environmental impacts (increases foliage loss for browser livestock (goats and camel) and interferes with the hydrologic balance of surface water in the long-term.
- Women engaged in making and selling baskets from tree barks.

Conclusion and Recommendations

In Addun Pastoral Livelihood Zone, (i) livestock holding (shoats) were almost similar to the 2002 baseline; (ii) Herd dynamics at the end of reference year show 12% and 17% reduction of shoats and camel respectively; (iii) Income opportunities from fishing have decreased due to piracy activities and sea patrol interventions by international marine forces; and (iv) Contribution of livestock products to poor households' energy requirements and income was very limited due to poor livestock conditions and asset losses from persistent droughts. Very Poor and Poor households were unable to access sufficient food to attain the basic survival threshold (of 2100 kcal and cost of food preparation), hence deficits in food entitlements of about 16% and 11% respectively. Purchased foods contributed 72% and 79% of the total energy requirements for the very poor and poor respectively, with food aid complementing about 12% and 10%. Own livestock production (e.g. milk) contributes significantly to household food sources, although susceptible to seasonal rain failures, livestock export bans, inflation, civil insecurity and market disruptions.

Recent and forthcoming publications and releases

FSNAU Press Release, June 2011
FSNAU/FEWSNET Climate Data Update, May 2011
FSNAU/FEWSNET Market Data Update, May 2011
FSNAU Toghdeer Apastoral Baseline Profile June 2011
FSNAU Toghdeer Apastoral Baseline Report June 2011

NOTE: The above publications and releases are available on the FSNAU website: www.fsnau.org

In order to enhance livelihood well-being and sustain development, the following areas are proposed for development prioritization:

- Formulate integrated rangeland management programmes focusing on environmental conservation (reforestation, building gabions to minimize run-off, erosion and degradation).
- Build capacity for the establishment of co-operatives for fishing communities and provision of fridges and other fishing equipment to increase fishing, marketing and income diversification options.
- Improve marketing of sea products and training of fishermen on sustainable methods of fishing that are non-depleting but which allow for a balance between harvesting and regeneration.
- Improve access to basic formal education by subsidizing education costs, improving the quality of the existing school programmes and other educational requirements.
- Provision of permanent water sources, by constructing boreholes, rehabilitating old/damaged berkads, and exploring further opportunities for rainwater harvesting.
- Improving access to basic human health and implementation of MCH centres in the main settlements as well as extending veterinary services for livestock.

Key indicators for future monitoring:

- Seasonal rainfall pattern/trends
- Livestock market performance
- Human/Livestock disease incidences
- Livestock migration patterns
- Vegetation productivity
- Livestock and crop production
- Seasonal streams
- Staple food prices
- Security situation

¹ See FSNAU Post *Gu* 09 Technical Series