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# Struggle for the delta: Hadendowa conflict over land rights in the Sudan

Hassan Mohamed Salih

## The Hadendowa territorial system

The Hadendowa territorial system reflects the segmented lineage structure which the tribal genealogies represent. The first appearance of the Hadendowa is assumed to have been on the Red Sea Hills. The tribe expanded gradually southward until it came to occupy the Gash Delta. They continued their conquests to the River Atbara on the west, and as far as the present Sudan-Eritrian border on the south-east. These conquered areas were subsequently distributed among the founding generations of the contemporary lineages of the Hadendowa, each receiving a share in the different regions. However, the tribal territory is not distributed among the various lineages equally. The extent of a lineage's shares could have been affected by political and economic processes in the area, such as population growth or size of animal wealth at the time of expansion. Large, powerful lineages with big herds succeeded in establishing and maintaining territorial rights over vast areas, and thus extended their holdings. In most cases this was achieved by pushing non-Hadendowa groups further away.

The territories of maximal lineage are allotted among its constituent *diwabs* (minimal lineages). The allotments of individual *diwabs* vary in area and

in population size and animal wealth. More important, because a lineage's shares are not confined to a particular region, collateral *diwabs* are not found clustering in one neighbourhood, but are widely dispersed over a number of territories in different parts of Hadendowa country.

The *diwab* is the smallest territorial unit in the Hadendowa segmentary system; its members have collective rights and claims in a particular territory. They either live together in one camp or are divided into a number of residential groups camping and moving in close proximity to each other within a defined territory.

The ownership of land is highly valued in this society; the Hadendowa have developed a complicated customary law, *oslif*, to regulate the system of land ownership and the allocation of its uses. All disputes over territorial rights or utilization of natural resources are settled by the interpretation of this law, which deals in great detail with various aspects of conflict over grazing and cultivation. This customary law recognizes and distinguishes conspicuously between two sets of rights in land known by the terms *asl* and *a'mara*. *Asl* and *a'mara* are two Arabic words which have been incorporated in the Hadendowa language and have become the principal legal terms used by them in relation to questions of land ownership.

The first word, *asl*, means origin, and refers here to joint rights in a certain territory. *Asl* rights can only be established by reserving and claiming a virgin plot of land, or by conquest; this right is customarily vested in the *diwab* whose members or ancestors are believed to be the first occupants of the territory concerned. Once it has been obtained, *asl* title to a territory is permanent and unchangeable.

*Asl* territorial rights are inherited collectively by male members of the *diwab* in the patrilineal decent line, and must remain continuously within their specific agnatic group. According to this strict rule, women are excluded from collective inheritance of the territorial rights and have no recognizable claims on land. The Hadendowa explain the exclusion of women from these rights by claiming that since a woman might be outside the *diwab*, any rights in land that she held would be claimed by the non-agnatic husband and his descendants, allowing territorial rights to pass from one *diwab* to another, and a large part of a *diwab's* territory might be lost. Thus the Hadendowa attitude towards land-ownership, and their great concern to keep land rights strictly within the agnatic group, may justify the exclusion of women from inheritance of land. No *diwab* prefers to share the ownership and utilization of its territory with non-agnates, who will certainly create more pressure on the available pastures and watering centres. In an environment where natural resources are extremely scarce and competition over grazing and cultivable land is very high, each *diwab* is expected to preserve carefully what it has for its descendants only.

*Asl* rights belong to the whole *diwab* and no territory is divided into individual shares. The *diwab* members have equal access to pastures and natural wa-

ter resources such as springs, streams and pools in their territory. There are certain acknowledged individual rights in cultivable plots, wells and residential sites, but these individual rights are conceptualized by the Hadendowa and defined by customary law as usufructuary rights and not as *asl* ownership, which is never divided into shares or alienated from the *diwab* as one owning unit. Consequently, transactions in natural resources within each territory are controlled by the *diwab* and individuals have no right to dispose of land either by sale or in the form of a gift. The tribal rules of the Hadendowa do not recognize gifts in grazing rights, wells, trees and agricultural land unless they are approved by the whole *diwab*. Although sales of land are not permitted by customary law, land may be transferred from one *diwab* to another within the same maximal lineage as a form of compensation in place of blood-money, *tudiya*. But a transaction of this kind between *diwabs* of two different lineages is not recognized in tribal custom.

According to these rules concerning individual rights, each male member of the *diwab* can reserve an unused piece of land for cultivation every year, and no other agnate can utilize it without his permission. This usufructuary right will remain the privilege of the first user, and it passes to his heirs when he dies. In addition, the individual holds a permanent usufructuary right in a well or a number of wells which he may open on the *diwab's* territory. He controls the use of these wells, and he has a right to prevent other people, including his agnates, from using them without his consent. Usually wells are the only form of individual property which persists over a long periods of time. Today, there are many wells which have been inherited through a number of generations the establishment of some of these wells

dates back to the eighteenth century. Disputes over such wells are an integral feature of Hadendowa political life.

The third recognizable individual right of use in land concerns the tent place. During movements over short or long distances, each tent must be repitched on sites which it previously occupied. Every family has a permanent right to return to the same site after each movement, and such a site will not be occupied by another family. It is the duty of the male members of the tent to protect this right, which remains constant unless the place is abandoned for a number of successive years; it can then be used by another family.

The failure to observe these individual rights of permanent use often leads to disputes within the *diwab*, even among brothers or first patrilineal cousins. A dispute like this, if it is not settled at the outset, may result in the segmentation of the *diwab*. Usually one of the contending families, joined by supporters, will split from the original camp and form a new settlement. The daily life of the Hadendowa is characterized by conflicts which occur frequently over wells and agricultural land.

The second set of rights in land is known by *a'mara*. *A'mara* refers to usufructuary rights in grazing and cultivation land, at watering centres and for pitching tents on *asl* of others. By this right, individual families, or sometimes whole *diwab*, can make use of land in which they have no *asl* rights, provided that they obtain permission from the holders. Moreover, *a'mara* rights involve payment of certain dues — the *gwadab* — to the *asl* owners. The *gwadab* is paid annually in kind; either an agreed number of animals or a fixed proportion of the agricultural produce raised on the land in question. In most cases the value of the *gwadab* is not

fixed, and depends largely on the economic ability of the person who is paying, as well as on his relationship to the *asl* holders. Customarily the *gwadab* on land is not exchanged among *diwabs* of the same lineage. As well, it is not required from refugees who are seeking protection and a place to establish new residence. Further, the payment of *gwadab* is considered nominal and symbolic; its function being recognition of the right of *asl* holders in their territory and ensuring the continuity of *a'mara* right to the payer. The Hadendowa are not interested in the actual material value of the *gwadab*, but in its significance as a recognition and a sign of respect of *asl* right.

*Asl* right is unchangeable, even when its holders are living away from their territory or have not been utilizing it for a long period of time. Consequently, permanent utilization of a territory or a part of it by an outsider, whether he is paying *gwadab* or not, does not affect the original *asl* right. An exception to this rule is occupation through conquest, but with the recent stability and maintenance of order in the region this is no longer relevant. Equally, according to the tribal customs, *a'mara* right is unchangeable as long as the user continues to pay the *gwadab* or recognizes in principle the right of the original holders. However, the *asl* holders are expected to watch their right constantly, preventing *a'mara* users from preparation of land for cultivation, cutting down trees, and opening new wells or repairing old ones, unless permission is granted in advance. An appropriate example here concerns a well at a place called Adarmimash in Khur Lageb. Some members of the Gemi-lab lineage have been living at Adarmimash for a long time by *a'mara* rights, in an area which belonged originally to the Wailaliab lineage. When the ques-

tion of repairing wells arose, the Gemilab had to consult, and take permission from the Wailaliab lineage whose members were living away from the area. The Wialaliab allowed the Gemilab to repair the wells, provided that a man from the Wailaliab would be appointed as agent for obtaining labour and overseeing the work. Apparently the Gemilab accepted this arrangement as a sign of respect to the *asl* holders.

Although terms of *a'mara* do not give the right to develop land without the consent of *asl* owners, the latter must not refuse such a request as long as their rights are observed. Finally, the customary law gives *asl* owners the right to use any well opened on their territory by *a'mara* users. In return, the owners have no right to refuse permission or to expel the users once permission is granted, as long as the *a'mara* users regard the customs relating to land-tenure system.

The neglect and violation of either of these rules is a major source of disputes among the Hadendowa at all levels of tribal structure, from the *diwab* to the lineage. Within the maximal lineage, collateral *diwabs* are not expected to trespass, or to utilize each other's territorial rights, without prior agreement. *Diwabs* of different lineages must follow similar arrangements and observe the same rules. Transgression of territorial rights and contention over land, whether for grazing or cultivation, may lead to severe conflicts and to the outbreak of fighting between two collateral *diwabs*. Frequently, such a conflict may develop into a lasting feud involving a series of homicides and revenge, and if this point is reached, it becomes difficult to end the dispute. In a situation like this, none of the disputing *diwabs* receives help, whether from inside or outside the lineage. Usually the other collateral *diwabs* will not support either side, but they will intervene im-

mediately, persuading each party to accept reconciliation and end the hostility. Though the *diwab* may split into opposed factions over issues of internal rivalries concerning the use of land, it acts as a united, undifferential group against outside encroachment. The *diwab* members are bound by common interests in their territorial rights which they inherit collectively, and they remain vigilant to protect them. This joint responsibility towards land is an important factor in the *diwab* acting as a political corporate group.

Disputes over land are the main factors of conflicts within the *diwab* and between different *diwabs* of the same maximal lineage. The maximal lineage is territorially dispersed as its members are not congregated in one region, but still its unity is manifested noticeably in matters concerning the defense of territorial rights. On such occasions the ties of common agnatic descent seem to be very strong, and this principle links together isolated and scattered *diwabs* of each maximal lineage, providing a framework for political co-operation. Thus the members of the lineage form a corporate group with collective responsibility, sharing obligations to defend each other against external attack. Here, the maximal lineage as a whole will act as a united body facing outside intrusion on any part of its individual *diwab's* territories. In the case of infringement, the *diwab* concerned usually gets immediate support from its collateral *diwabs* living in the same neighbourhood. But if the dispute develops and the confrontation becomes more serious, collateral *diwabs* living in distant regions will interfere and move towards the place of the dispute. It is very remarkable in these situations to see how agnatic kinship ties unite widely spread *diwabs* in one another's defense. Eventually, a conflict over land between two



*divabs* of different maximal lineages is more likely to extend and involve both maximal lineages concerned.

### The Hadendowa environment

The Hadendowa are situated roughly in the middle of Beja country, i.e., between the Ammarar to the north, the Bishariyyin to the north-west and the Beni Amer to the south and south-east. The boundaries of Hadendowa territory extend between approximately latitudes 15 degrees and 19 15' degrees north and longitudes 35 25' degrees and 37 30' degrees east. This is an area of about 40,000 square miles, bounded to the east by the Red Sea coast between Sawakin and Tokar. Its southern boundary extends from Tokar due south-west until it reaches the northern environs of Kassala town. Thence it continues to the Butana Bridge on the River Atbara; from there it proceeds further, following the eastern bank to Goz Rejeb. In the north the boundary runs northward from Sawakin through the Red Sea Hills up to Kambosanha Station. Then it turns southwest over the western slopes as far as Musmar on the Port Sudan-Atbara railway line. From here, Hadendowa territory stretches southwards covering the vast rolling plains until it ends at Goz Rejeb again.

Hadendowa territory covers an area of various physical features ranging from the high massive Red Sea Hills which fall westwards into the desiccated rocky outcrops. As one moves further inland, the landscape changes from the sandy wastes in the north to the clay plains of the Gash Delta in the south. Further to the west and parallel to the Gash Delta there are the eroded deposits, *Kerrib*, along the bank of the River Atbara. The characteristic features of the whole area are barren, rugged, hilly country and bare sands,

lying in the semi-desert belt of erratic rainfall and scanty vegetation. Perennial streams are uncommon, except in the vicinity of Erkowit and the River Atbara which runs on the periphery of the region.

### The Red Sea Hills and the Coastal Plain

There is diversity in the climatic and ecological conditions of Hadendowa territory. The greatest part of the area is unproductive, barren ground, classified as semi-desert or desert proper. The survival of human and animal populations in such a harsh environment may be inconceivable to an outside observer. But the Hadendowa have succeeded in maintaining themselves in it, withstanding long periods of drought and occasional states of semi-starvation. This perpetual endurance might have been partly due to the geographical position of their territory, with its varied climate and topography which encompasses two alternative rainy seasons. The Hadendowa are fortunate in having access to an area embracing both summer and winter rainfall-belts. Moreover, the Gash Delta has always been a relief to the Hadendowa when severe drought hits the northern and eastern rocky slopes. On the western side, the River Atbara provides a relatively secure source of water when conditions deteriorate in the surrounding area.

### Adaption to the Environment

Although herding is considered to be the main feature of Hadendowa economic life in their harsh and variable environment, they are not a highly nomadic society in the fullest sense. They are not engaged in regular seasonal migratory movements like the Baggara and the Kabashish in western Sudan or the Rufa'a Al-Hoi of the Blue Nile. The

scattered, limited water supplies and poor pastures throughout Hadendowa country, and importantly, their traditional territorial system which confines each *diwab* to a defined territory, seem to preclude long seasonal migration on a large scale. Instead, the *diwab*, or even more frequently, the independent extended family, tends to move irregularly over short distances within the limits of its own territory.

However, in spite of this tendency towards territorial segmentation and apparent restricted movements, I am trying to show the adaptation of the Hadendowa to their environment during different seasons of the year, in different parts of their territory. For the purpose of exposition, I divide the whole area into two main parts. These are the Gash Delta region on the one hand, and the rest of the Hadendowa territory on the other. The latter includes the northern region, which consists of the Red Sea Hills and the coastal strip as well as the inland plains stretching across the railway line from Gebiet to the northern fringes of the Gash Delta. This region also extends south of the Erkowit hills to embrace the mountainous country lying between the eastern side of the Gash Delta and the Sudanese-Eritrean borders. This is in addition to the western plains expanding from Sinkat southward to the River Atbara.

This area in the northern part is an arid country with poor, scattered grazing and few sources of water. The whole area is thinly populated; it supports only one-third of the Hadendowa population, rearing mainly camels and goats which can survive on short grass and thorny scrub. However, those *diwabs* who enjoy winter rainfall on the Erkowit hills keep a considerable number of cattle.

The ecological conditions outside

the Gash Delta do not permit large concentrations of population. Because water and pastures in a given area cannot maintain a large number of animals, the members of the *diwab* do not always remain in a single territorial cluster, living together in one camp, but are split into four or five residential segments. The typical residential pattern of the Hadendowa in this area is a small family group of not more than three or four tents, living and moving together within the orbit of their traditional watering centre. Apart from this, concentration of tents in certain places may occur temporarily, depending on the availability of water and grass.

The Red Sea Hills generally, and in particular their eastern slopes, *goonog*, receive a winter rainfall. The Hadendowa who live in Sinkat and Erkowit areas graze their cattle on the eastern slopes during the November-March period. It is the task of young men to move down with the cattle, while old men, women and children remain on the hill-tops. Normally a number of milk-cows, *thoma*, are left behind to supply the families with the daily consumption of milk. The weather on the main winter grazing area may be too humid or cold for camels and sheep; these animals often spend this time of the year further down on the western slopes. Later in March or in early April, both cattle and camel herds move back to join the families up the hills, where they remain throughout the summer. During this season, the tents are scattered in small, isolated groups near the wells or pools while the animals wander haphazardly on the surrounding pastures.

About late July, the main herds of cattle, camels and sheep start to move southwards and westwards down the slopes to be on the inland plains with the early *kharif* rains. Later some of the families might also follow their an-

imals, delaying their movement as long as possible to avoid the hot weather and dust-storms down the hills. But the majority of the Hadendowa here prefer to stay permanently on the hills unless their water supplies are exhausted during the summer; then they will move down. They keep moving, slowly and irregularly according to reports about grass and watering spots, until they approach Derudeib on the Port Sudan-Kassala Railway line. Typically, they follow their usual residential pattern of small independent family groups, pitching their tents at distances of three or five miles away from each other. The mobility of these groups depends on the limits of their territorial rights and access to pasture on *a'mara* basis from other neighbouring *diwabs*. Occasionally, the movements extend further southwards along the railway line, but normally do not take them more than fifteen or twenty miles. During years of poor rains, camels and cattle may travel as far as Odi and Tibilal plains in search of better grazing. By the end of September, kahrif pastures will be over-grazed so the herds start returning to the hills. At this time, the camels may be taken down the coastal plain before the high humidity and cold weather force them to retreat to the western plains.

In the case of the eastern region, the amount of winter rainfall increases towards the Ertitrean borders. Here grazing and water supplies, though still sparse and limited, support a widely scattered population all year round. The Hadendowa in this region are almost sedentary, though they live in small dispersed groups. Normally they spend most of the year around fixed well-centres in the sandy stream-beds. Their main animal wealth is still camels but they keep more cattle and sheep than those on the Red Sea Hills. However, during years of exceptionally poor

rains, large numbers of cattle and sheep move westwards, either with or without the families, to spend the summer in the Gash Delta.

Though the possibilities for cultivation on the Red Sea Hills and the Eastern Region are very limited due to scarcity and uncertainty of rains, sometimes the Hadendowa succeed in cultivating scattered plots of durra. But the agricultural produce is not sufficient for local consumption, and more often at least one member of each family has to seek durra cultivation in the Gash or Baraka deltas. Nevertheless, this alternative is not always possible as most of the families do not have enough adult men for both herding and cultivation far away at the same time. More important, there is great population pressure on the Gash Delta and the allotted area for cultivation is not sufficient to meet the local demand. Thus, the Hadendowa in these regions are always short of grain and they have to buy most of their supply from local markets.

The inland plains west of the Erkowit Hills receive very poor rainfall; this is primarily a camel-herding area, though some of the *diwabs* keep some cattle as well. The population of the region moves about much less, and tents may remain in position near to the wells for longer periods. The camel survives for most of the year on thorn bushes. Cattle and sheep cannot endure the severity of the summer here, so they are more likely to be taken by young men to the Gash Delta from early April until July. Immediately after the start of intermittent showers in July or early August, the families spread southwards in search of slightly better pastures away from the overgrazed areas around the wells. During the same period the cattle and sheep herds start to leave the Gash Delta to join the families in the north. Each family group con-



tinues moving separately, making use of the scattered grazing and rain pools west of the railway line. Some of them may cross the line to the east to share the same pastures with the hill Hadendowa who come down from the Erkowit region. In December, each family retreats to its traditional summer area and clears its wells to be ready for the long hot season.

In spite of poor rainfall and the extreme aridity of the inland plains, there are a number of seasonal streams like the Derudieb, Khur Arab, Ingwatiri and Odrus which provide narrow strips for the cultivation of durra. Another important area in this region is the fertile plain of Tibilol where cultivation may be successful during years of good rainfall.

The Hadendowa who live between the River Atbara and the Gash Delta keep cattle, camels, sheep and goats. They move their animals for short distances away from the river during rains. At this time of the year, they intermix over pastures with some of the Amarar and Bishariyyin sections in the region. The river dries out into isolated pools in winter. These pools provide water for the herds which move towards the river bank by January. The families either stay near the river for the whole summer or they may move further southeastwards to Gratit well-centre on the edge of the Gash Delta. The camels spend the summer grazing on the bushes and pods of acacias while cattle and sheep are usually sent to the Delta. The summer is a period of tension between the Hadendowa and the Shukriya who cross from the west to the east bank of the Ashbara with their animals. Conflicts and disputes over grazing continue between the two groups until the flood prevents the Shukriya from crossing.

The southern region is richer in pasture and in water sources and is thus

better able to support a larger pastoral population. The largest concentration of the Hadendowa is in the Gash Delta, where they live in camps varying from twenty to seventy tents. Here, the *diwab* is always a territorial cluster as its members congregate in one single camp. There is a marked difference between these camps in the Gash Delta and those on the hills.

The Southern Hadendowa breed mainly cattle and sheep, but they have in addition a few goats and camels. With the early flood of the Gash River, usually at the end of June or the beginning of July, the camps are moved to the open plains, to either the west or east of the delta. But during years of low flood most of the people may remain in the delta, pitching their tents on higher sites beyond reach of the flood.

By this time young herds start their rainy season movements, which take the animals to graze the annual grasses and herbs which grow after early rains on the plains east and west of the delta. The frequency of herd movements in this season depends on the situation of pastures and rainfall. Generally, pastures and water supplies are not sufficient for the animals to remain in one place more than three to five days, so they move frequently over short distances. Normally, old men, women and children do not follow the main herds, but stay behind camping in one place near the delta with milk cows and goats.

After two or three months the rain pastures are overgrazed and the water-pools dry up. So at the end of October the cattle and sheep herds rush back at great speed towards the Gash Delta in order to be near the watering-centres. However, when they reach the fringes of the delta they are not allowed to proceed further into the agricultural area, so as to avoid damage to the crops. They continue grazing on the outskirts

of the delta until the end of the harvest in February. During this period the animals come close to the fields, creating a constant threat to the cultivation and causing many disputes between the herders and the tenants. The administration of the Gash Delta Scheme has tried to protect the crops and reduce the scale of such disputes by providing a number of defined tracts on which animals can pass between the pastures and well centres. In addition, the administration maintains approximately twenty well-centres in the delta. Each well-centre is partially surrounded by banks to retain water during the flood and to allow the water to filter down through the hills to the fertile valleys and plains. Such traditional arrangement gives all members of the tribe access to the varying natural resources of their country. Nearly every lineage is widely dispersed, with *diwabs* both in the north and the south. At the same time, the ties of mutual help and reciprocal relations, operating on a kinship basis, extend beyond territoriality to embrace the whole lineage. While ecological conditions have forced collateral *diwabs* to split into separate territorial units, still the divisions of the Hadendowa on territorial lines is rather an arbitrary one. This is because individual families or whole *diwabs* move from one area to another when it is necessary for climatic reasons. It is common to notice that during years of drought in one region, the *diwabs* affected move to join their kinsmen in other regions where they get help and share the available natural resources. For many *diwabs*, winter grazing on the mountain slopes (*gonoob*), and the coastal plain provides relief from the normal long, dry summer on the western plains. Similarly, when winter rains fail on the Red Sea Hills, large numbers of *diwabs* move southwards to graze with their kinsmen in the

Gash Delta.

Furthermore, Hadendowa customary law of land tenure recognizes and safe-guards the acquisition of usufructuary rights and thus allows for a wide range of individual and *diwab* mobility from one region to another. According to the terms of the customary rules, individuals or groups can have access to territorial limits. These terms oblige the asl owners of the territory to allow for such usufructuary rights whenever they are requested.

#### Environmental Constraints and Conflicts over the Gash Delta

The rainfall is irregular and sometimes negligible over the major part of Hadendowa territory. Nevertheless, drought and harshness in the interior region are alleviated by the seasonal flow of the Gash River. This river rises in the Eritrean Highlands, about fifteen miles to the south of Asmara town, where it is called Mareb. It dashes down from an altitude of 2,000 metres above sea level, and is joined by many tributaries until it enters the Sudan south of Kassala mountain. From here it comes to be known as the Gash, and it takes a wide, shifting, sandy course. The rainfall in the catchment area in Eritrea is comparatively high with an annual average of about 587 mm., but rather spasmodic. Thus the flood reaches the Sudan in the form of fluctuating violent spurts which are usually confined to the period from early July to late September.

The delta is formed from the heavy silt which is carried down annually by the flood. The waters burst into the Gash plains creating a fan-shaped inland delta of alluvial soil. It extends in length for about sixty-five miles from north of Kassala town to Amadam Station on the Port Sudan-Kassala railway line. The whole delta covers an area of

700,000 acres lying between latitude 16 degrees and 15 28' degrees north and longitudes 36 25' degrees and 35 56' degrees east. Occasionally, in years of exceptionally high floods, the waters may reach as far as latitude 16 52' degrees north. This extension includes an area known locally as Gash Dai, which is the region north of the normal flood limits.

It is clear that the Red Sea Hills and the Gash Delta form complementary regions which vary widely in terms of resources and environment. Agriculture and pastoralism are the primary economic activities; pastoralism is the dominant mode of livelihood while agriculture is pursued as a secondary activity, mainly for household consumption.

Here, there are a number of intricate constraints on pastoral production. These constraints are economic, administrative, and, most importantly, environmental, including ecological hazards, in addition to technological constraints. All these constraints are inter-related and their resolution should be considered within the context of Hadendowa territory seen as one eco-system. The environmental hazards related to technology have led to the perpetuation of a state of poverty and low standard of living among the Hadendowa.

Generally, the expansion of large scale irrigated schemes, as well as rain-fed mechanized farming through private investment, have aggravated the already existing critical environmental situation all over Eastern Sudan. These processes started with the establishment of the Gash Delta scheme, followed by New Halfa and more recently by the Rhad Scheme. Agricultural development has reduced pastoral lands and hindered the seasonal movements of animals; pastoralists have lost access to pastures and water-points. The result is over-grazing and acceleration of the process of desertification.

The prevailing environmental circumstances over the Hadendowa Territory, along with the traditional land tenure system, lead to continuous intermingling of pastoralists between the Red Sea Hills and the Gash Delta. According to Hadendowa traditions, almost every section of the tribe has established territorial rights in different environmental zones, with particular emphasis on the Gash Delta. These rights, whether for grazing or cultivation, extend as far as River Atbara. The Gash Delta is the main summer grazing area for all the Hadendowa. It would be very difficult to restrict transhumance to one environmental zone.

Apparently, the pastoral population of the Red Sea Hills has been decreasing during recent years due to the drought conditions. Many have lost their animals and moved to settle on the fringes of Port Sudan town and in other emerging small settlements along the Khartoum-Port Sudan Road. As well, there is no doubt that the settled population in the Gash Delta has increased rapidly during the period 1978-1990. The displaced pastoralists constitute the bulk of the population in these settlements. Moreover, there are large numbers of Hadendowa families living on the outskirts of towns who can be classified culturally as pastoralists, but who economically are not. Such families have lost their pastoral production base and are now engaged in urban-based economic activities. The situation at the moment is confusing, because these displaced pastoralists still have very limited urban economic opportunities.

In conclusion, the Gash Delta is the only alternative outlet for the Hadendowa on the Red Sea Hills. Considering the environmental conditions and water resources, the Gash Delta can provide pastures for all the Hadendowa; and indeed historically has done so for