

NOMADS 'SETTLEMENT IN SUDAN: EXPERIENCES, LESSONS AND FUTURE ACTION



**Nomads' Settlement in Sudan:
Experiences, Lessons and
Future action
*(STUDY 1)***

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Preface

Competition over natural resources, especially land, has become an issue of major concern and cause of conflict among the pastoral and farming populations of the Sahel and the Horn of Africa. Sudan, where pastoralists still constitute more than 20 percent of the population, is no exception.

Raids and skirmishes among pastoral communities in rural Sudan have escalated over the recent years. They have degenerated into a full-blown war in Darfur that might have been contained if the root-causes of the conflict rather than its symptoms were understood and addressed in a timely manner. Understanding the changes pastoralism in Sudan has been undergoing over the past two decades and the traditional modus operandi of conflict resolution and reconciliation among the pastoral communities is the starting point of any conflict resolution effort.

In fact, pastoralism in Sudan is a traditional way of life. It is a product of climatic and environmental factors that has become a form of natural resource use and management. Pastoralism comprises a variety of movements ranging from pure nomadism characterized by year-around camel breeding and long-distance migration, to seasonal movements over shorter distances in combination with some form of agricultural activities.

Historically, there has long been tension along pastoral corridors over land and grazing rights between nomads and farmers. But recently, some parts of the country have been caught in a complex tangle of severe droughts and dwindling resources. Disputes flare up between farmers and pastoralists as a result of migrating camel and livestock herders in search of water and pasture for their animals during the dry season who would sometimes graze on farmers' lands and use their water points. Tribal leaders sometimes settled disputes over lost crops, land, and access to water and pastoralists' routes. Combined with weakened local governance and the lack of institutionalized mechanisms for land and water rights and usage, all these factors have been leading to widespread seasonal tensions between pastoralists and farmers on one hand and between traditional farmers and owners of big mechanized farms on the other.

To help address the root-causes of these tensions the Embassy of the Kingdom of the Netherlands, the Canadian International Development Agency (CIDA) and the United Nations Development Programme launched in 2004 ***the Reduction of Resource Based Conflicts Project*** with the support of the Government of Norway in the preparatory phase (2002-2003). Targeting the drought-prone areas the four-year initiative used to be carried out in North Darfur. But the conflict between farmers and nomads that had started over natural resources escalated into a full-scale war forcing the Project to suspend its activities in Darfur. It has since focused on three states: North and South Kordofan, Upper Nile and Sobat Basin.

The Project operates at the national, local and community level. In addition to supporting the local authorities in establishing institutionalized systems for improved natural resource management, and empowering pastoralists, the project has been promoting legal and policy reforms for land access and usage with the participation of all stakeholders.

Under this project, UNDP and development partners commissioned experts to research case studies covering the identified areas of conflict in rural Sudan. In this context, access

to land, water and other productive resources have been identified as major factors in aggravating conflicts and in marginalizing many rural populations.

The research undertaken under the project's guidance led to the following series of publications:

- 1. *Nomads' Settlement in Sudan: Experiences, Lessons and Future Action.***
- 2. *Pastoral Production Systems in South Kordofan.***
- 3. *Share the Land or Part the Nation: The Pastoral Land Tenure System in Sudan.***

We hope that these publications will shed some new light on the sources of conflicts in rural Sudan, and help policy makers and development partners to identify priority areas for policy interventions and development planning.

As the UN's global development network, UNDP will continue to connect partners to knowledge, experience and resources to help communities prevent more conflicts and build a more peaceful coexistence.

Mr. Jerzy Skuratowicz

Country Director
UNDP Sudan

Acknowledgments

Through the Reduction of Resource Based Conflict Project, UNDP Sudan and partners commissioned this series of publications to enhance and deepen knowledge on pastoral issues and challenges, and build a literature base for developing strategies that address pastoralists' policy issues in the Sudan. It was undertaken with the support and encouragement of UNDP Country Director Mr. Jerzy Skuratowicz and UNDP Deputy Country Director Mr. Auke Lootsma.

All discussions held with Sudanese partners in government institutions and other stakeholders in the process of formulating this publication were led by UNDP's Team including; Mr. Omer Egemi former Conflict, Environment and Resource Management Unit team leader, Mr. Mohyel Deen El Tohami Project Manager of the Reduction of Resource Based Conflict project, Ms. Dalia M. Ibrahim Project Associate.

We are grateful to the Canadian International Development Agency (CIDA) and the Netherlands Embassy for funding and supporting this publication.

We also extend our gratitude to Sudan's Ministry of Agriculture and Forestry and Ministry of Animal Resources and Fisheries, as well as the Sudanese Environmental Conservation Society, Pastoralism Society and Civic Unions (Pastoralists and Farmers Unions).

In collaboration with the Ministry of Animal Resources and Fisheries, the findings and the results from the Study and its methodology were presented in a national workshop addressed by Ms. Tereza Sirsio, State Minister, Ministry of Environment and Physical Development and UNDP Country Director Mr. Jerzy Skuratowicz,. The workshop was attended by twenty pastoralists and natural resources experts' in addition to over two hundred representatives of pastoralist communities, Sudanese Academia, key ministry officials and international non-governmental organizations.

This report is a product of collective efforts led by Professor Mohamed Osman El Sammani and Dr. Ali Abdel Aziz Salih.

TABLE OF CONTENTS

Preface

Acknowledgements

CHAPTER ONE: INTRODUCTION

1.1 Rationale of the Study -----	2
1.2 Definition of Nomadism -----	2
1.3 Nomads in Sudan -----	3
1.4 Status of Nomadic Livestock -----	3
1.5 Constraints of the Nomadic Production System -----	4
1.6 Nomads' Settlement as a Development Policy -----	4
1.7 The Study -----	5

CHAPTER TWO: SETTLEMENT EXPERIENCES

2.1. General -----	6
2.2. Enforced Settlement in Irrigated Schemes -----	6
2.3 Settlement as Spontaneous Development of an Irrigation Scheme -----	10
2.4 Settlement on Rain Lands -----	12
2.5 Precautionary Conferences, Kordofan Region -----	22
2.6 Exploration of the Concept of Nomads' Settlement -----	24
2.7 The Settlement Perspective -----	26

CHAPTER THREE: NOMADS STIPULATED RIGHTS

3.1 Convention No. 107 -----	28
3.2 Sudan Millennium Development Goals (MDGs) -----	35

CHAPTER FOUR: REACTION TO NOMADS' SETTLEMENT

4.1 Dialoguing the Concept -----	37
4.2 A Critique of Present Plans for Settlement of Nomads in Sudan -----	37
4.3 Similar Reactions from a Seminar Held in Shiraz, Iran, 1974 -----	39
4.4 Socio-cultural Elements on the Nomads' Side -----	40
4.5 Integration of Nomads -----	41
4.6 Need for a Planning Methodology -----	44

CHAPTER FIVE: CONCLUSION

5.1 Ongoing Transformations -----	45
5.2 Organization of Land Ownership and Grazing Rights -----	45
5.3 Some Guiding Principles -----	48

REFERENCES -----	50
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CHAPTER ONE: INTRODUCTION

1.1 Rationale of the Study

The reasons for examining the nomads' situation and bringing the question of 'settlement of nomads' to the forefront are:

- i. They form a recognizable part of Sudan's population, about 10 percent according to the last census in 1993;
- ii. They contribute effectively to regional economies and to the national economy;
- iii. They assume an influential role in local and national politics;
- iv. They have in recent times been in the midst of conflict situations, due to the interplay of forces within and outside their domains—ecological, socio-economical and political;
- v. They form a segment of the population that is lacking in development; and
- vi. This study seeks to contribute to the contemporary debate on the issue of nomads' settlement, a strategy promoted by many as a panacea that would resolve the nomads' lack of development.

As we shall see from the ground covered by the present study, Sudan has rich experience on the question of settlement of nomads, for the issue has come to the surface under different governments, and was discussed in many conferences, workshops and seminars. However, the outcomes have remained scattered and uncoordinated, which may be the result of factors such as a general institutional weakness, instability of government structures, limited research, piecemeal planning and non-existence of a control and guidance body for nomads' development.

In our research for this study, we sought to reach guidelines that would lead to future actions to improve the life of nomads, through the following steps:

- i. Review of the 'nomads' settlement' experiences in Sudan in two categories—planned and spontaneous settlement.
- ii. Discussion of findings and deriving lessons from reviewing the results attained, to be used in guiding future actions.
- iii. Exploration of the concept of nomads' settlement from the available literature, with special reference to the documentation that resulted from scientific gatherings (conferences, workshops, seminars, etc.) organized on the subject, inside and outside of Sudan.
- iv. A proposal for integration of nomads in Sudan's development strategies.
- v. Recommendations for future actions.

1.2 Definition of Nomadism

There is no agreed definition of the term '**nomad**.' Rather, the meaning of the term varies from country to country. It was suggested that the term implies groups of people who for one reason or another had to move in pursuit of their livelihood, and did not have a fixed dwelling. Usually nomads do not rely on agriculture, with some exceptions. In Sudan, all nomads depend on domesticated animals of various species, as dictated by ecological conditions. Some nomads engage in small-scale agriculture at fixed points or along their migration routes. However, their main income is derived from their animals. Among some tribes, some nomadic groups have a permanent dwelling, for temporary and occasional use.

Semi-nomads are those who raise herds and have one or more permanent dwellings and often engage in small-scale agriculture. They usually migrate for short distances, twice annually, between one or more herding grounds, and maintain a permanent dwelling in a village in order to secure water for their animals. **Transhumance** is a more stabilized form of semi-nomadism, often with two fixed dwellings at different altitudes.

With the term **tribe** we refer to racially related people who are traditionally occupying a certain geographic district. In the past they were all migrating and some groups remain nomadic. There is a close connection between the nomads and their settled kinsmen. Settlement is not always permanent, as some individuals may return to a nomadic life, temporarily or permanently, if the care of the herd calls for that.

1.3 Nomads in Sudan

Pastoralism is a land-use type practiced extensively all over Sudan, and is determined by rainfall intensity and distribution. Nomads amounted to 13 percent of the total population in the 1956 census, and to about 10 percent in the 1973, 1983 and 1993 censuses. Two forms of livestock grazing are found in Sudan, nomadic pastoralism and sedentary agropastoralism. The nomadic pastoralism follows two types of livelihoods, with distinctive production systems and culture: the Abbala and the Baggara. The Abbala raise camels and sheep and few goats, while the Baggara raise cattle with sheep and goats. Each of the two groups has a *dar* (homeland), from which they operate annually between wet and dry seasons. Grazing land tenure is governed by local cultures and customary land rights; and is strictly assumed by sheiks and chiefs, who allocate land for communal use and on temporary assignment for grazing and crop land to foreigners. While there are communal pasturelands open to more than one tribe, land tenure forms are confused by the establishment of communal wells, markets and administrative centers.

Migration cycles are changing through time, due to changes in climate and other physical elements. New cycles, adjusting to surrounding situations, evolve gradually with droughts, and in response, both nomads and semi-nomads have resorted to more crop cultivation, in order to secure household grain needs—particularly the Baggara, who began adopting commercial crop production. The broad strategies of nomads are diversification of animals, pursuing farming in their production systems, keeping more female animals to evade losses in dry years, selection of certain types during the wet seasons, long distance movement in search of water and grazing, supplementation with hay and other fodder, purchase of young animals for fattening and sale in the next season, and as a last resort, selling animals.

The nomads previously had indigenous political structures and organizations, which were met with increasing resentment from the elites and educated offspring of those nomadic tribes. By 1969, the native administration was abolished and substituted by an official government administration system of local government councils, which greatly affected the nomads and created a vacuum.

1.4 Status of Nomadic Livestock

Northern Sudan's animal wealth is a product of the traditional rain-fed natural pastures of the Kordofan, Darfur, White Nile, Blue Nile and El Gezira regions, contributing about 21 percent of the total gross domestic product during the mid-1990s until 2003 (ARSC, 2003), with an increase of foreign exchange earnings from US \$4.93 million in 1992 to US \$118.93 million in 2003.

The nomadic production system has the advantage of animals grazing on expansive natural pastures, yet it suffers from the cultural aspects that bind it. Nomads raise large numbers of animal herds, for prestige and social considerations, without improving the economic characteristics of their animals. Furthermore, they do not follow the market demand in their supply of livestock, selling few of their animals to satisfy their basic needs, which are scanty and do not require the sale of large numbers. These traditions and habits are reflected in limited and unpredictable sale of livestock, with resultant fluctuations in prices. In such a system, it is difficult to ensure a dependable, regular supply of livestock to meet the large demand of the domestic and foreign markets.

1.5 Constraints of the Nomadic Production System

These could be summarized as:

- i. Undeveloped economy that still runs on traditional practices.
- ii. A subsistence system for providing basic needs.
- iii. Economy built on numbers, and not quality of animals' breeding, for prestige and hedging against risks of herd losses during drought and disease outbreaks.
- iv. Full dependence on the natural range, which has been subjected to decrease in area because of competitive horizontal expansion of crop production activities and continued degradation of remaining pastureland.
- v. Shortage of water supply in nomads' stock routes, especially during dry season.
- vi. Conflicts with other users over access to grazing resources, intensifying on the livestock routes, especially in the resting grounds for the herds during migration.
- vii. Low production of milk and meat from the livestock.
- viii. Inadequate veterinary services and animal production services, other than the vaccination of animals under the rinderpest programme.
- ix. Shortage of drugs to combat major endemic and epidemic diseases.
- x. Shortage of fodder during the dry season, with low benefit from crop residues or baling, compelling nomads to buy wheat bran, straw and sorghum grain to supplement their animals' food.
- xi. Nomadic groups are not organized and not motivated at the grassroots level. Their trade unions are top-top.

1.6 Nomads' Settlement as a Development Policy

The establishment of irrigated and rain-fed mechanized agricultural schemes has blocked traditional animal routes and reduced grazing lands. The increasing numbers of livestock grazing in diminishing pastures, complicated by drought and desertification, have resulted in overgrazing, with concomitant conflict build-up. Other developments include further movement towards the south, creating a sense of resource-allocation awareness among nomads, competition over crop stalks after harvest in the different agricultural schemes, and introduction of protected pastures taking many forms, such as pasture enclosures, especially in Darfur.

In general, scientifically planned settlement approaches are being ignored, save immature and uncoordinated examples, while the assimilation of the nomads and their integration into the irrigated and mechanized rain-fed schemes receive little attention. Not until the 1983-1984 droughts did the Government start to consider the development of the traditional agricultural sector into its plans and policies. However, the policies continued to neglect the nomadic sector and focused on the development of the irrigated crops and rain-fed crop production systems with their associated infrastructure needs, as implemented in the British colonial era, with the established assumption that the

traditional crop and livestock production systems would continue guaranteeing income with little attention, input and investment needs. When nomadism was considered part of the traditional system, it was approached only from its economic capacity of supplying livestock for meat and milk products.

1.7 The Study

1.7.1 Terms of Reference of the Study

This study is conducted under UNDP's Reduction of Resource-Based Conflict Project.

1.7.2 General

Competition over natural resources, especially land, has become an issue of major concern and cause of conflict among the pastoral and farming populations of the Sahel and the Horn of Africa. Sudan, where pastoralists still constitute more than 20 percent of the population, is no exception.

1.7.3 Nomads' Settlement

There has been a growing drive recently from many sources of influence for implementation projects on nomads' settlement, voiced in organized gatherings (conferences, workshops, seminars, etc.) including from pastoralists' unions, tribal chiefs, state *walis* (governors), and the message is being adopted by some political actors at the federal level. The promoters of the idea view nomads' settlement as a policy for achieving end goals for the nomads, by securing their continued physical presence in their habitat areas, access to social services and other benefits, resulting in their effective contribution to local governance. The mounting calls for supporting projects on nomads' settlement are putting strong pressure on the above-cited UN project and programmes. In responding to the initiative, the programme needs to acquire basic knowledge of the development of nomads' settlement in the country, and how the concept and issues involved could be shared between UNDP and the different affected actors in order to reach consensus for action that is scientifically convincing.

This need for information necessitates this study, *Nomads' Settlement in Sudan: Experiences, Lessons and Future Action*, regarding policies and programmes that could be adopted. The overall objective is to provide benchmark data to be used to educate on the subject, and to recommend actions to be put before UNDP, the Government of Sudan and intermediary actors.

CHAPTER TWO: SETTLEMENT EXPERIENCES

2.1. General

This section reviews the settlement experiences in Sudan as cases, arranged under: planned settlement on irrigated agriculture, settlement as spontaneous development of irrigation schemes, settlement on rain lands and precautionary conferences in Kordofan.

2.2. Enforced Settlement in Irrigated Schemes

2.2.1. Case 1: Settlement of Nomads in New Halfa Scheme

Description

The nomads of New Halfa Scheme comprised members of the Shukriya, Lahawiyeen, Ahamada, Kawahla, Rashaida, Hadandawa and Beni Amir tribes. They claimed the right to the use of traditional natural grazing lands before the establishment of the scheme. Yet the lands on the boundaries of the scheme, comprising the Butana region and the plains of the Atbara River, provide grazing areas for the same nomads, plus those attracted from the Red Sea, Kassala, Northern, River Nile and Gezira states who breed cattle sheep, goats and camels.

The nomads were treated as equal to the Halfawyeen for whom the scheme was intended, and given tenancy ownership in compensation for their lost grazing lands, which were expropriated for the scheme, and to help them embark on a new way of life. The nomadic villages then accommodated nearly 140,000 people, with most nomadic families residing in villages, except those with a significant number of animals, who continued to move out of the scheme between August and February, following the herds on traditional stock routes into the natural grazing areas. Among those, there are tenants living between scheme tenancies and rain-fed sorghum areas whom are reluctant about settlement.

In time, the majority of nomad tenants combined animal raising with tenancy agriculture. From a survey conducted in preparation for the Rehabilitation of New Halfa Scheme 1978-1980, the occupational structure of the tenants in the nomads' villages showed new housing and the rebuilding of services, such as mosques, schools, markets, dispensaries and water supply. In addition to this is the comparatively healthy condition of the old areas, which are free of mosquitoes, flies and other insects, as well as accessibility to grazing pastures, rain-fed cultivation and road communication to Kassala and Khartoum. Settlement on the border of the scheme offered the nomads' livestock free movement in their village surroundings.

The following percentages showed the occupational structure of the nomadic tenants' villages: livestock breeding (63 percent), commerce (22 percent), crop cultivation outside the scheme (6 percent), farm labour (6 percent) and government workers (3 percent). Besides ownership of the tenancies, the crops produced from their labour as a measure of involvement is divided between the requirements of the tenancies and herd needs. In the tenancy the head of the household is involved in supervision and some irrigation work and weeding. Wives and children participate in irrigation and picking and harvesting cotton and groundnuts. Labour contribution is determined by animal wealth and the size and relative poverty of the family. They are keen on cotton picking to ensure early access to cotton stalks for their grazing animals. The involvement of females in tenancy work is limited by tradition and for children, attending school is the priority.

The process of nomads' settlement took place in two stages:

- i. Deliberate settlement as specified by the authorities in the northern half and eastern boundaries of the scheme;
- ii. Evolutionary settlement on the southeastern and eastern boundaries of the scheme in villages that existed prior to the scheme establishment. The settlement was not guided by physical planning, though plots of 500 square metres were allotted to each settler household. No actual building of villages took place, as in the case of the Halfawyeen, except for the provision of some community services. Hence, the size of villages and their resident population varied considerably. In some cases, tribes lived in one village as separated groups, while in other cases tribes shared a village, for example, Shukriya and Lahawiyeen. Tribal integrity and solidarity have sometimes been sacrificed for the needs and security of livestock, including grazing interests. Buildings were generally of wood and grass, and to a lesser extent of dry earth, with very few buildings of red bricks. A few residents used tents. Variation in the type of building reflects suitability of the site and climate variation as well as the date of settlement development and transition from nomadism towards settlement. Transforming nomads into settled people requires time as well as economic and social transition.

The following services were provided for the settlers:

i. Water Supply Services

Few nomads' villages (six out of 52) had sanitary safe-water supply facilities, with the rest drinking from the Atbara River or from the irrigation canals of the scheme via a sand filter station. For those privileged with water facilities, the quality of the service was poor, located at a distance of 1-2 kilometers away, and with some water sources non-functioning. Almost all villages to the north suffered from shortage of water in canals during the dead season from April to June.

i. Electricity Services

Electricity was not available in nomads' villages.

ii. Education Services

Fifteen out of 52 of the nomads' villages had access to primary co-education schools, but dropout rates were high. Since nomads' keenness for the education of their children was weak, boarding schools proved a good model for inducing enrollment of nomads' children from various areas, near and remote, to attend the school. Offering a daily meal was also a good incentive for encouraging children coming from distant villages to attend schools. At the time of the settlement phase of the scheme, nomads preferred having their children tend animals rather than attend school. Long walking distances between schools and residences discouraged children from regular attendance in school. There was also more preference for religious education over formal education, especially in the case of those from Eastern Sudan, and early marriages of girls limited how long they remained in school, with most reaching only class 5 or 6.

iii. Health Services

Thirteen villages out of 52 had dispensaries or dressing stations, with shortages in facilities, drugs and personnel. Not all personnel providing health services were adequately qualified. In addition, poor transportation and impassable roads, especially

during rainy season, made it extremely difficult to access the health service of the only hospital available at New Halfa town, almost 60 kilometers away from some of the nomadic villages in the scheme.

iv. Veterinary Services

Three out of the 52 nomadic villages had veterinary dispensaries. With only minor treatment services available, however, nomads go to New Halfa Veterinary Unit for treatment, drugs, vaccines and advice.

v. Shopping Services

Twelve out of the 52 nomadic villages had large markets, with groceries and livestock sales, but there were many complaints about prices and transportation costs to reach them.

vi. Police Security Services

Five out of 52 villages had police posts for routine purposes. Police collaborate with field inspectors in issuing and enforcing grazing permits, to control the numbers of livestock entering crop fields. However, police intervention peaks during and after harvest time, to stop encroachment of livestock of tenants and of other non-tenants from attacking cotton and groundnut crops.

Overview: Community Priorities

The demands which the nomads voiced in 1980, 15 years after their settlement phase, included improved supply of drinking water, primary education and health services, which were all deficient in the scheme. Low-priority needs included supply of agricultural machinery services, electricity, police protection, flour mills and markets.

Focus of Nomads on Livestock Raising

The nomads practiced crop production under irrigation in the scheme, and rain-fed sorghum production outside the scheme, together with raising livestock. To keep the animal economy productive, nomads devised dual grazing systems; one legally allowed by authorities to graze a small number of animals permitted inside the scheme from April to June, and the other of grazing large numbers of animals outside the scheme from July to March, led by youngsters moving into natural pastures far away. The weak control over numbers of livestock and their encroachment into the scheme, particularly during the dry season, created continued friction between farmers and animal herders. Nomads tended to keep more animals inside the scheme than outside for most of the year, especially during drought periods.

Encroachment on the Scheme Land

Factors that induced nomads to encroach on the cropped areas in the scheme include the large size of livestock herds, depletion of natural pastures outside the scheme because of shortage of water resources, exhaustion of crop residues availed by cotton stalks, which can be used for grazing during early rains, and damaged grass from the previous year. Solutions adopted by the nomads to face the shortage of natural grazing include resorting to stalks from stored and marketed resources, storing groundnut straw and crop residues, purchasing wheat husk at high cost from the monopoly wheat miller Cooperative Union in New Halfa, and illegal access to sugar straw at a high price and transportation cost.

Nomads' Focus on Livestock for Economic Security

Nomads are more interested in the care of their animals than in their tenancies. With continued decline in crop production revenues, nomads began to rebuild their animal stock as security against crop production and drought risks. Livestock to nomads are a way of life, for they secure milk and cash for the household, supplement income from agriculture, serve as a guarantee against natural hazards, provide capital needs for investment in agriculture and trade and represent cultural and social values.

Slow Progress of Cooperative Movement

The New Halfa Scheme was founded on cooperative development. Though nomads are communal in tribal and sub-tribal level issues, they are individualistic at the household level. The cooperative movement proved to be slow in their villages. The factors that discouraged expansion of cooperative establishment among nomads in villages include antagonism between nomads of different tribes residing in one village, poor knowledge and awareness about benefits of cooperatives, poor savings and access to cash and banks, lack of political power for initial capital of establishing successful cooperatives, mismanagement and experiences of failure. In addition, the Cooperative Department in New Halfa did not address the basic needs of nomads, including providing training and support.

2.2.2 Case 2: Settlement of Beja in Irrigated Schemes

Description

New Halfa Scheme (1962)

About 12 percent of the scheme total area was allocated to the Beja tribes (Hadandawa, Beni Amir, Ashraf, Halanga and Artega). Land was distributed in the form of tenancies of 15 feddans each. About 1,500 families were accommodated in Sabaat village, and are still practising crop production with livestock raising (goats, sheep and cattle).

Suki scheme (1972)

The government offered 350 tenancies of 10 feddans each for families from Hadandawa, Beni Amir, Amarar and Busharin nomadic tribes of the Red Sea Province in El Suki Scheme, where they were settled in village 12. The scheme administration contributed to the land preparation, and supply of seeds for cotton and groundnuts. In the first year, due to difficulties irrigating 10 feddans of elevated lands, some of the families were forced to return to their homeland. The rest remained in the scheme, and by 1980, about 220 families were still there. They established a consumer cooperative, a bakery and a grain mill.

Rahad Scheme (1980s)

Settlement in this scheme involved 150 Beja nomad families, of whom 20 percent were given tenancies in the scheme. These families practiced crop production and livestock raising and were employed as unskilled labour in different activities in the scheme. They are still living there.

Overview

The three cases prove that nomads, citing the Beja as a case, could accept settlement as a new way of life, and change from nomadism to a settled life, provided that conditions leading to settlement are met. El Sabaat as a Hadandawa village in New Halfa scheme is a well-established settlement, with a stable tenant population under the management of the scheme as any Halfawyeen village, with its farmers observing all the requirements of

irrigated tenancy farming. This also applies in the case of those settled in the Rahad scheme. In Suki, those who fled the scheme were forced by poor preparation of the land and illness caused by malaria due to the wet conditions of the land to which they were not accustomed in their original environment. With good preparatory work, such drawbacks could be addressed. In all three cases, the settled families continued raising livestock in varying numbers, thus integrating irrigated agriculture with animal production, a condition that needs to be met in settlement schemes that involve groups from a nomadic background.

2.3 Settlement as Spontaneous Development of an Irrigation Scheme

2.3.1 Case 1: Gezira Scheme

Description

Prior to the establishment of the scheme, the land of the area was inhabited by a mix of settled sorghum and millet crop growers, and nomads' livestock on the expansive rain-fed pastures in the hinterland. With the advent of the Gezira Scheme, the area was transformed from growing crops for three months during the summer rainy season into permanent cotton crop production all year round, by gravity irrigation from the Sennar Dam, with the intent of responding to the growing demand of the cotton textile industry in the United Kingdom. In the process, the once-dominant traditional forms of production were completely suppressed.

The Sudan Plantation Syndicate, which was running the scheme, forbade the cultivation of any fodder crop. This continued until 1931, when the tenants were allowed to grow sorghum for food and legumes for oxen-drawn ploughs. From 1925 to 1950, animal resources were ignored and treated as alien elements in the scheme. Legume forages remained only to feed the animals drawing ploughs, while the rest of the tenants had to keep their animals out of the scheme.

After nationalization of the scheme in 1950, and considering the declining animal wealth in the area, the management began an animal breeding and fodder supply programme, supported by animal health and husbandry research and extension services. This was followed by the building of successive animal units between 1963 and 1979, and culminated in the establishment of the Department of Animal Production in the Gezira Scheme, with the following units: (i) Animal Breeding Unit; (ii) Artificial Insemination Unit; (iii) Animal Health Unit; (iv) Poultry Unit, and (v) Pastures and Animal Nutrition Unit.

Livestock depended on pastures grown under the rains outside the scheme, supplemented by crop leftovers for most of the year, except March to June—the fodder shortage period. The exclusion of livestock from the scheme resulted in the stagnation of livestock numbers, as had been exemplified by comparing the figures of animal population in the scheme between 1973 and 1986.

Well-to-do tenants were considered to be those who stuck to their land and attached to their animals, which led to the revival of the previously advocated concept of animal integration in the crop rotation that came about during nationalization of the scheme in 1950. However, the policy of diversification and intensification of crop production in the late 1960s and early 1970s, with the introduction of wheat and groundnuts and withdrawal of fodder legume out of the crop rotation emphasized the established trend of excluding animals from the rotation, resulting in deterioration of animal health and population. The

animals continued to depend on crop remnants and were managed through the migratory nomadic system. Integration of livestock into the crop rotation according to announced policy meant:

- Cultivation of two kinds of crops: legumes/beans, and cereal/fodder crops.
- Establishment of a forage industry: wet forage, pressed forage and dry forage.
- Vaccination of animals against pests and diseases.
- Breeding and selection of higher milking types and better meat animals.
- Utilization of animal farmyard manure in manufacturing organic fertilizers, and for production of bio-gas as an alternative energy source to firewood and charcoal.
- Creation of an additional source of income, for capital financing of crop production operations and as a hedge against risk and disasters.

Overview

Nomads started to cease to exist in the Gezira Scheme region as of the mid-1920s with the advent of the scheme. However, their livestock continued to exist with changes in species raised and forms of herd management. Large livestock populations frequent the Gezira land to this day, from inside and outside the scheme, and livestock rearing continues to be a substantial source of income for the Gezira tenant.

As in the previously cited cases of settlement on irrigated schemes, nomads could be transformed into settled populations with the Gezira example emphasizing the possibility of transformation. Yet, the nomads' attachment to their animals survived all attempts to eradicate it. The many policies and plans utilized for integration of livestock into irrigated crop production is a response to this attachment. More serious work is needed in this regard to achieve full integration, particularly since the economic return from irrigated crops is showing a continuing decline.

2.3.2 Case 2: Tokar and Gash Deltas Schemes

Description

The Tokar and Gash Delta schemes were founded on the deltas of the two seasonal rivers of Tokar and Gash, which descend from the highlands of Eritrea into Eastern Sudan and are utilized through flush irrigation for growing cotton. The Tokar Scheme was developed during the Turkish period and continued through the Egyptian period, when cotton was exported to Egypt, with a brief interruption during the Mahdiya period and rehabilitation in 1889. The Gash Scheme was established in 1926. When cotton production as an economic enterprise by the colonizing power reached the two deltas, the Beja nomadic tribes—Beni Amir in Tokar and Hadandawa in Gash—had already long utilized these lands for the grazing of their animals (cattle, sheep, goats and camels) and growing sorghum with the annual flood waters, under a management system overseen by local sheikhs.

A new set-up was to be founded by the colonial administration to assure the production of cotton from the deltas, bearing the following features: managing boards set for the two schemes; the tribes as owners of the land, changed into farming tenants; livestock kept out of the two schemes during the time of cotton production; entrepreneurs interested in the cotton business attracted to provide the needed investment capital for production; and newcomers, namely West Africans (*takarins*) known as hard working, availed the opportunity to have access to the deltas. At the zenith of economic prosperity of the two schemes, when cotton was a valued crop, the two schemes were characterized by Beja tribal sheikhs, with heads of families under them, owning the greater part of the land, as

tenant-farmers and managing a good part of the production through share-cropping arrangements; West Africans having a stake in the land as farmers and sharecroppers; and wealthy individuals and companies owning lands (especially in Tokar Delta) and cultivating it, through agents/share-cropping arrangements, and widely involved in the cotton businesses. Prosperity withered with the decay of cotton as a lavishly paying crop, yet this general frame still exists—Beja ownership of the land, the Fellata as settled tenants and absentee land owners managing their acquired properties through resident agents.

The situation exhibited above reveals that the two schemes were never meant for the settlement of nomads, but for the production of cash crops; first cotton, then castor oil introduced at a middle stage, and at present, under a new crop composition; and with that, the nomad could stay on the fringes of the schemes growing his *dura*, provided that he keeps his animals off the tenancies during the time of production.

Overview

The Tokar and Gash Delta schemes continued to be operated on the initial philosophies on which they were founded—the production of economic crops and cash return from these crops.

The nomads' utilization of the lands of the deltas is by virtue of their historical habitation of these lands: as homelands where they can put their settlement dwellings, grow sorghum, utilize the available grazing and the leftover from the crops, and use their water sources for watering their animals. All of the above could be taken as physical elements, not aggregated around a scope that leads to the development of a pastoral system.

While the two Beja group are traditionally the owners of the land, and presumably the owners of the two schemes, they continued to have little say in their development, as they are poorly organized and with limited effective representation. The scant services reaching them are secured through their locality councils, with minimal contribution from the managements of the two schemes, which are constrained by financial weaknesses and did not include in their agenda and their formation any particular responsibilities towards the social development of the schemes' populations.

2.4 Settlement on Rain Lands

2.4.1 Case 1: Amaran and Busharin Settlement Scheme (proposed by the local government of Kassala Province, 1964)

Description

The proposal targeted settling all of the Beja of the Red Sea Hills (the present Red Sea State). In 1964, the designated area comprised the Amaran and Busharin Rural Council, with its headquarters at Sinkat, which was administratively under Kassala Province. Port Sudan at the time was administered separately under a commissioner.

The project justification was seen as follows: The Government of Sudan assigned a high priority to settling the nomadic and semi-nomadic tribes. Without this transition from a pastoral to an agricultural economy, the Government feared that the development of Sudan would be very slow. Experience was gained settling similar tribes in the Gezira. The Managil Extension—the Gash Delta Scheme—encouraged the Government to undertake the development of Kassala Province through settling the Beja who dominate the area.

According to estimates at the time (1964), the Beja scattered around the province numbered around 128,000, 80,000 of whom belonged to the Busharin branch and 48,000 to the Amrar branch. Due to overgrazing and other risks of the nomadic way of life, the tribes were passing through a phase of extreme hardship for want of water and pastures. There are strong indications that with a little persuasion and with proper incentives, the tribes would accept a settled existence.

Accordingly the government decided to plan their settlement in suitable places. For the purpose of settling the tribes, the areas they occupied were divided into five zones, and each zone into six settlement centers, making a total of 29 settlement centers. Each zone would have its own zonal headquarters, with the following offices and facilities established at each:

- An administrative headquarters.
- Staff for running deep boreholes.
- Staff for maintenance of 70 shallow wells.
- Staff for the construction of barrier dams.
- Staff for running medical services.
- Staff for running elementary schools, one for boys and another for girls at each chosen center.

The following activities, which fall partly into the private sector, also required Government support and assistance. These include:

- Flour mills
- Milk processing plants
- Poultry equipment
- Mechanized agricultural units
- Fertilizers
- Spraying equipment

Furthermore, equipment was needed for hospitals, including surgical instruments, medical equipment, ambulances and lorries. The 29 proposed settlement sites, with the zones in which they fall, were identified as follows:

Amrar Area

Athai and Qunub zone

Haliab, Fodykwan, Gabeit El Maadin, Sofia, Wadi Sodi and Eis, Dongonab, Mohamed Gol, Salala Aseer, Eit.

Port Sudan Zone

Dim Village (including Dar Es Salaam and Hamash Koreib villages), Hosheiri, Arbaat, Sallom Station, Kamosana Station.

Oleib Zone

Tahamyam, Sarakoyet, Tagaydlo Well, Oko (Gramayet Well), Shalahout Area, Arias Valley (for Abdel Rahimab).

Busharin Area along Atbara River

Eastern bank of Atbara River, Siddon, Adrama, Qoz Rageb, Umm Shadeida, El Ba'k (Tamarab area).

This was followed by cost estimates of project components and devising a proposed budget for implementation.

Overview

In the end, the project was not implemented, a result of a general trend of discontinuation of Government plans and activities. The project presents a demonstrative example of weak planning in terms of conceptualization and preparation. Neither of the two areas of the Amara and Busharin have the natural resource base; in terms of land and water, to become another Gezira or Gash Delta Scheme, even if we agree that the two have transformed local nomads to settled life.

The proposal twice made the statement: "Government has decided to settle the tribes of the area and has decided to transform them to agriculture"—a belief that is still being held by many as the future destiny of the nomads.

As the proposal lacked the interdisciplinary look in its formulation, it neglected essential planning parameters that should have been considered: the ecological set-up of the two areas, their development potentials in areas of range and pasture, livestock and small *wadi* agriculture and aspects related to the human dimension in the use and management of resources, such as tribal organization, land tenure, effective participation of the population concerned as partners, etc.

2.4.2 Case 2: Other Attempted Beja Settlement Experiences

In Hamash Koreib, by Sheikh Ali Betai (1951):

This is a type of spontaneous settlement associated with the establishment of religious schools (*khalawi*), model villages, and supply of health and educational services and facilities starting in 1951. Many government and international organizations gave financial support to these *khalawi*, with significant social and economic change benefiting the population in Hamash Koreib and the surrounding villages, estimated at about 5,000 persons in 1982.

Mechanized Crop Production Schemes in Gadarif Area (1948, 1958 and 1972):

Concern about settlement of the Beja continued, triggered by drought and risk of famine in the Red Sea Province, by moving them into more stable areas of southern parts of Kassala and Blue Nile provinces.

a. In 1948

The attempt of the Beja settlement included the settlement of 500 families in 50-feddan schemes in Gadambalia for the production of sorghum. The government contributed land preparation and crop supervision. After one year, about 80 percent of the families evacuated those schemes because of malaria and deaths, and returned to their homeland in the Red Sea Province.

b. In 1958

A number of Beja family groups were settled in Camp Four, in 10 allotments, with a total area of 1,000 feddans of sorghum crop production. The Government supplied them with tractors, agricultural equipment and seeds, which were to be repaid in installments. After five years, and due to instability in crop production and income and inability to repay their debt, these families left the scheme area.

c. In 1972

A new trial was made, involving the settlement of 120 families in an area of 3,000 feddans in a village built in Um Barakit in El Fashaga area. After one year, about 100 families returned to their homeland, due to inadequate skills and technical expertise in dealing with agricultural machinery, and because of the failure to secure adequate supply of food. The remaining families continued raising cattle in Um Barakit, at Lagadi and El Darari villages, encouraged by the presence of good pasture and water supplies in the area. They also continued growing crops under rain-fed conditions.

Overview

The Beja area, due to its poverty in agricultural resources, shortage of food and repeated famines, continued to attract the attention of government planners to come up with solutions to these problems. Settlement was considered an option at different times. The Hamash Koreib example, which was often pointed to as a success, only addressed provision of some services, but completely overlooked economic development. In all of the narrated examples of settlement on mechanized farming, the outcome was discontinuation of the experiment. The failures could be attributed to poor planning for a pastoral solution; availing the land with some inputs; and inadequate follow-up and supervision. Repeatedly the mistake was taking people and simply putting them on the land without the proper support and services to make the change sustainable. In addition, attempts were made to change people's habitat from a dry to a wet environment, with no assistance to adapt to new conditions. Those families that remained in Umm Barkeit did so by keeping livestock, pursuing the livelihood they were used to.

2.4.3 Case 3: Shukriya Settlement

Description

Shukriya nomads centered on the Butana plain are composed of more than 16 clans and raise camels, sheep and cattle. With the rise of New Halfa and Rahad schemes, their traditional grazing lands have been reduced. Hit by droughts and forced out of grazing lands by establishment of irrigated and rain-fed agricultural schemes, the Shukriya tribe is being squeezed into a new grazing area, and subjected to changes that affected their nomadic lifestyle. Some settled in the two schemes, as tenants and as seasonal labour, some became traders, other pursued paid jobs, and the majority continued to keep livestock.

In response to the involvement in the new crop production systems, the Shukriya's extended families and community solidarity was weakened. In place of their former cohesion, an individual-based and self-interested small family system evolved. The abolition of the native administration system encouraged other nomadic tribes who were previously not allowed to intrude into Shukriya grazing territories, thus rendering the Butana to more open uses. As a result of these changes, more crop lands have been developed, and insecurity spread with increased livestock losses due to theft; destruction of water sources, especially *hafirs*; overgrazing and drop of pasture quality; and recent low animal prices in domestic and export markets.

Overview

Drought cycles, establishment of agricultural schemes and incidents of insecurity have resulted in settlement and changes in lifestyle and traditions.

Changes in traditional stock routes due to blocking by agricultural schemes and establishment of irrigation canals has caused grazing movements to shift from long distance into nearby crop production sources and associated fallow lands, resulting in reduction in pastureland, conflicts over available fodder resources among nomads, and sedentary pastoralists and agro-pastoralists growing crops over the open range.

Economic activities have also shifted towards acquiring tenancies in schemes, practicing crop production, investing in livestock trade, becoming commercial traders and buying vehicles for herd transportation and for establishing businesses in permanent housing.

2.4.4 Case 4: Gireh El Saraha Settlement Scheme (1969–1984)

Description

This project was implemented in 1969 in the Kawahla area of Dar Kababish, under the direct administration of the Projects Section of the Rural Development Department of the Ministry of Cooperation and Rural Development.

The initial objectives of the project were revised in response to complaints voiced by the Kababish against its location in a communal grazing area that is frequented by many tribes during the rainy season, thus favouring the Kawahla against the Kababish. The modified objectives aimed at planned and sustainable utilization of protected grazing lands. The specific objectives were to:

- Settle nomads of various tribes of the area.
- Enable citizens and tribes to benefit from the scheme without discrimination.
- Develop and exploit the pastures on a scientific basis.
- Maximize the utilization of pastures' carrying capacity in the scheme.
- Facilitate government provision of education, health and extension services.
- Provide and regulate the use of water supply facilities.
- Introduce the scheme as a model for replication in other similar areas and situations.

The project is an example of a desk work plan with no prior scientific studies or surveys. It was located in the eastern part of Umm Qozein, a semi-desert area that had long been used as seasonal communal grazing lands, regulated according to culture and traditions. The area was suffering from limited water resources. The layout of the scheme area was designed on a checkerboard basis, with no reference to the geographical landscape features, social characteristics and traditions of the nomadic tribes sharing grazing pastures on the land. The scheme privileged one specific tribe, the Kawahla, who are centered on Umm Badir, by giving them access through usufruct rights.

The scheme was established as a cooperative, with 52 registered members at its start. By 1980, the main beneficiaries were about 70 families of the *nazir* of the Kawahla and his kin, and succeeded in developing a water yard, a cooperative shop and a flour mill.

Regarding pasture use, the scheme area was divided into paddocks with a system of rotational grazing between the paddocks. However, the system was not closely observed by the settlers, for soon they introduced into the scheme area cattle, which are heavy grazers, changing the scheme land into low-capacity pastures.

The performance of the scheme, evaluated for its capacity to produce adequate vegetative cover, indicated fluctuations in pastures and adequacy in line with changes in rainfall intensity and distribution. The protected pastures were subjected to overgrazing in lieu of poor control and weak management, resulting in removal of palatable grasses by selective grazing. Grazing management was not strict, with weak administration and low-quality scheme staff.

In evaluating the performance of the scheme for its social benefits, the project did not consider the provision of basic social needs of the target groups. By favouring one tribe over others, the scheme did not take into consideration the balance of grazing needs, both inside and outside the scheme, which resulted in continued invasion of nomads' livestock from outside the scheme. Health, education, veterinary, and other community services of the scheme were weak, and did not meet the aspirations of the target groups.

Overview

- Weak participation of settled and non-settled nomads in the design, financing and implementation of the scheme.
- Administration and financial limitations, with weak management of enclosures, not designed according to natural nomadic grazing frontiers and systems.
- Increases in livestock numbers beyond the carrying capacity of pastures; overgrazing around water points with introduction of heavy cattle grazers and influxes of livestock from outside the scheme.
- Continued tribal conflicts.
- Unqualified staff, with no scientific base in pastures management and social affairs or in dealing with nomads according to grazing traditions and cultures.
- Remoteness of the scheme, with poor access to social and economic services and employment opportunities.

2.4.5 Case 5: Settlement of Pastoral Nomads in Messeriya Humur Area

Description

A project for the settlement of the Agaiyra Messeriya Humur executed by the Rural Development Department, of the Ministry of Cooperation and Rural Development (later inherited by the National Water Corporation).

Execution started in 1969, with the project activities continuing irregularly to 1980. The geographical area was around Muglad and to the south of it.

The project objectives, as stated in the project document, were spelled out as follows:

- i. Use the natural resources of the area rationally, through scientific application.
- ii. Lay the basis for economic exploitation of the available resources under traditional grazing.
- iii. Settle the nomads, enabling them to lead a decent life.
- iv. Promote improved animal productivity as a measure of good breeding, to encourage the pastoralists to raise high-producing stock.
- v. Work out a model for economic return from water provision, by using the watering places as nuclei for rural development in place of the usual misuse of water sources.

- vi. Enable Babanusa Milk Factory to operate at better capacity, by collection of adequate quantities of milk.
- vii. Prepare the ground for other government agencies to provide essential community services in education, health and civil guidance, by the creation of settled and progressive communities.

The area to be covered by the project was designated to be 70 square kilometres, extending from around El Muglad and south, to be divided into 70 ranches of 10 square kilometres. Each ranch was fenced by barbed wire and supplied with a borehole at its center, on which a settlement would be developed for a chosen Messeriya group. Based on carrying capacity studies, the ranch would accommodate a suitable number of cattle with subsidiary activities of crop farming and gardening, to be developed on the borehole water close to the settlement.

On yielding the initial plan for evaluation, the 70 proposed ranches were reduced to eight, with the following sites chosen for implementation: Targi Allah, El Hagiz, El Hadadi, Bagra, Bout, Sibeih, Umm Dagig and El Kileibat.

Work on the project (delineation of ranches' boundaries, enclosing with barbed wire and drilling of boreholes) began in 1969, under the supervision of the Projects Section of the Rural Development Department, which ran it from Khartoum. Supervision was transferred in 1971 to El Obeid Rural Development Department, Kordofan Region. Progress in implementation was mostly on the physical and technical sides:

- Building of the ranch enclosures, constructing and operating the water yards, provision of staff (a few graduates with technical assistants), securing accommodation for the staff, procuring field equipment (vehicles, tractors and accessories) and conducting some range and pasture studies.
- From its start, the project was not received well, neither by local people nor relevant technical departments. In 1974 it was put to evaluation by an internal technical committee from the Rural Development Department, which came out with the following conclusions and recommendations:
 - a. Project genesis was the political vision of the Minister of Cooperation and Rural Development under the slogan 'making rural areas green', implemented by the Projects Section of the Rural Development Department.
 - b. The planning of the project lacked adequate preparatory studies concerning the many elements that make the base for its implementation, including the physical elements, the spatial dimension of its location in terms of the geography of the area, the range and pasture conditions, and most important, the sociological characteristics of the targeted nomadic population. It was essentially a gridiron exercise of delineating the project area and dividing it into ranches.
 - c. No consultation was carried out with the Messeriya Humur and their leadership, intended beneficiaries of the project, nor the technical departments operating in the area—Range and Pasture, Veterinary Services and the local government.
 - d. In the development of the eight ranches, their chosen sites were not taken as linking points in the corridors of the annual movement of the Messeriya stock

between the *magalid* rainy season grazing area, and the *bahr* dry season grazing area, with the outcome that the ranches obstructed the annual movement of many of the Messeriya factions, who had established grazing rights over these sites, resulting in conflict among the herding communal groups and with the project management.

- e. As to the objective of providing Babanusa Milk Factory with ample quantities of milk, this proved to be fallacious for the Messeriya cattle, which were the dwarf type, low in yielding milk (at best 4 lb per day per milking cow, much of which went to calves).

On this evaluation five of the eight ranches were closed, with the remaining three described as less problematic left operating for more piloting. These were also closed in 1980, however, and the project ended in the early 1980s.

Overview

- The objectives of the project were genuine, but could not be achieved.
- The goal to settle the nomads failed.
- The pastoralists, as the target of settlement, should have been consulted, with their priorities taken into consideration in designing and implementing the project activities.
- Planning settlement projects should not be attempted without fieldwork and interdisciplinary studies that take into consideration all of the project elements.
- Special attention should have been given to the spatial context, i.e. planning the chosen area for settlement within "the grazing container" of the group targeted for settlement.

2.4.6 Case 6: Western Savannah Development Corporation (1989)

Description

The Western Savannah Development Corporation (WSDC) followed a model of integrated rural development in the southeastern part of South Darfur on the philosophy of sustainable utilization of the resources of the area. The settlement development component targeted accommodating the drought-stricken populations, who entered the area from the northern parts of Darfur. It was designed and implemented on technical feasibility analysis with no reference to the social and environmental dimensions and their implications. The targeted groups were not consulted nor did they have positive participation in planning the project. However, they were later organized to participate in its management.

The overall objectives of the WSDC were to

- i. Increase the productivity of the land and labour for food and cash crops, using improved seeds, extension, credit, marketing and appropriate research, with access to basic community services and rural infrastructure.
- ii. Conservation of ecology through control of settlement, development of improved land tenure and crop rotation.
- iii. Protect and improve livestock and provide veterinary services.
- iv. Generate revenue and foreign exchange earnings.

This programme was carried out in the first phase of the WSDC, and followed by conducting a survey of nomads in Phase II, to understand the nomadic production system,

allocation of crop lands and communal grazing lands, and the benefits from crop rotation and designating fallow land for animal grazing.

The nomadic settlement programme was both spontaneous and controlled around water points and water yards in Al Amoud El Akhder, Um Rakuba, Umm Belut and Sani Doliba areas. The settled groups included families of the Zaghawa tribe of Northern Darfur, and some from Beni Helba. It emphasized the allocation of controlled pasture zones, with less concern about the internal management of these zones, and accordingly, the balance between the increasing number of herds and the decreasing pastures' carrying capacity was never resolved.

Taking Umm Belut Settlement as an example, it presented a type of controlled nomadic settlement model, targeting poor nomads with no land secured rights, giving them land for farming as a community and a communal grazing land. It accommodated some factions of Beni Helba tribe—cattle breeders who were affected by cycles of droughts and lacked services.

The model was operated in consultation with the local communities and the District Council, to practice controlled deferred grazing with exclusive rights, enclosing farmlands against marauding livestock by fencing at a high cost. However, the exclusive rights of access to protected pastures did not forbid influx of livestock of relatives and local leaders through exchange of animals. As a result, overgrazing and conflicts over grazing lands were common, especially during the dry season and drought periods. Even the signed contracts with the accommodated nomads did not succeed in reducing the numbers of grazing animals to an acceptable standard. The project terminated abruptly in the early 1990s, and with no evaluation made to draw useful lessons.

Overview

- Limitation of the range and pastures programme for selection of forage species and their propagation.
- Low focus on support for communal grazing reserves' development and management.
- The pastures situation outside the enclosures was ignored, culminating in high livestock pressure on the protected pasture of the WSDC.
- Studies of the socio-economic aspects of nomadism were inadequate, leading to weak design and management of grazing activities, concomitant with norms and traditions of nomads and the desire to conserve the ecology of the grazing pastures.
- The contracts signed with project nomads to control the numbers of livestock inside enclosures were not enforced.
- The project was considered too large for management and supervision.
- It was also constrained by limited funds, though it was jointly supported by large international organizations and Sudanese financiers.
- The project suffered from lack of qualified personnel, due to low incentives and financial benefits.

2.4.7 Case 7: Geraigikh Range Management and Carbon Sequestration

Description

In follow-up of the philosophy of El Odaiya Range Management Scheme promoted in the late 1980s by the United Nations Sudano-Sahelian Office (UNSSO), the Geraigikh project

was executed in the early 1990s. The project sought environmental sustainability of the ecological resources of the area, and range and forest conservation through wise community utilization.

Geraigikh, then a rural council lying northeast of Bara, was selected for the trial. The council combined two types of populations, settled Gawamaa, practicing *qoz* cultivation of millet and sesame, as well as gum arabic tapping and raising a small numbers of goats, and a branch of the Kawahla (of the Um Badir area) raising camels and sheep, visiting annually to spend the summer there, and depending on the Geraigikh village water yard for their water supply.

The long association between the village community and the nomadic Kawahla created amicable relations between the two groups, and it was seen by the team that planned the project that this case provided a good example for a working model of sustainable resources use. The project objectives included:

- i. Rehabilitate the pastures and increase carbon sink capacity in the soil.
- ii. Improve the economic situation of the target groups.
- iii. Provide a revolving fund to avail needed credit for income-generating investment activities for small producers and sustain rehabilitation of pastures in the future.
- iv. Encourage community development and management of natural resources in the area.
- v. Provide water, seeds and animal stocks services.

Its component covered:

- Raise the efficiency of the community to manage natural pastures.
- Improve the pastures' grazing capacity.
- Diversify and improve production systems through training and introduction of appropriate technology.
- Design and implement drought mitigation measures and promote income-generating activities, gender equality and training of target groups to benefit more from the resource utilization of the area.

The administrative structure of the project was based on coordination between the federal and state Departments of Range and Pasture in the design of policies and plans, and rehabilitation and improvement of natural pastures in the project area. The director of the project, a specialist in range and pastures, was responsible for the implementation of the plans and policies of the project through the following assisting units:

- i. **Natural Resources Unit:** mobilize the community to implement the activities of the project and enhance the participatory approach concept, train local male and female target groups, establish community-based organizations and institutions, focus on gender activities *gabareek*, sewing activities, food processing, etc.
- ii. **Extension Unit:** promote participation of the communities in the project planning and implementation, building of environmental awareness, reducing tree cutting, organization of grazing patterns and substitute lighter-grazing sheep for heavy-grazing goats.

- iii. **Gender Extension Unit:** train women on income-generating activities and introduce energy-saving stoves for cooking.
- iv. **Animal Health and Production Unit:** to combat animal diseases, train veterinary assistants, develop supplementary feeds from molasses and train target groups on raising poultry for eggs and broilers.
- v. **Credit and Finance Unit:** create revolving funds to support income-generating activities, substitution of sheep for goats and restocking of small ruminants for those who lost their animals during drought.
- vi. **Monitoring and Evaluation Unit:** establish standard measures for evaluation of participatory approach, poverty alleviation and gauging project performance.
- vii. **Administration Support Unit:** support local fund needs and pursue foreign funding.

Overview

The project could serve as a learning model in successful range management based on community involvement. Indicators of its success included:

- Working with two communities of different composition and interests, village-settled Gawamaa and nomadic Kawahla.
- In place of a physical fence of barbed wire, the project applied a 'social fence' of regulation and control of pasture use through organization of the community of users.
- Solid achievements in ecological rehabilitation were reached through rejuvenation of the vegetation cover, according to a number of evaluations.
- The project combined the goal of rational use of resources with social and economic development elements.

Despite these successes, the project came to a stop with the termination of foreign financial support, which indicates the vulnerability of such a project and limitations of government support as a back-up to foreign funding.

2.5 Precautionary Conferences, Kordofan Region

The name of this project came from the Nomads Affairs Administration of the Regional Affairs Ministry of Kordofan Region, under the Regionalism Rule founded by the May Regime. The administration emerged from the policy of the late Dr. Gaafar Mohammed Ali Bakheit, minister of local government during the 1970s, as an attempt to address nomads' development—through assigning the nomadic tribes 'mobile local government officers' and accompanying them on their seasonal movements to closely monitor their affairs and intervene in solving some of their problems. Ali Gamaa, one of the chosen mobile local government officers, who was from the Messeriya Agaiyra group, was the founder of the administration upon his transfer later to Kordofan region. Perhaps because it was Ali's own personal interest, it remained the only founded nomads affairs administration in the country. At the time of its viability, the administration enjoyed official recognition from the region's government as its specialized arm on questions about nomads. It had a staff of five university graduates, office facilities and transport vehicles.

Among the activities it promoted were nomadic conferences, which came to be known as Precautionary Conferences. They were annual conferences designed to address anticipated conflicts before their occurrence and addressed the phenomenal conflicts over grazing and water resources to which all nomadic areas are vulnerable. The administration had the tradition of holding conferences between the tribes along the lines of indigenous tribal systems, in an effort to resolve their local conflicts. Reading through the documentation left by the administration, one finds that numerous conferences were held, in almost every area council of the Kordofan region: Sodiri, Bara, Umm Rawaba, El Obeid, En Nuhud, Kadugli and El Muglad.

The issues discussed at the conferences were varied, and the audiences were large. As an example, the conference organized in 1984 at El Muglad took place in a drought year. The conference was convened over two days and was attended by a mixed audience, which could be distinguished under the following categories:

- The region's government led by the assistant governor and accompanied by some of the region's ministers.
- The Ministry of Health.
- Heads of the region's government departments: Range and Pasture, Agriculture, Forestry, Wildlife, Regional Water Corporation, the judiciary, the police and security, etc.
- El Obeid Agriculture Research Station.
- Representatives of the area councils, and the local government units of the region.
- Leaders of the political and legislative apparatuses.
- The tribes' traditional leaders and representatives of the popular organizations.
- Representatives of Bahr el Ghazal region, which borders Kordofan.
- Three University of Khartoum scholars from the Department of Social Anthropology with interest in the issues of pastoral nomadism (Prof. Abdel Gaffar Mohammed Ahmed, Dr. Musa Abdel Galil and Dr. Siddig Umm Badda of the Zeyadia tribe).
- Some of the international organizations and NGOs working in the region (UNICEF, WHO, USAID, Sudan Now), totaling 82 participants.

The conference covered a lot of ground on pastoralism issues. Central to the discussions was facilitating accommodation of pastoral nomads from the northern part of the region (the Abbala camel people), who were induced by the 1984 drought to look for outlets in the southern parts of the region. The conferees recognized the deteriorating situation of the Abbala and the tribe's representative acknowledged efforts of those in the southern areas to accommodate them. Emotions ran high, with the feeling 'they are our kinfolk, and they are in trouble'.

There was talk about considering settlement of some of the affected groups in the southern parts of the region, to which the region's Assistant Governor Sayed Fadl Allah Hamad, responded by making the following statement:

"It is our desire that the conference comes with reasonable outcomes based on in-depth analysis and scientific grounds, and not on empty promises. Coming from a pastoral background myself (El Messeriya Al Zurg, centered in Lagawa and Regil El Fula) and based on the time I spent as Commissioner South Darfur, I would like to emphasize that: tribes' people are partners in fire, water, pasturage, and the land. Yet, we need to work

out this partnership on scientific basis, and organize the resources to suit the different users, by delineating the corridors of movement, controlling the pastures' use, and timing the migration of the different tribes, and their evacuation of the cultivated areas".

The conference continued its deliberations, addressing the recurring conflicts between the different tribes and covering other issues, with recommendations being made in the fields of agriculture, animal husbandry, forestry, range and pasture, wildlife, water provision, health, education and tribal security.

Overview

- A developed modality, in keeping with long-practiced tribal traditional conferences.
- A comprehensive treatment of nomads' problems, judged on its elaborate audience, the development elements considering geographic coverage of tribes, and its regular convening, as an annual and sometimes biannual gathering.
- Like all the other conferences on the pastoral question, these Precautionary Conferences did not materialize in substantial planning to promote the welfare of the nomads.
- Establishment within the state governments of nomads affairs administrations may merit being considered as specialized departments to be entrusted with the promotion of nomads' development.

2.6 Exploration of the Concept of Nomads' Settlement

2.6.1 Lessons Learned from the Presented Cases:

In this part of the study, we shall discuss the concept of '**settlement of nomads**' as to their '**integration**' into the life of the nation, with the latter a feasible alternative leading to the development and prosperity of both the nomads and the nation. Lessons learned from the cases reflect the following shortcomings in the handling of the nomads' question:

- Top-down planning, policy design and implementation of the development and services projects in Sudan.
- Poor application of scientific approaches to planning, implementation of nomads' development and settlement projects.
- Nomads' development is monolithically conceived in settlement projects.
- Contradiction between national economy interests and nomadic groups' interests.
- Nomadic system frontiers are not conceived in settlement programs, including organized range and natural resources management.
- Nomads are not recognized as partners in the development of the livestock economy. The animal is treated as a commodity, and not within a socio-economic and environment-related system.
- Different locations have different nomadism traditions, which require special treatment and handling.
- Traditions and norms promote increasing the numbers of animals, with concomitant imbalance between animal numbers and pasture-carrying capacity, which must be addressed under controlled grazing in settlement schemes.

- Poor entitlement and social mapping of nomads, resulting in their isolation and low participation in planning, implementation and monitoring of settlement projects.
- Lack of integration of nomads into the surrounding socio-economic fabric, opening them to continued adjustments, with changes in norms, traditions and systems of production.
- Change of governance, especially at the local level, causing far-reaching repercussions in intensifying conflicts and degradation of natural grazing systems under nomadism.
- Political slogans, unsupported by scientific findings, lead to deterioration of the nomads' environments and position.
- Political or tribal favoritism is often involved in the selection of leaders and groups benefiting from settlement programmes.
- Lack of provision of the right type of services that suit the nomadic condition.
- Weak institutions and poorly qualified personnel to deal with nomads' problems.

In reviewing the nomadic settlement experiences, some unfolded as planned, while others developed spontaneously, with most cases triggering the same negative impacts: diminution of natural grazing areas, squeezing of nomads between the developed land and the remaining natural grazing areas and blocking of stock routes. No serious consideration of these negative impacts is given attention by planners to help the nomads adapt to new situations, neither within the developed schemes nor in the outside areas. This reflects an evident negligence of the nomads' place in development, thus prolonging their marginalization.

2.6.2 In Light of the Lessons Learned

It seems there is a perpetuating contraction between the nation's and the nomads' economic interests. The experience of Sudan since the turn of 20th century indicated the inherent influence of the colonizers in planning and developing the country, with side effects on nomads and other stakeholders. The establishment of the Gezira Scheme, which became a model for the other schemes that followed, laid down the foundation of linking Sudan's 'primitive' economy to the 'advanced' international economy, through the emphasis of growing one cash crop—cotton—to supply the demands of the textile industry in Britain. In this respect, large areas previously occupied by nomadic livelihood systems were dismantled, with no consideration of the nomadic traditions, social attributes and customs, or their adjustment to the changing natural resource environment.

The livestock were not allowed to graze on the green lands of the newly established 'largest modern farm under one management in the world'. During the past 100 years or more, livestock was considered an alien factor of production, creating risks and threats to the financially rewarding crop preferred by the Government (cotton), rather than that of tenants (sorghum, groundnuts and wheat). All efforts to integrate the livestock into the crop rotation of the Gezira Scheme were futile. The nomads lost their inherent pastoral nature, and the animal is still considered an enemy in the modern agricultural schemes of Sudan, Gezira, New Halfa, Suki and Rahad.

Similar agricultural development model ventures of the rain-fed mechanized crop production schemes initiated by the British in the mid- and late 1940s on a commercial basis inflicted similar harms on the nomads, evicting them from their natural grazing areas and sending them into the wilderness to tame new lands with meager resources of

pastures and water, culminating in tribal interactions characterized by both peace and conflict.

Since the earliest efforts to expand Sudan's agricultural crop production, usurpation of range and pastures lands and watering systems along with the devastating effects of cyclical droughts and continued increases in livestock population numbers kept the nomads living under instability and agitation, which resulted in socio-political conflicts that alternatively flared and were contained, yet did not reach the level of the present conflict in Darfur between crop producers and nomads.

In the 1990s, the adoption of market economy approaches for Sudan's development urged strongly for maximum utilization of livestock resources in earning foreign exchange at minimum cost. The sizable contribution of livestock to the gross domestic product and exports of Sudan were unprecedented, with commercialization of the nomadic system gaining momentum. Large livestock owners, side by side with big traditional livestock traders and exporters, began to adopt new marketing and trade opportunities, adjusting to challenges triggered by civil strife, macro-economic policies and harsh conditions of the traditional long treks from production sources to markets, both within Sudan and to neighboring countries such as Egypt.

Globalization and commercialization will further marginalize the nomadic livelihood, forcing a choice of linking the local economies with international ones and adjusting to the quality demands of foreign consumers. This would entail the continued supply of livestock, rather than the existing seasonal supply of animals dictated by traditions of the nomads' livelihood systems. This would entail the selection of animal breeds for meat and milk production, which may require the introduction of ranching systems in the country at large.

The end result of the largely failed agricultural schemes is they would fail to attain set targets of production due to poor management and policies, while the tenant population is still attached to the livestock economy and may be resistant to change. What is needed is new animal-crop mixed agricultural schemes that integrate the animals into the cropping systems, as in the traditional production systems, with supporting funds and professional (political, social, economic and technical) backstopping. These may turn out new innovative production and marketing systems of livestock and crops, within the social systems of agro-pastoralism and pastoralism, which are the institutional heritage of Sudan. Commercial farming can be allowed, but not at the expense of the interests of the large masses of the agro-pastoral and pastoral stakeholders of the lands.

2.7 The Settlement Perspective

There is a clear historic trend towards considering nomads' settlement as a solution to their problem, being promoted by Government and those concerned with the question of rational use of resources and promoting development of rural areas. The National Comprehensive Strategy (1992-2002) and Quarterly Centennial Development Strategy (2002-2027) showed concern about poverty elevation, protection of the environment, and conservation of natural resources; and it established protected areas and increased public and local communities' involvement in the realization of these objectives.

In both strategies, no definitive mention of settlement of nomads is made, yet much consideration is given to livestock as a national wealth and as an economic resource to be developed through rendering of related services, such as in the areas of improvement of

pastures, control of animal diseases, provision of water supplies, facilitation of marketing compared to prior times an official position of 'Settlement of Nomads', kept showing in the Ten Years Plan of General Abboud's rule and the May regime's Five Years Plan and Amended Five Years Plan.

This denotes that the concept has been kept alive throughout the period of the country's independence, while there was no mention of it in the records of the colonial area. The examples referred to previously as Gezira, Gash and Tokar Delta schemes, labeled as spontaneous settlement, targeted the labour of the nomads by transforming them into tenants or agricultural labour, to produce cotton—the one-cash return crop—for which these schemes were founded. It was very usual and continued to be through later years to read in the annual performance reports of these schemes how many livestock were present and how many herders were chased out and/or caught, or kept out from damaging the cotton crop.

It seems that with the achievement of independence and the nation's concern about the common welfare of all the citizens featuring high in the successive governments' agendas, nomads' settlement has been propagated as the panacea that would solve the nomadic question. The urban-based elite, whether politician, tribal leader, educated person or the like, found reasons in denouncing nomadic life as incompatible with spreading general education; that their mobile living prevented the provision of services and the running of local administration; that the nomadic lifestyle was wasteful of natural resources and more conscious of tribal than national loyalties; and finally that nomads' life is backward and barbarous.

These views seem to be shared by most nations that have a nomadic population, and in all cases, settlement was looked to as the solution to the nomadic 'problem.' The United Nations took up the issue, deemed the nomads a special category of people among the world's population and passed Convention 107, which came into force 2nd June 1959.

CHAPTER THREE: NOMADS STIPULATED RIGHTS

3.1 Convention No. 107

UN (Under the International Labour Organization): Convention Concerning the Protection and Integration of Indigenous and other Tribal and Semi-Tribal Populations in Independent Countries.

Adopted 26 June 1957, came into force 2 June 1959.

PART I. GENERAL POLICY

Article 1

1. This Convention applies to:

- members of tribal or semi-tribal populations in independent countries whose social and economic conditions are at a less advanced stage than the stage reached by the other sections of the national community, and whose status is regulated wholly or partially by their own customs or traditions or by special laws or regulations;
- members of tribal or semi-tribal populations in independent countries which are regarded as indigenous on account of their descent from the populations which inhabited the country, or a geographical region to which the country belongs, at the time of conquest or colonization and which, irrespective of their legal status, live more in conformity with the social, economic and cultural institutions of that time than with the institutions of the nation to which they belong.

2. For the purposes of this Convention, the term *semi-tribal* includes groups and persons who, although they are in the process of losing their tribal characteristics, are not yet integrated into the national community.

3. The indigenous and other tribal or semi-tribal populations mentioned in paragraphs 1 and 2 of this Article are referred to hereinafter as "the populations concerned".

Article 2

1. Governments shall have the primary responsibility for developing coordinated and systematic action for the protection of the populations concerned and their progressive integration into the life of their respective countries.

2. Such action shall include measures for:

- enabling the said populations to benefit on an equal footing from the rights and opportunities which national laws or regulations grant to the other elements of the population;
- promoting the social, economic and cultural development of these populations and raising their standard of living;
- creating possibilities of national integration to the exclusion of measures tending towards the artificial assimilation of these populations.

3. The primary objective of all such action shall be the fostering of individual dignity, and the advancement of individual usefulness and initiative.

4. Recourse to force or coercion as a means of promoting the integration of these populations into the national community shall be excluded.

Article 3

1. So long as the social, economic and cultural conditions of the populations concerned prevent them from enjoying the benefits of the general laws of the country to which they belong, special measures shall be adopted for the protection of the institutions, persons, property and labour of these populations.

2. Care shall be taken to ensure that such special measures of protection:

- are not used as a means of creating or prolonging a state of segregation; and
- will be continued only so long as there is need for special protection and only to the extent that such protection is necessary.

3. Enjoyment of the general rights of citizenship, without discrimination, shall not be prejudiced in any way by such special measures of protection.

Article 4

In applying the provisions of this Convention relating to the integration of the populations concerned:

- due account shall be taken of the cultural and religious values and of the forms of social control existing among these populations, and of the nature of the problems which face them both as groups and as individuals when they undergo social and economic change;
- the danger involved in disrupting the values and institutions of the said populations unless they can be replaced by appropriate substitutes which the groups concerned are willing to accept shall be recognized;
- policies aimed at mitigating the difficulties experienced by these populations in adjusting themselves to new conditions of life and work shall be adopted.

Article 5

In applying the provisions of this Convention relating to the protection and integration of the populations concerned, governments shall:

- seek the collaboration of these populations and of their representatives;
- provide these populations with opportunities for the full development of their initiative;
- stimulate by all possible means the development among these populations of civil liberties and the establishment of or participation in elective institutions.

Article 6

The improvement of the conditions of life and work and level of education of the populations concerned shall be given high priority in plans for the over-all economic development of areas inhabited by these populations. Special projects for economic development of the areas in question shall also be so designed as to promote such improvement.

Article 7

1. In defining the rights and duties of the populations concerned regard shall be had to their customary laws.

2. These populations shall be allowed to retain their own customs and institutions where these are not incompatible with the national legal system or the objectives of integration programmes.

3. The application of the preceding paragraphs of this Article shall not prevent members of these populations from exercising, according to their individual capacity, the rights granted to all citizens and from assuming the corresponding duties.

Article 8

To the extent consistent with the interests of the national community and with the national legal system:

- the methods of social control practiced by the populations concerned shall be used as far as possible for dealing with crimes or offences committed by members of these populations;
- where use of such methods of social control is not feasible, the customs of these populations in regard to penal matters shall be borne in mind by the authorities and courts dealing with such cases.

Article 9

Except in cases prescribed by law for all citizens the exaction from the members of the populations concerned of compulsory personal services in any form, whether paid or unpaid, shall be prohibited and punishable by law.

Article 10

1. Persons belonging to the populations concerned shall be specially safeguarded against the improper application of preventive detention and shall be able to take legal proceedings for the effective protection of their fundamental rights.

2. In imposing penalties laid down by general law on members of these populations account shall be taken of the degree of cultural development of the populations concerned.

3. Preference shall be given to methods of rehabilitation rather than confinement in prison.

PART II. LAND

Article 11

The right of ownership, collective or individual, of the members of the populations concerned over the lands which these populations traditionally occupy shall be recognized.

Article 12

1. The populations concerned shall not be removed without their free consent from their habitual territories except in accordance with national laws and regulations for reasons relating to national security, or in the interest of national economic development or of the health of the said populations.

2. When in such cases removal of these populations is necessary as an exceptional measure, they shall be provided with lands of quality at least equal to that of the lands previously occupied by them, suitable to provide for their present needs and future

development. In cases where chances of alternative employment exist and where the populations concerned prefer to have compensation in money or in kind, they shall be so compensated under appropriate guarantees.

3. Persons thus removed shall be fully compensated for any resulting loss or injury.

Article 13

1. Procedures for the transmission of rights of ownership and use of land which are established by the customs of the populations concerned shall be respected, within the framework of national laws and regulations, in so far as they satisfy the needs of these populations and do not hinder their economic and social development.

2. Arrangements shall be made to prevent persons who are not members of the populations concerned from taking advantage of these customs or of lack of understanding of the laws on the part of the members of these populations to secure the ownership or use of the lands belonging to such members.

Article 14

National agrarian programmes shall secure to the populations concerned treatment equivalent to that accorded to other sections of the national community with regard to:

- the provision of more land for these populations when they have not the area necessary for providing the essentials of a normal existence, or for any possible increase in their numbers;
- the provision of the means required to promote the development of the lands which these populations already possess.

PART III. RECRUITMENT AND CONDITIONS OF EMPLOYMENT

Article 15

1. Each Member shall, within the framework of national laws and regulations, adopt special measures to ensure the effective protection with regard to recruitment and conditions of employment of workers belonging to the populations concerned so long as they are not in a position to enjoy the protection granted by law to workers in general.

2. Each Member shall do everything possible to prevent all discrimination between workers belonging to the populations concerned and other workers, in particular as regards:

- admission to employment, including skilled employment;
- equal remuneration for work of equal value;
- medical and social assistance, the prevention of employment injuries, workmen's compensation, industrial hygiene and housing;
- the right of association and freedom for all lawful trade union activities, and the right to conclude collective agreements with employers or employers' organizations.

PART IV. VOCATIONAL TRAINING, HANDICRAFTS AND RURAL INDUSTRIES

Article 16

Persons belonging to the populations concerned shall enjoy the same opportunities as other citizens in respect of vocational training facilities.

Article 17

1. Whenever programmes of vocational training of general application do not meet the special needs of persons belonging to the populations concerned governments shall provide special training facilities for such persons.

2. These special training facilities shall be based on a careful study of the economic environment, stage of cultural development and practical needs of the various occupational groups among the said populations; they shall, in particular enable the persons concerned to receive the training necessary for occupations for which these populations have traditionally shown aptitude.

3. These special training facilities shall be provided only so long as the stage of cultural development of the populations concerned requires them; with the advance of the process of integration they shall be replaced by the facilities provided for other citizens.

Article 18

1. Handicrafts and rural industries shall be encouraged as factors in the economic development of the populations concerned in a manner which will enable these populations to raise their standard of living and adjust themselves to modern methods of production and marketing.

2. Handicrafts and rural industries shall be developed in a manner which preserves the cultural heritage of these populations and improves their artistic values and particular modes of cultural expression.

PART V. SOCIAL SECURITY AND HEALTH

Article 19

Existing social security schemes shall be extended progressively, where practicable, to cover--

- wage earners belonging to the populations concerned;
- other persons belonging to these populations.

Article 20

1. Governments shall assume the responsibility for providing adequate health services for the populations concerned.

2. The organization of such services shall be based on systematic studies of the social, economic and cultural conditions of the populations concerned.

3. The development of such services shall be coordinated with general measures of social, economic and cultural development.

PART VI. EDUCATION AND MEANS OF COMMUNICATION

Article 21

Measures shall be taken to ensure that members of the populations concerned have the opportunity to acquire education at all levels on an equal footing with the rest of the national community.

Article 22

1. Education programmes for the populations concerned shall be adapted, as regards methods and techniques, to the stage these populations have reached in the process of social, economic and cultural integration into the national community.
2. The formulation of such programmes shall normally be preceded by ethnological surveys.

Article 23

1. Children belonging to the populations concerned shall be taught to read and write in their mother tongue or, where this is not practicable, in the language most commonly used by the group to which they belong.
2. Provision shall be made for a progressive transition from the mother tongue or the vernacular language to the national language or to one of the official languages of the country.
3. Appropriate measures shall, as far as possible, be taken to preserve the mother tongue or the vernacular language.

Article 24

The imparting of general knowledge and skills that will help children to become integrated into the national community shall be an aim of primary education for the populations concerned.

Article 25

Educational measures shall be taken among other sections of the national community and particularly among those that are in most direct contact with the populations concerned with the object of eliminating prejudices that they may harbour in respect of these populations.

Article 26

1. Governments shall adopt measures, appropriate to the social and cultural characteristics of the populations concerned, to make known to them their rights and duties, especially in regard to labour and social welfare.
2. If necessary this shall be done by means of written translations and through the use of media of mass communication in the languages of these populations.

PART VII. ADMINISTRATION

Article 27

1. The governmental authority responsible for the matters covered in this Convention shall create or develop agencies to administer the programmes involved.
2. These programmes shall include:
 - planning, co-ordination and execution of appropriate measures for the social, economic and cultural development of the populations concerned;
 - proposing of legislative and other measures to the competent authorities;
 - supervising the application of these measures.

PART VIII. GENERAL PROVISIONS

Article 28

The nature and the scope of the measures to be taken to give effect to this Convention shall be determined in a flexible manner, having regard to the conditions characteristic of each country.

Article 29

The application of the provisions of this Convention shall not affect benefits conferred on the populations concerned in pursuance of other Conventions and Recommendations.

Article 30

The formal ratifications of this Convention shall be communicated to the Director-General of the International Labour Office for registration.

Article 31

1. This Convention shall be binding only upon those Members of the International Labour Organization whose ratifications have been registered with the Director-General.

2. It shall come into force twelve months after the date on which the ratifications of two Members have been registered with the Director-General.

3. Thereafter, this Convention shall come into force for any Member twelve months after the date on which its ratifications has been registered.

Article 32

1. A Member which has ratified this Convention may denounce it after the expiration of ten years from the date on which the Convention first comes into force, by an act communicated to the Director-General of the International Labour Office for registration. Such denunciation shall not take effect until one year after the date on which it is registered.

2. Each Member which has ratified this Convention and which does not, within the year following the expiration of the period of ten years mentioned in the preceding paragraph, exercise the right of denunciation provided for in this Article, will be bound for another period of ten years and, thereafter, may denounce this Convention at the expiration of each period of ten years under the terms provided for in this Article.

Article 33

1. The Director-General of the International Labour Office shall notify all Members of the International Labour Organization of the registration of all ratifications and denunciations communicated to him by the Members of the Organization.

2. When notifying the Members of the Organization of the registration of the second ratification communicated to him, the Director-General shall draw the attention of the Members of the Organization to the date upon which the Convention will come into force.

Article 34

The Director-General of the International Labour Office shall communicate to the Secretary-General of the United Nations for registration in accordance with Article 102 of the Charter of the United Nations full particulars of all ratifications and acts of denunciation

registered by him in accordance with the provisions of the preceding Articles.

Article 35

At such times as it may consider necessary the Governing Body of the International Labour Office shall present to the General Conference a report on the working of this Convention and shall examine the desirability of placing on the agenda of the Conference the question of its revision in **whole or in part**.

Article 36

1. Should the Conference adopt a new Convention revising this Convention in whole or in part, then, unless the new Convention otherwise provides:

- the ratification by a Member of the new revising Convention shall ipso jure involve the immediate denunciation of this Convention, notwithstanding the provisions of Article 32 above, if and when the new revising Convention shall have come into force;
- as from the date when the new revising Convention comes into force this Convention shall cease to be open to ratification by the Members.

2. This Convention shall in any case remain in force in its actual form and content for those Members which have ratified it but have not ratified the revising Convention.

Article 37

The English and French versions of the text of this Convention are equally authoritative.

3.2 Sudan Millennium Development Goals (MDGs)

The United Nations General Assembly decided in 2000 to focus on reaching eight key worldwide development goals by 2015. These goals are now being pursued and measured in every UN Member State. In Sudan, these efforts must include the nomads, who comprise a sizeable proportion of the country's vulnerable groups.

Goal 1: Eradicate Extreme Poverty and Hunger

Target 1: Halve between 1990 and 2015 the population whose income is less than one dollar per day.

Target 2: Halve between 1990 and 2015 the proportion of people who suffer from hunger.

Goal 2: Achieve Universal Primary Education

Target 3: Ensure that by 2015 children everywhere, boys and girls alike, will be able to complete a full course of basic schooling.

Goal 3: Promote Gender Equality and Empower Women

Target 4: Eliminate gender disparity in primary and secondary education, preferably by 2005, and at all levels of education by no later than 2015.

Goal 4: Reduce Child Mortality

Target 5: Reduce by two-thirds between 1990 and 2015 the mortality rate among children under age 5.

Goal 5: Improve Maternal Health

Target 6: Reduce by three-quarters the maternal mortality rate.

Goal 6: Combat HIV/AIDS, Malaria and Other Diseases

Target 7: Halt by 2015 and begin to reverse the spreads of HIV/AIDS.

Target 8: Halt by 2015 and begin to reverse the incidence of malaria and other major diseases.

Goal 7: Ensure Environmental Sustainability

Target 9: Integrate the principles of sustainable development into policies and programmes, and reverse the loss of environmental resources.

Target 10: Halve by 2015 the proportion of people without sustainable access to safe drinking water.

Target 11: Achieve by 2020 a significant improvement in the lives of at least 100 million slum dwellers.

Goal 8: Global Partnership for Development

Target 12: Develop further an open, rule-based, predictable, non-discriminatory trading and financial system.

Target 13: Address the special needs of the least developed countries.

Target 14: Respond to special basic needs of landlocked and small island developing States.

Target 15: Deal comprehensively with developing countries' debt problems.

Target 16: Develop and implement strategies for productive employment of youth.

Target 17: Provide access to affordable drugs.

Target 18: Make available the benefits of new technologies, especially for information and communication.

CHAPTER FOUR: REACTION TO NOMADS' SETTLEMENT

4.1 Dialoguing the Concept

ILO Convention No. 107 has been communicated to all UN Member States to bring attention to the special requirements of handling the nomads' status. Yet transforming the articles of the convention into operational programmes seemed incomprehensible to the Government and executives, especially regarding organizational and socio-cultural developments, so settlement of nomads lingered as the obvious solution and was supported by planners in many parts to the world, with models being tried in various places. The concept has continued to stir discussion about its positive and negative outcomes up to today.

In Sudan, we see many experiences of nomads' settlement, either planned, or as a byproduct of other activities. The concept was pushed high in government policy in the early 1960s, with the Ministry of Local Government taking a lead with the proposal for 'The Settlement of the Amara and Busharyeen', which we have reviewed here. The project was prepared by the local Government authority in the area in response to the repeated famines that ravage Beja country. In the same period, the Ministry of Local Government received assistance from the UN Special Fund (which later became UNDP) in establishing the Community Development Department.

During that era, the Community Development Department assumed a leading role in working with rural communities to improve their lot. This was tried in a number of developing countries, especially in Africa and Asia. In the Philippines, for example, then-President Ferdinand Marcos said, "There is no reason for people to revolt and go to the side of communists if we bring development into their areas, through our Community Development programmes." In Nigeria, a Ministry of Community Development was founded within the ministerial structure of the country, entrusted with effectuating development in the rural areas.

In Sudan, the Community Development Department founded under the Ministry of Local Government was led by a capable Pakistani. Some among us might remember the establishment of the Adult Education Training Centre at Shendi, and the secondment of many primary school teachers from the Ministry of Education to the newly founded Community Development Department, to be trained in this centre as Community Development officers. Its activities included the Abu Halima Women's Development Center, north of Khartoum. Both centres at Shendi and Abu Halima are still standing as the two persistent activities from that period.

Development of the nomadic segment of the population was among the areas the Community Development Department addressed. To this effect a request was made to the United Nations Special Fund for assistance and studies on and pilot projects for 'Community Development For Settlement of Nomads, 1964'. This marked a time when the idea of settlement of nomads was widely discussed in academic and executive circles. For example, the Thirteenth Annual Conference of the Philosophical Society of Sudan convened a session on the subject 3-6 December 1965.

4.2 A Critique of Present Plans for Settlement of Nomads in Sudan

In the above-mentioned session of the Philosophical Society, T. Asaad, I. Cunnison, and A.G. Hills made the following critique on the issue of nomadic settlement. We present it

here, for it was written by three leading social anthropologists of the Department of Social Anthropology and Sociology of the University of Khartoum at that time, and all three had prepared their doctorate degrees on the nomadic tribes of Sudan: T. Asaad on 'The Kababish Arabs', I. Cunnison on 'The Messeriya Humur', and I. G. Hill on 'The Hababin'. In summation, the critique carries the following points:

- Belief that nomadism is a bad thing is shared by many educated men and the international organizations, and is subscribed to by most nations with nomadic populations.
- The weakest of the usual objections to nomadic existence are those based on economic grounds, for most nomads occupy areas poor in natural resources, and through their skill exploit such areas, and make a noticeable contribution to the economy. Under such situations, developing the resources of these areas for purposes other than grazing by animals require large capital outlays, e.g. the Gezira Scheme.
- In relation to this point, and from a different source, we quote from a discussion between Sir Douglas Newbold, Governor Kordofan 1932-1938, and Sir Ali El Tom, Nazir Imoum Kababish, the following:

The old man asked plaintively, "Are we right to remain nomads? Our country produces nothing, and we live on our camels."

Newbold replied, "Yes, you are living true to your environment—to economic laws and to your social organization."

- But all nomads do not use such extremely poor land. The Baggara are an example, where with capital outlay, the land can be made suitable for some kind of settled existence. However, there still remain doubts relating to the physical process of settlement and to the feasibility of nomads adopting to tasks for which they are not accustomed, and the possibility of serious unemployment.
- The above comparison leads to the conclusion that physical settlement will differ from place to place. While it might be feasible with groups on poor grazing lands, e.g. the nomads and semi-nomads of old Gezira, others of prosperous condition might not be enticed to respond to economic incentive.
- Settling down by itself is no gain for nomads, even with incentive, for the nomad is motivated by his economic and social prospects, and with planned settlement goes stock reduction and regulated culling; a reduction in his stock amounts to control of his social life.
- It seems that those who plan to settle the nomads have their priorities wrong. We should not be asking ourselves, "How can we settle the nomads?" But rather how best to integrate the nomads more closely into the life of the nation, for the benefit of the nomads themselves and the whole community.
- Settlement could still be held as an elective solution, where conditions suit.

- However, the priority lies in integration; and in this, the pressing question is: how to choose the kind of development actions for integration to which the nomads would respond positively, and when put to the test, the effort would appear to be socially workable.

4.3 Similar Reactions from a Seminar Held in Shiraz, Iran, 1974

In 1974, a seminar was organized on 'The Health Problems of Nomads' by the World Health Organization (WHO) in Shiraz, Iran, with the participation of most Middle East countries, and which was attended by one of the authors of this study (Prof. Mohamed Osman El Sammani, who acted as a rapporteur of the seminar). Though health was the central theme of the seminar, it was treated in conjunction with the other parameters of nomadism. On the views of those taught participants who attended the seminar, the following substance on the issue of nomads' settlement vis-à-vis the alternative of integration as postulated by the previously presented critique.

- There is a clear historic trend towards settlement of nomads. Yet governments and those concerned with nomad affairs must take into account the alternatives and disadvantages of the settlement process. It should be noted that sedentarization is not always the best solution to the nomads' problems, and other alternatives such as the improvement of the nomads' living conditions within their existent 'spatial containers' and cultural frames of reference must be taken into consideration.
- Iran, for example, started with a policy of sedentarization, but based on experience gained, there is a new tendency to not pursue this policy, and instead to improve on nomads' condition and find other alternatives that yield positive results and better understanding of the nomads' social and economic terms.
- Settlement implies conversion of nomadic producers of livestock into village dwellers and farmers. In this context, it must be remembered that agriculture itself is passing through a period of crisis, and whereas some countries are short of grain, others have not subsidized their farmers to maintain world prices and the level of their own production. Some countries such as Iran (also Sudan in previous years) are passing through another kind of perceptible elimination of smaller communities, by establishment of small and big urban centers.
- There seemed principally to be three possible policy choices to address the nomads: (i) leave the nomads alone, (ii) subject them to planned sedentarization; and (iii) offer guided nomadism to improve their socio-economic conditions within their own tribes.
- In considering any decision on these possible policy options, it must be remembered that a huge and often unrecognized potential exists within the nomadic population to support of the economy of the community. For instance, they contribute to the GDP and own or control large grazing areas worth a high market value as well as many millions of heads of livestock as capital assets.

- This wealth proves that the nomadic groups, with improved conditions, could be integrated into the socio-economic development process of the country, and could continue to be a valuable asset to its economy. This kind of integration into the socio-economic structure of the country would be in the form of rationalizing nomadic livestock production, now practiced at the family level, into labor-based tribal animal husbandry.
- In the subsequent discussion, it was stressed that nomadism is usually an ecological consequence, and that areas occupied by nomads in many cases could not be utilized for any other purpose or form of livelihood. Thus the alternative to pastoralism would often be empty areas, which seems to be unwanted by most governments. The conditions that originally caused the development of nomadism and the nomads' pursuit of a migratory life still exist.
- Settlement of nomads in agriculture presumes availability of cultivable land and adequate amounts of rainfall, and with insufficient rains, artificial irrigation would be a prerequisite, like in the case of the settlements in the Gezira Scheme, New Halfa, etc. Regardless, the best soils are naturally already occupied by the existing farming population of the country, while in many places there are also considerable problems connected with land ownership.
- Thus in most cases, settlement of nomads implies great financial investments, which would not necessarily be matched by the economic advantages of sedentarization. In addition, the income derived from livestock breeding will drop. Since the income of nomads in many countries is as high as the income of villagers and nomads contribute considerably to the total national economy, the perceived economic advantages of sedentarization should not be overstressed, particularly in the ineffective peripheral areas, for in such areas agricultural development is not the alternative to livestock breeding.
- There is finally the important question of whether the nomads want to remain nomadic or desire sedentarization. The key question is: Do we have any survey data, for any part of Sudan documenting a case of one nomadic tribe coming forward requesting to be settled?

4.4 Socio-cultural Elements on the Nomads' Side

In conclusion, there are significant elements that are often overlooked by the urban-biased planner, such as:

- The approach of the nomads to nomadism is very striking. They have a love for their own way of life. They share concepts such as *"master of my habitat or homeland, and not filling of my stomach: That our northern goz country is healthy, for its pastures and climate, compared to the southern clay area, for in the northern parts our livestock, women and children do not suffer diseases; that our cattle, even if pegged will break lose, and run north with the coming of the rainy season, and that no other tribe would give its land for our settlement, since all good land is already being taken."*
- For the above reasons, nomads fear that sedentarization will lead to a situation wherein they will lose the life they know, and with that their values. They look

with suspicion on life in a settled village, in the same way that a villager reacts towards life in a town. They fear they may not be able to adjust.

- Folklore of these tribes extols nomadism. Proximity to Mother Nature, according to them, imparts greater purity unto them. Some nomads, who have built regular houses in some villages, are known to be living in tents, within a kilometer or two under a grove of trees in the dry season; Rashaida are an example.
- In the rainy season, when they move from place to place, they are moving for pasture green, and they are lured by the evergreen panorama. It is said by some nomads that "if some of those who talk of settling them wandered with them, even for a fortnight during the rainy season, they will enjoy that life so much, that they will give up the idea of settlement of nomads."
- To many a nomad, nomadism affords romantic opportunities as well. "To a Kabashi, what has a man done if he has not wandered about during the rainy season with his newlywed wife on a bedecked camel by her side!" In planning sedentarization of these tribes, one ignores the psychological makeup of the nomad at one's own risk.
- Yet there exist, probably everywhere, marginal groups of nomads who are ready and suitable for sedentarization, temporary or definitive. Settlement can be enforced, encouraged or voluntary. Of the three, voluntary actions and fair information and demonstration of benefits as well as disadvantages of a settled life should be stressed. Forced or too strongly encouraged sedentarization could bring about an unhappy, acculturated population, who after years of experience of a settled life might return to nomadism.

4.5 Integration of Nomads

4.5.1 The Content

As we have been arguing, **integration** connotes 'improvement of the living conditions of the nomads, within their spatial containers and cultural settlements', and it is this approach that is recommended by this study, rather than settlement or sedentarization; for within it, it accommodates elective settlement, when seen as necessary. Integration is pivoted on changing nomadism as a way of life, while maintaining the herd and pastures, as a means of the household economy and livelihood. It entails application of progressive planning packages that address:

- The human dimensions of nomadism; in areas of improved habitat, provision of basic amenities, e.g. health and water supply, and fostering of self-organization, to empower the nomadic communities to participate in shaping their future; for the Government role is not to plan for them, but to plan with them;
- A secured right to the land, improved pastures, provision of veterinary services, herd water supply, better breeds, secured conditions of movement, remunerative stock marketing, etc.

Through the benefits of these two factors, **integration** of the nomads into the mainstream of the development of the nation can be achieved.

Under the above scheme, the separation of livestock-owning families from their herds, whether temporary or through settlement, and the movement of stock according to season can still be carried out in settled communities by organized systems, including multiple property ownership or stock dealing. Specialization in production of various classes of livestock, such as vealers, store fat or unfinished cattle, all entail stock movement to different pastures at different times.

4.5.2 Three Cases of Attempted Improvements

The application of the above approach on the integration of the pastoral nomads requires implementation of a planning methodology. Here, we cite three cases for demonstration:

4.5.2.1 Case 1: The Soviet Union

By referring to those parts of the world where actual improvements were brought on pastoral nomads, we find that the Soviet Union contributed to the formulation of such a methodology.

From the essays of M.G. Levin and L.P. Potapov in their book *The People of Siberia*, we find that in the period that followed the Russian revolution many collective projects were implemented to improve the life of nomads. The major goal behind such projects was fitting the traditional nomadic world into the modern Soviet system, through careful selective adaptations, the means of which were as follows:

- In the field of administration, the old tribal institutions were reshaped and absorbed into the party system.
- Regarding economy, the livestock wealth of the tribes was reorganized into collective farms and integrated into the animal production of the country as a whole.
- Regarding cultural considerations, schools teaching local languages, folklore and music were established in different localities.
- Scientific and technical education were established and oriented towards the environmental problems of the economy and production. Soon a generation of tribal doctors, veterinarians, agriculturists and engineers was available for the process of development.
- Various types of seasonal pastures were delineated and evaluated based on carrying capacities, availability of drinking water, duration of grazing periods and agricultural potential.
- Permanent settlements were set on summer pasturelands that offered a longer grazing season, dry farming, and in some cases, patches of irrigated gardens. With the coming of winter, the summer pastures cease to be utilized, and herdsmen from the various settlements drive their animals into the winter grazing lands, leaving their families behind in permanent settlements.
- In these permanent settlements, the nomads through governmental guidance supplied their own housing, services and public facilities, and for the first time nomadic communities enjoyed the privileges of settled life.

It might be argued by some that the aforementioned improvements brought on traditional nomadic systems were enforced on the local tribes, and are thus a Soviet claim. This might be true, yet the major goals achieved led the nomadic communities into the most appropriate channel of evolution.

4.5.2.2 Case 2: Algeria

During the 1970s, Algeria adopted a programme for the improvement of nomads' life under the slogan 'Pastoral Revolution.'

- The changes targeted the nomadic tribes who raised sheep, inhabiting the semi-arid zone (200 mm annual rainfall) on the fringe of the Atlas Mountains and bordering the Sahara. These tribes carried an east-west movement along the mentioned belt, with each traditionally owning a territory in the belt and with most tribes sharing communal grazing with others.
- The approach of the project was voluntary settlement on the tribes' owned land, combined with seasonal migration into the communally shared lands. Those not taking up settlement were free to pursue their old pattern of movement.
- The organizational structure they adopted in the development of the settlement was the 'Pastoral Cooperative', where agnate families were given the freedom to choose those with whom they wanted to settle; hence the cooperatives that emerged were of different sizes.
- The figure of 22 ewes was adopted as the flock economic unit that gave a family sufficient income to pursue a reasonable life. Worked out on the rangeland carrying capacity in this semi-arid belt, 22 ewes multiplied by the number of families constituting the cooperative decided the size of the grazing land allocated for each cooperative. This was fenced, marking the cooperative land.
- Because of the arid conditions predominating in this belt, and of the frequent occurrence of drought years, an equal land to that in actual use by the cooperative was set aside as a contingency allotment for use in case drought occurs.
- Developments that were carried out at each cooperative included:
 - Improvement of grazing, through propagation of selected indigenous grasses, and planting trials of imported species, planting of trees and shelter belts to hinder desertification, improvement of the sheep breed, provision of veterinary services, provision of water supply, housing for the cooperative families, establishment of basic services such as flour mills, mosques, Koranic schools and cooperatives offices, extension of credit, organization of small industries in cheese making, wool shearing/weaving and handicrafts, and marketing of sheep and other types of produce. All of these activities were being strengthened by training of the cooperative members in related forms of management.
- At the area level, higher order services were provided for each group of cooperatives from a Development Centre, such as housing project branch management staff of the technical departments concerned, a primary school, a clinic, etc., under a board, with representation of the different member cooperatives.

4.5.2.3 Case 3: Mongolia

- Mongolia is a landlocked country with a population of 2.6 million (2000). Mongolia's climate is among the most extreme in the world, with very cold winters and short but hot summers.
- Extensive livestock rearing is the main source of income in this terrain. Pastoralism employs one-third of the Mongolian population, and its output constitutes one-third of the gross domestic product, and one-fourth of the country's export earnings. Most Mongolian herders depend on their livestock

for subsistence, and obtain much of their food from meat and dairy products, using wood, hair and hides for domestic purposes, burning dung for fuel, selling or bartering livestock and livestock products for cash or goods, and using camels, horses and cattle for transportation and draught purposes.

- In spite of their importance, pastoral production systems are also subject to high levels of variability, mainly from environmental factors but also from socio-economic and institutional causes.
- Along the lines of the Soviet model discussed previously, livestock production systems in Mongolia received the kind of integration package that aimed at their improvement within their tribal contexts.
- However, risk management strategies, which were operational in Mongolia before transition to a market economy, had largely collapsed since 1989, under the changed condition of a free market economy. In the past, herders have had a range of coping mechanisms, based on customary institutions previously, and on State institutions during the socialist period.
- Since the transition, when livestock were rapidly privatized and collective and state farms were disbanded, the government could no longer afford the wide range of previously subsidized services. As a result, veterinary services, maintenance of wells for livestock watering, and other state support to livestock declined. Rural markets collapsed, leading to increasing barter and livestock hoarding. Education and health services declined. Herders themselves had to assume the major burden of risks associated with livestock raising.

4.6 Need for a Planning Methodology

In support of the integration approach, we need a planning methodology that transforms the concepts explored into implementable actions. In the three examples presented above, the results achieved had their start in understanding the environmental conditions under which the nomadic communities operate. Of those conditions, the physical existence of the nomads on the ground and their migration behaviors were taken as the basis for their regional organization, the control of their environment, and the site location of their settlement. In other words, planning for the pastoralists has to originate from the specific physical dimensions that condition their grazing areas and tie them together into unified territories. By repeated seasonal migrations, these unified extensions of land make the 'spatial containers' of nomads' settlement, usually starting at points in space and time to finish and start again from those same points in an annual cycle. The following factors need to be considered in any plan for nomads:

- Geographical definitions of the spatial container
- Study of existing conditions
- Definition of problems
- Study and analysis of problems
- Formulation of policies
- Preparation of programmes
- Design works accompanying programmes
- Plan preparation
- Implementation of the plan
- Feedback
- Evaluation and adjustment to make the plan work

We are not suggesting that this kind of holistic planning should be applied broadly on the complete nomadic territory as a region, but rather suggesting elements for consideration with every nomadic case.

CHAPTER FIVE: CONCLUSION

5.1 Ongoing Transformations

Glimpsing integration the way we have featured it—as leading to the development of the pastoral systems through effectuating the necessary improvement in the lives of the nomadic communities and fusing their economies into the mainstream of the progress of the nation—is already taking shape through spontaneous transformations in different nomadic contexts. If genuinely structured into national and local policies and programmes, the nomads' progress could be achieved more systematically. We will now describe changes that have been successfully incorporated by the traditional nomadic systems.

5.2 Organization of Land Ownership and Grazing Rights

The base had been and continues to be tribal land tenure, organized through customary rights. The pastoralists have a growing awareness of the need for delineating grazing lands, applying land use planning, and reforming legislation for the regulation and control of the use of land. The Government has taken some steps in this regard, such as surveying grazing lands and defining corridors of movements. These efforts have brought the nomads to work closely with the Government.

Nomads' Political and Other Representation

Until very recent times, tribal leadership constituted the nomads' political representation, especially in local matters. More recently the various tribes have succeeded in forming pastoralist unions, which gained organizational and political power at the national and state levels and have the potential to be effectively involved in promoting planning towards nomadic integration.

Developed Mechanisms for Resolving Conflict

Nomadic tribal structures, whether through the native administration or the pastoralist unions, have continued to act as effective instruments in resolving recurring conflicts by applying their own modalities: conferences, judicial councils, *diya* payment (compensation for death or injury), etc. Through greater recognition of their decisions and promulgation of the laws that give them the power to act, these same bodies could address the need for reconciliation of relations between pastoral groups.

Integration of Different Settlement Types

Internal structural changes that have been shaping nomadic life are already leading to integration of various settlement types. In the 1950s, for example, the Kababish practiced separation between the herd and the homestead. We can say that the majority of the Sudanese nomads have entered this stage of evolution. Forces such as the wide use of hired shepherds, choosing sedentary life, and the urge for education have all combined to strengthen this trend of spontaneous settlement. Evidence of this trend is that a good number of the Pastoral Union leading figures are town dwellers. While they still own animals in the distant ranges, they manage them remotely.

Appearance of the Breeder/Trader Pastoralist

We find him among both the Abbala and the Baggara traditionally keeping a herd, and at the same time buying from others and breeding for the market. In many tribes, the financially able tribesmen have taken to trade in livestock. They buy from the needy, hold the animals, especially through the rainy season, to sell in the *darat* period, when the market is at its peak.

Knowledge and Practice of Market Dealings

Breeding for the market is a usual practice among all tribes. Sheep are designated either *sadees* (export sheep) or *rabob*, meaning the buyer can have his choice of ram from among the flock, and *el fasl* is applied in settling the purchase. Similarly in marketing camels, a herd is built from the animals of many breeders, then driven overland by herders to reach markets in Egypt. In the case of cattle, animals are also collected from different breeders and entrusted to a member from the group who treks with the animals to the Omdurman market to sell them.

Use of Grown Fodder and Processed Feeds

With increases in the numbers of livestock, shrinkage in grazing areas and occurrence of droughts, the pastoralists resorted increasingly to the use of stored hay, grown fodder and processed feeds. It is a general practice among many nomads to store produce from the rainy season to use later during the summer critical period. Some products such as oil, seeds, cakes and bran are also purchased directly from the market. With the change in breeding habits, a series of adaptations to the new conditions are taking place, such as buying a stove (which was previously given free) from the owners of mechanized farm schemes. Scheme owners have taken up raising large herds by digging *hafirs* in their schemes to utilize their won stove. Other changes include White Nile cattle breeders selling their milk to cheese factories and opening accounts with the factory owners to supply them with bran and cakes against the milk sales.

Adoption of Improved Breeds

This is practiced traditionally through local selection, as in the case of the Ingessana, who crossbreed their cows with bulls from the Rufaa tribe's El Hoi cattle. Crossbreeding with foreign strains like Friesian is now being practiced in many areas in Sudan, such as in South and West Darfur, the Messeriya area, White Nile State and the irrigated schemes. Crossbreeding of sheep with the Hamari type has become common, and in goats, with the Saa'neen buck. Crossbreeding of horses has long been practised in Darfur, which has an improvement center for this purpose in Kebkabiya.

Accommodating Crop Farming in their Migration

Crop farming during migration is a long-established practice among nomads, including the Beja tribes, despite their poor *wadi* agriculture. The motive is to secure the staple *dura* needed for the sustenance of the household. In some ecological settings, this even assumed a commercial role, with the Baggara growing cotton for the South Kordofan ginneries, and more recently the Rufaa El Hoi, Kenana and Fellata of southern Blue Nile and the Shukriya of the Butana farming plots with tractors.

Resorting to Automated Means of Mobility

Traditionally, the nomads are using their animals for their transportation needs—for the Abbala, the camel; and for the Baggara, the ox. In recent years the Baggara (especially the Messeriya) have begun using lorries to transport families on their journey to the *bahr*, and Rufaa El Hoi and the Fellata of the Blue Nile in their dry season movement like keeping the herd on good grazing grounds, and transporting the water from the watering places; to be seen also among the Kababish the Hamar, and the Kawahla tribes in vicinity of El Khuwei; and the Hawawir and Gidayat of Wadi El Mugadam.

Processing Some of the Products of the Herd

To many concerned about nomadism, the nomads are seen as closer in their development to the industrialized communities than farmers. They are known to treat their animals when diseased, process their milk into dairy products, shear their sheep and use the wool in rug making, and produce varied leather products. The fresh milk needs of many towns, especially in Western Sudan, are supplied by nomads, while in White Nile, South Kordofan, New Halfa and elsewhere, the nomads are supplying milk for cheese processing. The ghee reaching the market is a nomad's product in many areas. Women operating the looms in Mellit's rug-making factory come from a nomadic background. In Mellit in 1996, a pilot project was launched to establish a rug-making factory at Tinna in Dar Kababish with Beni Garar women, who are known to make high quality handicrafts. Thousands of tons of wool and hair was carried on the back of camels, sheep, and goats for the project. Zeyadia girls are known to be talented in making leather and *zaaf* products. Thus, the potential is great for extending production of these handicrafts.

Cooperative and Receptive to Change

Progress towards improved life is gaining momentum among the nomads, due to the many currents of change. However, in many instances the wrong approaches and inadequacies in the means available have been obstacles to progress. Experience has shown that whenever the nomads are availed the opportunity to improve their lot, they responded positively. Examples include: Western Savannah Development project; Mellit, Malha and Kutum Nomads Rehabilitation Programme; Renk Cattle-Raiser Union and other nomadic groups reached by Oxfam-UK; the many ADSs, (some of mixed populations, settled and nomadic) Eid El Fursan, Umm Keddada, Sheikan-El Obeid, Lower Atbara, El Butana under UNDP, El Ain Forest, by SOS, Wadi El Mugadum by ADRA, Southern Roseires Agricultural Development Project by IFAD, New Halfa scheme, allocating phases 4, 5, and 6 for the settlement of the nomads, Plan-Sudan in Kassala area, and the Beja country, with the many organizations that worked among them.

Contribution to Provision and Running of Services

In water supply: ownership/renting and management of water yards, wells, and *hafirs*; in education: contribution to support of primary schools, boarding houses and the sustenance of mobile teachers, who travel with the homesteads; in health: selection from the camp population of the local community health workers, support of their training by providing a monthly salary, financing and management of drug revolving funds, and selection and support of upgraded T.B.A.; veterinary services: assistance in the organization of vaccination campaigns, selection and support to training of paravets, organization and supervision of veterinary drug revolving funds.

Exposure to the Outside World

Many men from different nomadic tribes, both poor and rich, are migrating for employment opportunities. The poorer ones, especially those who lost their livestock, move with or without their families to the main and smaller towns, and reside there temporarily or permanently. The financially able ones emigrate to the petroleum-rich countries in search of employment. In many cases, emigration is taken as a group enterprise, where agnates raise collectively the expenses of traveling, on the hope that the material return would benefit them all. Emigration is affecting the manpower needed by the family left behind. One wealthy livestock owner of Um Shedara village close to Gadarif complained that all of his adult sons had emigrated to Saudi Arabia: "To do what? To work as attendants to race camels, while here their family owned so many camels." He added that he had now three wives, and if he could be sure that any sons from a fourth wife

would stay with the family to look after the wealth he owned, he would marry a fourth wife. Migration from nomadic areas, despite its setbacks, opened the nomads to a wider world, and to many progressive elements of change.

Nomads' Integration is the Recommended Policy

Having established that integration holds more rationale than settlement in dealing with the nomadic question, and that spontaneous changes could facilitate the integration process, we attempt below to highlight some guiding principles that might be adopted to make the process more effective.

5.3 Some Guiding Principles

Most nomadic groups are presently operating on strained ecosystems. Increased numbers of livestock and decreased carrying capacity of pastures have resulted in a disturbed animal/range relationship, and a confused land/tribal relationship. These are indicted by overgrazing of pastures, land degradation, death of animals, increased herd mobility and rising incidents of conflict. The old wisdom of the traditional nomadic system's capacity of utilizing meager pasture and water resources rationally is jeopardized by ongoing interventions of man and the effects of the natural elements.

Hence, rehabilitation of nomadic areas ecologically, economically and socially is the solution to the constraints nomads are confronting at present in most areas.

Provision of all Needed Services, as a Package to Achieve Functional Integration within the Spatial Dimensions

This is to be approached from two perspectives—integrating the nomads into the socio-economic milieu of the country as a whole, so as to provide them with leverage to interact with the market economy and the overall national progress; and giving services to the nomads as a package, including development of pastures, tree planting, provision of water supplies, establishment of veterinary services, founding of settlements, supply of education and health facilities, and the essential community organizations. The approach must be holistic rather than the scattered and uncoordinated approach of service provision rendered currently.

Involvement of all Concerned Stakeholders, in an Integrated Manner, to Participate in the Formulation of Policies and Planning of the Nomadic Development Project

Almost all policies and plans that are developed at national, state and locality levels are top-down. The involvement of the stakeholders is minimal, and at the political bureau level, there is weak contact with the people at the grass roots. Research bodies have had hardly any role in rural planning. That is why most implemented projects have been partial or complete failures and are not sustainable. Nomads who have been targeted by such projects have expressed their alienation in the planning process and only a few privileged groups benefited from the projects.

Founding a Central Body to Address the Nomadic Question

The proposed body—which will address nomads' development, organize efforts on their behalf and build their capacity to face new challengers—is to be formed of the relevant ministries, the Pastoralists Union, the scientific institutions and cadres and donor agencies.

The old functions and mandates of ministries (such as the Ministry of Agriculture, the Ministry of Animal Resources and related state ministries) that single out one element of nomadism—livestock—and treat it as a commodity to be produced at minimum cost, do

not lead to the development of the pastoral communities. These ministries have failed to integrate the nomadic system into the overall progress of the country. They are short of qualified professionals who have the capacity to incorporate the various aspects of the systems into the greater livelihood and society of Sudan.

In conclusion, we need to have a creed to believe in and to follow, and for this we borrow from Sir Douglas Newbold, Governor of Kordofan, 1932-1938:

"Anyhow there you are—you must find and have a creed and stick to it. My creed is the greatest happiness, of the greatest number, laughing children, inter-tribal friendship, family union, fat oxen and ripe crops, plentiful water-[unruffled], D.C.s, sympathetic, and fair minded technical chaps, no secrecy, trust of sheikhs and effendia and trust in the Almighty, and I am going to kick up a bloody row with anyone who blocks these things or sneers at them."

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