

SECS
(Sudanese Environment Conservation Society)

**Eco-Peace and Natural Resources Management
in North Kordofan State (NRMP)
Shikan, Um Ruwaba, and Bara Localities**

By

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Contents

Details	Page No.
I) Background of the Project :	1
1: General	1
1.1. Title of Assignment	1
1.2. Client	1
1.3. Consultant	1
1.4. Date	1
1.5. Terms of Reference	1
1.6. Organization	2
II: Basic Information about the Project Area	5
2.1. Location	5
2.2. Geology and Water Availability	6
2.3. Soils	7
2.4. Climate	7
2.5. Land Use	9
2.5.1. Crop Farming	9
2.5.2. Livestock Raising	14
2.5.2.1. Village Based Livestock	15
2.5.2.2. Nomadic Livestock.	16
2.5.3. Gum Tapping	18
2.6. Population Out-migration (in pursuit For employment)	19
2.7. Poverty Assessment in the Project Area	22
III: Launching the Project.	23
3.1. NECS Team Visits to the Project Area	23
3.1.1. Meetings with Concerned Bodies	24
3.1.2. Organization of a Three Days Workshop	24

3.2. Environmental and Eco-Peace Issues	25
3.2.1. Exploration	25
3.2.2. Possible Interventions to Address Ecological Degradation.	28
3.3. Crop Farming	29
3.3.1. Impacts	29
3.3.2. Possible Interventions to Upgrade Performance of Crop Farming	30
3.4. Gum Production	31
3.4.1. Impacts	31
3.4.2. Possible Intervention to Rehabilitate the Hashab Tree	32
3.5. Livestock Raising	32
3.5.1. Impacts	32
3.5.2. Possible Interventions for Promoting Livestock Raising	33
3.6. Water Supply	34
3.6.1. Present Situation	34
3.6.2. Possible Interventions by the Project	35
3.7. Livelihoods	35

IV: Implementing the Project	36
-------------------------------------	-----------

4.1. The Three Chosen Villages as Key Implementers of the Project.	36
4.2. Characterizing the Three Villages	37
4.3. Information about the Villages	37
4.4. Village Priorities	38
4.5. Social Action Programmes	41
4.6. The Project Partners	43

Bibliography	45
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Annex (1) Maps	48-60
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Annex (2) Survey Data on the Three Villages	62-
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1) Background of the Project :

1. General :

1.1.:Title of assignment :,

**Eco-Peace and Natural Resources Management –
Kordofan Project.**

1.2. Client :

Sudanese Environment Conservation Society (SECS).

1.3. Consultant :

Professor Mohamed Osman El Sammani.

1.4. Date : 9.6.2010 (of signing contract).

1.5. Terms of Reference :

According to the signed contract between (SECS) and the consultant, the main objectives of the assignment are :

- To conduct a study in the fragile and vulnerable environment of North Kordofan State, focusing on drought, desertification and human related activities and advise the decision-makers and planners in development of state policies.**
- Propose plans for alleviation and improvement of livelihoods..**
- Promote support dialogue between the state and local communities on the socio-economic implications of natural resources management and land use with small farmers and pastoralists.**

- **Provide the Eco-peace and Natural Resources Management Project (NRMP) with draft and final report.**

1.6. Organization :

In setting plans about the study and the prospected project, representatives of (SECS) and the consultant agreed on the following approaches and methods in handling the main objective of the study (of treating the fragile and vulnerable environment of North Kordofan State), by focusing on drought, desertification and human activities; and in response to the outcomes of the study, propose plans for alleviation and improvement of livelihoods; which is to be viewed in the following contexts :

i) That North Kordofan State, as presenting a huge region shall be kept as a geographic and environmental frame of the study, as regards : its natural setting, and the impacting phenomena of drought and desertification on human activities; and within this broader frame, to select 3 sampled locality councils for the application of the envisaged (NRMP); being held as demonstrative areas, for tried experimentation for the correction of the environmental mishaps that inflicted North Kordofan State; by bringing interventions that address improved livelihoods and work towards poverty reduction.

ii) The chosen locality councils are : Sheikan, Umm Ruwaba and Bara, taken as falling straight within North Kordofan desertified areas, and suffering from environmental calamities of reduced resources bases potentialities, and weakening of agrarian activities, ensuing conflicts between agricultural and pastoral users, and observed out-migration of the young segments in the population in pursuit of seasonal employment, in the economically active parts of the country.

iii) As the magnitude of the natural resources degradation and the environmental decay in North Kordofan State is huge, and can not possibly be arrested within the finance resources availed for the project, and its lifetime of two years, the approach to be adopted is to select three villages, one within each of the chosen three locality councils, to use them as demonstrative places, for bringing out the desired impacts of the project within its objectives of handling the environmental manifestations, and working towards improved livelihoods and strengthening eco-peace.

iv) The three villages selected are :

- El Sinut El Shargia, in Sheikan Locality Council.
- El Ghabsha, in Umm Ruwaba Locality Council, and
- Iyal Ali in Bara Locality Council.

In the selection of these villages, a number of essentialities are being taken into consideration :

- a) To be representative, as much as possible, of the natural Resources and environmental set-ups of the designated locality council.
- b) To embrace the prevalent agrarian economies practiced in the state, i.e. of traditional rain-fed farming, livestock raising, (of village based and mobile pastoralism) and gum tapping.
- c) To house a number of basic services facilities, such as of water supply, schools, health, shopping facilities and crop marketing, local administration, etc., serving the village community, and nearby villages dependent on it.
- d) The prevent economies and the existing services would mesh, to make the livelihoods of the village community, hence to be

addressed by the project for improvement.

- e) By acting as a centre to surrounding villages, it will be taken by the project as (high impacting places), and be treated accordingly, with the project interventions implemented at each of them, as serving in rendering trickling effects on the surrounding villages. This is especially so, in fields of capacity building, natural resource Management and environmental enhancement, and in women organization and motivation so as to venture into different change areas.
- f) A close working relationship between the selected villages, SECS as the project managing body, the locality councils in which the villages lie, and SECS branch societies of Sheikan, Umm Ruwaba and Bara, is viewed as essential, in the choice of the three villages, to be in proximity to the government seats of action. The purpose behind this, is to be accessible to the three centers of decision-making, so as to facilitate organized visits, in course of the project implementation, of the concerned state governmental organs, to dialogue on the progress of the project, and to avail the expertise needed (like in agriculture, forestry, water supply provision, credit, banking, etc..) in support of intervention s executions. This is seen as building into the project, close working relationships between the project and the state government apparatus, to evidence project achievements; and to use its outcome in influencing decision-making in future actions.

targeted towards similar situations, as to be served by the set objectives of the project.

g) As North Kordofan State is of a rich heritage of previously implemented projects, in fields of natural resources conservation and livelihoods improvements (To mention some examples; Land and Water Use Survey Central Kordofan Province, Rehabilitation of the Hashab Belt, the ADS (area Development Scheme), Gireigh Community Based Range Management Project, North Kordofan Rural Development Project, El Ain Forest Conservation Project, The Western Sudan Natural Resources Project, etc..) added to these the programmes carried out by a number of foreign NGOs, like Plan Sudan right now operating in Sheikan Locality, the project at hand, shall track the achievements of such activities, benefiting from their attained results, and the lessons learned.

2) North Kordofan State :

(Accounting for its natural resources, the status of the Environment, and for Livelihoods pursuits).

II) Basic Information about the Project Area :

2.1.: Location :

North Kordofan State lies almost in the central part of the Sudan, with its capital at El Obeid,. It is connected by rail, and asphalt road to Kosti on the White Nile ,and to the west by the Western Asphalt Road via El Nahud. To the south it borders South Kordofan State, which until recently, was part of greater Kordofan; and is connected to its capital Kadugli, again by an asphalt road,. To the north it is bordered by the Northern State, where its desert fringe merges with the great desert that

expands into Darfur. It has a total area of 190,840 sq.km. and a total population of 2,935,000 persons. The state is divided into 12 locality councils, of which Sheikan, Umm Ruwaba, Bara are targeted by (NRMP).

Fallen within the Sudano-Sahelian Zone, the state suffers drastically from adverse phenomena of drought and desertification, which recently magnified in impact as a result of climatic changes. Factors such as, lack of scientific planning, long term negligence of resources conservation, increase in human and livestock population and exceeded exploitation cover have all contributed to the severity of the two advertises. Present weaknesses of correction measures by state concerned organs and the communities of resource users, narrow improved prospects in the future. SEES Eco Peace Project is thus anticipated to address these two major issues, through demonstrative examples for integrated resources uses experimented in the chosen villages, in the three locality councils of Shikan, Umm Ruwaba and Bara,; and the driven results of the two SECS Projects addressing climatic change in North Kordofan State, the CLAAC Project in Umm Ruwaba Locality, and the NAPA Project (HENR) Bara Locality.

2.2.Geology and Water Availability :

Of the three known geological formations comprising the geology of the country, the Basement Complex (Pre Cambrian) occupies a large part of the aea of North Kordofan Province. It is found to dominate in its western and central half, in most of Soderi and Sheikan Locality councils. The formation is devoid of ground water aquifers, excepting minor supplies in fractured locations, and in the alluvial deposits of beds of wadis. The rest of the province generally falls within the known

geologic formation of Umm Ruwaba series, which is of sedimentary deposition, filling the troughs making most of Bara and Umm Ruwaba locality councils. The formation is known for its rich water bearing aquifers, which are usually tapped through drilled bore holes. Hence, in terms of water supply availability, the state could be broken into a poor western part (Soderi and Sheikan locality councils) and a richer part (Umm Ruwaba and Bara Locality Councils).

2.3: Soils :

The soils of the state are generally poor, being comprised mainly of sandy formations, taking the forms of sand sheets, and sand dunes of fixed and mobile nature. And where at variance from this overriding feature, soils exist as tranculated soils, known locally as Gardud (a compacted mixture of clays and sand) occupying stretches in the southern parts of the state (especially a good part of Sheikan and Er Rahad and Kazgeil locality Councils), being difficult to till, as developing a hard crust which limits rain water percolation. Comparatively, the good soils of the state are to be found on the Abu Habil delta lands, precipitated as a strip of alluvial deposits on the southern fringes of Er Rahad and Umm Ruwaba locality councils; and enriched annually by the Khor flood. The nature of the light sandy soils that make almost (70 per cent) of the surface area of the state, together with the irrational uses to which these have been subjected, have rendered the greater of the state to be categorized as of fragile eco-systems.

2.4. Climate :

Of all the climatic elements, annual rainfall stands as the most governing factor of natural and human life in the state, with a range of climatic zones, succeeding from north south as follows :

- desert type, with rainfall below 100mm., covering most of the very northern parts of Soderi locality council.
- Semi-desert climate, with rainfall which varies from 100 to 225 mms, comprising the southern parts of Soderi locality council, most of Bara locality council, and the northern and central parts of Sheikan, Er Rahad and Umm Ruwaba locality councils.
- Arid zone with annual rainfall ranging from 225-400 mm., engulfing the southern parts of Sheikan, Er Rahad, Umm Ruwaba locality councils, and all of Kazgeil locality council.

The rainy season starts with light showers in June and intensifies through the months of July, August and September, to fade away by October, with the maxima received in August.

Rainfall forms the main source of irrigation water for the arid lands of the state; and with the prevalent soils which grade from predominantly sands in its northern and central parts to narrower belts of gardud and clay to the south, together with the existent plants types and their resultant communities, give the state its ecological characteristics. These could be described as grading from a thinner to a denser vegetation cover, as one moves from north to south. Natural and human life follow the ecological setting; as being both shaped by the amounts of rainfall received annually.

As the rainfall regime is characterized by erratic falls, unbalanced distribution, and varied intensities from one year to the other, it affects the production activities that are dependent on it. It has become established, that one to two years of inadequate rainfall prevail in every five years cycle. Episodes of drought have also increased in frequency, and have become of a cyclic occurrence; well demonstrated by the disastrous one of the early 1980's, and the dry spell years of the 1990's.

In years of good and balanced rainfall distribution reasonable crop harvest are obtained., and the pastures yield adequate grazing; however such years being unpredicted, there developed among the farming population a kind of psychological barrier towards taking farming seriously, as used to be in the past. Owing to the risks involved, alternative income generating pursuits, mainly in casual employment in different ventures, are being increasingly taken by the rural population, for their higher economic returns as compared to farming.

2.5. Land Uses :

These follow from the ecological setting of the state (Soils, topography, rainfall, plant distribution) and on these the imprint of the human practices encountered being influenced in that by the technologies in use. Four main forms of land uses prevail across the locality councils of the state, with some minor one to be found in the same localities. The main ones are : crop farming, livestock raising, gum-tapping, and on these, there developed human settlements, taking the form of villages and small central places. The minor one, is irrigated agriculture. In what follows each of these shall be elaborately explored.

2.5.1: Crop Farming :

Being practiced on the three categories of soil : the sandy soil, which is predominantly prevailing in all of the 3 locality councils making the state, and gardud and clay soils which are to be found in the southern locality councils. Excepting a strip of gardud soils, and of Abu Habil clay soils, in Southern Sheikan and Umm Ruwaba locality councils respectively, the chosen three locality councils for the project, fall within the sandy expanses of the state, known as Qoz lands, hence their crop farming activities are predominantly on sands. Established practices of

farming on such lands, in genesis, were founded on the rotational use of the land, by fallow and cultivation; alternating the parcels with the decline of the level of soil fertility, i.e. fallow; land is brought under cultivation, while exhausted land is left to fallow., The Hashab (*Acacia Senegal*) tree formed an important link in the chain of rotations between farmed land and fallowed land, for the latter is usually left under Hashab, to grow and becomes established gardens, to be simultaneously tapped afterwards for the production of gum Arabic; which with the raised crops used to constitute the greater part of the household cash economy.

The crops raised are : millet as the main staple food grain, sesame and kerkadeih, (in some localities), as the main cash crops; with other minor crops of sorghum (Zinari), groundnuts, Lubia, and watermelon. These are usually raised on the main farm: called (belad),. Other than the belad, and in most villages, a kind of a homestead farm, known locally as (Jubraka) is being farmed, taking the form of a small plot of land, normally located near the family house, and is attended to by the women of the household. An assortment of crops are being raised in the (Jubraka); including okra (weika), tibish, maize, a quick maturing dura (nugud), red-pepper, watermelons, etc;. The raising of these crops, is to give an early produce, to make up for the family food gap, up to the time the crops of the main farm are reaped.

Rainfall, its intensity and distribution forms the conditioning factors in crop performance and productivity; for well spaced rains spells of adequate amounts results in successful yields as compared to hazardous rains. Intristic elements of tropical rains as of being of difficult projection and of changing regime from one year to the other, together with the recent occurring climatic change cause fluctuations in

crop production in any yearly series of the activity, affecting food security in the area.

As the used technologies, being of the traditional, together with the general drop in land fertility, the acreage cultivated by the average farming H/H. tends to be of a lesser size, as compared to what used to cultivate in the past, i.e. in the order of 8 makhamas (one makhamas is 7200 Sq.m.) using the H/H labour. Entrepreneurial farmers, employing hired labour usually go for larger farm sizes, of 15 makhamas, and beyond, for accessing farming land does not pose a problem.

Crop frequency distribution in order of importance is: sesame, of a quick maturing variety known locally as (hrehri) in the central parts of the province, with a tendency towards more millet in the northern parts. Groundnuts, for it needs more moisture, survives well in the southern parts of the province. Kerkedeih, as a support cash crop, and for its labour intensive picking, is cultivated in small areas in the central and southern parts of the province. Watermelons assume a special importance, as a water-providing crop for animals, in the northern parts of the state, where it is grown extensively, and for the sales of its seeds, as a cash crop..

The technologies used in farming are still on the main in a rudimentary state. Except for some improved seeds (sesame, lobia, sorghum, etc.) that are developed by El Obeid Agriculture Research Station and availed on sale by the (Seeds Marketing Company) at El Obeid, and accessed by interested farmers (mostly the progressive ones) from the localities councils offices of the State Ministry of Agriculture. The amounts supplied by these offices are usually less than the demand; and poorer farmers, end up depending on seeds put aside from their last season harvest, or on direct purchases from the market.

Farming tools, on the other hand, remain to be the old traditionally inherited ones; mainly among them are (the toriya in sandy soils – the saluka in gardud and clay soils – both being used for preparing holes in the soil for the planting of crops seeds, and the (hashasha) for weeding the crops. Tractors using the wide disc harrow have become of wide application in gardud and clay soils; being privately owned or on rental basis; and of recent, using ridgers, have been widely introduced in the light sandy soils, by the rich enterprising farmers, causing a drastic impact of soil degradation. Introduction of light ploughs (animal drawn), as the recommended appropriate technology for the working of such light sand soils is still at a staggering stage, for the shortage in suitable ploughs technology, and the weakness of agricultural extension in this field, coupled with the limited financial ability of the farmer.

Labour presents a major input in farming, usually supplied in the case of the average and poorer families, by the H/H members. Enterprising farmers, targeting production for cash motive, usually employ hired labour, especially in the southern parts of clay soils where semi-mechanized farming is practiced on a wide scale. Of the farming operations for which hired labour is being used intensively is weeding, and crop harvesting. It has become very observed in recent years, that crop farming on the sandy soils, has ceased to be a lucrative activity, judged on the kind of H/H members to be found engaged in the farming operations, mostly old men, women and children; for the majority of the able-bodied young persons migrate to places of employment, sending cash to support those left behind.

Finance for expending in the farming operations is usually obtained from three sources : (i)self-financing from the meager savings available to the H/H members, including migrants sending petty amounts,

or pocketed to be spent when they come back to villages; (ii) borrowing on credit from the village merchant and the financially well to do persons in the nearby centers, usually at high interest rates under (the sheil) system, i.e. a sum of money for a certain agreed amount of crop (mostly a cash crop) to be delivered at harvest time; and, (iii) from crediting banks.

There are a number of banks branches (Agricultural Bank of Sudan, Khartoum Bank, The Development Co-operative Bank, The Islamic Bank, etc.), at El Obeid, and the main towns of the three locality councils, (Bara, Umm Ruwaba and Er Rahad) avail these banks credit on the Islamic modes of lending, in support of crop farming, livestock breeding and fattening, and the related agrarian businesses and enterprises; and of recent what is termed as (small credit), targeting availing finances for the support of income generation by the needy H/II, under the adopted government policy, of addressing poverty alleviation.

Generally speaking, banks terms of lending look to be fair; however, lacking on two aspects; the security demand of the borrower on the loan, as under the applied regulations, the bank requires of the loanee, a security cheque from a guarantor, who in practice is not easily accessible, especially to poorer farmers. The other weak aspect, is the confused knowledge of the farmer, about the banks, procedures and terms of lending. The former obstacle, may possibly be solved, by applying a system of group lending, to avail the security needed by the bank, in place of the cheque by a guarantor. For the second obstacle, by the carrying out of extension work by the banks among farmers. Enlightened farmers and the more to do ones, mostly operating in mechanized farming, appear to be the group benefiting from the credit extended by banks.

For overall improvement that extends the credit the credit service to reach the average farmer, the study recommends reviewing the ABS policy of village groups lending which was experimented by Umm Ruwaba ABS branch bank in the 1970's in 46 villages by organizing the villages into agricultural co-operatives and giving four loans for crops establishment, weeding, harvesting and transport and marketing. The experiment proved its success in creating viable village co-operative bodies, timely delivering of credit, mastered collection of repayment, and a higher return of crop value to the farmer through organized marketing by selling at a remunerative prices.

Production and productivity are conditioned by the above narrated factors, being of the physical elements (soil, rainfall, etc.) and the inputs essential for production (seeds, the technologies in use, labour, credit, etc.). Generally crop production is showing a drastic downfall, as may be judged from the last 3 years figures of the amounts reaching Umm Ruwaba crop market as, for example :

Crops and Amounts.

Year	Sesame (Kantars)	Dura (Sacks)	Kerkedeh (Kantars)	Groundnut (Kantars)	Gum (Kantars)
2007	657,243	242,375	58,994	28,250	27,963
2008	246,158	103,081	77,657	148,062	245,029
2009	261,422	92,511	37,110	27,023	28,407

Source: Umm Ruwaba Crop Market, 2010

2.5.2. Livestock Raising:

Two forms of livestock raising take place in the three locality councils, making the project area. These are, village-based livestock, and nomadic livestock rearing

2.5.2.1. Village Based Livestock :

In almost all villages in the three locality councils, a good number of households own animals; mainly goats, in small numbers, being raised for the milk they supply, the selling of their off-springs for cash, and their slaughtering to supply meat., especially in celebration occasions. Goats are tough animals, in the sense that they graze on any vegetative cover that is available in the surroundings of the villages, and require little management care, as are usually being attended to by the females and the children of the household.

The next village-based animals in importance is the donkey, which many villagers own, as a transport animal, especially in hauling water from its source to the household; also for communication between places, and for transport between the farm and the village.

Camels used to be numerous in the past, as transport animals between the villages and the market places; and with the advent of motor transport, they are no longer to be seen in the villages, except by some individuals.

Cattle, was of the animals raised by a good number of households in many villages, especially in the southern parts of the three locality councils. That was so up to the incidence of the 1984 drought, which drastically reduced their numbers, to almost a complete absence of the species in the northern parts of the same councils. Presently, they may be found owned by selective households in some villages.

Sheep are found in good numbers, as would be seen roaming on the grazing spaces between the villages. Their numbers prior to 1984 drought – as village-based animals – was smaller, and they increased in the aftermath of the drought, as an adaptation strategy, taken up by some enterprising villagers, by building sheep flocks for earning better incomes; with the incurred lower returns from farming and gum-

tapping, which used to be the main source of income. In a good number of villages you find the activity as prospering, being taken by the financially able villagers, by investing in building sheep flocks, up to 50 heads, and more. This is being encouraged by the suitability of the ecological conditions in these areas, in terms of grazing; besides the availability of shepherding, as hired persons, or on sharing arrangements; and by the readily available marketing possibilities.

Of the three chosen villages for the project implementation, Iyal Ali, in Bara locality council, tends to show a higher viability of the sheep rearing activity, for the rich pastures available in the area, and the cultural heritage of its population, as originally descending from nomadic background.

2.5.2.2: Nomadic Livestock :

The area is annually frequented by nomadic livestock, in an alternating movement with the sheason:

a) The Cattle Nomadic Groups : Hawazma, Habaniya.

During the rainy season, the Hawazma and the Habaniya, both of Baggara (north of Dilling area) stock, enter the area, the former from the Nuba Mountains and the latter from Sherkeifa area in eastern Umm Ruwaba locality council. Both spread north, reaching almost the latitude of El Obeid, occupying most of the gardud country of Sheikan locality council, with a presence east up to Er Rahad, and west up to Abu Haraz. In their annual grazing cycle, they call these lands as (Kordofan). Their main animal is cattle, which comes in large herds; (estimated at 200 thousand heads) with a smaller numbers of sheep and goats.

Their movement from the south and east during the rainy season (late July to early October) into this belt, has a long history that dates back to the 17th. Century, It is induced by the prevalence of favorite

rainy season grazing conditions, of adequate pastures, dry ground surface, available drinking water supplies for the herds, and proximity to El Obeid and some of the smaller centers, where they market the milk obtained from their cattle, purchase their domestic necessities, and access the services needed, especially medical care. They are organized in lineage groups with a number of them configuring in a certain grazing locality (about 8 of such localities are to be found in the mentioned belt). Cheese-making industry, in the form of one or more centre, has sprung in each of these localities, being run by manufacturers, who come mainly from El Obeid, buying the milk from the herding families, and processing it into cheese, an activity which adds substantially to the income of the household. By October, the cattle nomads start their back movement, the Hawazma, south, into the Nuba Mountains, and the Habaniya, east to Sherkeila area.

b) The Camel Nomads :

They are constituted of northern Kordofan tribal groups, like the Kababish, the Hawawir, the Kawahla and Beni Gerar, of Sodiri locality council; together with some factions of Dar Hamid tribes of Bara locality council who are rich in nomadic livestock and the Shanabla of existence in Sheikan and Umm Ruwaba locality councils. They all enter the project area in November, for early dry season grazing, with the majority of them, using the area as a passage way to continue moving south, to spend the later part of the dry season (March-June) in the Nuba Mountains area. Their livestock is mainly camels, sheep, and to a lesser degree goats.. Their movement takes the form of independently owned stock, attended to by the herds' owner or by a hired shepard.

Their movement within the project area is very much conditioned by the existence of water supplies for the herds; hence they show concentration around water-yards, some hafirs, and surface well fields.

Observed concentrations of them are to be found around Er Rahad Turda, (Umm Ruwaba locality council), Abu Haraz and Kazgeil (Sheikan locality council). This dry season movement into the project area, is known in the nomadic calendar as the (damer) period. With the on-fall of the rains they start their movement northwards outside of the roject area, known in their calendar as (Shogara),.

2.5.3. Gum Tapping

North Kordofan State was historically famous for the production of gum Arabic; being tapped from the hashab tree (*Acacia Senegal*). The tree spread throughout the state on its extensive sand surface, with its growth being favoured by this type of soil and the amount of rainfall received. The project area comprised of the three locality councils, with extension into En Nahud locality council to the west, presents the core of gum production in the state; and El Obeid is often referred to as the world gum market.

In earlier times, when human habitation was sparse, gum was obtained by tapping hashab, growing as natural forests. With increased settling of the land, growth of villages, taking up agriculture as a main activity, hashab exploitation took the form of gardens, alternated with farmed parcels, in a fallow – cultivated land system, which was widely practiced. This being organized as such, a separate piece of land is put under cultivation, another with hashab trees as a gum garden, and a third rested from farming with hashab off-shoots being nourished to make a future garden. The cycle engaged built-in natural soil fertility by clearing aging gum gardens, resting the land that was farmed, and tapping the newly developed garden. This system was in operation up to the late 1960's, and thence after began to collapse, as a result of factors such as, growth in phenomenal and villages, expansion in cultivated

land, and the peromenal environmental decay affecting the lands of the state.

Gum is produced by the operations of slashing the park of the tree in elongated cuts, usually done in October, and in response the tree oozes gum, which is collected, as the produce, as of the beginning of March.

The remunerative prices of gum, used to stabilize production, towards high amounts that reach the markets; with the gum tapping activity thus occupying a substantial time in the yearly working and production calendar of the local farmer; June to November as his engagement in the field crops, and October to May, in the production of gum; which continued up to the late 1970's; and as of then, things started to change. The 1984 drought, which caused a wide ecological desiccation affecting among others, hashab growth, coupled with the fluctuation in gum prices, and a declining trend in exportation, have dealt a heavy blow to gum production in the area. This is being reflected in negligence of the industry, diminution in the amounts reaching the market, adding to increased unemployment of the population, and the flight from the land,

2.6: Population Out-migration (in pursuit for employment):

Intelligent guesses, estimate that, one fourth of the population of Kordofan State, carry out annual migrations to the other parts of the country pursuing employment. The push factors, experienced by the state include; the overriding disparities in development, characterizing most of the rural areas of the Sudan – the centre versus the periphery areas imbalances, the effects of education and exposure in building peoples' perceptions of better life and prosperous opportunities in the advanced parts of the country; and as factors of direct implications, the decline evidenced by the local economies, being traditional and

dependent on the endowment of the natural resources, where with the years these have continuously lost their inertia in giving adequate returns. The latter is being shown in depressed crop production, shrinkage in village-based livestock, and limited gum production, the three pillars on which the economy of the area was once pivoted.

Internal wage earning was the practice up to the mid 1960's, for the poorer segments in the population, used to sell their labour to the financially able farmers in lad cultivation, with a fewer number drifting to the towns of the area for casual urban employment. Movement an observed scale to outside the areas, was associated with cotton-picking in the irrigated schemes; and these continued to be the trends up to the advent of 1984 drought. As of this time on, massive migrations have become phenomenol, almost of occurrence in all villages of the state.

Their destinations, are in all parts of the country, with a high influx on Khartoum and those parts that are agriculturally developed. They are engaged in all kinds of remunerative jobs. To mention examples; in urban centers in economically marginal pursuits, in the irrigated schemes and the mechanized schemes as agricultural farm labor, in the southern richer parts of the gum belt (South Kordofan, Gedaref and Blue Nile areas) as gum tappers, and in the northern region, in the pollinium of dates palms, and the harvest of the date crops. With this, a good number of them, practice emigration to the rich petroleum producing countries. In these movements, they proved to be industrious and accommodating to the new environments they came across. As part of the cycle of their migration, is their settlement permanently or partially, in the places they headed to, for they make observed elements in the squatter settlements of the big towns, especially Khartoum

Among the migrant population, a good part could be labeled as in a transitional stage, with one foot in the place of origin and the other in the new destination. They keep their link with the village by sending remittances, or coming back with their savings in July, to participate in the establishment of the crops to be grown. Travelling through the villages of the project area during the cultivation season, one comes on older men, women, and young children, as constituting a substantial part of the farming population. Those able bodied -- young, have for quite a time reached the corollary that farming is unpaying, compared to earned cash from employment. Farming in these areas is mostly , financed from brought in money from migration; not only in supporting the activity, but also in the livelihood sustenance of those members of the household, left behind in the villages. This trend shall continue, however its final outcome is difficult to project.

Under a broader socio-economic study conducted by the author in 1996, in preparation for the implementation of the IFAD North Kordofan Rural Development Project, that covered Bara and Umm Ruwaha locality councils, and which involved surveys of 14 villages, chosen in the two councils, a vital conclusion reached on the economy of the area was the following :

- Crop farming gave 35% of the income of the household,
- Returns from migration 27%,
- Livestock raising 21%,
- and last,
- Gum production 17%.

While, prior to 1984 drought, the picture was; crop farming 45%, gum tapping 30%, and livestock raising 25%; as the three eminent forms of the economy, with a minor role for migration, in case it was practiced. In this conclusion, is a clear indication of a glossal drop in the land

potentialities of the area, meshed into it the interplay of a number of socio-economic transformations.

2.7: Poverty Assessment In The Project Area :

In summation of the performance of the above fields of economic activities, and their impacting on the level of prosperity of the project population, an attempt was made by the author, in 1996, as part of North Kordofan Rural Development Project preparation studies (which covered Bara and Umm Ruwaba locality councils); to gauge the poverty situation in the project area. The study and the gauging were based, on the villages communities perception, as to who is the poor in their village, on the wealth scale, as related to the different parameters. The results reached by the study showed that the poor are those who :

- Cultivate a small area,
- Enter the rainy season with no inputs, especially seeds,
- Sell their labour to others.
- End up expecting assistance frm others,
- Old women and those of unsupported H/Hs make a sizeable number among poor,
- Do not own livestock,
- Do not have credibility in borrowing from the village shop,
- Lives in one gutiya – hut,
- Has poor clothing,
- Eats one meal a day ;
- Does not send his children to school,
- Dies bit visit health services, and
- Of low image in the village social life.

In comparison, and under the same exercise, it was asked : who is the rich in the village, and the results came to : who,

- Cultivate a large acreage,

- **Grows cash crops,**
- **Has farming inputs,**
- **Hires others,**
- **Credits others,**
- **Own livestock,**
- **Eats two meals a day,**
- **Purchases meat on market days,**
- **Has a bigger house,**
- **His house is furnished,**
- **Engaged in other businesses in the villages, or outside,**
- **Receives remittances,**
- **Well connected,**
- **Sends his children to schools,**
- **Benefit from health and the other services in the village; and**
- **Of social status in village matters.**

The two extremes of poor and rich, do not occur in villages as tight-jackets, with the villagers showing traits of both. A measurement of their occurrence showed that, about 20% of the village H/Hs qualify as distinctively poor, up to 10% as rich, with the remaining 70% as in-between, carrying characteristics of both.

This scale of poverty and the elements that come in it, presents, a good platform on which poverty alleviation for livelihood improvements, could be targeted by the project; for each of the listed deprivations of the poor, invites a programme intervention.

III: Launching the Project :

3.1. SECS Team Visits to the Project Area :

June 2010 was a busy month for SECS in working on the project. Following an introductory visit, carried out by two of SECS officers to El

The workshop targeted to give orientation and training in ECO-Peace issues, to 20 participants from SECS branch societies, of El Obeid, Umm Ruwaba, and Bara, plus some attendants from the three project chosen villages, of Iyal Ali, El Sunut, and El Ghabsha.

The workshop was organized at El Obeid Agriculture Research Station premises, with its main hall used for instruction, and its guest house for accommodating the participants.

The workshop opening session was attended by some key government representatives and members of the three SECS branch societies. It was run as a fully participatory activity, in its dealings, throughout its different sessions; with presentations by the trainer, followed by open discussions and groups formation, to air out and discuss different issues, and come with conclusions. Of the subject matters given full treatment, are : groups formation and organization, situation analyses, identification of community basic needs, formulation of programmes, advocacy, programmes execution, and monitoring.

A folklore musical band, based at El Obeid, of fame in highlighting developmental and environmental issues, in songs and acts in popular artful ways, participated in the workshop activities; intervening between the sessions, with songs and acts for enhancing environmental vitalities. The band continued to give same shows in two of the places visited by the team, Bara and El Sunut.

3.2. Environmental and Eco-Peace Issues :

3.2.1.Exploration :

On conclusion of the workshop, SECS team, visited the three chosen villages, holding a full day meeting at each village. The meetings were attended by a large audience of villagers, of males and females; being organized in such a way, to have both gender present at the

meeting, with a set place for each; so as to explore different issues with the participation of all the village populace. The meetings were guided by the Projects' consultant, Professor El Sammani, and the outcomes were effective in explaining :

- What the project is about,
- Organization of the project,
- Roles and responsibilities of SECS and the villages, as partners in the implementation of the project, and preparation of proposals by the villages of the priority areas to be endorsed as a programme for intervention.

Keeping in mind, the objectives of the project, in enhancing the environmental conditions in the area, strengthening eco-peace, and improving the livelihoods of the targeted population, SECS team spent most of the time in the meetings with the villagers, in exploring the questions related to environment changes, and their impacts on the livelihoods of the population. This was done in full participation of the audience attending the meetings; and was meant to furnish an adequate background knowledge, on which the villages would work out their proposals for intervention.

The issues raised, and the assessments made, regarding the three project areas of concern; the status of the environment, eco-peace and livelihoods, the explored current conditions, revealed the following pictures :

As regards the conditions of the ecology there is agreement in all three villages that the local ecologies have tremendously changed in time, judged from :

- The disappearance of certain tree and grass species of high use value.
- Shrinkage of the area of hashab cover and plantations.

Dominance of certain inferior gasses and shrubs.

- **Expansion of barren land surfaces.**
 - **Complete absence of wild life, except for some lower species.**
 - **Observed mobility of sands formations, in sheets and dunes.**
 - **Frequency of haboubs, carrying blown sands.,**
 - **Burial of water courses,**
- etc....**

All of the above are adverse phenomena impacting negatively on the local eco-systems. Comparative assessments between the present and the past, poited to the existence of more rich ecologies in the past.

As to the causes of ecological decay these were featured as :

- **Drop I the annual amounts of rainfall, and as rainfall being characterized by a changing pattern of distribution from one year to the other.**
 - **Pressure by human and animal populations,, on a shrinking land resources base;**
 - **Added pressure by the incoming nomadic groups, with their animals, on the village resources – coming to water in the villages and on their north-south movement;**
 - **Opening of once vegetated land for cultivation;**
- Increased fuel wood consumption by village users, and its exploitation for selling at near-by urban places;**
- **Intensification of certain land uses, unsuited for the local Eco-systems, like increased farming, on semi-arid land, and use of Tractors on sandy soils;**
 - **Negligence of the old farming rotations, of fallow and farmed land, in alternation of parcels.**
 - **Plus other impacting factors.**

3.2.2. Possible Interventions to Address Ecological Degradation:

The ecological adversities (symptoms, and causes), being portrayed above, are barely addressed by any rectification programmes, either from the side of the North Kordofan Government, nor by the communities users of the natural resources, though the latter, tend to show awareness of their repercussions. The commercial use of the resources, with the belief that they are nature given, and the lack of national control, in their using, account for the on-going large scale dilapidation of the resource bases, occurring throughout North Kordofan State. The down trend, that eroded the resources potentialities, has been in action for quite a long time, and it is beyond the capacities of the present project, to come out with magical solutions, to revert the present trend. The most that the project can do is to keep building environmental awareness among communities, about the occurrence of such trend, coupled with the trial of some models that target ecological control and management.

Community awareness, could be promoted through organized enlightenment, and training sessions in the three village communities; drawing as well, people from the neighbouring villages. It could also assume groups organization; like of farmers, women, native administration bodies, etc. The three SECS branch societies of El Obeid, Umm Ruwaba and Bara could effectively contribute to the awareness building programmes.

As to modeling of possible intervention to be promoted, these could be in the founding of village nurseries, to avail seedlings, coupled with the development of trees seeds stores, to use both, in the rehabilitation of hashab lands, the establishment of shelter belts, and the planting of trees in the settlements.

The offices of the National Forestry Corporation (NFRC), at the three towns, of El Obeid, Umm Ruwaba and Bara, would be approached to support the community efforts in this regard.

Mitigating, the pressure on the bio-mass energy resources, caused by the use of fuel wood and charcoal, could be effected by the application of energy conservation stoves, manufactured of local burned clays; being previously introduced by a number of NGOs as part of village programmes. With this activity, bottle gas facilities need to be introduced in the three villages.

As to the management aspects, a strong application of the laws, preventing the cutting of trees, needs to be pursued; with the three village communities, to be supported in this, by the (NFC), the village Sheikhs and the area Omdas, and through the available local guards. The banning of tractors from operating in the sandy soils, which is presently guarded against by the North Kordofan State authorities, needs to be fostered, especially by the two villages communities of El Sunut and El Ghabsha, a practice which may spread to affect their lands; in with SECS branch societies in the two areas, to put effort in this regard.

3.3: Crop Farming :

3.3.1: Impacts :

These were narrated as :

- Change in the grown crops, by taking more to sesame being comparatively a profitable crop: resulting in the reduction of the dukhun planted area, as the staple grain crop
- Reduced food security in the area, as depending before on dkhun; with the gap in H/H production being made for it, by purchasing dura from the market.

- **Diminution of the areas under groundnuts, which used to be an important crop in the area, due to the inadequate rain-fall received.**
- **Drop in soil fertility, lowering the production of the different grown crops.**
- **Shift of crop farming from dependency on household labour to hired labour, hence becoming more of a financed activity; with the poorer farmers producing less as a result of the emigration of members of the H/H to seek outside employment.**
- **Occurrence of crop failure, 1-2 years out of 5 being recorded as of complete failure, or of production levels less than the average with a higher frequency of the phenomenon in recent times.**
- **An overall assessment, points that, crop farming has become less remunerative than used to be in the past, both in terms of meeting H/H grain needs and in generating cash.**
- **Of the accompanying shortcomings associated with the farming activity, as being raised in the dialogues with the three village communities, are : absence of agricultural services, especially agriculture extension and crops pests control, shortage of seeds, including improved seeds, constrained access to credit from banks, and poverty of farmers inducing the majority to sell their crops at the lower, start of season prices.**

3.3.2: : Possible Interventions to Upgrade Performance of Crop Farming :

Of the previously listed problems of crop farming, the ones that seem as feasible to be addressed by the project may include : organizing farmers in the three villages to take group action with ;ook to be the following :

Building awareness among farmers to come back, to the old rotation of fallow – cultivated land, so as to restore soil fertility which entails the promotion of hashab planting, with setting aside fallow areas; so as to alternate land between resting, and putting back under cultivation, which used to be the case in the past.

Little could be done by the project, in the provision of agriculture services, including agriculture extension; for availing such services, falls under the responsibility of North Kordofan State.Government. By using group action, farmers in the three villages, with the support of the project, could access improved seeds, agricultural implements, credit from banks and negotiate better prices in selling their crop.

3.4: Gum Production :

3.4.1:Impacts :

All three villages used to produce gum in sizeable amounts, with the returns from its sales contributing to the household budget. The general factors, reducing gum production, referred to earlier, proved to be operative in the three villages, with the production being drastically reduced. Only a few farmers in the three villages, presently manage to take gum to the markets, and in small quantities. The collapse in the industry is referred to :

- 1984 drought which dessiniate the hashab trees on largeScale.**
- The drop in rainfall amounts, retarding new growth.**
- Collapse of the traditional fallow cultivated land rotation, which maintained the growth of new hashab shorts ito become trees.**
- Clearance of trees to make for new cultivations.**
- Browsing by camels, stagnating tree growth.**

3.4.2: Possible Intervention to Rehabilitate the Hashab Tree :

It is outside the scope of the project to intervene in negative elements, such as drop in amounts of rain-fall, and stabilization of gum prices. The NFC is carrying out rehabilitation activities on a large scale in North Kordofn State. It would be in the interests of the project to familiarize itself with these activities; and see to it, how the three project villages could be adequately drawn into such activities. With this in mind, the previously stated interventions, under ecological rehabilitation need to be emphasized, namely :

- Organization of village communities under environmental awareness programmes,**
- Establishment of village nurseries, and building of tree seed stores for a wide propagation of hshab planting,**
- Reduction of the effect of camel browsing, by controlling the passage of nomads through village hashab plantations: and,**
- Exerting an effort to revitalize the old hashab fallow – cultivation cycle.**

3.5 : Livestock Raising :

3.5.1:Impacts :

As of 1984 drought, which wiped out most of the livestock of the project area, all villages have failed to come back to their previous levels of animal wealth. Ensuing environmental changes feature out in :

- Cattle, being the most affected species, has actually disappeared from most villages, especially the northern parts of the project area.**
- In the cycle of wealth building, animals used to be raised from the annual income savings, generated from crop farming, i.e. accrued savings from farming, tied up in animals. With the low returns from farming becoming eroded, access to livestock by farmers dwindled.**

- Existent livestock has taken two forms of externity, i.e. of small number of goats by some villagers; and of sizeable sheep flocks, raised as a form of investment by financially able persons. An exception is in Iyal Ali village, where almost all H/Hs are owning sheep, and in sizeable numbers; for the village populace is of a pastoral heritage; also with the village lands, as of ample pasturage for sheep raising.
- The status of animal wealth in the two villages, El Sunut and El Ghabsha may be described as one of variance, with the majority of villagers as non-owning; and of those owning, the types and sizes owned as inconsistently different.
- Fodder availability experiences a cycle of abundance during the rainy season, and the immediately following months – August to February, and thence after, turns into a situation of scarcity – May to July, where breeders resort to taking their livestock, especially of sheep flocks, to distant pastures, and to the stored and purchased fodders.
- Veterinary services are lacking, except for the vaccination of cattle, being provided by the veterinary services. As for the other animals, the owners have to seek the private veterinary drug stores and pharmacies.
- Programmes for improving animal breeds are non-existent, and all raised animals are in their natural form.

3.5.2:: Possible Interventions for Promoting Livestock Raising:

These are seen to include :

- Small ruminants restocking (goats and sheep), with specific targeting of women and the poor heads of H/Hs. Programmes of similar nature have been promoted under some of IFAD and NGOs projects, and proved their success. The two livestock types could be obtained on

- credit from the banks operating in the area, with the project playing a facilitation role between the three village communities and the banks.
- Trial with the villagers, for the establishment of fodder stores on commercial basis, with the stores to be owned and managed by the communities, and with the fodders accessed from the markets and put on sales, with the accruing profit, to contribute in building the village finances.
 - Improvement of the goat breeds in the area, by importing into the villages high quality species, being attempted in a number of projects; giving encouraging results. The types to be targeted are good milkers, which would improve, the dietary situation in the villages especially that of children.
 - Little could be done in the area of veterinary services, however, and especially in relation to the livestock, purchased through the banks on credit, or that of high quality species imported for the improvement of the local breeds, organized veterinary care is needed to secure maintaining such animals. Here, the project needs to intervene in facilitating a working relationship, between the three project villages, and the veterinary departments operating in El Óbeid, Umm Ruwaba and Bara.

3.6. Water Supply

3.6.1.: Present Situation :

All three villages possss permanent water sources : El Sunut has a water-yard, and three drilled wells, awating rectification, El Ghabsha, has 2water-yards, and a distribution network that covers 75% of the village housing, and Iyal Ali, a tube well present out oforder that used to supply the c-operative garden owned by the village and the village population.. Other than the water users in each of the three villages, the same ources

are visited by people from the near-by villages who have no sources, and by the nomads grazing their animals around, or on their north south movements through the area, with pressure on the use of water intensifying during the dry season, especially in its late months.

3.6.2: Possible Interventions by the Project :

Under the normal levels of water intake sufficiency in the project area, the three villages could be considered as adequately served by their existent water sources. Interventions are required in the two cases of El Ghabha, in completion of the community distribution network, which has already been started by the village population efforts, under two conditions, technical consultation with the NFC office, at Umm Ruwaba as to the feasibility of completing the network of the village contribution to the costs of the project; and in the case of Iyal Ali, again securing the contribution of the village towards the costs of the maintenance of the well, in purchasing and fitting a new pump. Negotiations on these grounds, need to be concluded between the committees of these two villages, and the project director.

3.7 : Livelihoods :

These ensue from the previously accounted for, forms of economic pursuits, i.e. crop farming, gum taping, and livestock raising, making the primary activities to be found in the area. On these, there developed tertiary activities, of small businesses and enterprises; and off shooting, as an economically gainful pursuit, outside emigration for employment. On these economic components of life in the three villages, there developed other essential elements to complete the picture of livelihoods, namely housing and the existent community services. All of these parameters mesh together in an interactive way, to give the special characteristics of

the three project villages. What to be promoted by the project, in regard to the first three economic activities, and with regard to ecological rehabilitation, have been expounded in the previously given accounts, under possible interventions by the project. As regarding, the rest of the pointed out elements of livelihoods, covering businesses, enterprises and community services, these shall be addressed under the community interventions priorities, in the next section of the report, and as pictured in the proposals made by the three villages.

IV: Implementing The Project :

4.1. The Three Chosen Villages as Key Implementers of the Project :

The philosophy of the project, rests on coming up with an implemental model, by a rural population, that has been impacted upon by environmentally negative conditions, and that, through the project actions, some level of eco-peace shall be attained by such population. We have seen, through the processes, leading to the achievement of this set target, that the project has opted for the high impacting model, by selecting one village in each of the three locality councils, earmarked for the project implementation;; and in the initial preparation for the stage of implementation, the convening of the start-up workshop, the carrying out of the essential contacts with the concerned bodies, the sensitization of SECS branch societies in the project area to be on the boat, and the orientation and mobilization, through meetings of the three village communities, chosen for the implementation of the project. It remains to stand on the conditions in these three villages and the steps taken by them preparation for entering the forthcoming stage of implementation.

4.2. Characterizing The Three Villages ::

The SECS team during its visit to the project area worked closely with the communities of the three villages, in :

- explaining about the project,
- asking the communities to organize themselves, males and females, and chose their representative committees.
- furnish basic information about their villages; and
- work out priorities for intervention by the project.

Regarding organization, each village chose a male and a female committee of 8 persons each, with representation of two females in the male committee.

4.3. Information about the Villages :

El Sunut :

i) Location : 17 Km. north-east of El Obeid.

ii) Population : 2135 persons, making 422 H/Hs.

Average H/H size : 5 persons.

iii) The economic activities practiced, are crop farming, gum tapping, livestock raising, small businesses and enterprises and outside migration for employment. (and since these apply to all three villages, we need not mention them again in the cases of Iyal Ali ad El Ghabsha).

iv) Existing Services :

- Education : 1 primary school for boys.
- Health : no facility – depends on El Obeid.
- Water Supply : 1 bore-hole operating – 3 more bore-holes awaiting rectification.
- Marketing : some permanent shops, with a weekly market.

El Ghabsha :

i) Location : 24 Kms, east of Umm Ruwaba.

ii) Population : 3500 persons, making 700 H/Hs.

Average H/H size : 5 persons.

iii) Existing Services :

- **Education : 1 Kindergarten.**
- **2 Primary schools = one boys, one girls.**
- **2 Secondary schools – one boys, one girls.**
- **All schools with boarding facilities.**
- **Health : 1 Health centre.**
- **Water Supply : 2 bore-holes, distribution net work, covering 70% of village.**
- **Marketing : 30 permanent shops plus a weekly market.**
- **Police : A Police post.**
-

Ival Ali :

i) Location : 35 Km north-east of Bara.

ii) Population : 750 persons, number of H/Hs 150.

iii) Average size of H/H : 5 persons.

iv) Existing Services :

- **Education : 1 mixed primary school.**
- **Water Supply : 1 operating bore-hole.**
- **Health : No facility – depends on Bara.**
- **Marketing : Some village shops.**

4.3. Village Priorities :

On the broad background of explanations of the project objectives, and on the presentations and discussions led by the SECS team in the three villages, the following matrix sums up the villages priority areas.

that are anticipated to be responded to by the project. In painting a fuller picture, of the prospects of adopting the villages priorities in guiding the formation of the project programmes, these are gauged against the previously given (possible interventions); and where the two coincide, looks to be the priority areas, that need to be adopted by the project. These are ticked (/) in the matrix; with the ones unticked to be further negotiated with the villages committees.

**: Village Proposed Priority Areas – Summed up for the
Three Villages**

**Fields of activities – ticked (/) as meeting the suggested possible
interventions**

<u>1) Agriculture :</u>		
* Provision of improved seeds	/	
* Provision of fertilizers and sprayers	/	
* Provision of animal drawn ploughs	/	
* Access to bank credit	/	
* Building of a store for seeds	/	
<u>2: Forestry, Gum Production :</u>		
* Provision of tree seeds	/	
* Establishment of a nursery	/	
* Planting of a shelter belt	/	
*Availing of energy conservation stoves	/	
*Availing of bottle gas	/	
*Extension in forestry	/	
<u>3: Livestock Raising :</u>		
* Goats/sheep restocking	/	
* Availing cattle and poultry	?	Specific to El Sunut.
* Establishment of fodders store	/	
* Training of a veterinary cadre	?	Specific to El Sunut
* Provision of improved breeds	/	
* Introduction of milk processing	?	Specific to El Sunut.

4: Community Services :

4.1: Education:

- | | | |
|--|---|-----------------------|
| * Building of school classes | ? | All three villages. |
| * Building of Teachers' offices and rehabilitation of boarding houses. | ? | All three villages |
| *Provision of school furniture | ? | All three villages. |
| *Building of secondary school | ? | Specific to El Sunut |
| *Training of teachers | ? | Specific to El Sunut |
| * Support to poor pupils | ? | Specific to El Sunut |
| * Provision of school books | ? | Specific to El Sunit |
| * Building of a school theatre | ? | Specific to El Sunut |
| * Supply of school feeding | ? | Specific to El Sunut. |
| * Provision of a kindergarten | ? | Specific to El Sunut. |

4.2. Health :

- | | | |
|--|---|-----------------------|
| * Provision/upgrading of existing health service | ? | All three villages. |
| • Training of midwives. | ? | Specific to El Sunut. |
| • Assisting in building toilets | ? | Specific to El Sunut |

4.3: Water Supply :

- | | | |
|---|---|-----------------------|
| * Provision of a new water yard | ? | Specific to El Sunut |
| * Rehabilitation of existing water yard and completion of the village distribution network. | ? | Specific to El Ghabst |
| • Rehabilitation of existing well | / | Specific to Iyal Ali |

4.4: Community viewing clubs.

? All three villages |

5: Small businesses and enterprises and Women activities :

- | | | |
|---|---|----------------------|
| • Training of youth in gainful skills outside village | ? | Specific to El Sunut |
| • Formation of women Sandug | / | All three villages. |
| • Promotion of women enterprises | / | All three villages |

As it looks from the matrix, El Sunit village is exceedingly ambitious in its expectation from the project, and needs to be put, to the

realities of the project scope and resources. It is recommended, that the project director, is to enter in elaborate dialoguing, with the three communities, as to what to be supported by the project in the area of community services; especially on what finances, the communities would contribute, towards the costs of their proposed interventions.

4.5.: Social Action Programmes :

The matrix summaries what could be termed as the hardware of the project, given as solid interventions, proposals, that are anticipated to be met by the project. The project will not complete its mission, without coping these, with a soft-ware component, of associated social action programmes, that build the capacities of the three chosen village communities, in upgrading their levels of thinking in problem-solving to implement the project, and by learning from the project in handling life-situation in future. To achieve this target, the project is to work in delivering different capacity building programmes, through interactive training activities, involving the different projects targeted groups. The village males and females folks, the youth, the staff in community services, in the villages, the native administration figure, the near-by village communities; and in building connecti ity with the related government departments in the three locality councils of project implementation, and the SECS branch societies. The substance of training is to include :

- i) Knowledge about the project, as to its objectives and the targets it aims to serve.
- ii) The partnership between the project and the benefiting communities with the responsibilities and contribution of each well defined.

- iii) **The organization of the project and its management by its elected bodies \, to assure smooth performance and transparency.**
- iv) **The project and its connectivity with the near-by villages, so as to realize its impacting effect on the population in proximity.**
- v) **Drawing into the project other frings groups, like the water administration, popular committees, schools parents, teachers councils, etc., as facilitators in the project implementation.**
- vi) **Incalcating into the project of a system of community self-monitoring through scheduled villages meetings lead by the villages committees to review project progress and obstacles.**
- vii) **Training for knowledge building in the different fields, as entailed by the project interactions, m with the trainers t be drawn frmthe near-by townships of El Obeid, Umm Ruwaba and Bara; in fields such as in : resource conservation and management, forestry and tree planting\, provision of improved seeds, credit delivery, advocacy of women position, health education for women, role of native administration in resource conflict resolution; with the field, extended to cover any kind of training that the village communities indicate, as expressed need.**

In conclusion, the project needs to continually promote its conceptual frame, so as to building an added value into the communities present status of knowledge, so as to give new experiences in handling resource issues, promoting local livelihoods, and working towards eco-peace.

As an end result, this is really what is expected of the project to leave behind on its termination..

4.6: The Project Partners :

The main implementers of the project are; SECS and the three chosen villages, represented by their committees. In the give dispositions, across this report we come on a number of bodies and agencies, which need to be kept as partners facilitators in the implementation of the project. The following listing helps in reminding about them:

- Commissioners of the three locality councils; Sheikan, Umm Ruwaba and Bara.**
- State Ministry of Agriculture, and the offices of Agriculture, in El Obeid, Umm Ruwaba, and Bara.**
- State NFC, and its offices at Umm Ruwaba and Bara.**
- The National Water Corporation at El Obeid, and its offices at Umm Ruwaba and Bara.**
- The Veterinary Services at El Obeid, Umm Ruwaba and Bara.**
- The Branch Basnks at the three towns.**
- The SECS Society branches at El Obeid, Umm Ruwaba and Bara.**

The project also needs to have an advisory board, to advice on the implementation and the monitor of activities. For the board, to be in a close working relationship with the project, it is suggested to be constituted of the following persons :=

- Ustz/Ali El Khalifa, of SECS.**
- Prof. Mohamed Osman El Sammi, the Project Consultant.**
- The chair persons of the three village committees.**

- **The chair persons of the three SECS branch societies;**

With the project director acting as Secretary of the board.

The Board is to meet every three months, regularly at El Obeid to review the projects' progress and if need arises at any called time.

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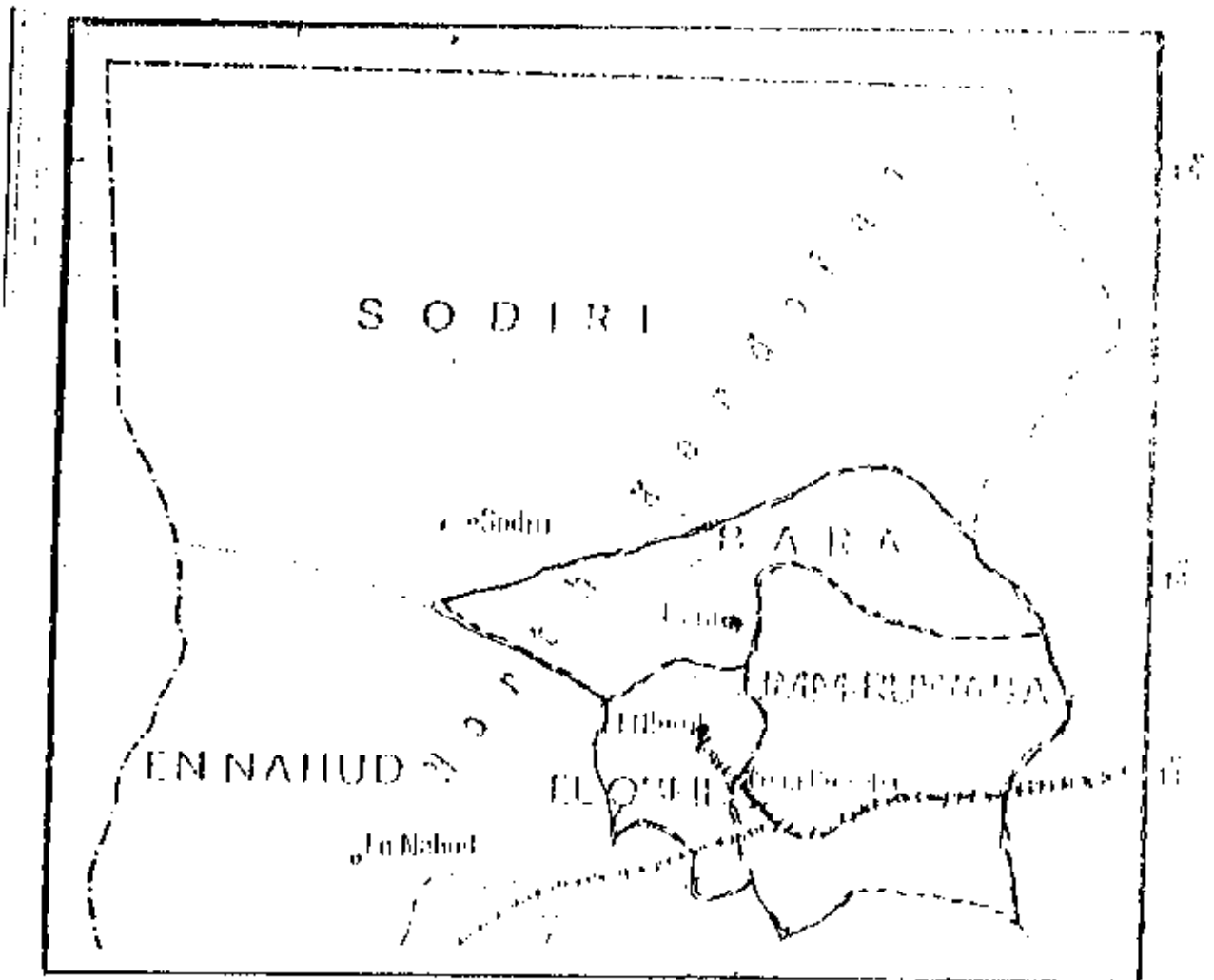
Annexes

Annex (1) Maps.

Annex (2) Survey Data on the Three Villages

Annex (1) : MAPS

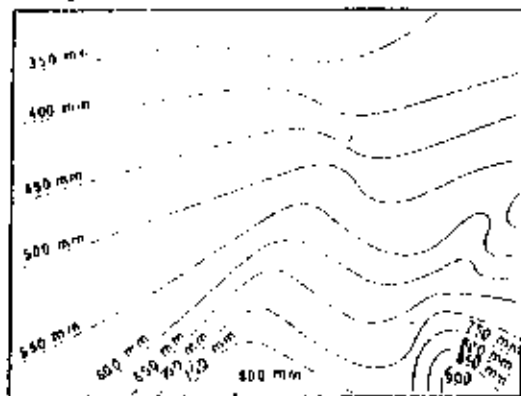
Project Location



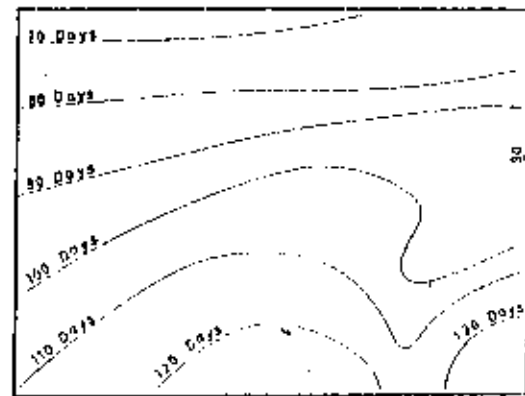
Source: El Sammani, (ed), 1986.

Khartoum and Evaporation - General Kordofan Office
 Embracing 3 locality Councils.

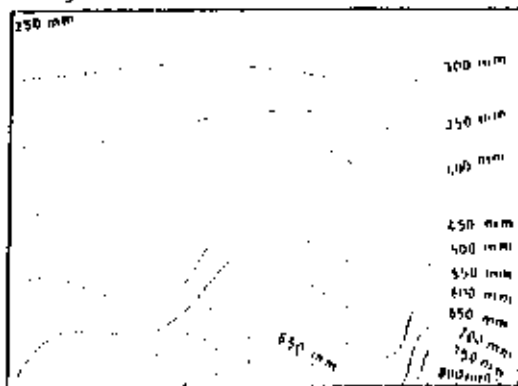
Isohyet - 5 Year high probability



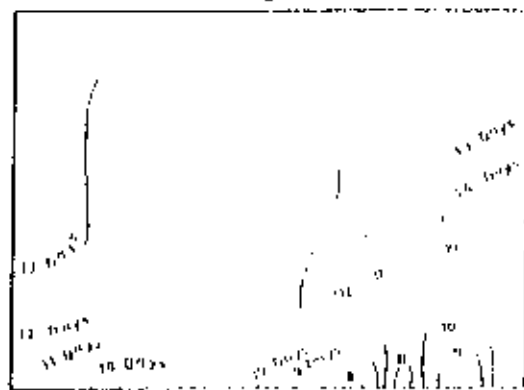
Mean length of Rainy Season



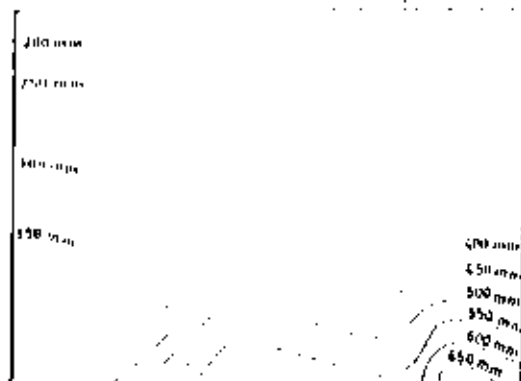
Isohyet - Mean



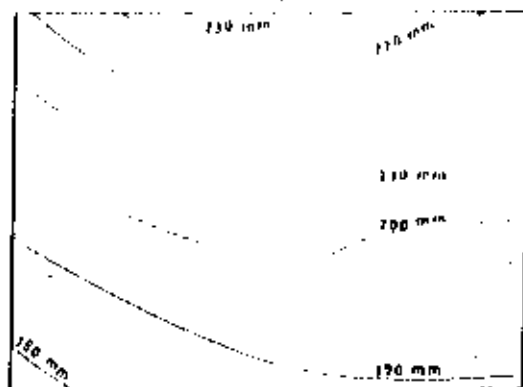
Mean Initial Drought



Isohyet - 5 year low probability

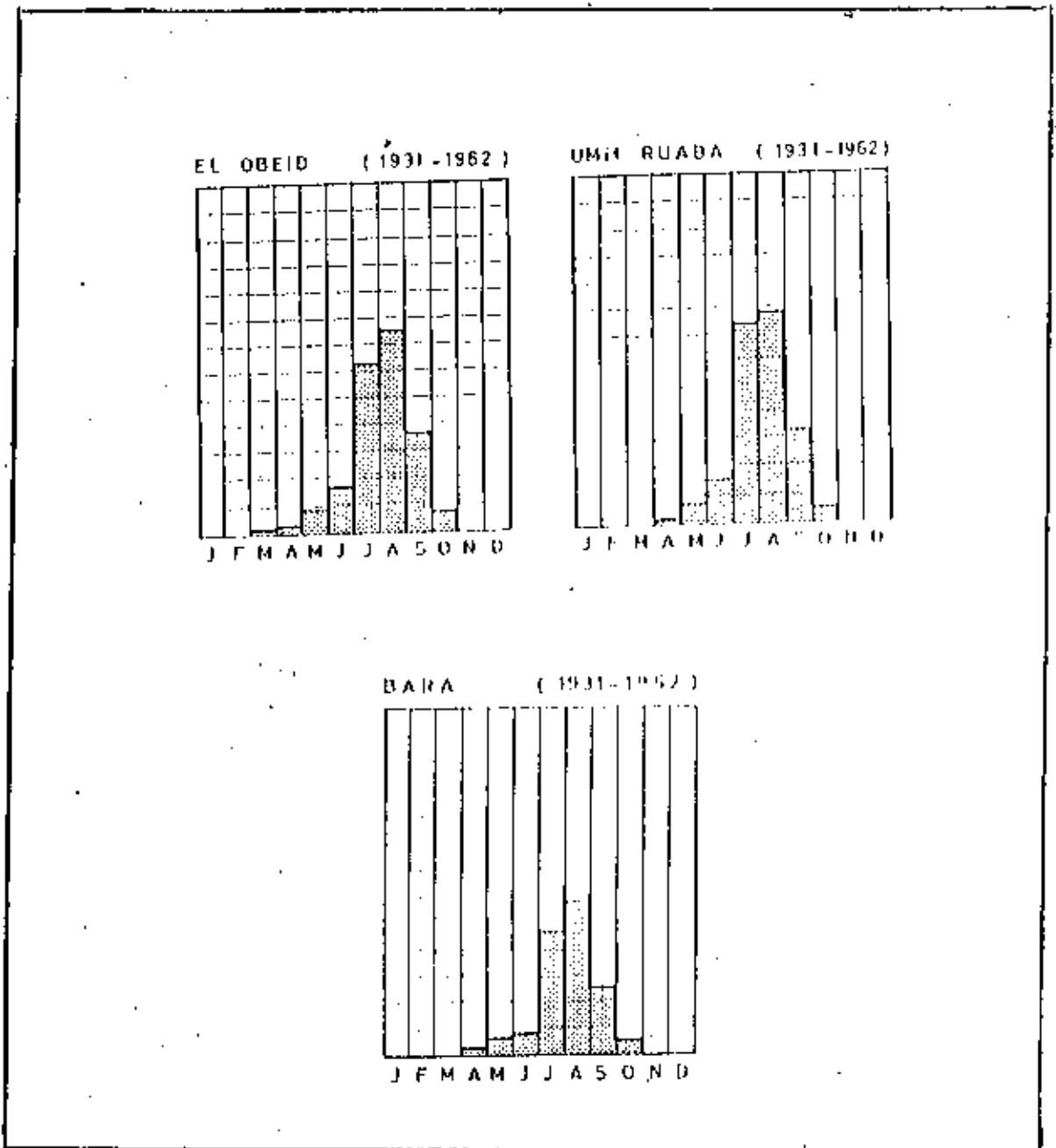


Mean Annual Evaporation



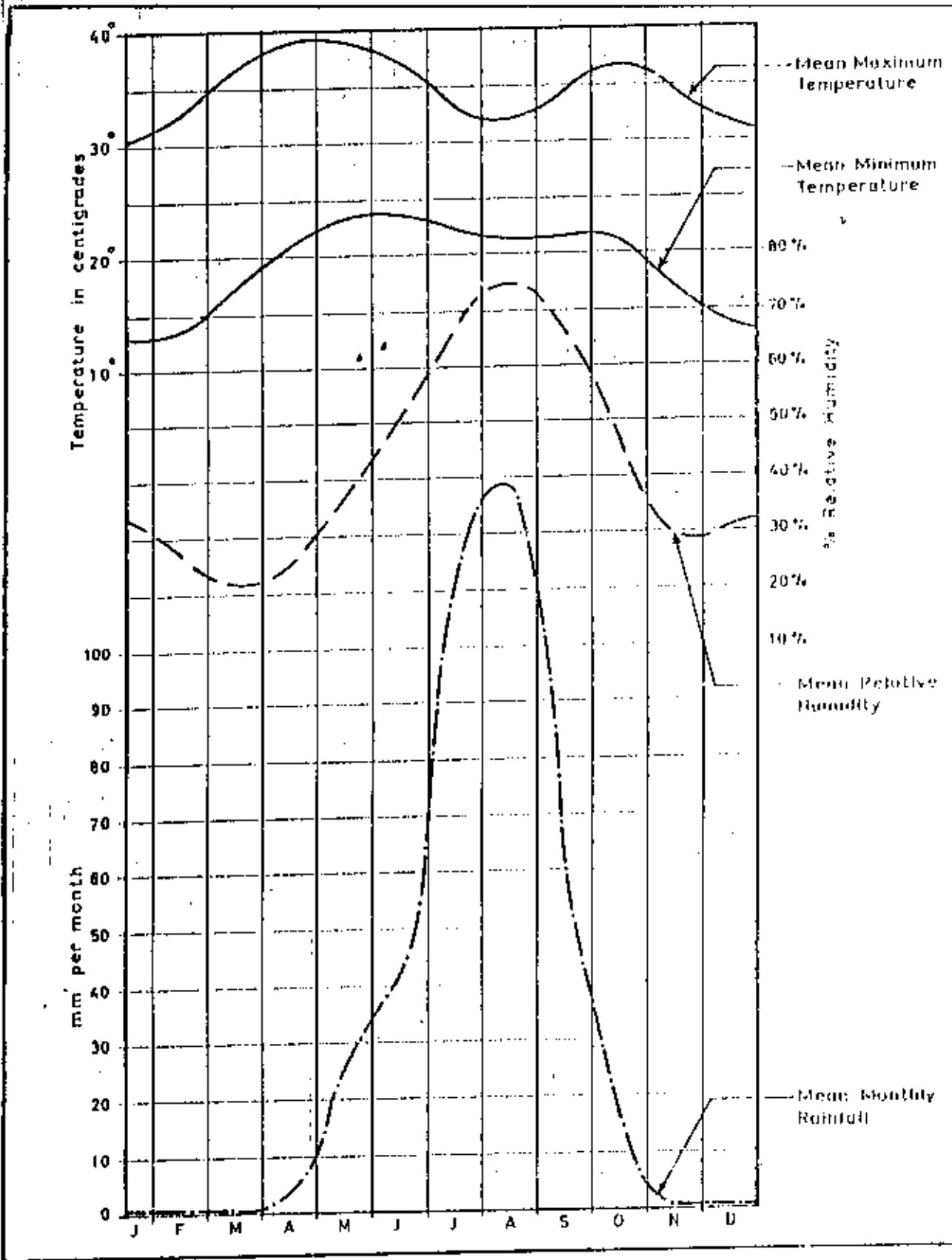
Source : U.N. , Development Programme, FAO, *Land and Water Use Survey in Kordofan Province (The Sudan), Final Report*, Rome, 1967

Rainfall Characteristics



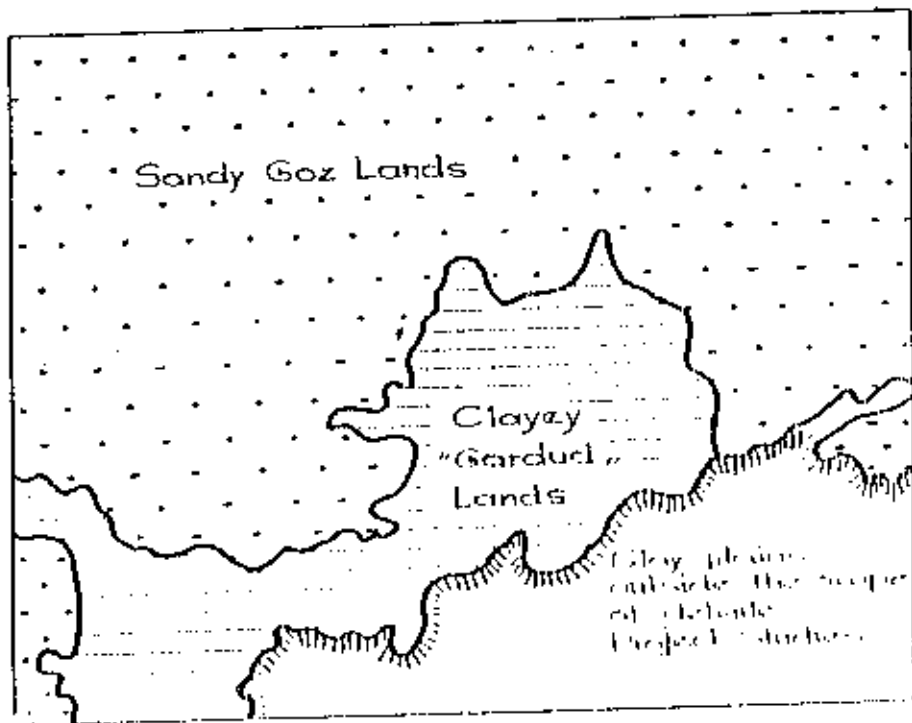
Source : U.N. , Development Programme, FAO, *Land and Water Use Survey in Kordofan Province (The Sudan), Final Report*, Rome, 1967

Climatic Normals at El Obeid



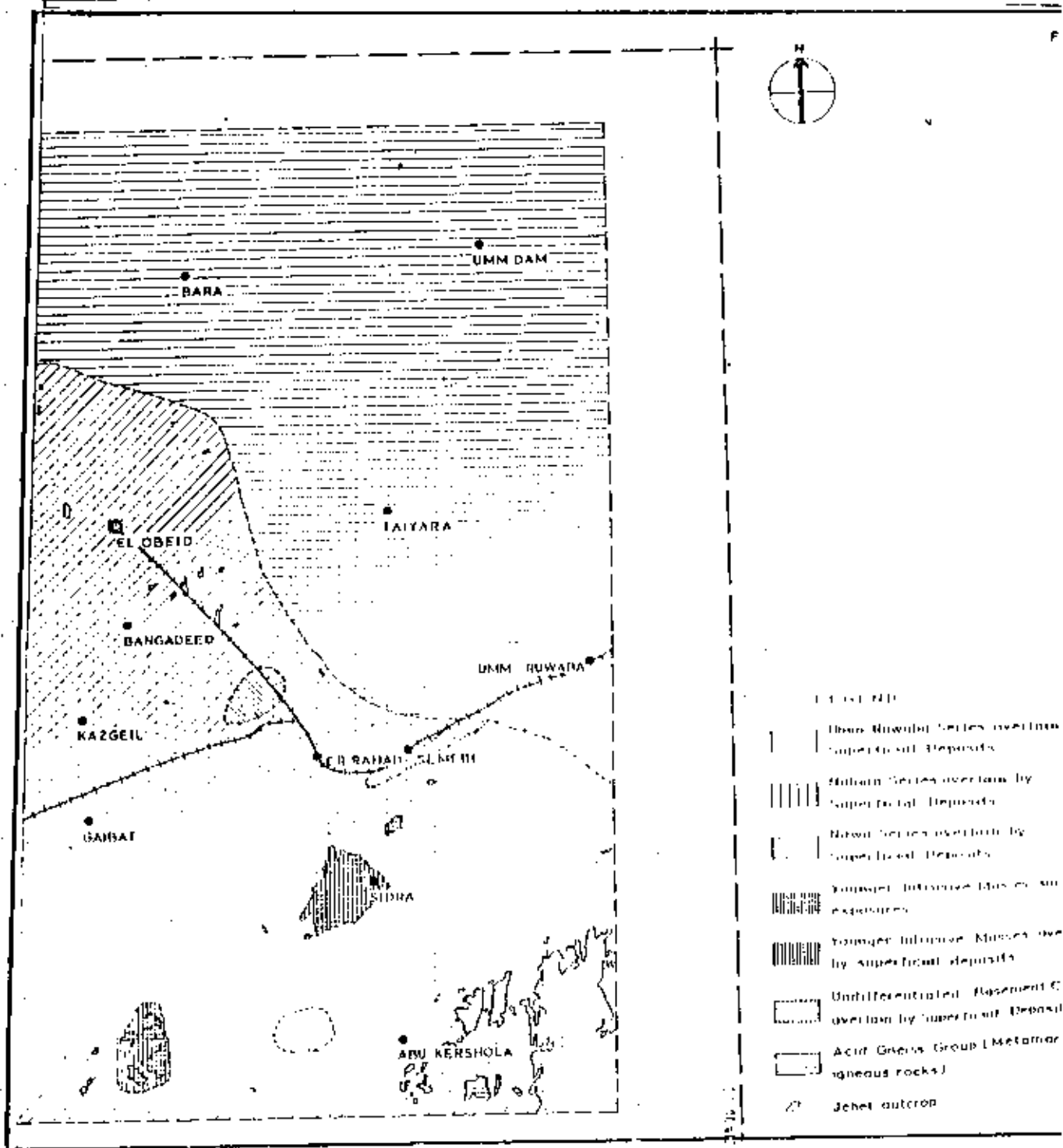
Source : U.N., Development Programme, FAO, *Land and Water Use Survey in Kordofan Province (The Sudan), Final Report*, Rome, 1967

Major Soils types :
The Goz and the Gardud



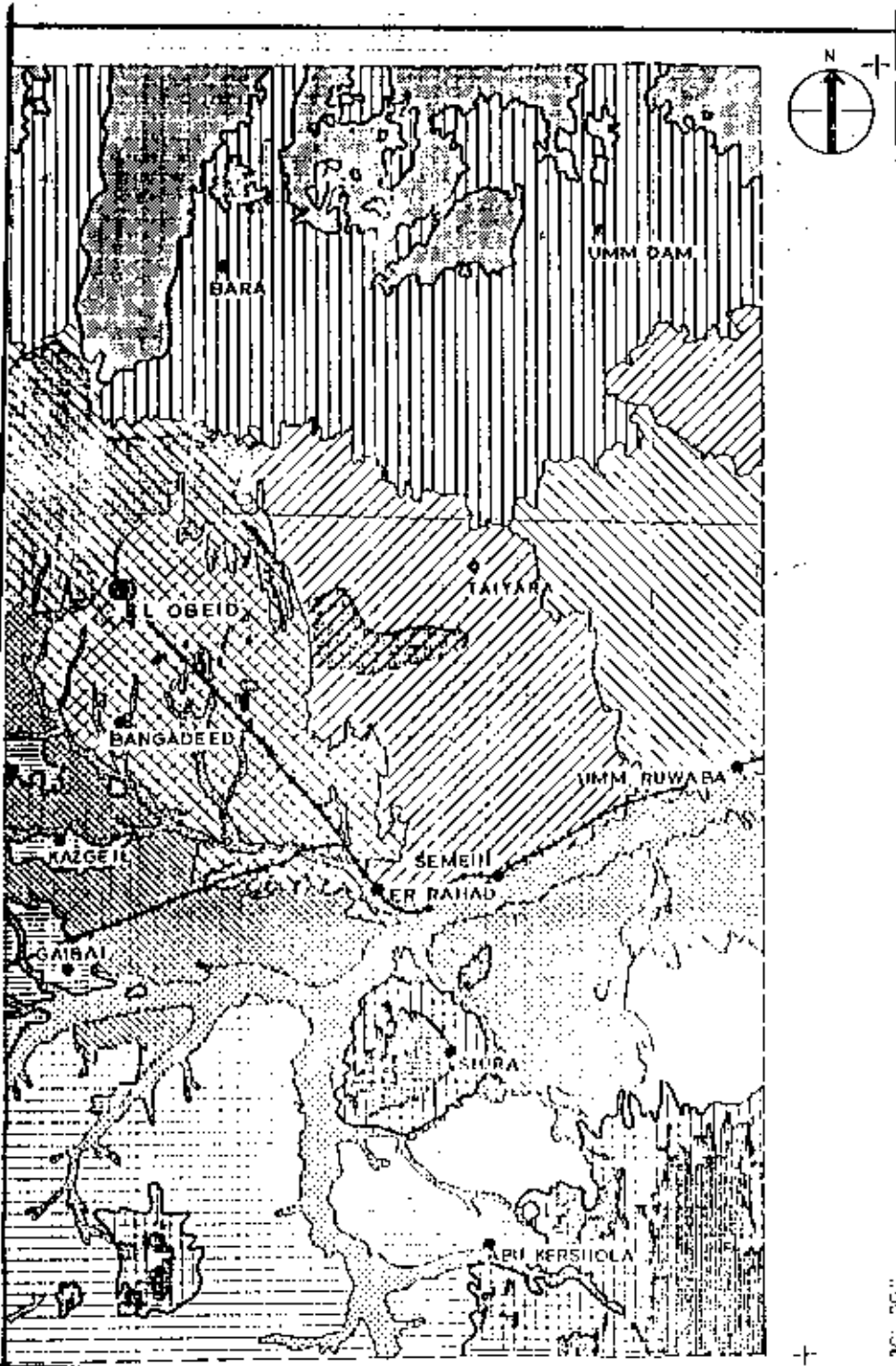
Source : U.N. , Development Programme, FAO, *Land and Water Use Survey in Kordofan Province (The Sudan), Final Report, Rome, 1967*

Geological Map



Source : U.N. , Development Programme, FAO, *Land and Water Use Survey in Kordofan Province (The Sudan), Final Report, Rome, 1967*






























Vegetation Map



NOTE

The area washed over in colour is the tree map prepared by G.A. Booth in 1963. All the features in black are reduced scale from the 1963 map by Hunting Technical Services Ltd.

LEGEND

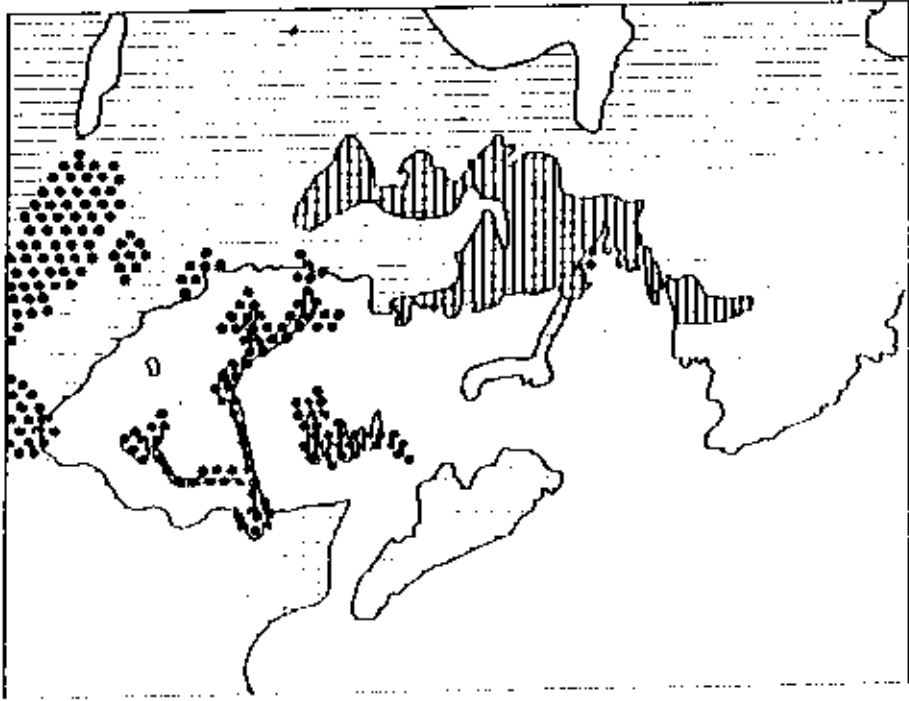
-  High density
-  Medium density
-  Low density
-  I  Aristida Grassland Assoc.
-  II  Acacia tortilis Leptadenia Association
-  III  Annual succul. Association
-  IV  Annual succul. Convolvulaceae Association
-  V  Acacia Seyal Bulbostylis Association
-  VI  Acacia mellifera Commiphora Association
-  VII  Acacia tortilis Acacia
-  VIII  Banyan vegetation
-  IX  Convolvulaceae Convolvulaceae Association
-  X  Aristida grassland Leptadenia Association
-  XI  Commiphora bromelia Assoc.
-  XII  Acacia tortilis Acacia
-  XIII  Acacia tortilis Acacia

CURMASH CODE

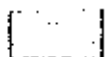

- Tropical Desert I
- Tropical Thornland II III IV V
- Tropical Savannah Woodland VI VII VIII

Source : U.N. , Development Programme, FAO, *Land and Water Use Survey in Kordofan Province (The Sudan), Final Report, Rome, 1967*

Acacia Senegal Distribution

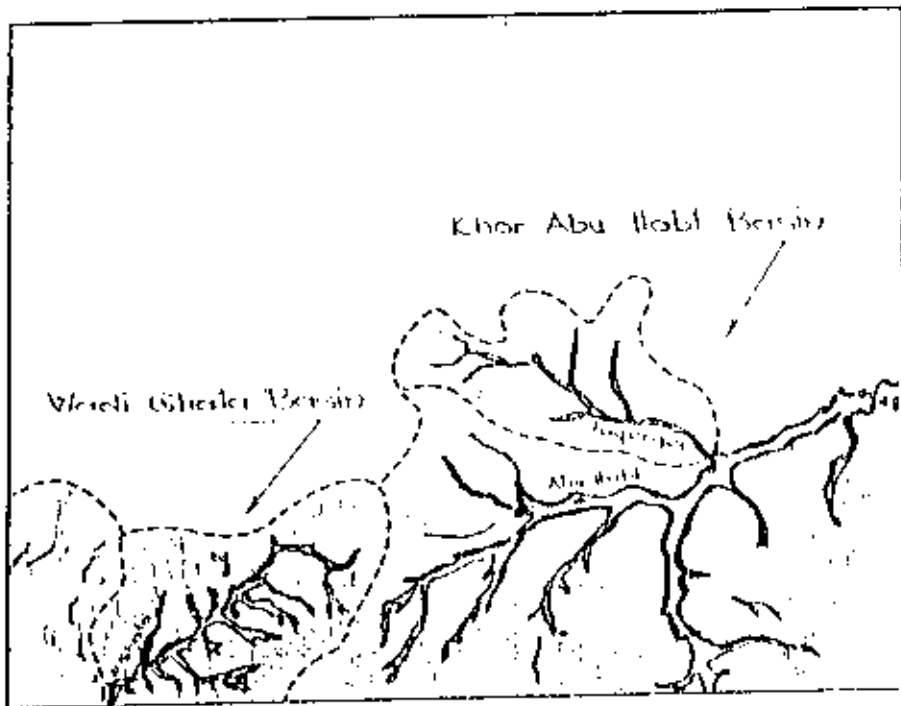


Legend

-  ACACIA SENEGAL
-  DENSE ACACIA SENEGAL

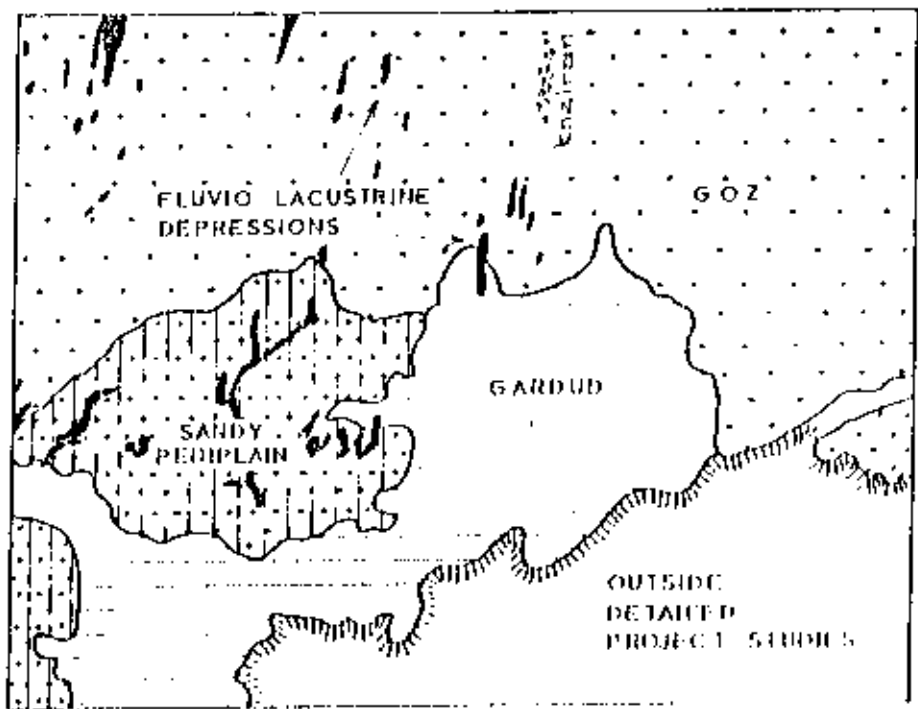
Source : U.N. , Development Programme, FAO, *Land and Water Use Survey in Kordofan Province (The Sudan), Final Report*, Rome, 1967

Surface Drainage Basins



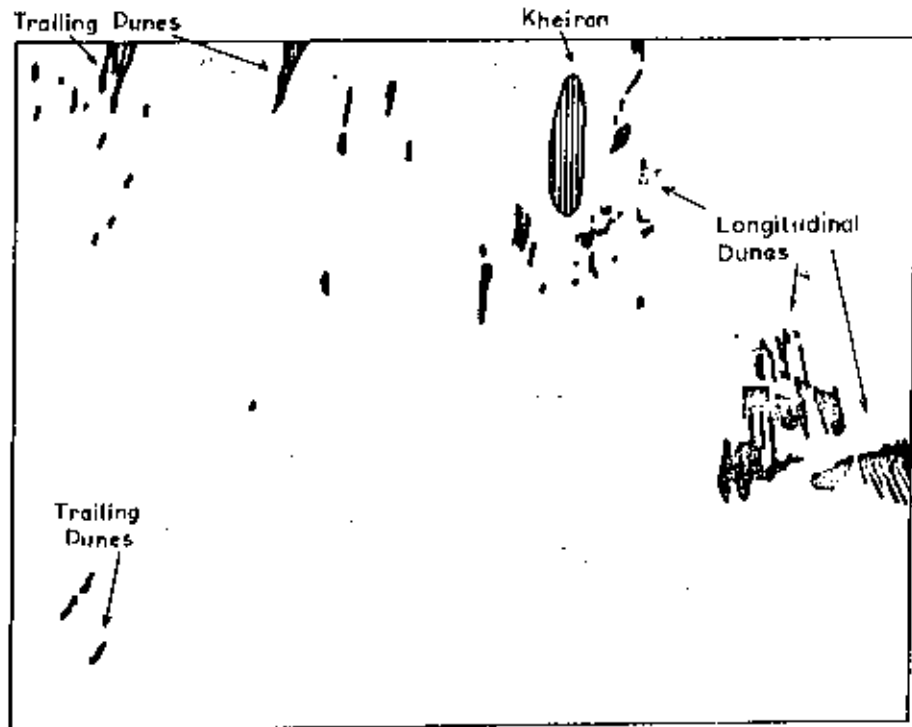
Source : U.N. Development Programme, FAO, *Land and Water Use Survey in Kordofan Province (The Sudan), Final Report, Rome, 1967*

Sandy Pediplain and Fluvio-Lacustrine Depressions:



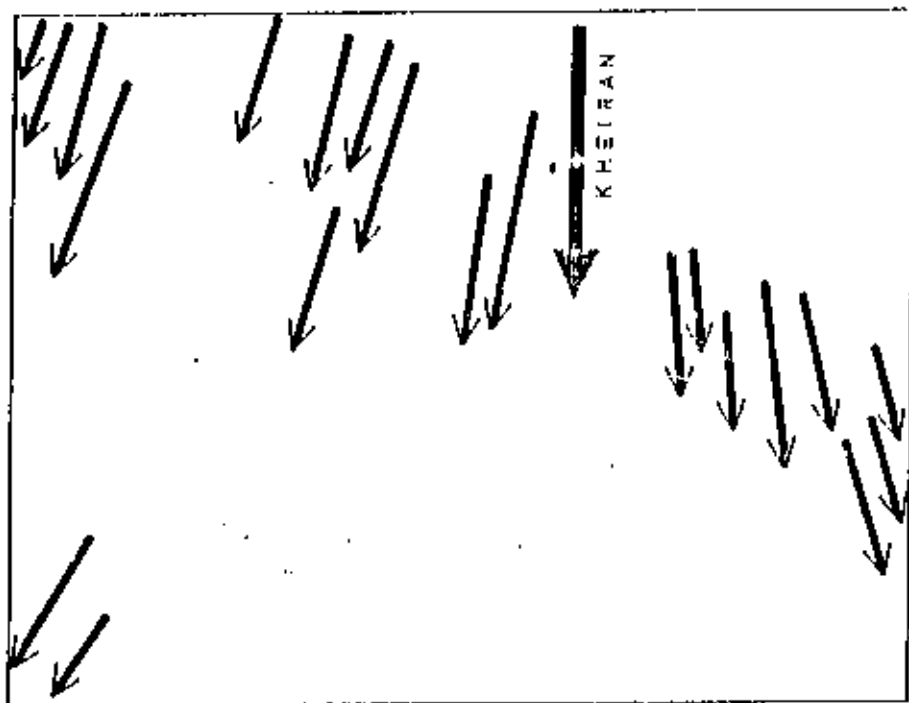
Source : U.N. , Development Programme, FAO, *Land and Water Use Survey in Kordofan Province (The Sudan), Final Report*, Rome, 1967

Wind-Blown Geomorphic Features



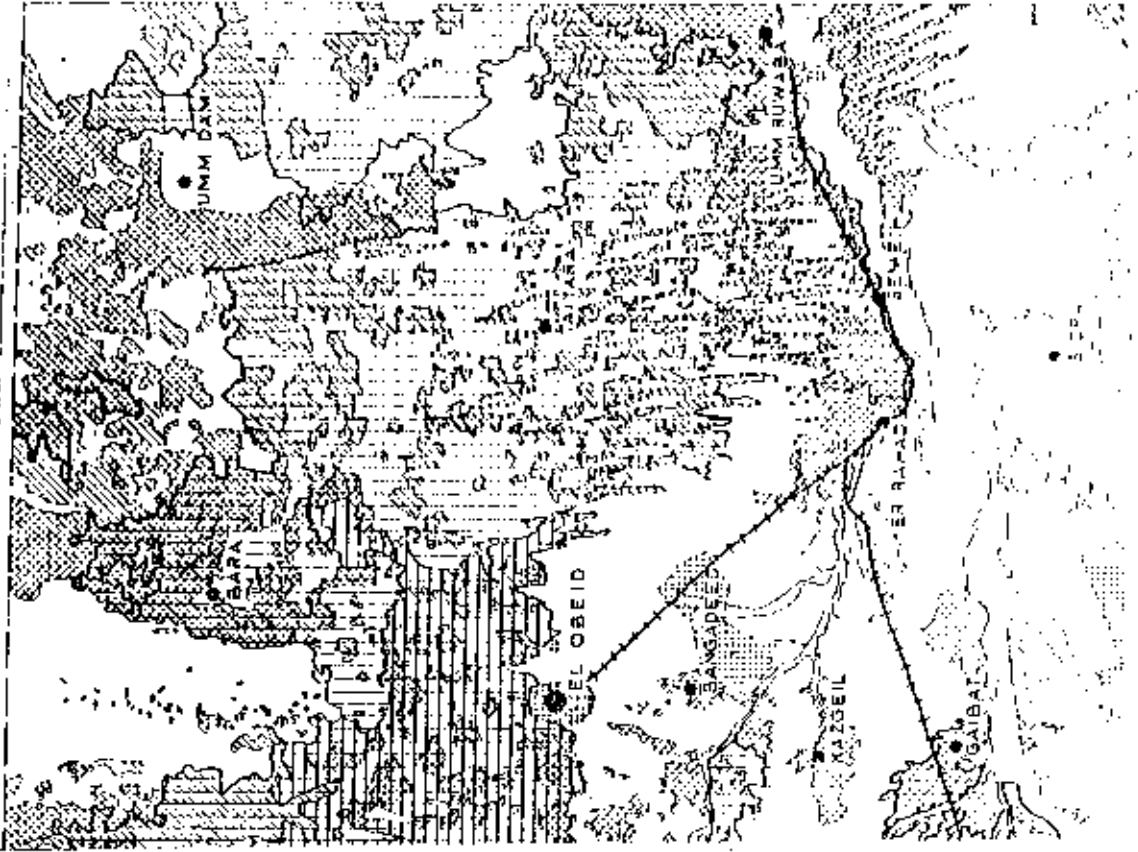
DIRECTIONAL CHART

Fig. 34



Source : U.N. , Development Programme, FAO, *Land and Water Use Survey in Kordofan Province (The Sudan), Final Report, Rome, 1967*


The Cultivated Areas



NOTES

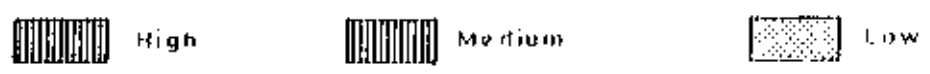
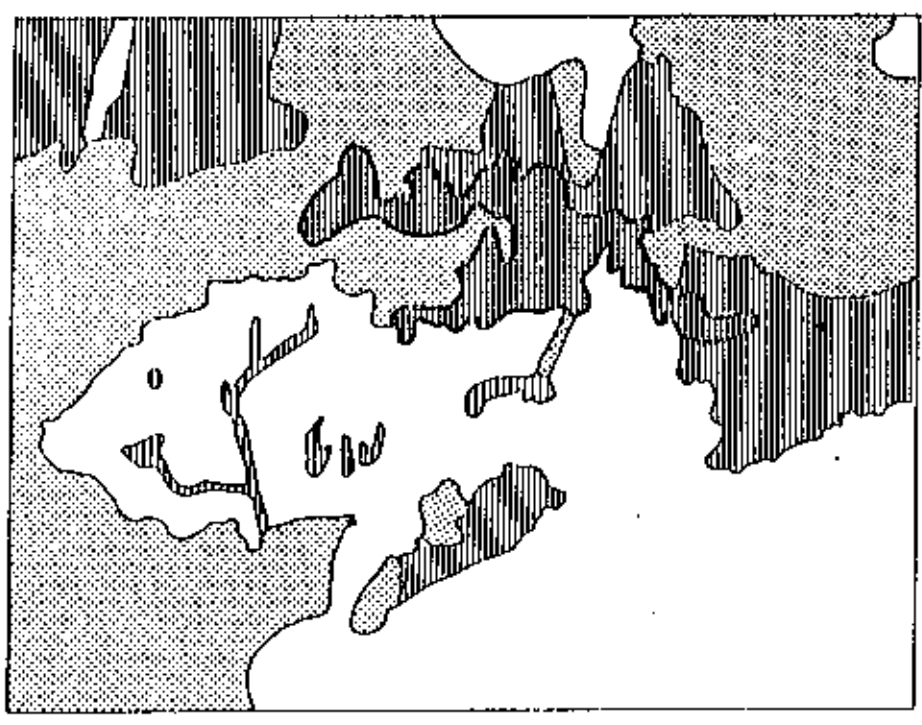
- 1 Reduced in scale from the 1963 maps prepared by Hunting Technical Services, London and printed in colour at 1:250000 (four sheets) by Sudan Surveys Dept.
- 2 The gum distribution is shown as on the original survey maps, 1963. Further explorations by G.A. Booth 1965 led to modifications: see Figs 24, 50, 51 and 52.

LEGEND

 Forest reserve

Source: U.N. Development Programme, FAO, *Land and Water Use Survey in Kordofan Province (The Sudan). Final Report, Rome, 1967*

a) Gum Acacia Distribution



b) Gum Distribution and Soils.

