

**DESK REPORT ON
THE FINDINGS OF SITUATION
ASSESSMENT OF
FIVE LIVESTOCK ROUTES**

**SUBMITTED TO
THE PROJECT
SUDAN PEACE BUILDING AND
DEVELOPMENT**

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Desk Report on

The Findings of Situation assessment of Five

Livestock Migration Routes

1. Introduction :

This is a desk study of five livestock migration routes, commissioned by the Project Sudan Peace Building and Development Project (SPBDP)

The studied routes include three in Greater Darfur State, one in South Kordofan State and one in Blue Nile State. The routes are :

- i) Habil Abu Araadeib, West Darfur State.
- ii) Um Layona, South Darfur State.
- iii) The Eastern Route, North Darfur State.
- iv) Samasim Livestock Route, South-North Kordofan States.
- v) Roseires Bados Livestock Route.

All the studies have sections on assessment objectives which were being followed by the study teams in tackling the elements of the assignment

1.1: General Features

To fulfill the assignment objectives the study groups adopted the following study frames :

Assessments of land for pastures, modes of animal raising (sheep, camels and cattle) animal ownership, problems affecting animal production, marketing of animals and products, (meat, ghee, cheese, etc.) land for cultivation, covering land tenure and ownership, number of farmers, planning of land along the routes, farm sizes inputs and labour, marketing of farming products, expenditure, and households consumption patterns, access to savings and credit, link to financial and credit institutions, views on micro-finance, training in the prevalent livestock and agricultural economies.

1.2. Regulating Conditions in the Stock Routes :

Regarding general characteristics, ecological and environmental aspects, spatial features (length width and resting sites on the routes) regulating laws and management, and community perception of these aspects.

1.3. Administration :

Systems of government, (formal and informal) community bodies and other organizations involved, their capacities in handling management aspect of the routes and the support received for effective operation.

1.4. Community Services :

The services facilities existing on the routes, including safe potable water for human and livestock, education, health, hygiene and sanitation, marketing systems etc. with assessment capacities of delivering the services, and users perception of adequacy of the facilities.

1.5. Community Organization :

Existing community structures; including VDC's, MDC's, and WUA's, Popular Committees Councils with explanation of the leaderships of such organizations .

1.6. Cross Cutting Issues (Women and Youth) :

Place of gender in the society, males, females, gender relations, division of labour and other responsibilities, and youth situation.

1.7. Communication Media :

Regarding institutions in use formal and informal, access to knowledge and application of information.

1.8. Environmental Conservation Awareness :

By applying environmental impact assessments as to occurring environmental changes and community knowledge and awareness about such changes.

1.9. Conflict Resolution :

Conflict Resolution Management by highlighting nature of conflict, defining existing conflict resolution mechanisms, degree of effectiveness of such mechanisms, causes of conflicts, social economic and environmental

1.10. Key Recommendations :

The assessments would conclude by recommending priority areas for interventions in compliance with project components.

1.11. Mapping :

To produce detailed maps of the routes clearly showing main towns, villages, social infrastructures and resting areas for animals.

1.12. Communication :

Finally to improve on strategic planning for peace building purposes, require collecting information that might be adopted as reference for SUDIA and the SPBOP

1.13. Composition of the Study Teams :

This varied from one study to another. In some cases the group that conducted the study was drawn from personnel of mixed types, academicians, government technical experts, and assisting free lancers. In others, they were contracted from official research groups including Peace Building centers.

The composition of the teams mainly included persons with socio-economic professions, range and pastures, agriculture, administration, with some female researchers being incorporated. The time of the survey covered a period in the range of two weeks.

1.14. Methodologies :

The five studies adopted the following methods and sources of information in answering the assessment objectives :

- i) Participatory methods in exploring and generating information using meetings, interviews, and structured questionnaires. In the above respect the studies interacted with the following stake-holders: :
 - Government officials.
 - Farmers' Union
 - Pastoralists' Union,-
 - INGO's CIBO, CBS's.

- - Tribal leaders (Amirs, Omdas, Sheikhs, Farshas)
 - Sedentary cultivators.
 - Individual pastoralists.
 - Civil society representatives.
 - Women and youth groups.
 - Field visit observations, with gathering of available information, complemented by
 - Designed questionnaires.
- Prior to the field visits some relevant data related to the project was consulted, including baseline survey of the three areas, South Kordofan State, Blue Nile State, and Abyei and other relevant official data, and information for SUDIA e.g. TOR were reviewed
- Stakeholders under project beneficiaries were identified to ensure fair representation of the targeted communities. these include d persons from Government institutions, community members, etc...

iv) Meetings, interviews and focus group discussion were being carried out with the different identified stakeholders for attaining quantitative and qualitative information.

v) The field visits covered different points on the routes, being selected on representation of the different activities and the key stakeholders.

- vi) Participatory observation was also being used as an effective tool for the analysis and interpretation of key features. Some of the routes assessments gave a list of the institutions and actors being interviewed and the basic feautes and characteristics of the routes.

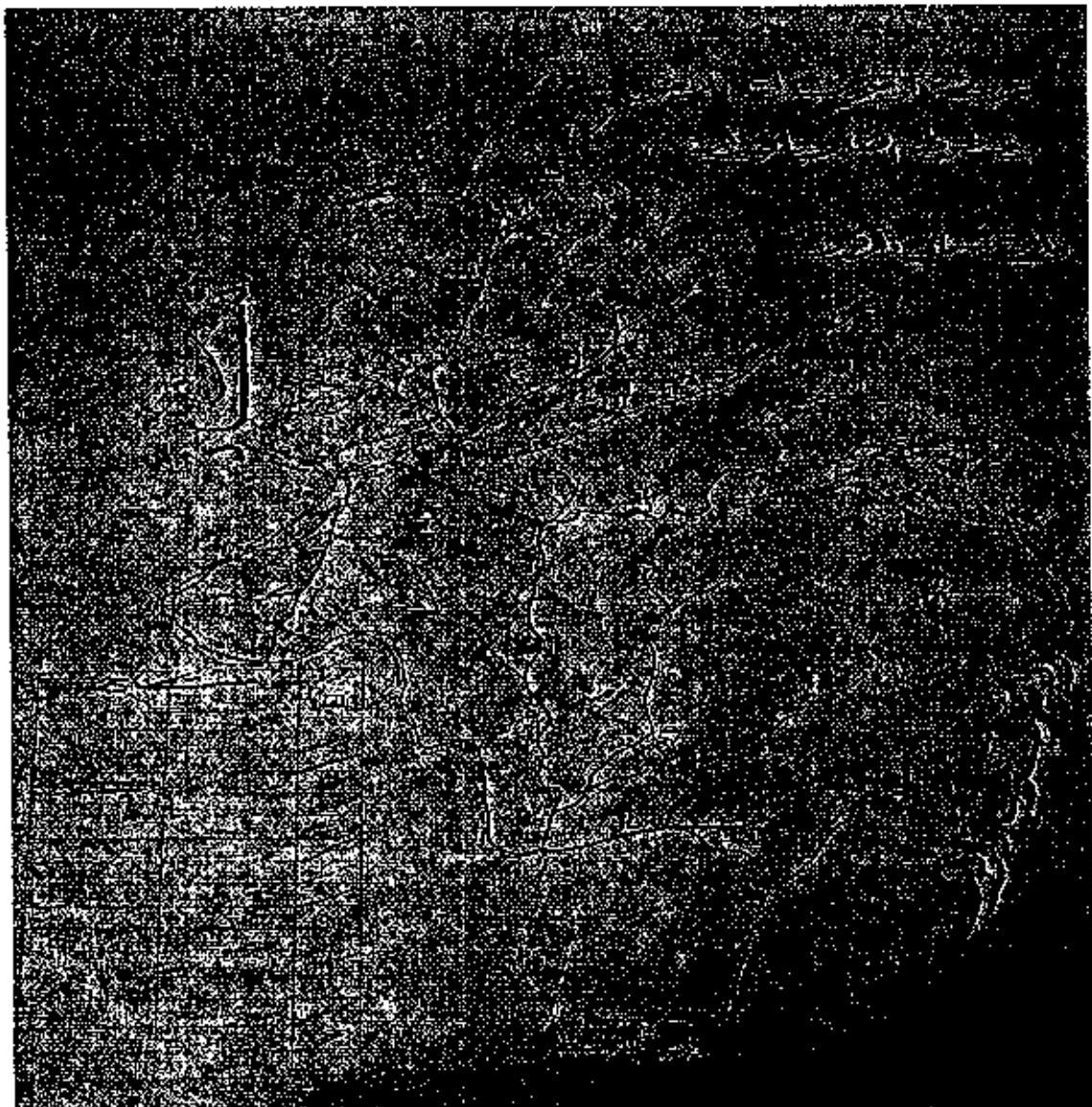
2: The Routes:

2:i: Habilia Abu Aradeib West Darfur State :

Defined as a *Masar*, animal route with branch routes radiating from it, and including Makarif (rainy season grazing areas and watering places). Habilia Ab Aradeib route is 268 Kms in length. It is a strip of lands which is supposed to be uncultivated and preserved for migrating animals (camels and sheep), and provided with resting areas (Sinyas).

Usually the *Masar* follows a gravely stretch of land unsuitable for cultivation. The herds migration starts their north wards movement in April and return un January-February. They move in numbers of 100-150 camels per group.

The population moving on the route is comprised of two main tribes, besides smaller tribal fractions, differing in size, economic activities and pattern of life. The first mobile group are Rezaigat Al Mahanneed,, who are Arab camel raising tribe, subdivided into 9 lineages, practicing a regular yearly north-south movement along the route.



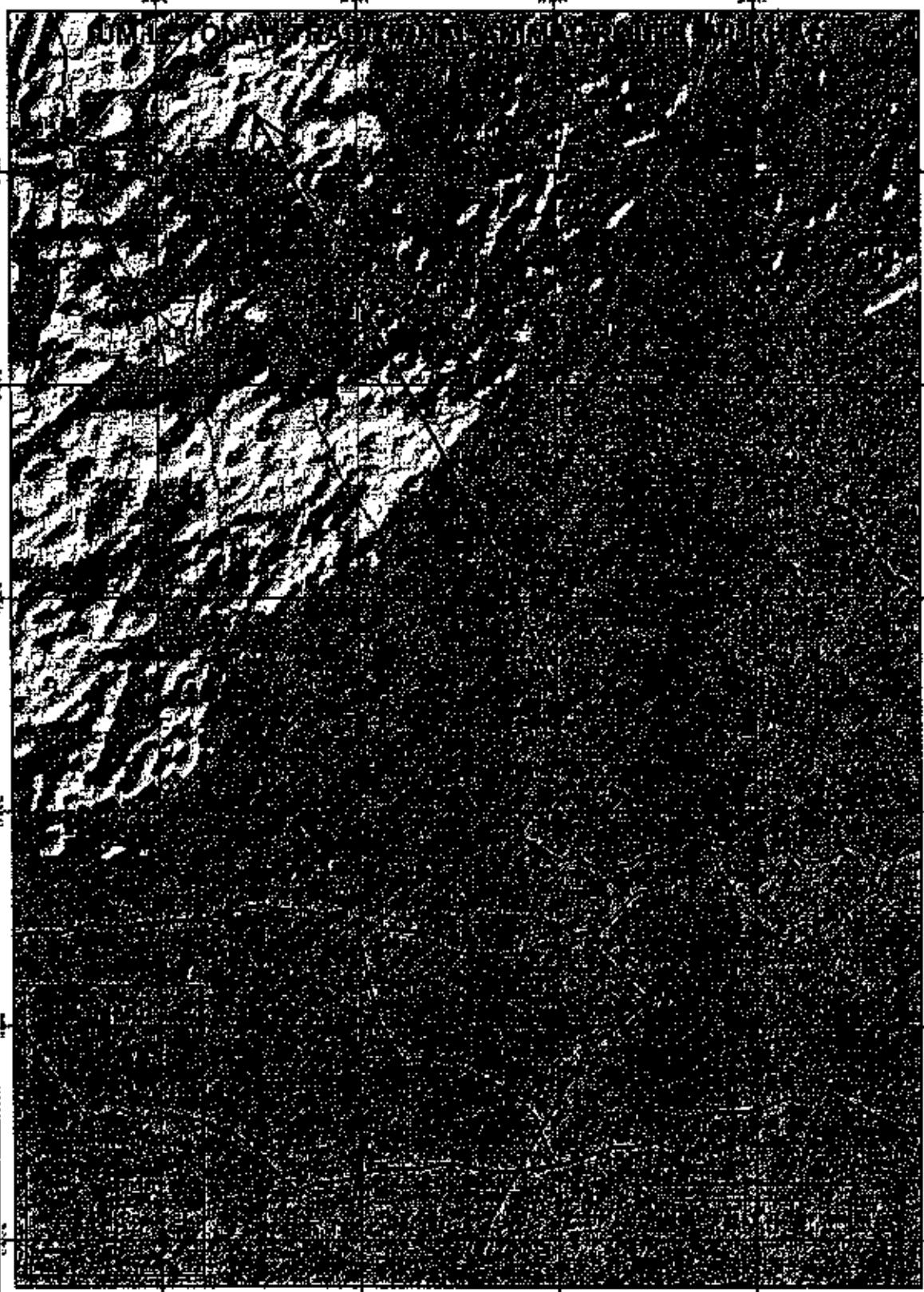
The other main group are the Masalit, the original inhabitants of the land, recently mixed with IDP's. The 3 groups, are competing for land, which have become a source of conflict. This entailed the formation by the local administration of a conflict resolution committee named Abu Dihya (Habila and Azirini Conflict Resolution Committee) with representation of different population factions.

list of 8 villages existing along the route was given with the population of each village shown. The part of the route covered by the research team encompassed both systems of livelihood, cultivation and animal raising. The variation of the ecology of the area and the uses of the land had produced different systems of production along the route.

2.2. Um Leyona Livestock Route, South Darfur State :

It is on an important route. It starts from Sunta locality about 17 Kms south of Sunta centre near Amara valley. There, the area is dominated by extensive grazing and with available water resources and absence of farming. Most of the nomads who visit this area stay for a long period of time, visiting their relatives in Sunta and its surrounds.

After, the murhal passes Jabjab 15 Kms north-west of Sunta. Here the area is a vast grazing land for animals with ponds of water. Also is to be found settled farmers who practice



agriculture. People meet in social events such as marriage, wedding, etc.. with relatives in Sunta and neighbouring areas.

From Jabjab the route passes through Al Khurein, approximately (12 Kms) a highly populated area with large spaces for grazing. Most of the population of the area had moved from Bir four well due to tribal conflicts. There is one primary school constructed from local materials. The area suffers from an acute drinking water problem, especially in the summer season. They rely on Bir Tabla water with an estimated traveling distance of one hour and half by donkey. From El Khurein, the murhal passes through Um Layona which is the last place in Sunta locality. The murhal here arrives at El Gazm area on the border with Yassin locality, heads to the east through Um Al Khairat and Bribri in Yassin locality Um Al Khairat is one of the biggest villages along the murhal and it suffers scarcity of drinking water, with the only available source in Bir Tabla, which is 3 hours distance by donkey.

From Bribri area the murhal moves north-west to pass through Kleakly Mago of Guantarat area. Keleakly Mago is a large village , it has one primary school, a drinking water point and a police station. From there the murhal passes through Higiig area in the west of Yassin locality, enters Belail locality to the west of Sani Findo, and Al Barakh and Goz Tortaal which present the last site accessed by the team, as allowed by the security situation.

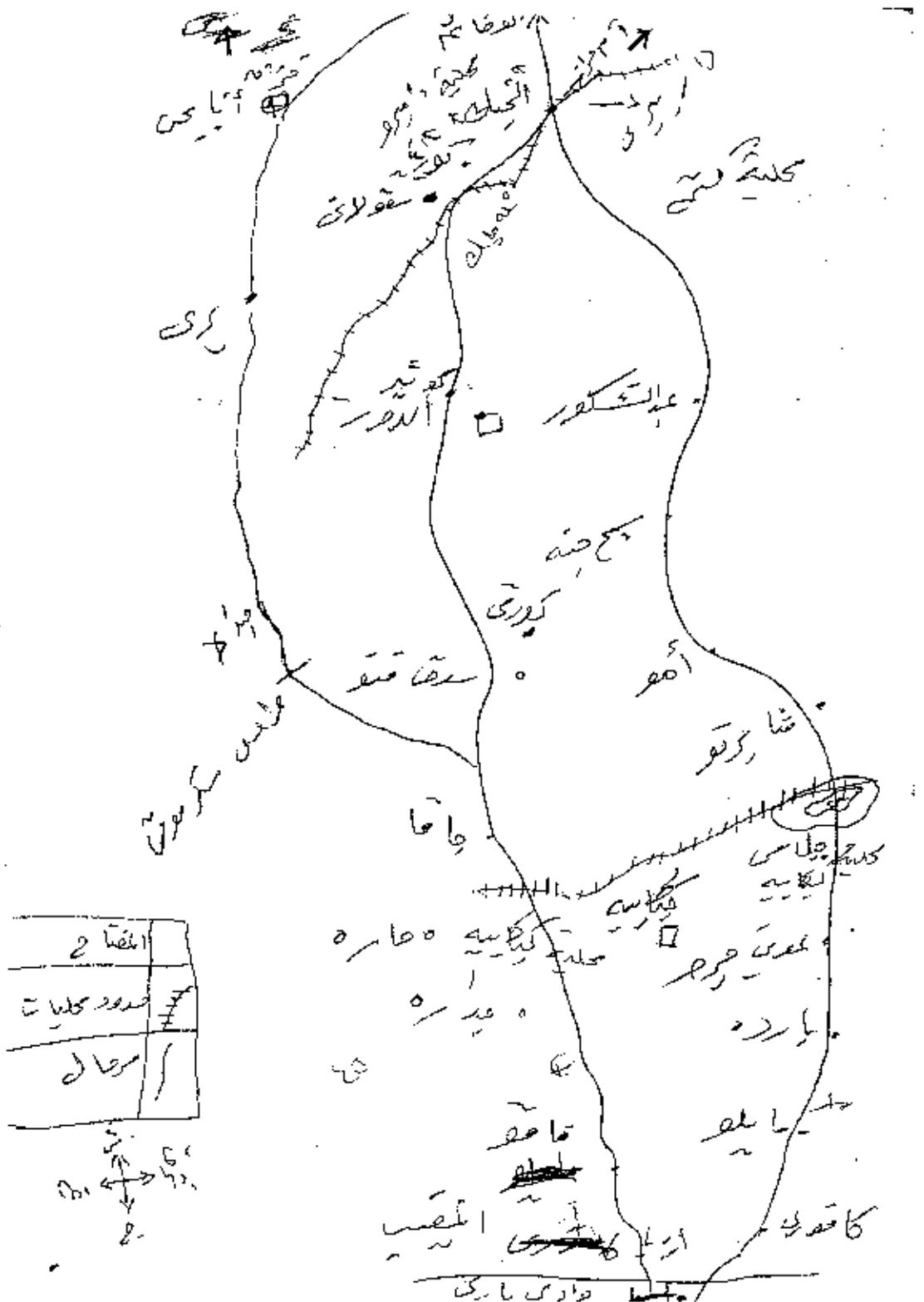
2:3 The Eastern Route, North Darfur State :

It is one of the crucial animal routes in North Darfur. Its length is approximately 80 Kms. It starts from Azagafra in the north up to El Salam in the south.

The route is not well demarcated and has two rest places (Seniya) in Graywed Marafeen and Goz Bainca. The Seniya is approximately 5 Kms in diameter. According to the information given by the director of the Range and Pasture Administration in North Darfur, there is no demarcated land for pastures along the route.. The pastures on the route are not fully used due to insecurity and the effect of the recent droughts. The animals raisers using the murhal do not go beyond Graywed Marafeen. Most of the users of the route are cattle owners. Settled farmers have in recent times exploited part of the route, resulting in its narrowness . not exceeding more than five meters in some parts.

The survey conducted along the route, starting from Azagarafa, showed that the main tribe in the area is Gawimmaa. Azagarafa village has two basic schools, one for males and the other for females, a health center, a veterinary center and two development centers, one for women and the other for men and a nutrition center.

Ground wells and there are 6 ground wells, one hafir and great amount of hand pumps. All the locality Institutions and entities are in Dar Elsalam.



Regarding water, Azagrafa has five deep wells, one dam, three hafirs and hand pumps. The estimated number of livestock passing at this point on the route is approximately 4000 heads including cattle, sheep and goats. The second village from Azagrafa is Um Maraheek located about 11 Kms. North east of Azagrafa.. The main tribe in the area is Berti. The village has two basic schools males and females. one mixed secondary school, one kindergarten and 3 midwives. The health facility serves other seven villages in the surrounds. The water sources include 4 hand pumps, two hafirs, a big and a small one. with both are not working and unmaintained..

The main livestock to be found in this area using the murhal is estimated at 12000 heads, consisting of sheep and goats. The third village on the route is Gogogo, located about 9 Kms. to the south-east, and is inhabited by the Musabaat tribe, Regarding services, it has a mixed basic school, 8 hand pumps, two small hafirs one in Gogogo and the other in Afan with no health or veterinary services - It also has a women center but not operating. The fourth village in the route is Fashar, located about 7 Kms. south of Gogogo. The livestock available in this part is approximately 7700 of heads of sheep and goats including some cattle. The main tribe is Berti, and the existing services include one big dam with separate watering places for humans and animals, one basic school, one health, cemtre, three midwives, a mosque and a solar energy facility. Because of the

availability of water, the place serves as a center for the watering of the livestock from the surrounding areas, estimated at about 21000 heads of mixed types.

The fifth village is Jebel Banat, the water sources here are hand pumps with no other services. This is followed by Gerawid Marafeen, which has Seniya for resting of animals, and followed by Goz Banat which has two hafirs, one mixed basic school and a health center. Followed by Hillat Abdel Rasoul and Um Dul which have one hafir, a number of hand pumps, and two deep wells, one mixed basic school and a health center. About 6 Kms. from Umm Dul is Dar El Salam, the capital of the locality with concentration of services, including one rural hospital with doctors, nurses, and midwives, 6 deep boreholes and 3 basic schools for males and females, a big market place, and presents one of the two active centers in the state, busy in marketing cash crops, particularly Karkadi (Hibiscus).

2:4 Samasim Livestock Route, South-North Kordofan State

It runs across 6 localities, taken from south to north, these are

- i) Umm Dorein Locality (Umm Dorein Al Humra where the route starts)
- ii) Kadugli
- iii) Al Reef El Shargi

iv) Habilia

v) Dilling

vi) El Goz

The main towns along the route are Kadugli, Kiwik, Dilling, and Debeibat. The main villages and rest areas are: -
El Humra, starting point of the route, a summer grazing area (Masiyaf) but these days is not accessible for insecurity in Umm Dorien locality, caused by sporadic fighting between SPLM-North Sector and government of Sudan forces.

= Saraf El Jamoos: A passing area in Kadugli locality, a summer grazing area (Masiyaf).

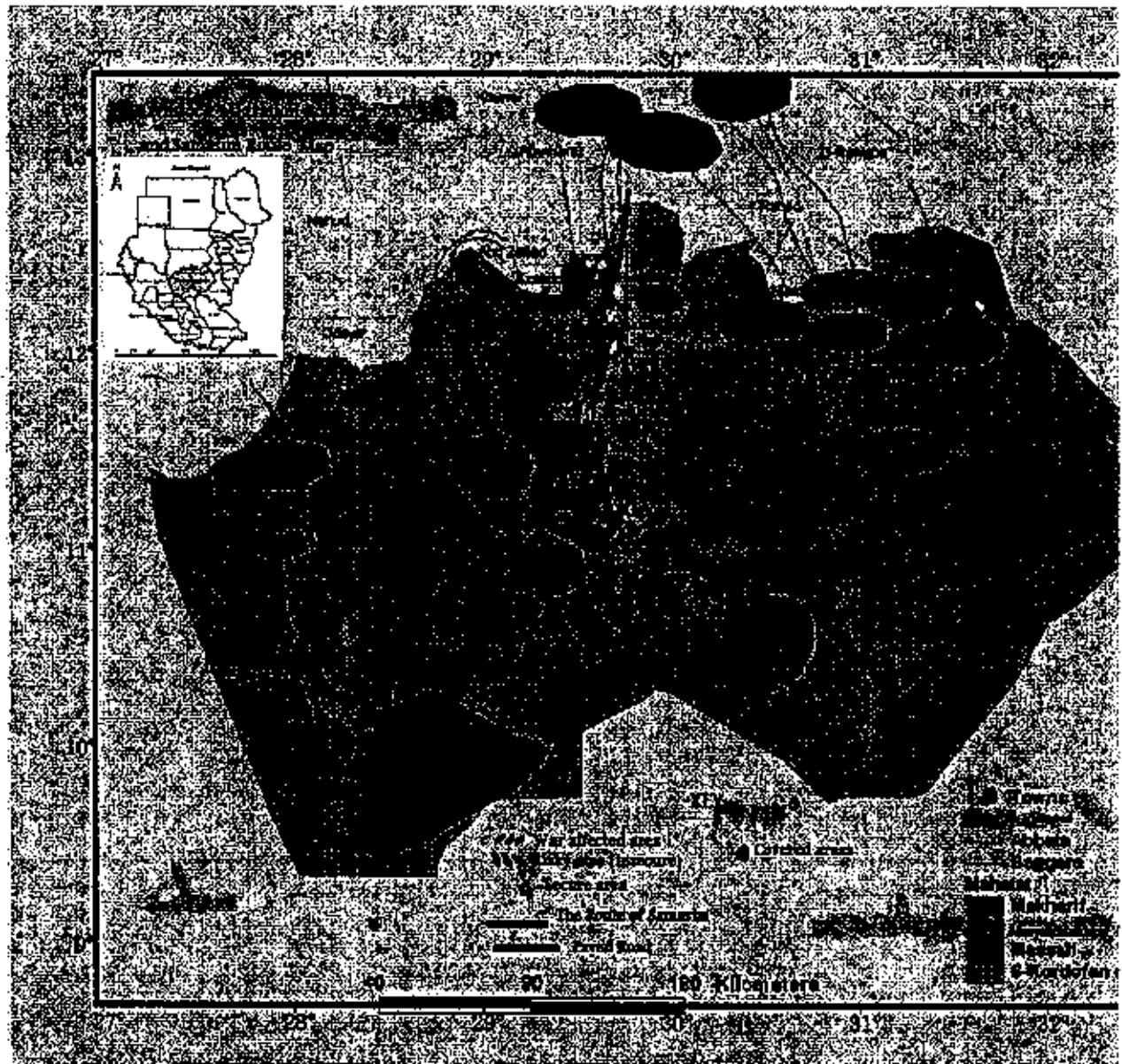
- Shaeer : A village lying to the north of Kadugli used to be a passing and rest area (Nuzukl), and recently is considered as a Masiyaf.

- El Reef El Shargi: passing and rest area (Nuzul) lying between Kurgal and Kiwik.

- El Reef El Shargi : Doshool : passing area in Habilia locality.

- Kurgal: Passing and rest area (Nuzul) headquarters of the Administrative Unit, Habilia locality

Annex (2): A Map



Livestock Migration Routes (Revised by author from a map used by the Department of Strategic Planning, SKS)

- El Gardud El Ahmar : Passing and rest area (Nuzul) in Kurgal Administrative unit.
- Samasim passing area, part Kurgol lHabila locality.
- Tukma passing and rest area, Dilling locality with some of the people saying that it has become a summer and autumn grazing area (Makhraf) as well as Masiayif..
- Hajar El Dalaib : A passing area to the north of Tukma.
- Kirmalay : Comprised of scattered villages making autumn grazing area (Makhraf) Dilling locality.
- Sunjukaya : Passing area (Goz locality).
- Muglad El Obeid : Passsing and rest area.-
- Um Kanyat : Passing and rest area before the expansion of farming at the expense of the route.. -
- Karykiga : Key autumn grazing area (Makhraf).

2:5: Roseires Bados Livestock Route :

The route occupies a central part of Blue Nile State, south of El Roseires, The main tribal groups using the route is Rufaa El Hoi and some Fellata factions, raising in terms of livestock mainly sheep with some owning cattle. With the secure situation in the past, their movement used to take them south of Kurmuk up to Khor Yabus of the Sudan Ethiopian border. The study centered on Bados Administrative Unit, investigating the following 8 branches of the route.

- 1) El Safia – Um Barid.
- 2) Aliuon – Abu Zoar.
- 3) El Dewna – Daiima
- 4) Abu Sidreen – Sayied.
- 5) Abu Sharagrout – Hamda
- 6) Hiefira – baida
- 7) Shantor – El Garif.
- 8) Azawagia – El Zindia.

All of above branch routes disperse to certain locations on the Blue Nile bank, as known watering places Mashara, which used to be 20 meters in width, but with the development of orchard farming, these sites declined to narrower width.

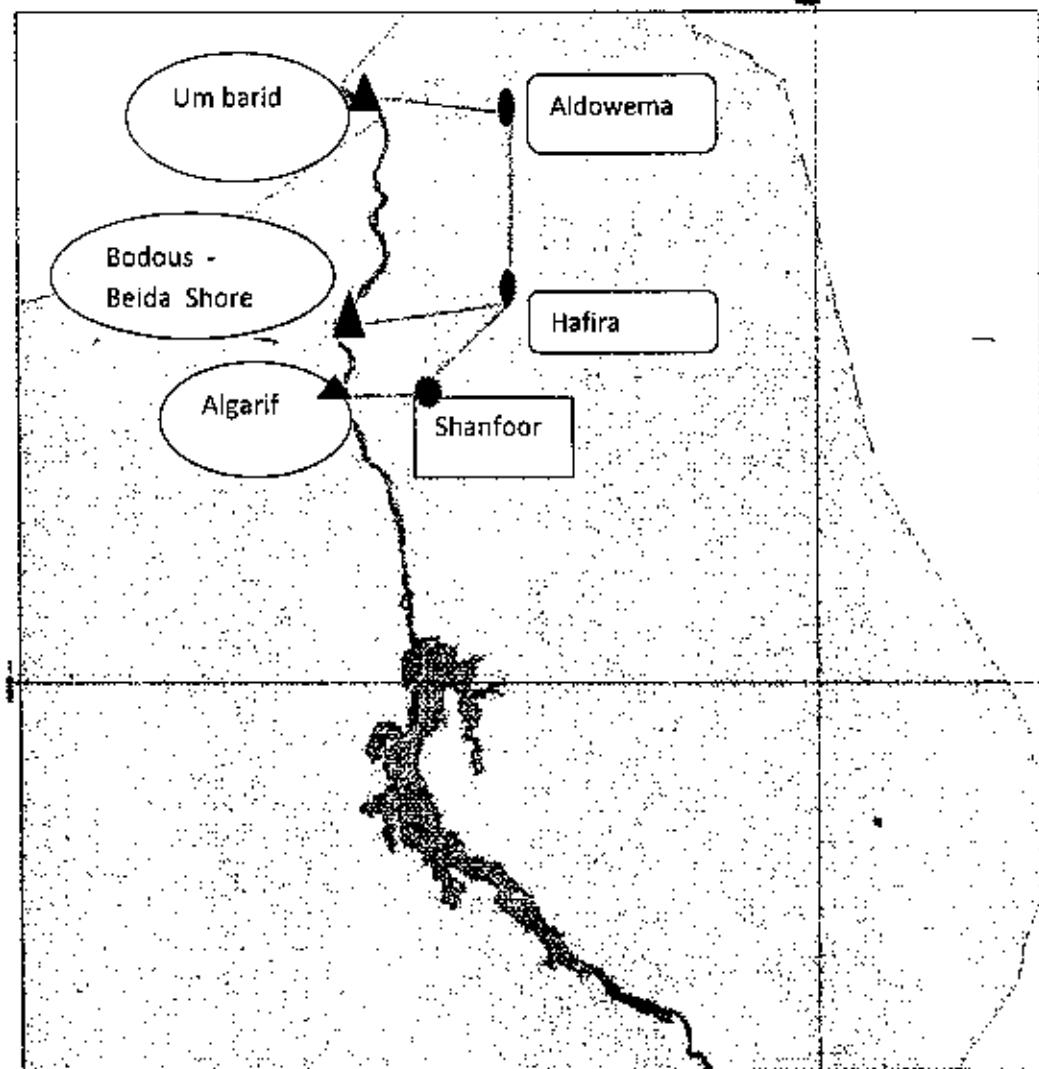
El Roseires-Damazin bridge and Omdurman Fellata, Shamar – Fary sites, present concentrating points on the route.

Besides the expansions of agriculture on the river bank have reduced the available grazing on the routes. The following three branches of the route were studied under the present survey, being the most active ones. Shanfor El-Gerif, Hiefira Baida-el Deama and Um Barid.

These routes are active from the beginning of the rainy season up to December-January with the animals using the expanses of land on the truck road following the uncultivated areas and pockets of forests especially at Um Muhar. The

LIVESTOCK ROUTE ROSEIRES - DOEMA

Roseires -Doema



0 2 4 8 12 15
Miles



general picture shows that cultivated areas are dense in the vicinities of villages making the grazing and lands scattered..

The assessment of the three routes gave the following information by center in the following matrix on population, type of activity and existing services.

Village	Popul- ation	Type Of Activities	Existing Services	Education	Health
1-Badus2	15000	Rainfed Cultivation, irrigated farming grazing	Wateryard, Hafir, hand pumps, river	Primary school for boys, secondary school	1 hospital
2-Baida	3000	Irrigated farming, grazing	Supply mainly from river	Primary school	Cinic
3-El Dowma	1421	Rainfed cultivation irrigation farming grazing	Hand pumps, hafir, wateryard		Cinic
4-Shanfor	1300	Irrigated farming grazing	Wateryard, Hafir, Hand pump	Primarsy school	Cinic
5-Um Barid	4800	Irrigated farming grazing	River, hand pumps	Primary school	Cinic
6-El Garif	3600	Irrigated farming grazing	River – hand pumps	Primary school	Cinic

The 6 sub-migration routes under consideration are pivoted on the Blue Nile River , and centered on the above six villages. The population of the villages is of mixed nature, comprising settled elements, practicing rain fed and irrigated agriculture and passing nomads grazing the confines between villages, and depending for drinking water on the river, and for the other services on existing facilities in the villages.

The nomads have no officially recognized title to the land and their access to resources is acquired by traditional relations between them and the indigenous population of the mentioned villages.

The route is not demarcated and is generally following North-south orientation, running parallel to the Blue Nile River, with movement being constricted by the recent development of farming.

3) Livelihoods Systems:

In all studied routes, the prevalent livelihood system show great similarities, being based on traditional activities of rain-fed farming, and livestock raising, conditioned by the local ecologies and the practiced technologies. Taking the situation by route they show the following characteristics :

3.1.: Habilia – Abu Aradeib.

Livestock raising follows two patterns, of home-based animal keeping by the settled villagers along the route, usually a combination of the two small animals (goats and sheep) with few households keeping cattle in small numbers. The second type is camel herding , being practiced by northern Rezaigat El Mahmeed, who use the pasturage on the murhal in the rainy season in a north-south movement.

Local consultation with the villagers revealed that conditions along this route have continuously deteriorated, affecting relationship, between the animal raisers and the settled communities, due to increased armed attacks and theft resulting in murder. Resident livestock sizes have declined in numbers causing lack of milk and other by-products , observed between Habilia and Krenik.

According to both pastoralists and farmers the economic and social relations between the populations along the route were good, with mutual cooperation between people. With the on-going competition over the resources incidences of skirmishes started to occur, and are being resolved by the traditional system of native administration.

It is a practice that the pastoralists enter their animals into the cultivated land, to graze the crop residues in the beginning of summer according to customary regulations of Talga. The animals using the residues improve the land fertility by their droppings which is welcomed by the farmers. Of the reciprocal relations between farmers and pastoralists in the past days, that the latter leave their children with the farmers to attain schools. Such relations have now deteriorated, as being tensioned by practices like the pastoralists entering their animals into the cultivated fields. In the past the movement on the route was regulated by elders accompanying the young herders and directing the movement of the herds in the grazing land.

Regarding farming, two patterns of crop cultivation are practiced in the area, rain-fed farming on the extensive Goz land, with millet as a main crop, in addition to some minor vegetable crops like tomato and okra, to meet the needs of the household or to sell for cash. The other type is clay soil irrigated agriculture, practiced in wadis, depending on irrigation from wells using the traditional bucket system of (Dalo). Together with this, there exist a kind of winter cultivation on the flood water of wadis, started in October and harvested in June. The main crops grown are onion, potato, and fodder. Most of these crops reach the market and support the cash income of those practicing them.

3.2: Um Leyona Livestock Route :

This migration route operates in part of the cattle complex of South Darfur State, which has an estimated 30 million heads of animals (mainly cattle) accounting for 18% of the livestock population of the country. This made Nyala as becoming one of the largest livestock markets in the Sudan, with the revenue generated from the sale and the market services rendered, as constituting the main financial resources of the localities through which the route passes. The two localities identified in this regard are Sunta and Yassin, given as commanding 182,000 heads of animals of which 86,000 are cattle 49, 000 sheep, 45,000 goats and 2,000 camels.

More than 70% of the animals using this route are raised under the traditional migratory transhumance system. The number of animals owned by the individual household is comparatively larger. The main pastoral groups are Baggara, including Razaigat, , Beni Halba , Taaisha and Maalia, who are continuously on the move between wet and dry season grazing grounds, following the annual rythim of rainfall, spending the dry season in the southern part of the state extending to Bahr El Arab (River Kir) , and the wet season grazing to the north of the railway line. The majority of the sampled population reported that they practice livestock raising and agriculture in settlements along the route.

Livestock particularly ruminants are frequently liquidated into cash to supplement family income. Due to conflkict, a good number of the sedentary farmers has lost their livestock, and are reluctant to restock their animals because of livestock pillage. Accordingly, the share of livestock in family income has become smaller. In fact income derived from livestock is limited to those inhabiting Sunta locality.

With livestock, traditional farming is practiced as a base activity on the route, with 55% of the population practicing it. The farmers grow subsistence crops mainly dukhun and sorghum for household consumption and groundnut as a cash crop, with other minor crops including okra, hibiscus, tomato and watermelon .

With these main sources, there exist some petty trade activities that give income to some families. 97% of respondents own cultivated land with an average ownership of 5 mukhamas and with traditional sedentary farming as the dominant type of agriculture in the state.

The total area under cultivation in the state is estimated as six million feddan, practiced by 1.7 million persons, with the 37% of the farming population in Nyala area. The household is the main production unit with women accounting for nearly 60% of the total agriculture labour force. The technology in use is traditional in terms implements and other inputs. Yields are comparatively low depending mainly on the adequacy of rainfall. Usually the crops produced on the clay soils are for cash generation, while those on the sandy soils for family consumption.

The present pattern of farming is showing changes in land tenure from traditional to commercialized land. Land could be acquired by sale or rent. The current land rent is 400-600 pounds for 1 Mkhamas on the Qoz, and 1500-3000 pounds for a Makhamas on the clay soils. The majority decline selling their land especially on wadi terrain. The second manifestation of the shift to a market economy is the increase in the use of wage labour. Accordingly to examined sources, agricultural wage labour has increased significantly for all agricultural operations

especially for the first and second weeding and for reaping of crops.

3.3: The Eastern Livestock Route :

The survey material generated on this migration route is of limited coverage on the aspects of livelihoods, however remain within the main activities of livestock raising and agriculture. Livestock raising follows two modes: sedentary type of small ruminants (sheep and goats plus few cattle) by the village population lying within the route, and a nomadic type (camel, sheep and goats) using the route, Of the surveyed informants 72% of the population are farmers and agro-pastoralists, while the remaining 28% are categorized as unemployed or pursuing other occupations.

The route embraces different ethnic and cultural groups. Regarding livestock raising the route land is severely affected by environmental degradation, being attributed to increased selling of trees for local fuel consumption, a hazard of which the local community is well aware of. repeated grazing is also reducing the quality of pastures, resulting in the reduction of preferred platable grasses, limited water sources, with their distribution being reported as an obstacle to balanced use of grazing. Sheep and goats are the main animals to be found on this route, mainly due to their adaptability to village residence and the available pasturage..

The livestock numbers on this route are continuously changing due to inadequacy of grazing and the increase in the size of takeoff for selling to meet households needs, besides the effect of insecurity.

Few veterinary services exist along the route affecting the situation of animal health and vaccination coverage. The main livestock diseases reported are those related to sheep pox and black quarter.

Crop cultivation is practiced on the goz sandy soil, with fields size in the order of 5 Mukhamas. The main crops are millet, and dura as staple food crops, with hibiscus, sesame, watermelon and okra as cash crops.

Off farming activities are very few being limited to wage labour.., and the practicing of small petty trade usually practiced by women. Some finance giving committees exist in a few villages, extending funds to women to run their own businesses, especially in trading in hibiscus in Dar el Salam market..

3.4: Samasim Livestock Route :

Along this route the sources of livelihood show great variance between the different localities through which the route passes.

In general, the primary activities practiced are agro-pastoralism on rain-fed clay soils practiced by settled Nuba

population, and cattle raising by Baggara nomadic population. With these, some horticultural activities, and indulgement in mechanized crop farming are practiced; with collection of natural foods, wood cutting plus trading being pursued. The latter is practiced by migrant elements from northern Sudan, as well as by traders of local origin.

Taking the route from south to north the following activities could be portrayed:

- Nuba tribes to be found along the route from, Leri in, the south to Dilling in the north, in villages practicing farming with the breeding of small ruminants (cattle, goats, sheep and poultry with some keeping pigs as well).
- Nuba villages around Kaiga and from Doshad via Kurgul to Samasim dominated by Ghulfan tribes, and from Tukma to Kormalay in Dilling area by other Nuba clans .
- The Baggara and Hamar pastoralists are entrenched in the areas of the above mentioned villages, and using the land for grazing. The Baggara groups including mainly Hawazma and in recent times the Messeriya, besides cattle raising practice traditional agriculture as well.
- The camel pastoralists who entered South Kordofan during the last decades include Hamar, Shanabla, etc... -West Africans including Fallata, Bargo, and Barno,

They are generally settled in villages, and are active in traditional farming, also practicing horticulture and some animal breeding, their presence is observed from Tuvama to Kurmalay up to Sunjukaya.

- Traders, to be found in the the mentioned places on the route and, in sizeable numbers of in towns and the big villages..

Crop farming constitute the main activity, for the majority of the people in the state, practice traditional agriculture as a source of food and for cash. Rains are the main source of irrigation water on different types of soils, cracking and non-cracking in the south and Goz (sandy) soil in the north.

The traditional farming practiced depends on indigenous technologies and systems, in terms of implement in use, grown seeds, accessed finance, etc.. with family labour in undertaking the agricultural operations. The crops raised include dura, sorghum, on the clay soils. and dukhun on the Goz soils. There is also to be found irrigated agriculture of small gardens producing fruits and vegetables, namely lemons, guaffa, banana etc.. and tomato, sweet potato and potato.

Such gardens are developed on naturally conserved rain water or on dug wells. Crossing wadis and the flooded lands on the route present suited places for the development of irrigated farming.. Farming intensity on the route followd

villages settlements, especially those inhabited by the West Africans.

Interviewed pastoralists complain of the increase of farmed land on the expense of grazing, and especially that occurring in Nuzul areas, particularly by irrigated farming. Besides, some parts of the route are fringed by mechanized farming, plus subsidiary activities of Hashab (Gum Arabic tapping) and charcoal and fuel wood production. These clearly feature, as intensive competition over the land resources leading to different kinds of conflict.

In terms of animal husbandry, South Kordofan State constitutes one of the very rich states in livestock in the Sudan, accommodating cattle, sheep, goats and camels under traditional systems of production. 80% of this animal wealth is owned by nomadic population who follow a regular movement with the rainfall rhythm that take them into the adjacent fringe lands of Northern Kordofan State for rainy season grazing (July to October), and to return into South Kordofan for dry season grazing, as from Dilling south, routes up to lands on the White Nile River, (Kaka and Lake No).

Across this long terrain the pastoralists come on settled Nuba communities with their livestock utilizing the grazing available pastures on the route. The livestock is of traditional species, originally raised for supplying the household needs, namely limited amounts of milks and the sale of surplus stock

for obtaining cash. The same is true of the camel raising groups, utilizing part of the same grazing areas. The pastoralists received some improvement in recent decades in terms of water provision, mainly hafirs and dams, developed at some sites, besides organized veterinary services, and using the marketing facilities in the existing centres on the route..

3.5 :El Roseires - Badus Migration Route :

Similar to other migration routes livelihoods center on crop cultivation and livestock raising . The types of agriculture practiced include traditional rain fed farming, some -mechanized rain-fed farming, plus supplementary irrigation farming.

Rain fed farming makes the main source for securing the food supply and generation of cash. The acreage cultivated by households varies considerably between small farmers making the majority of the farming population ranging from 1 to 10 feddans, while large farmers cultivate up to 500 feddans.

The crops grown are dura, millet, and sesame as the main crops, with lubia groundnut and others grown as minor crops. The area cultivated by the household under each crop varies from one farmer to the other, depending on farmers' preference in meeting households needs. No regular crop rotation is followed, however mixing of crops like dura with cowpeas is practiced.

The seeds used in sowing are usually obtained from the market, or from the last year harvest stored at home. Some NGO's operating in the area provide farmers with some certified seeds of different crops. With improved seeds some extension services are also being introduced; however, short of meeting the farming needs of the population hence crop cultivation remains traditional in the area.

Semi-mechanized Rain fed farming is being limited to 3% of the population and individual farms plots are in the order of 100-150 feddan. In this type of farming hired tractors services are used, with financial loans obtained from the Agricultural Bank. The main crops are Dura, millet, sesame and sun flower. The produce from this agriculture is targeted for trade and not for food consumption. There is limitation in access to different farming services.

Irrigated Agriculture : takes two forms, on Grouf land on the shores of the Blue Nile river, being cultivated on the recess of the flood water of the river, or as established orchards on direct irrigation from the river or by dug wells. The total area under this form of farming is estimated at 5000 feddan, with individual farm ownership ranging from 1 to 10 feddans. Under this type of farming more than 70% is occupied by banana crop, with the balance 30% occupied by mangoes, lime, and vegetables. Of the farm inputs the most used is nitrogen fertilizers, with some extension services being provided.

Livestock Raising exists under two systems of agro-pastoralism practiced by most of the villages in the area, raising mainly sheep and goats under a management system of fencing animals during the night and letting them free to graze the available pasture near the villages in day time. The raised animals are short in milk supply to meet the household needs, being mostly kept as a source of cash.

The other type of animal raising is by nomadic pastoralists of Rusaa El Hoi and some factions of the Fellata, concentrating on Badus Administration Unit; with about 41% of them registering at Badus Council. They own an estimated number of 1,500,000 heads, roaming in the area during the dry season and watering from the river. Some of these nomadic groups operate from fixed hamlets, where their homes and fodder storage places are to be found. During the rainy season they move out of the area for grazing in the northern part of Abu Huggar Rural Council ,with some crossing to El Kajamir grazing area on the White Nile between Kosti and El Jabaleen.

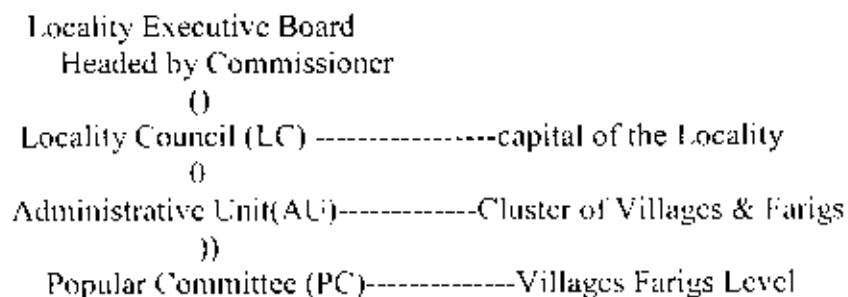
4: Administrative Systems :

These can be generally described as applicable to all studied routes since administration in rural Sudan is founded on the same principles . There are two administrative systems (formal and informal) . The two have come through successive developments, regarding their structure and functions, which

are being stipulated in the Local Government Administrative Rule of 2004, showing the following interlinked tiers. At the bottom there is the Popular Committees (PC) operating at villages level and nomadic camps, and at the quarter level in urban places. The members of the (PC) are directly elected for a term of two years. The PC is accountable to the Administrative Unit making the second level in the hierarchy of the administration system. Up of the Administration Unit is to be found the Locality Council in both rural and urban areas. Members of the Locality Councils are also freely elected, however for a term of four years. The number of the representing committees at the Locality Council level is based on the size of the population of the locality area, this elected body has a director and deputy director, with each locality run by an executive body, headed by an executive Officer See the following diagram)

Current Structure of the Locality

Governance, 2004 Local Act:



The above constitute the formal system of the administration. The informal system is constituted of the native administration. It has at its roots the tribal structure, with its base in village Sheikh organizing the life of the local communities; as developed by the Condominium Rule with creation of the upper tiers of Omda and Nazirs. Its roles which persisted from previous times into the present, center on the management of rural resources (including lands, forests water, etc..) and animal tax collection, security and settlement of conflicts).

The capacities of the traditional system has been severely weakened compared to the past times; and is presently function under severe pressure, which is due to the following factors :

- Loss of power of the traditional leaders due to erosion of their economic and political influences. Up to now the native administration has no recognizable law to legitimize and regulate relationships with the other government structures.
- Many of the inherited historical powers of leaders, especially in relation to lands, natural resources management, environmental conservation and conflict resolution, have been taken by modern government structures.

- The emergence of new political forces led by educated youth, who are explicitly contesting the powers of traditional leaders.
- Changing value system, especially among the youth, under the current processes of expanded modern education, globalization and information flow of new ideas.

There are gaps in the above structures which are seriously impacting on their expected performance in the management of community affairs, that need to be pointed out. The popular committees though representing the villages at the grass-root level, they do not supercede the authority of the village sheikh nor do not contradict his mission, for the committees respect the opinion of the sheikh particularly in regard to issues related to land ownership and its utilization. None of the above mentioned bodies under the two administration systems enforce the law which rests with the police, the judiciary, formal and informal, especially in the handling of disputes and conflicts, with the native administration having an effective role in problems solving and direct through mediation with tribes members. This role extends to other civil and social entities, like Farmers' Union, Pastorals Unions, Youth, Women and students bodies, where such exist.

It is recommended that the roles of the figures of native administration especially Amirs, Omdas and Sheikhs be more strengthened, to play the following functions :

- Maintaining the tribes boundaries with other neighbouring tribes.
- Building strong social structures among the sub-tribe and keeping them unified.
- Promoting linkages and external relationships with other tribes.
- Enhancing local security situations.
- Representing the tribes in the engagements with the state and federal governments especially on issues related to socio-economic development and political aspirations.

5: Causes of Conflict and Resolution Mechanism

5.1. General Characterization and Impacting Conditions on the 5 Routes :

The 5 routes lying in different ecological zones share some common characteristics. As known, livestock movement under pastoralism is being shaped by the seasonal availability of grazing, which entices livestock raisers under the system to move from one area to another (rainy season to dry season grazing area) in search of available pastures. This movement was free in the past with a abundance of usable land for farming and pasturage and under

facilitating elements, including smaller population of humans and livestock, limited spread of settled population in villages, and well controlled cultivation under effective native administration system and harmonious relationships between tribal entities, settled and nomadic. All of these conductive elements decayed in time leading to adverse conditions in all of the studied routes. In listing adversities that are impacting with different degrees on the covered routes, mention is to be made of the following :

- 1 – Shrinkage of grazing areas on routes, as a result of climatic changes and the occurrence of droughts and progressive desertification, well exemplified by the cases of Dasur routes. These, with encountering increases, in livestock numbers, have lead to unbalanced grazing use of the available ranges lands.,
- 2 – The expansion of settled population taking the form of villages, accompanied by uncontrolled increase of cultivations, taking different forms of traditional irrigated and mechanized farming, have diminished natural grazing land and reduced the access of pastoralists to resources, laying the seeds of conflicts between the two groups.
- 3)Movement of outsiders population into other tribal domains, being forced by the dilapidating conditions in their own land, adding to the imbalanced conditions in the available grazing resources frequented by the visiting nomads.
- 4) Internal and external upheavals caused by massive population movement arising from droughts, local conflicts and wars, as in the

case of political unrest in Tchard that sent large population with their herds into Darfur. It is often quoted that the population of Darfur increased from 4 million to 7 million. With the increasing populations movements, acquisition and use of modern fire arms have become phenomenal in the trespassed areas for forcing a new existence and for self-protection, with the recipient population in the affected areas counteracting by owning arms.

- 5) With such general confusion in local security situation, there occurred weakening of the native administrative systems which used to be in control of local land resources and the maintenance of harmony and security between the different population groups
- 6) The existing systems have been subjected to many changes part of which are by direct government policies, like redivision of tribal domains and giving rights to new population entities that have been rejected by the original owners of the lands, fueling more the recurring conflicts.
- 7) By early 2000 the local upheavels have been politicized under the slogan of unjust sharing of power and wealth, and marginalization engulfing the three areas of Darfur, South Kordofan and the Blue Nile State, with the promoters of the issues taking arms and fighting the government. Their causes have been picked up by the SPLM resulting in mixed agenda in the political realm of Sudan, with wars still continuing between these movements and the government, adding to the already flaring situations.

8) The unplanned use of lands as in terms of allocation for different purposes with forced acquisition of new rights due to poorly founded government policies, as in the case of mechanized farming in South Kordofan and Blue Nile states or by power of wealth as in the case of development of orchards lands in the case of Blue Nile State, have all created drastic changes in access to land resources and inequities.

9) Nomadic groups through time have received little attention by the successive governments, regarding demarcation of their grazing domains, improvement of the grazing resources and the services pertaining to their development (livestock marketing, provision of water supply, education, health etc..).

10) The gaps caused by the decay of the native system have been in some areas made for by newly created local institutions to address ensuing problems in different fields of conflicts, taking the form of committees, councils, etc.. and sometimes merging with the local and official government institutions. Some of these have proved to be effective, with others needing strengthening and improvement. Of the presently accessed services the majority have been originally developed for the settled population, and are shared by the nomads in the places they pass by.

On the above situation there has come the (SPBDP), with the overall development objectives of promoting sustainable livelihood systems, by informing legal and policy reform processes in land rights, coordinating existing conflict management

mechanisms, and implementing direct programmes, interventions, designed to consolidate alliances among community stake-holders around shared interests.

5.2. : Conflict Issuesd and Resolution Mechanism :

5.2.1. : Abu Aradeib Route :

= Conflict sources centered on

- Competition over the use of natural resources.
- Politicization and weakness of local administration.
- Tribal disputed and reprisal.
- Narrowness of route and difficult access of animal to grazing along the route.
- Trespassing of pastoralists into agricultural land.
- Lack of government experience in the handling of conflict along the route
- Rapid transition to market economy and the consequential encroachment on grazing lands causing the blocking of pastoral routes.
- The absent to the Hakoura system of land ownership.
- The drawing of administrative boundaries on technical basis implying the transfer of land from one tribe to another.
- Erosion of local community governance caused by dissolution of the active system, with leaders being

politicized and manipulated against their own people since the start of Darfur conflict in 2003.

- Unbalanced use of the existing water resources due to poor planning.
- The spread and use of fire arms in settling conflicts.
- Wide acquisition of illegal weapons combined with excessive using of such weapons to settle disputes.
- Climatic and ecological changes causing instability of seasonal movements, coupled with farmers expanding their cultivation into the route.

5.2.2. Um Leyona Livestock Route :

The causes given for the asrising conflict include :

- Competition over land and natural resources , rapid growth of human and animal population under increased conditions of climatic vulnerability land environmental degradation.
- Instability o implement signed agreements.
- Wide acquisition of illegal weapons combined with excessive using of such weapons to settle disputes.
- Climatic and ecological changes causing instability of seasonal movements, coupled with farmers expanding their cultivation into the route.
- Regarding conflict resolution mechanism of the ones mentioned is the formulation of a local administration

committee under the name of Abu Dhya-Habila and Azirini Committee to deal with conflict. This committee involves farmers and pastoralists belonging to 7 tribes living in the area. The committee role is to separate conflicting parties through application of customary law. The committee members being interviewed, thought that this approach is successfully working in handling conflict situations.

- As to the mechanism applied to resolving conflict these cover :
- Native administration efforts and Godiya system, being mentioned as the most common mechanism. Peace Committee (Rakouba) and courts were also mentioned.
- Prominent in this concern is also the Nomads Development Commission, with a board comprised of sectoral experts and influential members with tribal connections and familiarity with nomads issue.(Lagant El Hakoma) (Wisemen Committee), also referred to as the Agricultural Committee, established at each village along the route, to mitigate conflicts between farmers and pastoralists.
- The noimads forum for peace and social existence, as a non-governmental organization registered under the

Humanitarian Act Commission (HAC) which in its workings brings in conflicting groups of and traditional leaders.

5.2.3. The Eastern Route (El Murhal El Shargi) :

The causes of conflict on this route go to factors of a severe competition over usable land resources for settlement grazing and cultivation. Also, over the available services, especially water supply. Coupled with these is the weakness of the institutions catering for conflict resolution as complicating the situation further . Of the first factors according to people interviewed is the persistence of the Hakoura system, i.e. ownership of traditional land by certain families or population groups, with successive inheritance passed from generation to another .denying accommodation of new population. From the Survey 79.6% of individuals claimed owning their land through the Hakoura system as being of the same ethnic group. The remaining 20.4% stated that they hired their land from Sheikhs.

The native administration guards the system of land ownership with conflicts arising over the applied legalities. The conflicts arising over grazing resources emanate from the existence of two animal raising modes under two management systems. While the settled villagers raise sheep and goats being adaptable to grazing in the vicinity of

villages, the nomads raise the two animals, camels and a few cattle, mostly observed in the southern part of the Murhal, with variation in the management systems of the two types.

Regarding the availability of services, the types mostly existing are water supply facilities in the form of hand pumps with few tube wells at the main centers along the route. The water supplied by the existing sources is short of meeting the population needs.

This forces households members, to enter the villages searching for water, which often leads to conflict between the pastoralists and the settled communities. The difficulties caused by inadequacy of water are also featured in long walking distances to water sources, leading to death of animals especially the small ones, with contamination of water sources also occurring causing animal and human diseases. The other services available are health clinics and veterinary centers, and weekly markets.

Resolution Mechanisms include Local Government founded councils and native administration institutions (Villages Sheikhs and Omda) as the mechanism involved in resolving conflicts.

To address conflicts over the Talga grazing, (left over from cultivated fields) a Farming Protection Committee is being established by the Farmers' Union to manage the dispute

arising from the expansion of cultivation and the regulation of the Talga timing.

The Doha documents on peace in Darfur (DDPD) signed in July 2013 provides a comprehensive framework for peace and development in Darfur, for it includes establishing local government structures and rebuilding institutions for effective immediate and long term recovery of livelihoods for individuals and communities affected by conflict.

Other recommendations made by the study group on future improvements on this route cover :

- i) Demarcation of the route by erection of signs that clearly indicate its direction and width.
- ii) The route width lis to be reviewed and widened.
- iii) The pasture lands are to be delineated, protected and rehabilitated.
- iv) Regulation of the usage of the route by a mobile security force.
- v) Provision of services especially water along the route.
- vi) Of the existing bodies involved in resolving conflict (CBO's) are to be consolidated.
- vii) Promotion of peace culture between the settled cultivatdors and the pastoralists.
- viii) There is a need to encourage INGO's to indulge in the area.

5.2.4. : Samasim Livestock Route :

Conflict sources on this route have their roots in the following

- Conflicting interests over access to resources by two competing economies, crop farming and livestock raising.
- Historically inherited animosity between different population sections, the Arabs (Baggara including Hawazma, Misseriya and Maalia besides the camel raising tribes : Hamar, Shanabla and others, and the Nubas. The three groups, being of different cultures live in antagonisms over land ownership.
- The absence of land use planning to organize land rights and give recognition to different parties over the land resources.
- The political spirit in the area in fueling conflicts, especially by the educated elites from both sides, without strong and effective community based bodies to reconcile the situations of conflict.
- Burning of pastures to drive animals away from farms causes increased competition over the available grazing resources and maximizing conflicts.
- Killing of herds by some unknown people, as a new incidence provoking conflicts.

- Weakness of native administration to address conflicts due to eroding socio-economic factors, and local differences between native administration figures and educated elites in the communities.
- Weak and inactive state legislation regulating the use of natural resources.
- Deterioration of the economic situation of the population, causing wide spread poverty, especially among the settled communities along the route.
- Increasing frustration with the pastoralists using the route especially in Nuzul areas.
- Wide use of arms infiltrating in the hands of different communities especially with the ongoing war in South Kordofan State.
- Resolution Mechanism : The mechanism of settling conflict include :
 - Direct community interventions through Godiya organized by community members to mediated between persons and group.
 - Native administration courts through judiciary processes, being active at administrative unit level regarded as key actors in conflict resolution.
 - Crop damage estimation committees at villages, passing decisions compensation to affected farmers.

- Tribal conferences and workshops convened to resolve outstanding issues on a wider scale, with the roots of problems going back to farming, part of this is aggravated by climatic changes and environmental degradation.

5.2.5 : El Roseires – Badus Livestock Route :

Along this route the basic features are settled villages with their cultivated expanses of land , being crossed by mobile livestock raisers, grazing the empty spaces between farmed land in the vicinity of villages and the surrounding rangeland and targeting the Blue Nile river for watering their stock.

Conflicts occur in this route as a result of encroachment of nomadic livestock into farmed land , especially at Talga time to graze crop residues. Also as a result of competition by the pastoralists to access sites for establishing settlements and cultivation. In the 1970s there was an effort by the Blue Nile State government to give the pastoralists sites along the river to set their villages and develop their cultivation, however the nomads groups were not prepared at that time to pick this opportunity. Later on they came in an open conflict with Abu Gemi Farmers' Union (Southern El Roseires IFAD Agricultural Project) in denying this right.

Relations between the settled population and the pastoralists were in harmony, showing cooperation like in livestock owned by the villagers being taken for rainy season grazing by the pastoralists in their north-ward movement, and by children of the pastoralists being accommodated by villagers in local schools.

The conflicts are resolved by the local administration, (formal) through local government councils organs and (informal) through the native administration. Sometimes government official bodies like Department of Range and Pasture also intervene in estimating crop damage for compensation. In recent years the Pastoralists Farmers Union from its office at Damazin also playing an effective role in reconciling conflicts.

6) Cross Cutting Issues

Two study aspects under the above title, women and youth, are being treated, under three of the five migration routes.

6.1.: Habilia-Abu Aradeib Route :

No treatment of cross-cutting issues undertaken by the study.

6.2.: Um Leyona Livestock Route :

6.2.1: Women :

Gender relations along the migration route are not different from women position in Darfur, applying to both

settled and nomadic groups. Early marriage for girls is widely spread, especially among the nomads, due to the prevailing opinion that girls once reaching puberty are to be married.

Marginalization of women and youth is very high in this society, for the main reason of male dominance in access of resources in the two types of economies. More than 70% of women do not own land, yet providing the labour needed, equally they do not have access to credit. Most women are uneducated hence not involved in development plans and policies, besides no access to information and training. To improve on the production activities by women, they need to be organized and given access to resources, agricultural and technological inputs and to undertake businesses.

6.2.2. : Youth :

Youth are a very volatile social group in Darfur. With the conflict prone environment many young people have missed formal education, without employment opportunities to sustain their livelihoods and help their families,. Interventions are to be developed to assist youth to undertake basic businesses, through giving them vocational skills and access to credit. Agriculture and pastoralism have limited absorption capacity to engage youth. 59% of the youth are reported to be engaged in conflicts Initiation of small projects and training, are being pointed as effective means for achieving social changes

and development progress, especially among youth and women.

6.3. Eastern Route :

6.3.1. : Women :

Generally dominated by men, though playing important roles in all aspects of family life, domestic and production responsibilities. Some women centers are being organized in some villages to raise women awareness about their rights, and to participate in some programmes to improve the livelihoods situation.

6.3.2.: Youth :

They are in unstable situation between the pulling forces to urban areas and the pushing forces out of the rural areas. Due to lacking of employment in rural areas some entered the movements. It was reported that some of the youth in Dar Es Salam Locality engage themselves as volunteers in UNDP Livelihoods Programmes and in gender issues in collaboration with El Fasher University.

6.4. Samasim Livestock Route :

6.4.1. Women :

On the general assessment of women's depressed situations in most of rural Sudan the case in this migration route is not different. Girls education lacks behind compared to boys especially among the nomads. There are some efforts adopted

by UNFPA in different areas along the route in Kiwik,, Kurgol, Dilling and Dibeibat to promote gender equality by empower women through enabling institutional and socio-cultural environments, so as to ensure women right and eliminate gender-based violence. Such efforts can be further developed to enhance women participation in peace building and development through training workshops on advocacy, management of small projects and GPV on the main centers along the route: Kiwik, Kurgol, Dilling, and Hamadi.

6.4.2.: Youth :

No treatment of this aspect undertaken by the study.

6.5. : Er Roseris – Badus Livestock Route :

No tackling of this aspect given under the study.

7. Communication :

7.1: Habilia – Abu Aradeib Livestock Route :

Interviews were conducted with NGOs workers community leaders, women and youth, about the kind of information they liked to acquire, and the type of radio programmes they liked to listen to, and the livelihoods they want to have information about.

Generally, the people on the Murhal suffer a huge information gap about improving their livelihoods situations.

Of the two kinds of populations the nomads reported poor access to information.. Radio is the most accessed and preferred channel for receiving information.

NGO's have been trying to communicate information with regard to their implemented projects on peace building and livelyhoods through different communications means traditional methods, public meetings and community mobilization.

Interviewed NGO's workers stated that radio is the most effective means in the cycle of information giving. In this connection, youth in the community showed interest in gaining information on issues of improving their livelihood in areas like micro-finance funding. As to women, though having great home responsibilities, in cultivation of land, collection of fire wood, dealing with natural resources, tending animals, fetching water and while needing community services, especially health, they live a huge information gap, with regard to all these aspects, due to absence of directed programmes and non-existence of media channels. Of such, radio is the most accessible media channel in reaching the rural areas. TV is accessible in the urban areas and some of the rural centers. News papers are the least accessed, due to their presence only in Khartoum with long distances to reach such places like Darfur, added to that high illiteracy among the

population, and also being considered as untrusted source of information. Women are reported as poor users of radio compared to men.

BBC Arabic is the most credible source of information. Other channels listened to are Omdurman Radio, Dabanga, Radio Alia Darfur, Quran Radio and Community Radio. Mornings and evenings times are the best times to listen to radio. Preference programmes are: news by those of 40-50 years of age, who also like to listen to religious programmes. The youth have interest in music (local songs), sports and culture programmes. Directed development programmes are not run in local stations. Drama is also preferred, but it is broadcasted from time to time. Listeners preferred material in local Arabic that have roots in their area environments.

7.2. : Um Leyona Livestock Route ::

Nyala Radio belongs to South Darfur State Government. It was established in 1983, and covered most of Darfur region, in addition to parts of Chad and Central Africa Republic. The station broadcasts daily for six hours throughout the week. Arabic is the main language in use. The programmes contents vary between music and talk including children, social, cultural, political programmes and news. It also cooperate with NGO's in producing

programmes of interest to NGO's. It has two editorial meetings, one daily and the second weekly, to review and set plans. It has two equipped studios, one for recording and the other for broadcasting.

The findings on the issue of communication on this route tried to give focus to the conflict situation in the media programmes, under the radio activities, including the following :

- Investigation of the key causes of conflict by collecting information and dissemination of outcomes to inform respondents.
- Robust mediation on peace building by local religious persons and community leaders.
- Training of local leaders and forming of mediation bodies.
- Organization of campaigns discouraging the use of arms.
- Support the peace building committees and native administration leaders along the livestock route to solve different conflicts.
- Raising the awareness of the pastoral nomads communities to keep good relations with the farmers to reduce conflict incidences.

- Provision of information about livelihoods opportunities. In this regard radio is considered as the best means of communication.
- Bringing together NGO's working in South Darfur specially with the nomads in forums to design messages and programmes that could enter the communication radio.

7.3.: El Murhal El Shargi

No treatment of this study aspect.

7.4.: Samasim Livestock Route :

Information circulation to communities is highly dependent on activist from youth, community and women leaders, and learned people in different institutions, to circulate information to reach both the farming and pastoralists communities. The information most relevant is that on pastures aspects robbery, banditry and the severity of conflict. The weekly markets also enhance access to information. Mobile phones as a modern technology strengthen information giving between individuals and groups.

Kadugli Radio Station is an effective communication media in South Kordofan. Before the eruption of war, the station was working under the slogan (Radio of love and peace) presently the slogan is changed to (Radio of Rehabilitation and Development). The station coverage extends to the Southern part of the route namely El Hamra Kadugli and eastern rural council (Kiwik area).

The northern part of the route embraces Dilling Locality (Tukma) to (Kurmialay) and the 'Goz Locality, which fall within the coverage of El Obeid North Kordofan Radio.

The language used in the programmes is Arabic, with some local languages of Nuba tribes to send messages to local communities. The run programme include music, talk, political programmes, local news and religious programmes, with some peace messages being touched upon. The Kadugli Station is technically well equipped, and covers a distance of 45 to 50 Kms. It presently broadcasts for six hours.

The station attracts a high audience, due to that some of the programmes focus on community culture, using local languages, with some also being directed to peace building, cultural diversity, through what is called (Community Radio) Through this programme about 14 local language are being in use, of Nuba tribes. Hawazma and Fellatra etc.. Many of the programmes are oriented to peace building and development. Men are the main audience because they own radios while women are the less media consuming especially the nomads in the route for their lacking of the radio facility.

Community radio is believed to be the most successful programme for it provides entertainment and community mobilization for peace coexistence, Drama is recommended by the station experts for it attracts audience in different communities, especially materials that relate to common people daily interests.

7.4.: El Roseirs = Badus Livestock Route :

No treatment of this aspect is given by the study.

8. Routes Demarcation :

8.1. : Habilia I- Abu Aradaib Livesdtock Route :

Only the following recommendation is given :

Demarcation of the route with signs that can be seen and widening of the route.

8.2: Um Leyona Livestock Route :

The benefits of route demarcation are immense. It contributes in removing a major cause of conflict, by allowing assured seasonal passage of nomads enabling the improvement of pastures and providing needed services, according to the priorities of the community. Route demarcation will promote harmonious relationship between the settled people and the nomads, by defining the rights of both. This will reduce conflict situations and enable the conflict resolution mechanisms to operate more strongly, according to recognizable rights.

Detailed demarcation of this route will cover 115 Kms, starting in Blail Locality in South Darfur as from Remella, Kabeibi village, extending into Yassin Locality, and ending near Um Sunta Itown.

As mentioned, water supply facilities need to be provided on the route, with identification of sites for water provision, to be worked out by the beneficiary communities. Concern is also be given to solving environmental problems along the route, regarding pasture, acquisition of land, improving livelihood etc.. by designing programmes that meet these requirements.

8.3. The Eastern Route :

No detailed tackling of the demarcation aspects given in the study.

8.4.: Samasim Livestock Route :

In demarcation of this route, characteristics of the route need to be taken into consideration.

- From El Hamra to Kadugli, the route passes through war affected areas, where the insecurity situation is very severe, an area of 45 Kms from Kadugli to Kiwik via Shaeer.
- After above area the security situation is to some extent better because the route runs in conformity with asphalt road, a distance of 17 Kmss.
- From Kiwik to Samasim (a mountainous area) the route follows the petroleum pipeline, a risky area affected by insecurity (about 75 Kms).

- From Sanasim to Tukma the area witnesses some insecurity incidences (about 25 Kms).
- From Takma to Kurmaly no insecurity is reported (about 20 Kms).
- From Kurmaly to Gabrus through the Goz locality the areas is secure ..

The ecological conditions on the route vary considerably, in terms of topography, soil, rainfall, water resources and vegetation diversity. In the southern part of the route to about Kurgul and near Samasim, the area is rich in pastures and suffices herds needs all year around. From Samasim to about Tukma and Kurmalay the area has sparse pastures which improve during the rainy season.

- From Kurmalay to Gabrus the area has less pastures, being affected by environmental degradation.
- The stake-holders interviewed along the route (community leaders, native administration, pastoralists and farmers, as well as the official authority, have all affirmed their acceptance of the demarcation of the route. Key actors of the demarcation process may be listed to include :
 - Ministry of Agriculture, namely Department of Pastures and Fodder.
 - Native administration, leaders of farmers and nomads..
 - Representatives of local government authorities and

Security committees.

In the processes leading to the demarcation the following is to be taken into consideration :

- Coordination with native administration leaders and local administration bodies.
- Holding of workshops and conferences with stakeholders to come with an agreed plan of demarcation.
- Giving consideration to rest areas and Makharif and Masaif places.

8.5. : Roseires – Badus Livestock Route :

The demarcation question is not being treated under this Ma route

9: General Recommendations :

9.1.: Habilia – Abu Aradeib Livestock Route.

- Improvement of animal health facilities along the route to combat and control annual health diseases. Youth can be involved in providing the needed services through vocational training and capacity building.
- Provision of needed services and upgrading the existing ones of water supply, education and health.
- Agriculture needs also to be developed through provision of inputs (tools, seeds, crop protection, etc..) with the availing of micro-finance.

- IDP's are to be specially targeted under such programmes.
- Pastures need to be improved through rehabilitation and conservation.
- Strengthening of the role of the native administration and other bodies, including committees to resolve conflicts.
- Promotion and encouragement of peace culture.
- Development of communication through the use of effective media channels, with research findings dissemination on different problems be communicated.

Attraction and encouragement of INGO's to indulge in the projects activities.

- Under communication, to train community members on livelihood improvement aspects, using local cultures in extension substances.

9.2. : Um Leyona Livestock Route :

The recommendations given center on the following:

- In agriculture, improvement of agriculture beyond the subsistence level, through transfer of technology and extension services, with extensive use of water harvesting for agricultural use, to evade failures caused by climate changes and compating crop loss caused by pests through

provision of proper crop production services, with involvement of the farming committees.

- The project is to intervene in organizing local producers and providing them with the needed inputs through special programmes to develop them into viable organizations, to increase incomes from farming and livestock activities.
- This shall require adopting proper technologies, training skills, access to micro-finance system and development of marketing infrastructure.
- In the field of environmental conservation, to raise people awareness in handling the environment resources, by proper conservation means, including rational keeping of trees and for gum-Arabic production and energy needs.
- - Access to safe potable water, by initiation of programmes, especially in Blail, Sunta and Um Leyona, through implementation of water harvesting systems, and installment of waster facilities, by means like construction of dams and water bonds, to reduce the distances of accessing water by communities. To attain hygienic supplies, committees need to be trained in water management aspects, with provision of the required control means, like chlorine supplies with regular testing of the water sources to assure a high level of a hygienic. Under health and sanitation, the project is to exert efforts in the promotion of environmental health activities,

especially for women to prevent acute watery diarrhoea and other common water born diseases in the three localities, involvement of all community members.

- Another programme to be provided for is the construction of hygienic latrines and waste disposal facilities , with hygiene promotion teams to be instituted in the three localities..
- In education, schools are to be constructed with permanent building materials, and with technical education to be provided.
- In marketing, to develop effective marketing of agricultural and livestock products, through promotion of crop production, development of edible oil processing and improvement of livestock quality.

9.3. El Murhal El Shargi.

The recommendations given include :

- Improvement of agricultural production through provision of inputs, including proper technologies, and attention and training in environmental conservation.
- Provision of mobile livestock clinics , to cater for animal vaccination and treatment of animal diseases.
- Availing of animal rest places along the route, by reconsidering the existing places and provision of new sites.

- Construction of two health centers at Graywid Maraseen and Goz Bainna with health cadre and drugs, to be provided from El Fasher and Dar Es Salam.
- Construction of basic schools at Gogogo, Jebal Banat, Gaour, and Hilat Abdel Rasoul.
- Conducting workshops on conflicts analysis and management for the committees of the two localities.
- The project is to be organize awareness campaigns to people, moving on the route on the importance of trees and the use of innovative energy saving devices.
- In collaboration with UNESCO and WES the project is to look into the construction of hygienic latrines.

9.4: Samasim Livestock Route :

Due to the on-going war in South Kordofan, there is a high sensitivity by the local people and the government organs, towards the initiatives supported by foreign aid and INGO's agencies, which needs careful manipulation with government institutions and IIAC. Also the present insecurity condition along the route need to be taken into consideration. The recommendations made are as follows :

- Enhancing coordination with relevant government institutions, mainly the Department of Range Management and Pasture.

- Organizing conferences, and workshops on capacity building and awareness, land use training courses, in land ownership and management resources, conflict resolution skills, peace culture for peaceful coexistence, using the dialogue approach..
- Capacity building of conflict resolution mechanism, including native administration figures, development committees, women leaders, with a strong involvement of nomads representatives.
- Coordination through enhancing relationships between Pastoralists and Farmers' Unions, and between native administration and formal courts.
- Activating laws and regulations through reforming and empowering the states legislative bodies, especially in the area of regulating the utilization of natural resources.
- Demarcation and opening of fire-lines to protect and conserve pastures.
- Promoting the role of the state radio, to deliver programmes on peace building, and development of the local economies.
- Provision of services (water supply, health, education etc..) with the rehabilitation of existing facilities.
- For the development of livelihoods, expansion of gum-Arabic production in the area along the route.

- Building awareness about small businesses, and developing linkages with financial institutions to improve incomes of both farmers and pastoralists.
- Development of marketing infrastructures.

9.5 : Er Reseries – Badus Livestock Route :

No recommendations given.