

# **Local governance to secure access to land and water in the lower Gash watershed, The Sudan**

Land and water governance case study  
**Gash Sustainable Livelihoods Regeneration Project**

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### **1. Context and background**

The Gash irrigation scheme is located in Kassala province, East of the Republic of the Sudan. This large irrigation scheme of 100 000 ha was set up by the government in the 1920s to settle poor nomadic people into a cash economy growing cotton. The scheme went into serious decline in the 1970s, and further drought spells and security problems have led to increased pressure on meagre resources. Many of the poorest farmers now rely on small plots of land occasionally allocated to them. Furthermore, the organisation managing the scheme has changed often, and has not demonstrated effective management of the scheme.

Since 2002, IFAD has been developing the Gash sustainable livelihood regeneration project, choosing to put livelihoods instead of infrastructure at the core of its development approach.

### **Project beneficiaries**

Of an estimated total population in the project area of 87 000 households, or about 480 000 people, some 75 000 households are rural, and 67 000 rural households are considered poor. It is estimated that through the project 30 000 tenant farmers will benefit from secure and equitable access to economically viable and irrigated landholdings. An additional 10 000 landless households, including some 4 500 woman-headed households, will gain legally recognized and secure access to irrigated land. About 27 000 non-tenant households will benefit from improved infrastructure for livestock production (fodder availability, veterinary services, restocking efforts) and non-farm income-generating activities.

### **Causes of poverty**

In the Gash Delta area, as elsewhere in The Sudan, the level of rural poverty is closely related to the strength of agricultural production and productivity. The total cultivated area has decreased by 50% over the past 20 years, and the total cultivated area per tenant has declined from seven to less than one *feddan* (fed). Managerial, institutional and policy factors are the root causes of this process of impoverishment that has disrupted livelihoods in the Gash Delta. Chief among these factors are the absence of an agreed approach and a plan for development in the area, resulting in an ad hoc use of current resources and investments; unpredictable local and extra-local resource allocation, including inequitable patronage systems; lack of transparency in the management of Gash area resources and investments and the diversion of the surpluses extracted from the area away from reinvestment in the area; erratic

support services; frequent exemption from or non-payment of services charges, such as water rates; and weakening of traditional solidarity and social support mechanisms. The relatively harsh and fragile agro-ecology and the cumulative degradation of the natural resource base further aggravate the situation.

### **Project assistance for the target group**

The purpose of the project is to ensure the efficient, equitable and sustainable operation of the Gash Flood Irrigation Scheme and the integration of the scheme into the local economy. Core deliverables of the project include policy and institutional safeguards that can guarantee rational, responsible and equitable water management, an increase in the landholding from 1 fed to the more economically viable size of 3 fed of food and cash crops per year, equitable access to the tenancy rights in the scheme, the diversification of the livelihood base among non-tenant households, reliable access to potable water and to social services, the development of women's access to social and productive assets, greater access to rural financial services, the establishment of community organizations responsible for, inter alia, the management of natural resources and the provision of social, economic and financial services, and the strengthening of the capacity of the Gash Agricultural Scheme to manage the competing demands on the water resources equitably and effectively.

### **Beneficiary participation**

The adoption of a participatory approach is essential under the prevailing conditions in the Gash Delta region, where the opportunities and priorities differ between the primary target group and other stakeholders. In this regard, communities will be represented in the land tenancy reform process, the selection of eligible tenants, the identification of the criteria for clearing the irrigation block registers and accessing land on an equitable basis, and the formation of water users' associations and community organizations around economic and social interests. The participation of women will be supported through alliance building with local leadership, partnerships with line agencies and non-governmental organizations and quantitative targets for the representation of women in community organizations, along with the relevant training of women and men in gender-related concepts.

### **Innovative features**

In line with the Country Strategic Opportunities Paper for The Sudan (2002), the project will create the opportunities and incentives for the policy and institutional reforms necessary to redistribute assets equitably across the population and gradually to devolve land and water management to user associations and community-based associations. Furthermore, the project is proposing socially and gender-differentiated approaches to increase the access of the poor and women to productive assets.

## 2. The land and water governance innovation

The problems identified were:

- a decrease in the area cultivated by households, combined with a decrease in the average herd size per household
- income derived from agriculture is not sufficient for food security
- coping mechanisms put in place to address the deterioration in total land cultivated have used a seemingly equitable system, that keeps poor households poor and enables the better-off to accumulate land
- management of the scheme is fragmented and under constant non-compliance with the formal and informal land access rules

These problems derive from:

- weak, fragmented and nepotistic management
- poor technical competence over many years
- loss of cash crop and income generation-base for the scheme, with growing expenditure on scheme management and social services (water, health and education)
- insecurity of access to land which acts as a disincentive to invest in land development for better flood control
- unclear level of water fees that do not reflect cost recovery on O&M of the scheme
- low state and federal fund transfers compared to those budgeted
- climatic variability and civil unrest which results in a constant flux of people seeking refuge in the Gash Delta. This puts increased pressure on the production base, the social infrastructure and traditional solidarity mechanisms.

The objective of the innovation is to reform the land and water governance of the scheme in order to promote equity, economic efficiency and sustainability.

The features of the innovation are:

- A clear delineation of roles, responsibilities, authorities, financing mechanisms among the 3 key stakeholders in the management of the scheme: the farming communities, the Gash Delta Agricultural Corporation (GAS new name), and the Ministry of Irrigation and Water Resources (MOIWR).
- Clear entry and exit rules for leaseholds. This means screening and clearing the tenancy registry books. Leaseholds would be fixed in conjunction with an increasing control of flood waters. Enforcement of the exit and entry rules would also be devolved to the WUAs.
- The devolution of land allocation, land development, water management at mesga and later block level to WUAs. WUAs would be established around existing farmers' groups using the lottery system.
- The devolution of collection of water fees to the WUAs.

- The setting of a minimum leasehold size to ensure economic viability and food security, and a ceiling on leasehold size to ensure that the scheme accommodates as many households as economically feasible. The economically viable size estimated at 6 feddans (2.52 ha)/2 year crop rotation.
- Fixing leasehold in conjunction with better control over the floodwater.
- A decrease of the crop rotation from 3 to 2 years.
- The negotiation of water fees on the basis of financial cost-recovery analysis.

This option was chosen by the farmers, during the formulation phase of the IFAD project. The Farmers' Union played a key role in facilitating this participatory phase and lead an awareness campaign. In particular, meetings were held, and radio and TV were used to explain the details of changes proposed.

The introduction of these changes is facilitated by the commitment of MOIWR at local and national levels: flood control service for Kassala city, and rehabilitation of the drinking water pipe network.

### 3. The LWG innovation context

#### Socio-historical context

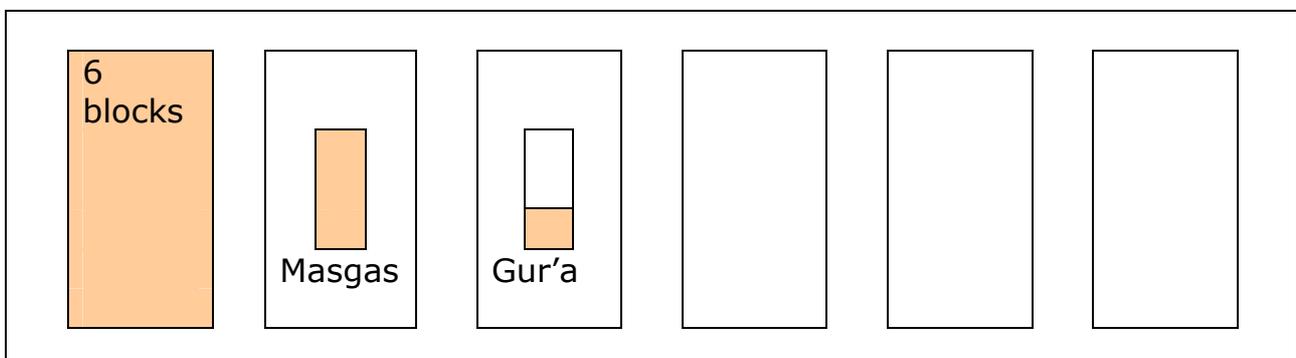
The bulk of inhabitants are from the Hadendowa tribe, initial inhabitants leading a traditionally nomadic life, and an agro-pastoral life style (sorghum-livestock) since the establishment of the Gash irrigated scheme (1920s). Traditionally, Hadendowa would grow sorghum and ranch their herds on flood recession grounds of the Gash river. Due to conflict and a drought spell, Hadendowas that used to live North and East of the irrigated scheme have now moved in, resulting in an increased number of users.

#### Physical context

River delta area: 294 000 ha

Area equipped for irrigation: 100 800 ha

Irrigated area: 15 540 ha in 2002



The Gash irrigation scheme is used for its grazing grounds, water, crops (traditional sorghum and cash crops, which residues are used to feed the

livestock). The Gash management authority waits for the flood to see the area that can be distributed for cropping.

### Economical context

The irrigation scheme is well connected to major export facilities, in particular to Port Sudan. There are market linkages with food markets in Eritrea and Ethiopia. The production is diversified (cereals, fodder, livestock, horticulture) and there is potential to develop them (processing industries). Investors have access to finance, but it seems that finance of small enterprises is more successful than finance for agriculture.

### Legal context

'Traditional' (since 1840) Hadendowa water governance would direct the first flood of the river to the extremes of the scheme, so as to stock drinking water for the livestock (in hafirs) and grow some grass that in turn help keep cattle away from crops.

Land is state property in The Sudan. Individual or group usufruct are possible. For each block of the irrigated scheme, a register holds the list of tenants of the block area. In principle, each year land is allocated to each farmer on the basis of his entitlement as written in the book. The location of the land allocated to an individual changes each year according to the amount of water and the area irrigated.

In order to have friends and relatives for neighbours, people regroup into "lottery" groups (gur'a) and the land is allocated annually through lottery numbers.

### Stakeholders' context

- The MOIWR – federal and provincial – is responsible for flood control actions for Kassala city, for the provision of drinking water and for technical assistance.
- The Gash Development Authority (GDA) created in 1991 was under the authority of Kassala state. In 2002, this responsibility was returned to the federal administration of MOIWR. In 2004, this institution was modified and renamed Gash Delta Agricultural Corporation (GAS). An independent Board of Directors runs day-to-day activities related to irrigation only.
- Farmers have organised themselves under the "Hadendowa Farmers' Union". They successfully lobbied between 1993 and 2002 for the federal government to take back responsibility for the Gash irrigation scheme with the support of Kassala State Government and Kassala State Deputy.

## **4. Assessment of the land and water governance innovation**

### Strengths

- It promotes empowerment of local communities on the basis of equity, security and better governance of the resources they rely on for their livelihoods.
- Area available per tenant will increase to a fixed area of 3 feddans (2,1 ha) cultivated and 3 feddans fallow.
- Traditional rules used to mitigate conflict between uses (drinking water for livestock / people, outside range instead of irrigation scheme for livestock grazing).

### Weaknesses

- Possibility of Hadendowa traditional access to land to be questioned, reduced (eviction). Eviction is not an option. Are those who have accumulated land in a non-transparent manner or have breached the land tenure legislation by trading their tenancy rights to be evicted?
- Limited capacity of the implementing agencies to effect the management changes proposed by the project.
- Large focus on the Gash delta and the flood irrigation scheme without creating alternative opportunities outside the boundary of the scheme for those who do not have access to irrigated land.

### Opportunities

- The cost of the status quo is too high economically and socially. Reform is more desirable alternative.
- Security and viability of leasehold would encourage farmers' investments in land development and payment of water fees and organization to safeguard acquired benefits.

### Threats

- Variability of the flood.
- Prevalence of a welfare vision (symbolised by keeping people content by giving them a "small piece of the cake that is ultimately non viable" rather than building and developing assets).

## **5. Implementation experience**

Changes are being implemented on one block (the Degain block) between June 2004 and June 2005. After that, similar changes will be implemented on one block each year. It is expected to take 2-3 years for the full package of innovation to be introduced and adopted.

### Progress as of July 2004

A Legal Committee for Land Reform (LCLR) was established by a decree from the federal minister of agriculture. LCLR is usually translated into Arabic by the legal committee for land fixation, which does not adequately represent the mandate of the committee for setting the procedures for equitable allocation of fixed and viable landholdings together with a period of appeal.

Eligibility criteria have been adopted by the local stakeholders, state, and federal ministries of agriculture and farmers' union for screening tenants and clearing the registry book. These criteria are broader than those proposed at appraisal and tend to favour maintaining the status quo.

LCLR has met with tenants who appear on the 2002/2003 registry books, but the screening criteria were not systematically adopted. In the third week of June 2004, the LCLR position was that all people met are eligible for a leasehold. Accommodating all people on a fixed irrigable land area means that the reform related to minimum size of leasehold could not be initiated. An IFAD/UNOPS mission advised that the screening process be completed in an objective and transparent manner in order to establish who is eligible for land, taking into consideration the poor and women headed households. The loan would only be declared effective once the registry book is cleared.

Water Users' Association (WUA) legislation was drafted, discussed within parliament and approved. With the start of the agricultural season, this activity would only be implemented at the end of the agricultural season to prepare farmers for the next season.

Tendering has started for the services of a partner financial institution to finance WUAs, especially water fees and agricultural inputs.

The Gash Delta Agricultural Corporation (2004) has been created: its board now includes representatives of the farmers. Responsibilities of this institution include all engineering works within the equipped command area as well as planning at scheme level. This scheme level organisation will complement future WUAs that will be established at mesga level (water fee collection, water spreading) and block level (water distribution, water allocation between mesgas, planning at block level).

Important investments, mostly public, have taken place on the Gash river with the objective of protecting the city of Kassala and directing flood water to the irrigation scheme. Collaboration between Gash Delta Agricultural Corporation and MOIWR is going smoothly.

## **6. Results and impact**

Available in 2005. The aim pursued is a cleared registry book, improved control of the flood, and cultivated area of 55 000 feddans (23 100 ha) taking into consideration the developments in Degain block.

## **7. Role of IFAD**

Through its activities in country programme evaluations, on the Country Strategic Opportunities Paper (COSOP) and on the sustainable livelihoods analysis framework (grant mobilised from DFID for this purpose), IFAD has been able to propose reform on the Gezira scheme (largest of The Sudan) and enter a dialogue on the need of the land and water governance reforms.

In its collaboration with The Sudan for the Gash irrigation scheme, IFAD mobilised early implementation grant which included a financial and logistics support to the LCLR, and supported the development of an implementation manual.

At present, IFAD is working towards promoting conditions that enable the reform process to be set in motion (loan effectiveness conditioned among other things on the clearing of the Degain registry book).

## **8. Conditions and potential for replication**

Available in 2005.

## **9. General lessons learned**

This project is in its very early stages and so drawing too many lessons from it is premature. However, there are features that are worthy of note:

- The project is innovative for The Sudan as it is designed to put people first. It reverses the traditional approach of starting with infrastructure but it remains to be seen just how successful it will be in a society with a long history and culture of the top-down approach.
- Effective land and water governance is at the core of this project. Without security of land tenure farmers are unlikely to invest in the land. But land without water is of little benefit and so the focus is as much about water as it is about land tenure – they are symbiotic.
- If people are to engage effectively with the project they will need the capacity to do so. This means developing the institutional structures that enable individuals to function effectively and a favourable social and economic environment within which they can work. Individuals will also need to develop new skills and practices.
- New institutional structures are needed and the local well-established informal institutions such as the Farmers' Union can provide the

foundation on which to build them. These include a new Board of Directors, a Legal Committee for Land Reform with powers to allocate land title and Water User Associations that give farmers power to influence the management of water.

- The challenge is to develop this capacity in a society that has a strong and long tradition of supply-driven irrigation management with farmers as tenants that has changed rapidly to one where farmers now have land and water rights and can seek legal redress for failure to deliver on contracted services.