

Environment Development Studies EDS

Assessments for the Preparatory Phase of the” Sustainable Land Management for Sustainable Livelihoods in Tokar Area of East Sudan

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Annex To The Main Assessment Report – Containing:

1. A Brief On Tokar Delta Scheme.
2. An Annotated Bibliography On Scheme During Colonial Period.

Local terms used in Bibliography

Agawid	: Arbitration Group
Bayada	: Government Owned Dry Land
Dimin	: Individual Cultivator Registered Land
Hod	: Basin Division within Murabba (see below)
Hish/Hishing	: Weed/weeding
Kaber	: Old person in Cultivator Family
Maglis Ahli	: Tokar Locality Council
Mahandis El Gism	: Tokar Delta Engineer
Minha	: Grant to Farmer
Murabba	: Square, Division of Delta into Squares
Nashif/Nashaf	: Unwatered Land <i>+</i>
Nusf Farmer	: Partner Receiving Half Share of Proceeds of Crops
Omda	: Tribal sub-chief
Orneik	: Form of Official Land Registration Title
Quarter Farmer	: Partner Receiving Quarter Share of Proceeds of Crops
Rakuba	: Temporary shelter
Sheikh	: Tribal Minor chief
Samsar	<i>K</i> : Border and Farmer Financer
Wakil	: Agent Assigned by Omda/Sheikh
Zaraa	: Agriculture Office

Br. S. K.

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Annex I: A Brief On Tokar Delta Agriculture Scheme:

1. The situation during the colonial period, 1904 - 1950:

Extracted from the administration site of name: Allotment of Agricultural Lands in the Delta, General Rulings, Tokar Delta Policy Committee, Tokar Agricultural Advisory Committee. Forwarded as a draft Pamphlet by Governor Kassala, to Director of Agriculture – Khartoum,” 1950.

1.1 The Baraka Khor comes down through Eritrea into the Sudan and about 15 miles south of Tokar it spreads into the Tokar plain. The water flows down the Khor between late July and early September in eight or ten flushes in an average season and spreads out over the plain depositing a rich silt throughout. The flow is so fast and so irregular that in the opinion of irrigation experts who have studied it, large irrigation works to control the flood are not practicable, though minor banks and earth works have been made. During big flushes the surface velocity can be as much as five times that of the average velocity of the main Nile in flood and carries over forty times as much silt as the Nile at Halfa. In the early days of the Egyptian Government the plain was largely covered with scrub and there was less spread of water, but in spite of this the forces of Osman Digna were supported by the dukhn grown on the Delta. Mumtaz Fasha first introduced cotton between 1850 and 1860.

1.2 In 1904 a land commission was appointed and after surveys and inquiries were completed the area was declared government land

inquiries

and cultivation rights were registered. The total Delta area comprises some 387,000 feddans of which 170,000 feddans in the west have not been watered for 28 years.

For cultivation and registration purposes the Delta is divided up into hods of various sizes and these are again divided into murabbes of 160 feddan each, there being from 15 to 65 murabbes to the nod. The Central and Eastern sections of the Delta contain 200,000 feddans and the average area watered in one season is 60,000 feddans though as much as 120,000 feddans were watered in 1946, and as little as 26,000 in 1948, such are the vagaries of the flood that no one can tell whether his holding will be watered or not, though up to 1945 those with land in the Eastern quarter were nearly always lucky. Cotton is grown on the well watered areas and dukhn on the fringes and at the southern apex of the Delta. Round the blocks of cotton is planted dura, which growing more quickly and taller than the cotton * to protect the young plants from the hot damaging habibai winds. No arrangements for rotation and resting the land are necessary owing to the annual deposit of silt, nor would it be possible on account of the nature of the flooding.

- 1.3 The land is allotted each year on annual tenancies several months before the flood by a Land Allotment Board composed of the Senior Inspector of Agriculture, the District Commissioner and Sudanese members drawn from the sheikhs and tribal leaders cultivating in the Delta.

Early in September after the floods when the land is sufficiently dry the Agricultural staff measure the flooded areas and the cottonseed is issued to the tenants. Persons whose land is not watered either resign themselves to a profitless year or fix up a partnership with a tenant who has more watered land than he can deal with. Such partnerships must be registered at the Agricultural Department Office.

A certain amount of tribal land as distinct from individual allotments is reserved each year for distribution by Omdas to such of their tribesmen whose land has not been watered, and this is done at the time of the first sowing.

1.4 For many years prior to 1948 the Government had been concerned at the great inequalities of wealth in the Delta and at the exploitation of the poorer cultivators and tenants by the large land holders. An attempt to introduce the practices of cooperative measures failed and in 1942 a special committee was set up in Khartoum to consider measures for improving the administration of the Delta. The principles accepted by the committee as a basis for future policy were:

- i. As many genuine working cultivators should be accommodated on the land as is compatible with the making of reasonable living by each tenant.
- ii. Some measure of financial assistance should be afforded to the worker by the Government.

- iii. More attention should be paid to the growing of grain and vegetables so that Delta agriculture may be more balanced than in the past.
- iv. The half-share partnership as at present operating is indefensible and requires reform.
- v. Persistent absenteeism should be eradicated.

The committee recommended the redistribution of tribal land so as to make the areas available to each tribe as equitable as possible and the reduction of all holdings whether tribal or personal to a larger number of much smaller units. In particular they recommended the gradual reduction of all big holdings to a maximum of 160 feddans that absentee tenants should be deprived of their land completely and that the "half share" system of partnership between land-holders and their subtenants should be changed to a system whereby the subtenant receives two thirds and the land-holder only one third of the crops.

The Committee's recommendations were accepted by the Central Government and were sanctioned by H.H. the Governor General.

1.5 The approved policy is now being carried out and with one exception by the middle of 1949 all the big holdings had been reduced to 500 feddans and most to 400 feddans of waterable land. Further cuts are due to take place in 1950 and 1951. When this policy was first announced and again in 1949 there were ^{protests} ^x ~~protests~~ against these cuts which are naturally unpopular with the large

land holders, but the great demands for Delta land, and the great inequalities in wealth show that a more equitable distribution is necessary. Apart from the above reforms the lands are re-allotted annually to the same holder except in case of bad work, absenteeism, and the death of the holder, and the land available for new distribution for these reasons is allotted by the board to deserving and competent cultivators. The land records and allotment forms are all carefully and accurately kept by the Senior Inspector of Agriculture. X

1.6 Free sowing grants are issued from the Tenants Account (see below) for both cotton and grain at 20 P.T. per feddan and cleaning grants are also made later for cotton at from 20 to 40 P.T. per feddan. The Senior Inspector of Agriculture exercises control through a staff of Agriculturists – usually 7 – situated at various points on the Delta. The ^{grain} grain ripens in late December and is all harvested within a couple of weeks or so, and the dukhn is harvested in January and February and during these months great numbers of Habab from Eritrea, Beni Amer and Hadendowa from Sinkat settle in the Delta, some for the grain harvest only, but most of them for the whole season which lasts up till the end of May. X

1.7 Cotton picking starts in the second half of January and the first cotton market is held at the end of February and these continue according to arrivals in the market up to the beginning of June. At the beginning of the season the cultivator registered himself with one of the ten cotton ^{worker} ~~worker~~ ^{brokers} in Tokar, who handles his cotton

through the market for him. The cotton is graded by experts employed by the Government, is weighed, sold and passed out of the market either for loading on the railway to Trinkitat or into lorries. Part of the cotton is ginned at Suakin and part at Port Sudan. The tenant receives a free grain crop and 70% of the value of the cotton grown by him. 10% goes to the Cultivators Financing Account for the sowing and ~~leasing~~^{lending} grants and 20% to the Government which represents land tax, rent etc. The Tenants Financing account at the end of 1949 stood at Ls.... And is regarded partly as a reserve and equalization fund.

1.8 Before 1941 all cotton was sold by free and unrestricted ~~suctions~~^{auctions} at Tokar. From the years 1941-1949 the cotton was sold at controlled prices to the British Government and later to the raw cotton Commission but a return was made to the ~~suction~~^{auction} system in 1950. In 1948 and 1949 payment of part of the price of the crop was for the first time in the history of Tokar deferred and there is little doubt that the payment by installments was of great economies benefit to the smaller cultivators though it is not liked by the bigger cultivators. The system of payment by installments has thus been brought into line with the policy adopted in the Gesira, Gash and other Government schemes.

1.9 Decisions about general policy in the Delta were usually taken in regular consultations between the Agricultural and the Province staff, and in 1949 a statutory committee was set up known as the Tokar Delta Policy Committee whose terms of reference were "To

consider and advise on questions arising in connection with the Tokar Delta". ^{At} ~~At~~ the same time the tenants were given representation in a committee of nine members who were advisory and consultative to the Senior Inspector of agriculture, and who were responsible for submitting matters to the Policy Committee. Five Sub-Committees each of five members, to represent the five divisions of the Delta were also appointed to meet the Senior Inspector of Agriculture monthly in connection with the day-to-day agricultural administration of the Delta. At present those committees are appointed by the government after taking local advice but as elections are already held to elect the members of the Local Government Council there is no reason why the tenants agricultural representative^s ~~s~~ should not also be elected by the tenants themselves and it is expected that this method will shortly be adopted.

1.10 In 1948 a tenants welfare fund was established to provide social services and amenities for the benefit of the tenants and others whose livelihood depends on the Delta Agricultural Scheme. The fund was started with a grant of Ls 10,000 from the Government and is fed from a levy on the cotton crop of 4%, a small kantar together with the interest at 2% on the money standing in the Tenants Financing Account. The fund is administered by a board of trustees under the presidency of the district Commissioner and by a consultative committee of local members. The income accruing to the fund by July 1949 was about two thousand founds

and is now a good deal more than that. The money is being used for assistance to social clubs, the Tokar After-are Club, football associations, boy scouts, radio set and water supplies.

2. The situation During Independence Period, 1956-2008:

Annex II: Annotated Bibliography on Delta Tokar, "Covering: Land and Allotment of Agricultural Lands in the Delta, General Rulings, Tokar Delta Policy Committee and Tokar Agricultural Advisory Committee, extracted from the administration file carrying the above subject matters".

1. Rationale of the Bibliography:

There is nothing at present comprehensively written about Delta Tokar. The scheme was the making of the Colonial administration, 1904, which continued to run it for a period of 50 years, up to the time of the Country's Independence in 1956. Hence, it goes without much justification that the dealings of the earlier administration with matters in the Delta have left their imprints on the current situations in the scheme, for in them we find explanations of how things have developed. Though no scientific solid writings, to which a researcher may refer, have arisen in course of implementation of the scheme, there exists a dearth of valuable information in some of the administration files, as records of various actions taken, which could be scrutinized, documented and analytically used.

Above is the purpose of the present bibliography, to illuminate the past, and send messages into the present. Its material has been compiled from the file under the name mentioned above, and thereafter arranged topically, with reference coding at the left margins of the pages, for easy referring to its contents in the writings of the four assigned thematic assessments.

contents

2. On land issues:

Code Reference 2.1. Legal status of Delta of Tokar Delta lands:

"To Governor Kassala, 1953"

The Government's title to the Delta land originates in the Tokar Regulations 1904. These regulations were never gazetted, nor can I trace that they were issued in the form of a proclamation by his Excellency the Governor General (the normal method of promulgating legislation at that time).

However, be that as it may, the regulations provided for a commission to be appointed to determine the right of the Government to lands at Tokar and any persons claiming right to the same.

The commission was appointed (Mr. Tippets) and declared the land to be government and subject to no private rights of any kind. The proceedings of the commission were untraceable in 1929 and all that remains is a brief ~~MS~~ written by Mr. Tippets in 1926 before he finally retired.

The Government accepted the finding of the Commission and treated the land as Government land subject to annual allotment to the cultivators.

The method chosen to distribute the land was by means of a Board consisting of a District Commissioner and Inspector of Agriculture. In 1925 Mr. Tippets (then Governor Red Sea Province) modified the Land Allotment Board to include Sheikhs and cultivators as assessors. The Board has presumably continued in much the same guise to this day.

~~This~~ The then is, briefly, the background to the Governments' title; a somewhat unorthodox legal background, but one which has remained unchallenged for 50 years. The public has accepted that the land is government land, and that the government is free to distribute it annually to the best interests of the local cultivators. The Government has employed certain machinery (the Land Allotment Board) to distribute the land, and has given effect to alternations in policy (viz the successive reduction of large allotments, known as scheme C approved by his Excellency in 1942) by administrative action and not by process of law. The Governments' right to act in this manner has never been questioned.

I therefore recommend that the way to make such changes as are necessary in the system of land allotment is for ~~you~~ to follow previous practice and ~~present~~ ^{precedent} and to effect these changes by administrative direction.

There are two alternatives, either to continue to operate on the present basis, as I have suggested above, or to apply for legislative sanction to embody the present practice in an ordinance. I think you will agree that we should avoid resorting to legislation unless we are forced by circumstances to do so e.g. by a successful challenge in the courts to the present policy. Until this happens, and it is not I think a very likely eventuality, I suggest we should let sleeping dogs lie.

Commissioner of Lands

Code Reference 2.2. Types of cultivable lands

Official classification of cultivable land types (1948) points to:

Dimin lands: allocated to individual farmer according to official title.

Tribal lands: allocated to tribes with omdas (chiefs) of tribes encrusted with the rights to distribute to chosen members of the tribes.

Bayada lands: Unallocated Government land temporarily distributed, when reached by irrigation to the landless in a range of 10 feddan.

Senior Inspector of Agriculture Tokar Delta Scheme

Code Reference 2.4. Large Allotments were put to Revision (1946-minutes of meeting"):

The land likely to be watered in the case of these 12 cultivators was as follows:

		Feddans
1.	Mohi Bahash	250
2.	Sayed Mohamed Takool	100
3.	Mohd. Ahmed Abu Amna	300
4.	Osman Abu Ali	300
6.	Ohag Hussein Musa	200
7.	Taher Mohamed Abu Elgadir	350
8.	Ibrahim Mohamed Osman	100
9.	Idris Salih	250
10.	Hassan Abu El Hassan	150
11.	Hussein Kantibai	100
12.	Abu Ali Musa	150
	Total	<u>2550</u>

Nos, 1, 5, 9 and 12 are old and their holdings are likely to be split up soon where where they die.

There are twelve other cultivators who have been now reduced to 500 feddans and whose land will be further reduced to 160 feddans.

The 12 recommended for exemption are all good cultivators, persons of local status, and useful in putting across agricultural propaganda. Some of them perform unpaid agricultural duties.

A list was produced in the meeting of 166 holdings between 160 and 500 feddan which were due for first reduction at the 1950 and subsequent land boards, with recommended exemptions from reduction

in the case of 4 persons between 400 and 500 feddans, 12 persons between 300 and 400 feddans, 39 persons between 160 and 300 feddans.

- Policy on reduction of large size holdings

Meeting attendee by: *Representative*
~~Civil Secretary Office Secretary Office~~
Senior Inspector of Agriculture Tokar, and
and District Commissioner Tokar.

Code Reference 2.5. Allotment of Land (1948)

1. The question of land allotments was discussed at Tokar Policy Meeting in Port Sudan in April and certain recommendations were made.

We have been instructed by Khartoum that the original policy formulated in 1941 is confirmed as regards the reduction of large dimins so that the Delta can accommodate as many independent cultivators as possible.

The Governor (Kassala) at a meeting in March 1946 at Tokar agreed that in certain case~~s~~ on special recommendation he would approve that some large allotments which had been cut, would not be cut further.

Khartoum has confirmed this action by the Governor.

For the 1949 Board cuts in accordance with instructions will be carried out down to 400 feddans, but certain large dimin holders with the approval of the Governor will be exempted on grounds that:

- (a) They have proved themselves good agriculturists and have assisted the government in furthering good cultivation in the Delta.
- (b) As heads of tribes and notables they have assisted the Government in the administration and control of the Delta lands and population.

These exemptions will be made when the allotments are considered by the 1949 Final Land Board.

Senior Inspector of Agriculture, Tokar Delta Scheme

Code Reference 2.6. Re-allotment for Equitable Distribution of Land in Accordance with Instructions of the Tokar Delta Policy Committee (1952):

As with the Scheme "C", and bearing ~~in~~ mind the present path of the flood only Potential floodable land has been taken in consideration. Dry west and fringe areas, are therefore for the ~~movement~~ ^{ut}, ignored.

As far as possible individual allottees have been given 20 feddans as I consider this an economic unit for an average family. Exceptions are tribes with little land, in these case allotments have been cut down in order that as many people as possible can be accommodated.

All individual tribe allottees have been taken from lists and archives of genuine deserving landless cases which exist in this office.

Senior Inspector of Agriculture, Tokar Delta Scheme

Code Reference 2.7. Womens Right to Acquiring Land "From Draft Recommendation For the Revision of the Administration of Various Land Problems, preliminary and Final Land Boards and Delta Agricultural Court. Revision Decisions of the Land Board on the Re-allotment of Dimins of Dead Persons"

On the death of a registered annual allottee the approved policy was to allot his land to:

- (a) His son or sons of a cultivating age.
- (b) The nearest relative (male) of a cultivating age.
- (c) A deserving Tokar cultivator within the same tribe.

Female heirs as such were not recognized, as this would be contrary to the fact that Tokar Delta is government land on annual allotment and can not be dealt with under the "Shareiya" Law.

Permitting a trustee to cultivate land on behalf of female ~~their~~ ^{heir} would imply such certain rights which were not recognized officially.

The subject was then raised before the Legislative Assembly (Question No. 117 on 19th April 1950 by Sayed Mustafa Onur) requesting appointment of trustees of female heirs and minors.

The resolution of the Legislative Assembly is not available, but Mr. Porter (Senior Inspector of Agriculture Tokar) permitted the practice before he retired.

This proved to be a rich source of complaints by those who required extension of the tenure prior to 1950.

Recommendations:

1. Cases prior to 1950 should not be heard. ^{as}
2. To avoid fractionation of the land and treated ~~a~~ contrast in an area of essentially large allotments it is recommended that a limit is set to an allotment say from 10 to 15 feddans.

Priority of an allotment of a deceased, incapable of further splitting should be as under:

- (a) The parties concerned must come to an agreement as to the person who should assume the allotment. ^{given}
- (b) In case of disagreement preference should be ~~to~~ ^{given} to that who can actually ~~form~~ ^{farm} the land.
- (c) If all fall in same one category lots should ~~be~~ drawn amongst them.

Senior Inspector of Agriculture, Tokar Delta Scheme

3. Management of Land:

Code Reference 3.1. Conditions of Tenancy, Tokar Delta – Personal Allottee (1948):

No written or printed conditions of tenancy, as such, is issued to individual allottees.

The actual position is that the annual Land Board of Tokar Delta allots Delta Government Land (all land in Tokar Delta is Government Land) to allottee on Annual allotment, it being verbally understood that the allottee to which land is allotted annually is required to:

- (a) Supervise the cultivation of the allotted land (absentee land lords are not permitted).
- (b) Cultivated the allotted land if flooded to a reasonable standard of agricultural efficiency, as determined by Senior Inspector of Agriculture, and as publically notified by him by "Notices" to cultivators issued from time to time during the cultivation season.

Compliance of the above conditions as made known to all allottees through their tribal heads entitles the allottee for favourable consideration for annual re-allotment of the same land by the annual Land Board.

Whilst all Government Land in Tokar Delta is allotted on Annual allotment, an allottee allotted provided he supervises in person, the cultivation of land allotted in his name to a reasonable standard of agricultural efficiency, automatically becomes eligible for consideration for re-allotment of the same land for the following year.

At the Annual Land Board, each allottee of Delta land for the coming season receives an annual allotment form (specimen attached) which indicates:

- i. Name of Allottee
- ii. Tribe
- iii. No. of Murabba within Hod
- iv. Area of land allotted.

Such annual allotment ~~firms~~ bears a stamp indicating: "Annual Allotment of Government Land year, and are signed by ^P president of the Annual Land Board.

In addition to these similar particulars of annual allotments are recorded on forms A & F/Gen/25, "Tokar Land Allotment Form" One form for each allottee, and these are retained in Land Office, Agriculture Office, Tokar.

Code Reference 3.2. Management of Tribal Land at Field Level (1945) Regarding Tribal Allotment:

Required of Omda (tribal chief acknowledged by the Administration) through Tokar District Commissioner.

- (a) Appoint a Wakil from his tribe for each Murabba of his tribal land in the flooded area.
- (b) The Wakil will assist in the distribution of land to cultivators under the Omda, and be responsible to the Omda and Government in seeing that the cultivators will carry out the cultivation work in a proper manner.
- (c) In consideration for this work the Wakils of each Murabba will be allotted ¹⁰ ~~120~~ feddans in his particular Murabba, whilst the cultivator 8 feddan ~~cultivars~~ and Wakils cultivating in tribal land will only be those ~~was~~.

- i. Who are members of the tribe.
- ii. Who cultivate themselves
- iii. Who have no watered land elsewhere.

In follow up of this instruction Omdas are required to submit a list to Agricultural ^Office showing the names of those ^{who} will act as Murabba Wakils, for that particular cultivation season. X

Anyone found cultivating within tribal land who has watered land elsewhere will be liable to lose their own allotments elsewhere, and also that which they have cultivated within tribal land.

X The land ^{now} given out for cultivation this season is registered as government "not allotted" lands.

The question as to whether or not such land at next Land Board will remain as government "not allotted land" or be considered for inclusion on the orneik of the person to whom it is given for this season will be decided in due course and will largely depend on the work of the cultivator of that land this year. No lazy, unsatisfactory or absent cultivator will have any chance of having such land added to his orneik at the next Land Board.

Cultivars to whom this government "not allotted" land is given this year will submit request for seed in respect of this land by arduhal in the usual way. X

As soon as the flood subsides, ^{measures} will proceed to measure out the lands amongst the cultivators to whom it is given, in order that each will know his ^{piece} of land for this year. As there is a large area to be covered all persons to whom this land is ^{now} given must be present at the area allotted them as soon after seed issue as possible and await arrival of

chase

the land measurers. The land measurers have no time to ~~choose~~ after cultivators, and any cultivator to whom land is now given who is not present on the land to be shown his boundary by the land measurers, or in certain case by "the Muhandis El Gism" will lose the chance of cultivating the land this season and the land will be given to another.

The Government land for cultivation this season will be given out as per the attached list for one season only 1944-1945. Every person to whom this land is given, by accepting the land is hereby under a definite obligation to thoroughly clean the land at the end of the season. Failure to comply with the order will result in the allottee (tribe or individual) concerned never again being given land in the future and also the allotment of an equal area of other land already registered on orneik (official ^{title} till of registration) in his name, or if a sub-allottee only, the loss of an equal area there from.

The granting of this Government "Not allotted" land to cultivators for cultivation by them for this season 1944-45 because the land registered on their orneik is dry does not mean that such cultivators or others will necessarily again be given such Govt. "not allotted" land in future years, even though the land on the orneik is dry.

Senior Inspector of Agriculture, Tokar

Code Reference 3.3. Management of tribal land (1951):

The tribal allotment as opposed to personal allotments to individuals within a tribe, is in the nature of an "insurance" against non-flooding of the normal individual personal allotments. No actual division of tribal allotment land is made by the tribal heads until after the food

and just at the time of sowing. Such "tribal" land as is watered in any season is then divided, by the "tribal heads", in consultation, amongst individuals within the tribe whose personal allotments have not been watered by that seasons flood.

It is obvious therefore that no "hard and fast rule" that division of tribal land can be made in advance of the flood, because:

- a) The area of tribal land watered and available for division is not known until the end of the flood.
- b) The percentage of individuals in each "badana" – tribal section – whose personal allotments are not flooded is equally not known till the end of the flood (i.e. till sowing time).

The first call on watered tribal land allotment is in respect of individuals whose personal allotments have not been flooded. Any further flooded tribal land after all such cases have been accommodated, is then available for division to landless "deserving cases" within the tribe.

In order to accommodate as many persons as possible on the tribal land, the normal allotment does not exceed 5 feddans per person.

It should also be noted that any allotment of tribal land to any individual within that tribe in respect of above is for the one current season only and all such land reverts to the tribal land at the end of the season.

On completion of the division of tribal land for the current season lists of such division are submitted to this office by the "Tribal Heads" making the division, and this office holds such "Tribal Heads" making the division responsible for the agricultural administration of the allotted

tribal land throughout the season. It is therefore not permissible for "tribal land" to be allotted or divided by any body over which this office has no supervision or control i.e. such allotment is required to be carried out by the "tribal heads" under the agricultural Sheikh of that tribal section.

Senior Inspector of Agriculture, Tokar Delta

4. Partnership:

Code Reference 4.1. On Rent (1943):

I know that the word "rent" is used throughout our files but I am trying to ensure that it is no longer used.

I consider that by officially allowing a man to charge "rent" for government land we were giving him certain grounds for thinking that the land was his.

It is true what you say that the passive partner used to draw from the active partners in a "nusf partnership" was in fact rent and that is one of my main objections to it.

I should prefer this payment to be given some title other than "rent" for the rest of its life.

Governor Kassala

Code Reference 4.3. Letting land on partnership (1943):

Partnerships will be permitted and approved in respect of flood and cultivated land only. No partnership will be permitted for dry land. Any persons found to be concerned in any partnership of dry land will be severely punished.

Where tenants are unable to work out all their holdings themselves they are allowed to let out the remainder to partnership under the following terms:

- (a) They must inform their tribal leader they have land available for partnership.
- (b) All contracts must be made out as under and registered in the Ziraa office as soon as possible after the crops are sown.
- (c) No contract is made until its certain that the area is flooded.
- (d) The contract and terms therein will hold good for season 1943/44 only.
- (e) Check will be kept on Simsar book and in the field and any tenant not registering partnership or allowing land out on terms other than those approved by the government will be severely dealt with.

Approved contract:

- i. Hod
- ii. Marabba
- iii. Name of Tenant Tribe
- iv. Name of cultivator Tribe

..... hereby agree to allow
to cultivate feddan for season
on the following terms

1. The cultivator to receive all sowing and hishing grants.
2. The cultivar will pay for all cultivation expenses
3. After cutters ^{and} ~~an~~ threshes ^{eyes} have received their share of the grain crop, the remainder to be divided $\frac{2}{3}$ to cultivators and $\frac{1}{3}$ to the tenant.

4. The cultivator will receive two thirds and the tenant one third of what remains of the value of the cotton crop after deduction of the following expenses:

- Cost of Rakuba and Brish matting.
- Picking
- Packing of cotton in Rakuba
- Transport of cotton
- Simsars' commission
- Water for labourers.
- Cutting and turning of cotton stalks and final clearing of land.

(Seal of Tenant)

(Witness)

(Approved by)

Code Reference 4.3. Registration of partnership (1944): *cultivale* *he*
 Where a tenant has more watered land than he can himself be is
 permitted to arrange a partnership, provided:

- He must inform his tribal Sheikh that he has land available for partnership. If the Sheikh can not produce a partner from within his tribe the cultivator should obtain a note to that effect and he can then secure a partner from another tribe.
- In general, only one type of partnership is alleged. Conditions of such partnerships on the $\frac{2}{3}$ one third principle have already been issued and are again stated below.
- All partnerships must be submitted to Ziraa office for registration after the crops are sown. A check will be made in the field and through the Simsar books during the season to see that this has been carried out, and if non registered partnerships are found to exist, the coming Land Board will have no hesitation in dis-

alloting part of the land of a cultivator who has let out his land on partnership without registration.

d. The approved partnership contact and terms thereof will hold good for season 1944-45 only.

Now that the sowing of the crops has been completed all concerned are hereby ^{informed} improved that all partnership must now be submitted to Ziraa office for approval.

Such partnership registration will commence on 20th October and all must be submitted for approval of registration between 20th October and 30th November, 1944.

All partnership agreements will be made in the following manner.

Approved contract

1944-45

Code Reference 4.4. Quarter-share partnership, 144-45:

These are not encouraged and will only be permitted in a limited number of cases on areas of 20 feddans and over. The terms of such partnership will be that the tenant will pay All expenses and the cultivator partner will pay no expenses whatsoever. The cultivating partner will receive one quarter of the net yield of grain after cutters and threshers have been given their share, and also one quarter of the net value of the cotton crop after deduction of all expenses.

All such quarter-share partnerships must be submitted to Ziraa office for approval and registration between 20th October and 30th November 1944.

Senior Inspector of Agriculture, Tokar Scheme

Code Reference 4.5. Change of policy of partnership (1953):

The Policy Committee has recently ruled out the following:

- (a) That the registration of partnerships need not be compulsory.
- (b) That as a safeguard to the cultivating partner registration is to be permitted before the flood.
- (c) That the division of profit is not fixed but merely registered as agreed between the two partners.

The old practice was that all agreements to be endorsed by the Senior Inspector of Agriculture, with a copy of the agreement used to be kept by this office.

De-allotment in bad case of partnership will be more effective than punishment viz. fine or imprisonment and this should be applied by the Final Board whenever possible.

Inspector of Agriculture, Tokar

5. Agricultural Advisory Committee:

Code Reference 5.1. Formation of Local Agricultural Advisory Committee (1947):

During the visit to Tokar in December 1947 of Director of Agriculture and Forest Department, Governor Kassala Province, discussions took place aimed at most closely associating the actual cultivating population with the Agricultural Office in the general agricultural administration of the Delta. Formation of the following bodies ^{was} decided upon:

- (a) A Local Agricultural Advisory Committee. The constitution of this committee to be nine members as follows:

7 Active cultivators (a certain number of whom will be territorial representatives)
1 Representative of the cotton Simsars
1 Representative of labour.

The members to be nominated by agreement between Senior Inspector of Agriculture and District Commissioner Tokar.

This committee to meet for ~~this~~ ^{the} time being once a year with Senior Inspector of Agriculture as Chairman.

The duties of this Local Advisory Agricultural Committee will be assist the Senior Inspector of Agriculture in the ~~several~~ ^{General} agricultural administration of the Delta. This committee will discuss, make suggestions and recommendations on, agriculture in general, in Tokar Delta and matters connected with Tokar Delta agricultural administration and operations arising therefore.

Delta Territorial Agricultural Sub-Committee

The cultivable Delta, which, at present represents the whole Delta east of Tokar town will be divided into sections, such sections may vary from year to year with changes in the flooded area. (This year the number of territorial sections will be 5). Each territorial section will have its own agricultural Sub-Committee of the main local advisory committee.

Such territorial Sub-Committees will consist of five members, the "rajs" (chief) being one of the 7 "Cultivator" members of the main Local Advisory Committee, who is an actual cultivator within that territorial section.

The "rajs" of each territorial area will co-opt four other members to form the territorial area Sub-Committee of his section These

co-opted members will be actual cultivators, cultivating their own allotted land (not by partnership) within the section, and the selection of the co-opted members by the territorial "rais" to be approved by the Senior Inspector of Agriculture.

The functions of these territorial Sub-Committees will be to present cultivators interests in their areas and to present cultivators problems to Senior Inspector of Agriculture. These territorial Sub-Committees will have access to Senior Inspector of Agriculture, meeting in his presence, monthly during the cultivation season, such meetings of each territorial Sub-Committee being held at a convenient Centre within its section of the Delta.

Code Reference 5.2. Functions/terms of reference of the Delta Agricultural Advisory Committee and the Territorial Agricultural Sub-Committees:

To Director of Agriculture and Forests, Khartoum.

1. Delta Agricultural Advisory Committee:

1.1 Functions:

The duties and functions of the Local Agricultural Advisory Committee will be purely advisory and consultative and will be to assist Senior Inspector of Agriculture in the general agricultural administration of the Delta and to discuss problems affecting the agricultural welfare of the Delta and cultivators. The Local Agricultural Advisory Committee to be the channel whereby the Tokar Delta Policy Committee will obtain the views and opinions of cultivators on any matter the Tokar Delta Policy Committee desires such view and opinions of the cultivators.

The Local Agricultural Advisory Committee to meet twice a year.

1.2 Terms of reference:

✓ To receive deliberate on, and submit the views and opinions of the Tokar agricultural community, and any subject passed to it, for its views and recommendation by the Tokar Delta Policy committee.

To assist Senior Inspector of Agriculture Tokar, in the general agricultural administration of the Delta.

To co-ordinate, deliberate on and make recommendations on proposals submitted by its five Delta Territorial Agricultural Sub-Committees for the general improvement of agriculture in the Delta.

2. Delta Territorial Agricultural Sub-Committee:

2.1 Functions:

Each Territorial Agricultural Sub-Committee to meet once a month, in a convenient place within the Delta territorial division and in the presence of Senior Inspector of Agriculture (or his representative).

To submit, study and discuss with Senior Inspector of Agriculture (or his representative) day to day problems affecting the agricultural administration of the Delta territorial division and make suggestions for its further improvement.

To act as a convenient channel for the presentation of cultivators problems to the Senior Inspector of Agriculture.

To propose and submit (through its territorial representative) to the Local Agricultural Advisory Committee, Schemes for the improvement and furtherance of good agriculture in the Delta.

2.1 Terms of reference:

To receive study and obtain the general views of cultivators in its territorial division, as any matter referred to the Sub-Committee by the Local Agricultural Advisory Committee.

To be, in practice, the day-to-day" channel for representation of all cultivators interests in the territorial division to Senior Inspector of Agriculture.

These Sub-Committees to be purely consultative and advisory, and to have no executive authority.

Senior Inspector of Agriculture, Tokar

6. Moves towards Equitable Land Distribution: Awareness About the Problem, Adopted Policies and Efforts Involved:

Code Reference 6.1. Giving priority to Local Tribes (1943):

I note that land is being taken from local tribes as the Shaiab and the Sudanese and allotted to the Habab. The total amount is small and the Habab holdings only risen from 4,491 feddans to 4,539, but you will recollect that we have agreed with Eritrea not to allot more land to their Eritrean tribe. Rather a lot of land has been taken away from local tribes and re-allotted to west Africans. I know that they make good cultivators and from your point of view are an asset but you ^{must} ~~such~~ also bear in mind that the ^{Land} level in the Delta is not sufficient for our Sudanese and that our general policy is not to give land to non-Sudanese, while there are reasonably good Sudanese cultivators to take it up.

Governor Kassala

Code Reference 6.2. New Policy (1949):

The government has decided to introduce a new policy.

To meet clauses of the policy it will be necessary to take the following actions: *redistribution*

- (a) Make certain radio ~~**~~ of the Delta so as to make areas available more equitable.
- (b) Reduce all dimns whether tribal or personal to small units so that ~~an~~ ^{can} their workings ~~an~~ be more easily checked and that more working tenants can be accommodated in them.
- (c) Reduce the rent of the land let out to partnership.
- (d) De-allot absentees and re-allot to persons who prepared to stay on and work the land themselves.
- (e) Increase the government revenue from 25 to 30%. *force*

The redistribution of holdings will not be put into *price* immediately but spread over a number of years.

Code Reference 6.3. Tokar Delta Land Scheme: Order for Disposal of Land (1953):

Governor Kassala Office.

1. Application:

This order applies in respect of all agricultural land which lies within the demarcated area of Tokar Delta and shall come in force herewith.

2. Land allotment board:

A Board to be known as Tokar Land Allotment Board (hereafter called the Board) shall be responsible to the allotment of land to the

persons for the purpose and the manner authorized by the scheme, and for ensuring due observation of any term or condition attaching to such allotment with power at the time to cancel such allotment in default of such observance – provided that in the absence of the Board the Senior Inspector of Agriculture shall have authority to exercise the power of de-allotment.

The Board shall consist of:

- i. The Director of Agriculture and Forests or his representative as chairman.
- ii. The Governor Kassala Province or his representative.
- iii. One representative of each tribal group with a cultivation allotment in the demarcated area (to be nominated every three years by the Governor) and who shall be a member of the Board only at such time as it is dealing with allotments concerning his tribe.
- iv. The Board is empowered to co-opt additional members at its discretion, but such co-opted members shall not have the right to vote.
- v. Decision of the Board shall be by majority vote.
- vi. The Inspector of Agriculture, Tokar, or in his absence, an official appointed by the Senior Inspector of Agriculture, shall be Secretary and Executive Agent of the Board.
- vii. The Board shall be guided in procedure by such rules and regulation as may be approved from time to time by the Delta Policy Committee, and which provide for the ~~expeditious~~ disposal business and enable the Board to follow an ordered policy to be followed.

expeditious

3. Purpose for which land is to be allotted:

The land or any part of the land described in the schedule may be allotted by the Board for disposal under the terms of this order for the purpose of cultivation under annual tenancy.

4. Record of allotments:

Registration books showing how the land has been allotted shall be kept in the office of Tokar Agriculture Scheme and shall be available for inspection by the public during office hours.

5. Condition of allotment:

The authorized representative of the Director of Agriculture may enter into annual agreements with cultivators on such conditions as may be approved from time to time by the Director of Agriculture and the Financial secretary.

Code Reference 6.4. Beginning of registration of official title of tenancies to individual cultivators:

District Commissioners' Office, Tokar, 1953

I understand that a register of complaints (about allotments) is now kept in your office – to await the Utopian age in which the official or Board can be spared to right the wrongs of Tokar delta.

See
I seem no objection to permitting the automatic renewal of tenancy agreements on a year to year basis without interviewing each individual dimin owner. (Of standard practice in Governments' issue of Annual Tenancy Agreements on lands form No. 7). After the Lessee is signed it runs for a period of one year, "and thereafter", being terminable at 3 months notice on either side).

if X

I believe it would b an advantage if the Land Board were to take over the allotment of all Government Land. Possibly much of this land could now be withdrawn from the Government holding and ~~land~~ ^{hand} offer to cultivators for registration in their names in the ordinary way. The annual allotment of the remainder (at present done after the flood) could still be controlled by the Lands Board, if at its May meetings, a priority list was drawn up of deserving case^s. When the flood was known the allotment will then be announced in accordance with the Land Board list. Some such arrangement as this would do much to remove the burden of distribution from the individuals' shoulders and help to stop the deluge of petitions for Government which came in at the time of the flood.

District Commissioner, Tokar

Code Reference 6.5. Land registration – Notice of Tokar preliminary land Board (1953):

The 1953 Tokar Preliminary Land board will commence on Sunday 12th April 1953.

All Tokar Land Allottees other than the exceptions mentioned in para three ^{below} ~~below~~ are required to be present In person at Tokar for registration of their allotments on the dates shown below:

It must be noted that all allottees of land east of Tokar whether cultivated or dry this season must be present in person.

<u>Tribe</u>	<u>Date of registration</u>
Ashraf	12 th April Sunday
Amrar-Nurab	13 th April Monday
Artiga	14 th - 15 th - 16 th Tuesday, Wednesday, Thursday

Bani Amir	19 th – 20 th Sunday, Monday
Habab	21 st Tuesday
Hadendowa	22 nd and 23 Wednesday and Thursday
Kumelab	26 th Sunday
Hassanab	27 th Monday
Shaiab	28 th and 29 th Tuesday and Wednesday
River people Swakinees, Strangers	3 rd May Tuesday
Sudanese	4 th May Monday
West Africans	5 th May Tuesday

Exceptions

Cultivators living elsewhere than in:

- (a) Tokar whose total holdings are in the dry western delta must forward written application for re-registration, and they must get their applications initiated by a District Commissioner if possible.
- (b) Any allottee who is unable to attend owing the illness must forward written application for registration accompanied by a certificate from a Doctor or District Commissioner.
- (c) Any allottee who had a valid excuse for non-attendance other than (a) and (b) above must forward written application for registration, stating his cause in full, and should get his application initiated by a District Commissioner.

A part from the exceptions stated above, no excuse for failure to attend the land Board will be accepted from any allottee, and the land of such unauthorized absentee will be de-allotted in full and re-allotted to other persons.

Code Reference 6.6. On effort involved in redistribution (1953):

To District Commissioner Tokar

Excluding the Dry west (~~year~~^{yet} always bearing in mind a possible change in the Flood path). Again we should be heading for trouble in trying to discriminate in equity with such cases: land is limited, and were this put abroad, applicants for change could be countless. Have you considered the volume (and in my opinion to little or no advantage in such changes) which would be involved in the complete re-registering of old orneiks, and the issuing of new orneiks to new comers, and also the field work necessary in demarcating new boundaries? We simply could not cope.

Our own opinion is that impartiality should be the key word: if the tribal heads, who in some cases in the past have been ~~quality~~^{guilty} of such male administration are given too much say in the matter, then the object of re-allotment to the genuine deserving cases will be defeated. It should be borne in mind that the list of deserving cases have been compiled from the recommendations of our predecessors for the last decade or more. However I am willing to be convinced that one of this offices nominees would be better substituted by one of a tribal head.

Senior Inspector of Agriculture, Tokar

Code Reference 6.7. Correcting or checking allotments usually involves a lot of effort on the side of the agricultural administration:

Draft Recommendation for the Revision of the administration of various land problems, preliminary and final land board and Delta Agricultural Court (1954).

1. Land Boards
2. Preliminary Land Board

This is conducted at present by the Inspector of Agriculture, who ~~ascertain~~:
interviews for a period about a month every allottee to ~~ascertain~~.

- (a) That the allottee is not dead or absent.
- (b) To initial every allotment form thus approving it for next season
- (c) To split some dimins into separate orneiks.
- (d) To hear various complaints and bring some of them to the land board.

Reference above:

- a. Those can be detected better in the field or during minha payments.
- b. Normal re-allotment can be approved by notice for a period of a year or more.
- c. Applications for own orneik: usually arise from injustice that existed in 1943, and further injustice on the part of some allottees as regards seed issue or minha payments to their sub-allottees, with the latter wanting their own separate orneiks.

In the last preliminary land boards 48 separate orneiks were issued involving the worst cases. The disadvantage of this is now apparent in two ways:

1. That issue of separate orneiks on paper, faster than could be executed in the field and later correcting the land office maps accordingly. This is causing various administrative problems at present.

or neiks

2. There is a limit to the number of oneiks that can be dealt with by this office when issuing seeds at sowing or during minha payments. With the present staff, this limit has been reached.
3. There is an obvious advance in maintaining the system of an allottee as a Sheikh to his sub-allottees to help in issuing seed or mina. A bad Sheikh can be replaced and punished.
4. The major job of demarcating the sub-allotments have not started yet due to shortage of staff.

The new system suggested below will bring about better results:

- (1) Land petitions to be received by this office all year round.
- (2) Each petition as received will be stamped numbered registered and filed with other petitions.

The inspector of agriculture, at intervals will examine the lot and bring forward relevant cases to the final land board.

Senior Inspector of Agriculture, Tokar

Code Reference 7.7. Efforts involved in correcting land distribution:

Draft recommendation for the revision of the administration of various land problems, preliminary and final land boards and Delta Agricultural court (1953)

1943. Sub allotment lists:

These lists were the results of the initiation of scheme C. they were made by the Meraz (Commissioners' office) through Omdas and sheikhs and allottees and were supposed to be published for securitization of sub-allottees. The final undisputed of form was accept/after an elapse of 5 years.

accepted

years from date of publication. It is only two clear that many of the lists are ~~sub~~urbed and numerous genuine allottees were not listed.

The authorities previously gave a deaf ~~ear~~ ear to complaints arising out of these lists for fear of the result - the flood of claims that would pour in. However the matter was approached carefully in 1951 and a bold step was taken to rectify some of the worst cases. This was also done in 1952 and 1953 Final Land Boards.

The number of cases dealt with may be small, compared to the whole lot but it is considered the worst cases were rectified.

As was expected petitions poured in from directions and with the limited staff, the easy course was sending these petitions to the Delta court for preliminary investigation with recommendations taken.

Many Sulh cases (arbitration) were effected. In other cases the recommendations of the court were misleading. Generally the court assumed some of the powers of the final land board for which it was never meant.

Recommendation:

No further complaint arising out of 1943 list should be heard in court and a suitable notice should be issued. The whole job should be rectified as in one lot ^{on} of the basis of these lists by an appointed senior official (full time).

Code Reference 7.8. Survey of sub-allotments initiated plan:

To Governor Kassala (1954).

1. The problem

The inaccuracy of 1943 lists and therefore present muddle and need for resurvey of most of the sub-allotments was caused as explained hereunder:

- 1.1 Large Dimin holders in 1943 in order to avoid scheme C acts reduced their dimins appreciably on their own by listing sub-allotments in the names of their relatives or outsiders who had no rights of "Kabir" with them and other fictitious names.
- 1.2 The small dimin holders on the other hand took this opportunity to enlarge their dimin by crossing out deliberately names of genuine allottees or reducing their areas on the list (but not on the ground). As a result the following types of sub-allottees and complaints came into being:
where

- a) Those who wee given allotments as per para 1 claim the land, while the allottees deny it.
- b) Those who actually cultivate the land now who are not sown in 1943 lists (para 3). *shown*
- c) Those who actually cultivate areas larger than shown against their names in 1943 lists (para 2).

Although 1943 lists were available for a period of five years for inspection by sub-allottees no body did so in good faith, also because the land was dry. The above state of affairs was only discovered for the first time in the record flood of 1950/51 when the dry land was watered and the sub-allottees were denied their sub-allotments or given smaller areas.

The dry hishing (weeding) grants in later year covering most of the eastern half of the Delta increased, and the numbr of complaints became more and more.

Previously no complaints arising out of 1943 lists were given attention but attempts were made in 1951 and subsequent land boards to rectify some of the worst land case^s but it was felt that the problem nearly needed full time investigation team to study and clear it.

1.2 What is required

- a) Resurvey of all sub-allotments lists and preparation of new ones, accurate and up-to-date. Duplicate copies of the new lists will be required one for the allottee and one for reference in the Senior Inspector of Agriculture Office, Tokar.
- b) Registration of above in a permanent form in two registers, one open to inspection for public in Senior Inspector of Agriculture Office and one to be kept in safe custody.
- c) Resurvey of all sub-allotment maps and reorganization of all sub-allotments in rectangular shapes of multiples of 5 feddans in conjunction with (a) above.
- d) Duplication of above maps, one copy open for public inspection, and the other to be kept in safe custody in the Senior Inspector of Agriculture Office.
- e) Marking out of all sub-allotments on the ground.

1.3 Implementation

- a) Appointment of an investigation team, including one senior investigator officer, 2-3 clerks and two surveying teams. In this respect it is suggested that the registered general should be registrar

consulted as to the size of the investigation team. The number of sub-allottees list is 2800, and the number of sub-allottees is 4600 (some sub-allottees are repeated in more than one list).

- b) Prior to the arrival of the investigation team all allottees should be instructed to produce correct and up-to-date sub-allotment lists (names and areas). A suitable and carefully worded warning will be necessary. Above lists should be published in good time before the arrival of the investigation team for information of all sub-allottees, and will be a guide together with 1943 lists, if necessary, for the investigation team.
- c) It is suggested the investigation team conduct its investigation in an open court, attended by the leading members of the tribes, and any number of witnesses (e.g. neighbouring cultivators) that may be required and convenient.
- d) In fixing the new sub-allotments the investigation team should interview all the sub-allottees personally.

1.4 The Bayada (Government Unregistered land in the dry west)

When finished with the resurvey of sub-allotment, the investigation team can then deal with the re-allotment of Bayada land in a similar manner, on paper prior to becoming on land.

Senior Inspector of Agriculture

Code Reference 7.9. Difficulties associated with schemes targeting settlement of the land question to Governor Kassala (1954):

Survey of sub-allotments

de facto

The investigation team would have to check first the registered allotments lists and then the "defacts" situation in the field, but the latter is only feasible in the case of watered holdings.

The insertion of boundary mark-ers would be desirable but not essential if a rectangular layout of plots were to be adopted.

The legal positions should also be clarified. Only last year, the advocate general permitted the hearing of a case against the government for alleged wrongful de-allotment of land by the final Land Board. Is the recent declaration of title in Tokar Delta sufficient to stop legislation by persons aggrieved by decisions of the tribunal or investigating team?

The settlement of the Bayada (government land in the delta) problem is the logical sequence of the investigation work. This is a major operation in itself requiring a complete survey of the area as a preliminary.

Once the resettlement of the entire Delta is achieved supervision will still be necessary for some years to maintain the reorganized layout. If this is not done, the past may repeat itself and the last state of Delta will be no better than the first.

The magnitude of the whole task should not be under estimated; only those with local knowledge of the Delta and the Tokarawis' infinite capacity for deception and dispute the very considerable practical difficulties which will be encountered. I believe that if the team completed its work in three years it would do well.

District commissioner, Red Sea District

Mesquite (*Prosopis*): as a pest to be Eradicated or a Resource for Charcoal Production Leading to Livelihood Improvement of Rural Population

1. Background

The problems of Sudan's dry zone can be briefly summarized as follows:

- Severe lack or shortage of firewood and charcoal;
- Increasing shortage of fodder for the growing animal population;
- Drifting and wind-blown sand which may encroach on fertile soil; and
- Decrease in agricultural productivity due to environmental degradation.

Prosopis, known as Mesquit in Sudan, is a perennial woody plant, characterized by a strong root system, and with the ability to grow under a wide range of environmental conditions. *Prosopis* is fast growing, salt-tolerant and drought-tolerant trees that can grow in areas receiving as little as 50 mm of rainfall per year. *Prosopis* is the only tree able to yield 2.5 tons of wood/ha/year where nothing else can grow. On saline soils in India this can rise to 12 tons.

It was first introduced into Sudan in 1917 and later on (1970s and 1980s) widely disseminated for the purpose of addressing the above problems of Sudan's arid and semi-arid areas, summarized as: fuelwood production; pods for fodder; soil stabilization; and as a means for stopping the desertification process. However, as its spreading and growth are extremely difficult to control, *Prosopis* negatively affects Sudan's agriculture productivity. Therefore Sudan has to spend huge amounts of money, every year, in order to control its fast and wide spreading into agricultural lands and irrigation canals.

There is great controversy surrounding: unmanaged, it often colonizes disturbed, eroded and over-grazed lands, forming dense impenetrable thickets. Thickets of *Prosopis* have become established in grazing lands, crop lands and along river courses, alarming pastoralists, farmers and conservationists. There is concern on the impacts of the tree on

biodiversity of native plants and on the amount of water in dryland streams. *Prosopis* has been declared as noxious weed in many countries including: Argentina, Australia, South Africa, Pakistan and Sudan. On the other hand, *Prosopis* has proved useful in restoring degraded and saline lands, stopping sand movement, stabilizing sand dunes and producing a variety of useful products for the local populations. *Prosopis* has great potentials as a source of fuelwood, timber, honey and animal forage. In eastern Sudan, the only source for firewood, charcoal, and building wood is Mesquit wood.

Similar to other countries, where *prosopis* have been introduced, Sudan declared Mesquit as a noxious weed and launched a national program for its eradication. Several eradication methods were tested, including mechanical (uprooting and burning), and chemical (touch-down herbicides). Although experimentally the chemical method proved more effective, however, it is not used in the field. The mechanical method (uprooting and burning) is applied widely, but in the absence of other control methods (better management of the resource) Mesquit thickets re-appear after a short period of time, particularly in humid areas (irrigated agricultural schemes and water courses). The example of New Halfa Agricultural scheme demonstrated the high cost and non-effectiveness of mechanical method for Mesquit eradication.

In India, work on converting *Prosopis* in a valuable resources have concluded: (1) that *Prosopis juliflora* can be a very valuable resource for the drylands; (2) that efforts to completely eradicate *Prosopis juliflora* are overly expensive and likely to be ineffective; and, (3) that *Prosopis juliflora*, when managed, can be a very valuable source of commercial products and livelihoods in the drylands. Experiences from India are particularly instructive. *Prosopis* is acknowledged as an important source of fuelwood and income for low-income earners in Tamil Nadu. Its value for reclaiming degraded saline soils has also been widely acknowledged. Most importantly, its value for woodfuel, charcoal, timber, furniture construction, animal feed, human food, and medicinal products have been documented and increasingly exploited. The Planning Commission of India's Action Plan for Greening India identifies *Prosopis juliflora* as one of the most promising agroforestry options for problematic and saline soils. Other regions of the world have much to learn from these experiences.

This project proposal aims at introducing an alternative method for Mesquit control based on better management of the resource through involvement of the rural population in resource management, where their livelihood could be improved through resource exploitation to produce charcoal using improved carbonization techniques (metal kilns).

2. Objectives

2.1. Goal:

Improve the livelihood of poor rural population in Red Sea State – Eastern Sudan

2.2. Program Objective:

Introduce *Prosopis* resource exploitation and management as an alternative to costly and non-effective eradication methods

2.3. Project Objective:

Improved charcoal production techniques adopted by rural population in Red State

3. Outputs

The main outputs of the project at the end of its three years lifetime are:

- Rural communities trained in Mesquit resources commercial exploitation, charcoal production, and sustainable management
- Livelihood of rural population in Red Sea State improved
- Contrary to general perception, national awareness raised that Mesquit is no longer a noxious weed, but a valuable resource for the communities, environment preservation, animal fodder, fuel and other timber products
- The capacity of FNC build on better exploitation and sustainable management of Mesquit resource

4. Activities and Duration

The project lifetime is three years, during which the following activities will be undertaken:

- Establishment of partnership with Forest National Corporation, FNC, and formation of a project team
- Gather information from local sources, mainly Forest Research Institute, FRI, and Forest National Corporation, FNC, on *Prosopis* species introduced into Sudan and their characteristics
- Gather information from other countries and organizations with practices and experience on *Prosopis* resource exploitation and management practices. In particular, India, Kenya, FAO and HDRA the Organic Organization, have accumulated knowledge and experience with *Prosopis* resource exploitation and management.
- Identification of ten villages along the Red Sea which have problems with Misquit thickets (invasion and domination agricultural and grazing land by Mesquit)
- Conduct awareness and mobilization of the village communities towards better understanding of Mesquit as a resource that could better exploited and managed
- Identification of mobile carbonization techniques (metal kilns) that suits the rural areas
- Fabrication of metal kilns
- Training of village communities on the use of carbonization kilns with comparisons of charcoal output quality with of traditional carbonization technique (earth-mount kiln)
- Provide kilns for interested villagers willing to adopt the new carbonization technique or who already practice charcoal production as a living. Kilns provision will be based on cost-recovery basis.
- Conduct trials on the carbonization of small branches of Mesquit and if successful investigate the possibility of introducing charcoal briquetting technique in order to convert the otherwise considered waste into a valuable product – increasing the income of charcoal makers.
- Investigate on possibilities of Mesquit charcoal export. The Government is only promoting the export of Mesquit charcoal as part of its Mesquit combating campaign

- Investigate on possibility of activated charcoal production – a valuable industrial material with wide range of uses
- Investigate on possible direct briquetting of Mesquite shrubs and branches and the possibility of export of briquettes/pellets (an industrial fuel), environment friendly
- Organize workshops and undertake information dissemination activities
- Monitoring, evaluation and reporting

5. Beneficiaries and Impacts

Eastern Sudan, particularly Red Sea State, is one of the most hard hit areas by drought during the last four decades. The impacts on the population and the environment are quite severe. Most of the rural population, basically pastoralists, lost their animal wealth and migrated to urban areas, where they lacked the basic skills to compete in the urban labour market. Many of them still live in squatter/slum areas in the periphery of towns under real poverty conditions.

However, some communities remained in their original villages, where their livelihoods are mainly drained from collection of firewood and charcoal production, basically from Mesquit, for marketing in the urban centers. With the launch of national program aiming at Mesquit eradication, the livelihoods of above rural communities look rather endangered.

The project will work towards enabling the rural communities in Red Sea State to participate and develop skills in Mesquit resource management aiming and realizing and maintaining a better livelihood while catering for environment preservation. Contrary to the general believe, worldwide, that *Prosopis* is a noxious weed, the Indian experience have proved that it is a valuable commercial resource for the rural population and the only possible alternative to conserve and claim degraded and dry lands. The project will identify and work with ten rural communities along the Red Sea Coast. Through better Mesquit resource exploitation and management the rural communities will undergo an improvement in their livelihoods.

On the other hand the project will work towards capacity building of the partner organization, FNC, on Mesquit management techniques, improved charcoal production techniques and possibly on fine charcoal briquetting as well as investigate on possibility of direct briquetting. Once the project is successful, the FNC could further disseminate and scale up the best practices in other areas as alternative approach to Mesquit eradication.

Osman

Tokar Project